

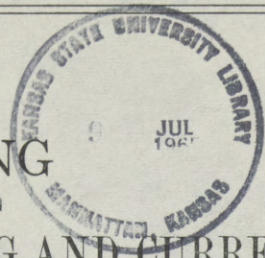
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# COINAGE ACT OF 1965

GOVERNMENT  
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HEARING  
BEFORE THE  
COMMITTEE ON BANKING AND CURRENCY  
UNITED STATES SENATE  
EIGHTY-NINTH CONGRESS  
FIRST SESSION  
ON  
**S. 2080**  
A BILL TO PROVIDE FOR THE COINAGE OF THE UNITED STATES

JUNE 9, 1965

Printed for the use of the  
Committee on Banking and Currency



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## COINAGE ACT OF 1965

WEDNESDAY, JUNE 9, 1965

U.S. SENATE,  
COMMITTEE ON BANKING AND CURRENCY,  
*Washington, D.C.*

The committee met, pursuant to notice, at 10:05 a.m., in room 5302, New Senate Office Building, Senator A. Willis Robertson (chairman of the committee) presiding.

Present: Senators Robertson, Douglas, Williams, Mondale, Bennett, and Thurmond.

The CHAIRMAN. The committee will please come to order.

We will open this session rather promptly because we have a great many witnesses to be heard in 1 day. In fact, we have been forced to fall back on the rules of the Reorganization Act of 1946 under which the chairman of the committee can notify witnesses that they will be limited to 10 minutes but with the privilege of extending their remarks in the record in any reasonable way.

We hated to do that, but we feel what a German philosopher once called a categorical imperative.

We only have a 3 years' supply of silver left, and if we continue using more silver than the total world production we will in a brief time be completely out of silver not only for our beautiful coins but for those who were born with a silver spoon in their mouth and other uses of that kind.

Being more or less dedicated to fundamental principles and rather proud of Virginia's contribution to the birth of the Nation and the formation of priceless principles of political and economic freedom which are now being so rapidly changed and eroded, I naturally approach with some reluctance a bill to abandon a coinage system agreed upon in the first year of our Government by Thomas Jefferson of Virginia and Alexander Hamilton of New York. I shall always regard both of them as two of the truly great statesmen of our Nation.

Students of the history of coinage will recall that one of our complaints against the mother country was that Great Britain wouldn't let us coin any money. In New England at one time they used wampum and shells. In Virginia we used tobacco, and about the only hard money we got was a Spanish dollar.

So when we had the privilege of creating our own money, Jefferson said, "Well, let's use the Spanish dollar as our dollar." And we did. And we have used that dollar ever since. It is the same weight. It is the same dollar that George Washington threw across the Potomac down at Fredericksburg.

It is the same dollar that has been in great demand for years all over the world because it could be redeemed in this country in goods and services that the world wanted.

And as the distinguished Senator from a silver-producing State remarked to me this morning, our money is the prettiest money in the world, and I don't think there is any doubt about it.

I was privileged to visit for a week or more in Copenhagen last September during the meeting of the Interparliamentary Union, and I was impressed with the relative beauty of a 50-cent piece that was not made out of silver. It wasn't as heavy as our 50-cent piece. It didn't have quite the same color, but it was bright and shiny.

And so I am glad that our distinguished Director of the Mint has brought up an exhibit here of the money she is going to put out after this bill becomes the law. All of you can see it is bright and shiny.

There is some issue, of course, as to whether the 50-cent piece would be like the others with no silver. The House committee thought they had better not put any silver in any of the coins.

At this point let us insert a copy of the bill.

(The bill follows:)

89TH CONGRESS  
1ST SESSION

# S. 2080

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## IN THE SENATE OF THE UNITED STATES

JUNE 3, 1965

Mr. ROBERTSON (for himself and Mr. BENNETT) (by request) introduced the following bill; which was read twice and referred to the Committee on Banking and Currency

---

## A BILL

To provide for the coinage of the United States.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*  
3 That this Act may be cited as "The Coinage Act of 1965."

### TITLE I

5 SECTION 1. (a) The Secretary of the Treasury is au-  
6 thorized to cause to be minted and issued the following coins:

7 (1) A half dollar or fifty-cent piece which shall be com-  
8 posed of an alloy of eight hundred parts of silver and two  
9 hundred parts of copper per each one thousand parts by  
10 weight clad on a core of a silver-copper alloy of such fineness

1 that the composition of each coin shall be four hundred parts  
2 of silver and six hundred parts of copper out of each one  
3 thousand parts by weight.

4 (2) A quarter dollar or twenty-five-cent piece and a  
5 dime or ten-cent piece each of which shall be composed of  
6 an alloy of 75 per centum of copper and 25 per centum of  
7 nickel clad on a core of pure copper.

8 (b) The cladding alloy used for the outside layers of  
9 such coins shall comprise not less than 30 per centum of the  
10 weight of each coin. Such coins shall be of the same diam-  
11 eter, respectively, as the coins of the United States of corre-  
12 sponding denominations current at the time of the enactment  
13 of this Act.

14 (c) The weight of the half dollar provided for herein  
15 shall be eleven and fifty one-hundredths grams, of the quarter  
16 dollar five and sixty-seven one-hundredths grams, and of the  
17 dime two and two hundred and sixty-eight one-thousandths  
18 grams.

19 SEC. 2. Subject to the requirements of section 1, the  
20 methods of manufacture of the coins therein provided, the  
21 wastage allowances, and the allowable deviations in the  
22 metallic percentages and weights, shall be as determined by  
23 the Secretary of the Treasury. Such coins shall be subject  
24 to the laws pertaining to the designs and inscriptions on coins  
25 of the United States.

1       SEC. 3. All coins minted pursuant to the provisions of  
2 this Act shall be legal tender for all debts, public and private,  
3 public charges, taxes, duties, and dues.

4       SEC. 4. Nothing herein contained shall be deemed to  
5 prohibit the continued minting of coins of the United States  
6 authorized by law at the time of enactment of this Act.

7       SEC. 5. Whenever in the judgment of the Secretary of  
8 the Treasury such action is necessary to protect the coinage  
9 of the United States, he is authorized under such rules and  
10 regulations as he may prescribe to prohibit the exportation,  
11 melting or treating of coins of the United States.

12       SEC. 6. The Secretary of the Treasury is authorized to  
13 sell on such terms and conditions as he may deem appro-  
14 priate, at not less than the monetary value thereof, any silver  
15 of the United States in excess of that required to be held  
16 as reserves against silver certificates.

17       SEC. 7. The Secretary of the Treasury is authorized and  
18 directed to purchase at the price of \$1.25 per fine troy ounce  
19 silver mined after the date of enactment of this Act from  
20 natural deposits in the United States or any place subject  
21 to the jurisdiction thereof and tendered to a United States  
22 mint or assay office within one year after the month in which  
23 the ore from which it is derived was mined. The bullion  
24 fund provided by section 3526 of the Revised Statutes, as  
25 amended (31 U.S.C. 335), may be used for such purchases.

1       SEC. 8. In order to expedite acquisition of essential  
2 equipment, patents, patent rights, technical knowledge and  
3 assistance, metallic strip, and other materials necessary to  
4 assure the prompt and continued availability of materials re-  
5 quired to produce an adequate supply of the coins provided  
6 for herein, the Secretary of the Treasury, during such period  
7 as he may deem necessary, is authorized, without regard to  
8 the provisions of section 3528 of the Revised Statutes, as  
9 amended (31 U.S.C. 340), or any other law, to enter into  
10 contracts upon such terms and conditions as he may deem  
11 appropriate and in the public interest, for the acquisition or  
12 transportation of such equipment, patents, patent rights, tech-  
13 nical knowledge and assistance, metallic strip, or other ma-  
14 terials.

15       SEC. 9. (a) The Act of September 3, 1964, Public Law  
16 88-580, is amended to read as follows: "Notwithstanding  
17 section 3517 of the Revised Statutes (31 U.S.C. 324), all  
18 coins minted from the date of enactment of this Act shall  
19 be inscribed with the year of the coinage or issuance unless  
20 in the judgment of the Secretary of the Treasury such inscrip-  
21 tion is likely to contribute to a shortage of coins, in which  
22 case the particular coins involved may be inscribed with the

## 5

1 last preceding year whose date has been inscribed on coins  
2 of the same denominations.”

3 (b) Section 3550 of the Revised Statutes (31 U.S.C.  
4 366) is repealed.

5 SEC. 10. The first sentence of section 3558 of the Re-  
6 vised Statutes, as amended (31 U.S.C. 283), is amended to  
7 read as follows: “The business of the United States assay  
8 office in San Francisco shall be in all respects similar to that  
9 of the assay office of New York except that until such time  
10 as the Secretary of the Treasury determines that the mints  
11 of the United States are adequate for the production of ample  
12 supplies of coins, its facilities may be used for the production  
13 of any coins of the United States authorized by law.”

14 SEC. 11. Section 4 of the Act of August 20, 1963 (31  
15 U.S.C. 294), is amended by striking out “\$30,000,000”  
16 and inserting in lieu thereof “\$45,000,000”.

17 SEC. 12. Section 3 of the Act of December 18, 1942  
18 (31 U.S.C. 317c), is amended by striking out “minor”  
19 each place it appears in such section. Section 9 of the  
20 Act of March 14, 1900 (31 U.S.C. 320), is hereby repealed.

21 SEC. 13. Section 3528 of the Revised Statutes, as

## 6

1 amended (31 U.S.C. 340), is amended (1) by striking  
2 out "this Act," in the first sentence and inserting in lieu  
3 thereof "law,"; (2) by striking out "minor" each place it  
4 appears in such section; and (3) by striking out "\$3,000,-  
5 000" and inserting in lieu thereof "\$30,000,000".

6 SEC. 14. Section 485 of the Act of June 25, 1948  
7 (18 U.S.C. 485), is amended by striking out "the gold  
8 or silver coins" and inserting in lieu thereof "gold, silver,  
9 silver-clad, or cupronickel-clad coins".

10 SEC. 15. The Secretary of the Treasury is authorized to  
11 issue such regulations as he may deem necessary to carry  
12 out the provisions of this Act.

13 SEC. 16. Whoever knowingly violates any of the pro-  
14 visions of section 5 hereof or of any order, rule, regulation,  
15 or license issued pursuant thereto shall, upon conviction,  
16 be fined not more than \$10,000 or imprisoned not more  
17 than five years, or both. In addition, there shall be for-  
18 feited to the United States any coins exported, melted, or  
19 treated in violation of this Act or any order, rule, regulation,  
20 or license issued hereunder, or any metal resulting from  
21 such melting or treating of coins. Such coins or metal may  
22 be seized and condemned by like proceedings as those pro-  
23 vided by law for the forfeiture, seizure, or condemnation of  
24 property imported into the United States contrary to law.

## 7

## 1 TITLE II

2 SECTION 1. The President is hereby authorized to estab-  
3 lish a Joint Commission on the Coinage to be composed of  
4 the Secretary of the Treasury as Chairman; the Secretary  
5 of Commerce; the Director of the Bureau of the Budget; the  
6 Director of the Mint; the chairman and ranking minority  
7 member of the Senate Banking and Currency Committee;  
8 the chairman and ranking minority member of the House  
9 Banking and Currency Committee; one Member of the  
10 House of Representatives to be appointed by the Speaker;  
11 one Member of the Senate to be appointed by the President  
12 of the Senate; and four public members to be appointed by  
13 the President, none of whom shall be associated or identified  
14 with or representative of any industry, group, business, or  
15 association directly interested as such in the composition,  
16 characteristics, or production of the coinage of the United  
17 States.

18 SEC. 2. No public official or Member of Congress serv-  
19 ing as a member of the Joint Commission shall continue to  
20 serve as such after he has ceased to hold the office by virtue  
21 of which he became a member of the Joint Commission.  
22 Any vacancy on the Joint Commission shall be filled by the  
23 choosing of a successor member in the same manner as his  
24 predecessor.

1        SEC. 3. The Joint Commission shall study the progress  
2 made in the implementation of the coinage program estab-  
3 lished by this Act, and shall review from time to time such  
4 matters as the needs of the economy for coins, the standards  
5 for the coinage, technological developments in metallurgy  
6 and coin-selector devices, the availability of various metals,  
7 renewed minting of the silver dollar, the time when and  
8 circumstances under which the United States should cease to  
9 maintain the price of silver, and other considerations relevant  
10 to the maintenance of an adequate and stable coinage system.  
11 It shall, from time to time, give its advice and recommenda-  
12 tions with respect to these matters to the President, the  
13 Secretary of the Treasury, and the Congress.

14        SEC. 4. There are authorized to be appropriated, to re-  
15 main available until expended, such amounts as may be  
16 necessary to carry out the purposes of this title.

The CHAIRMAN. We are going to have some Senators testify this morning who think that it would be both foolish and unnecessary to completely abandon silver in our coinage, and they are going to recommend the administration bill—that the content of the 50-cent piece be cut from 80 percent of silver to 40 percent of silver.

Mr. Clerk, in keeping with protocol, we shall, of course, give priority to our distinguished Senate colleagues who wish to testify. I am not at liberty to put them under any sanction as to how long. But if they will act as though we are in the morning hour and limit their oral statement to 3 or 5 minutes and then extend their remarks, I can assure them the record will be just as fine as if we sit here for an hour to hear them testify in extenso.

Mr. Clerk, call the witnesses.

Senator BENNETT. Mr. Chairman, before the first witness comes, as the cosponsor of the bill and the ranking minority member of the committee, I should like to offer for the record a statement I have made supporting the President's proposal.

The CHAIRMAN. The statement will be received and published in the record.

(The statement of Senator Bennett follows:)

STATEMENT BY WALLACE F. BENNETT, U.S. SENATOR FROM THE STATE OF UTAH  
SILVER, A REASONABLY WORKABLE APPROACH

This bill, S. 2080, which I have cosponsored by request, is a reasonable, workable approach to the coinage problems that we face. It is not the only possible solution nor can it be determined at this point that it is the best of all possible solutions but it is based on intensive study of our silver supplies, production, industrial usage, and estimates of future needs. It is unfortunate that we could not continue our present system of coinage with 90-percent-silver content which dates back to the first Coinage Act of 1792, but we cannot, and it is imperative that we make a change now.

The problem we seek to solve in this legislation has not developed overnight, nor will it go away if we do nothing. Action must be taken decisively, now, on the basis of all of the information available. Each of the interested groups must be willing, if necessary, to forgo possible short-term advantages for the overall good of the Nation. It is only in such an atmosphere that a practical solution can be effected.

When I came to the Senate, existing silver legislation was basically the result of a contest between the producers and processors over the price of silver in an era of production surpluses. Years earlier, producers had been able to persuade Congress to give them a sure market for newly mined silver by requiring the Secretary of the Treasury to purchase it at a price above that which private buyers would pay.

Many changes have occurred since that time. Today, we face a completely reversed situation. While production is growing relatively slowly, both private consumption for industry and arts and Treasury consumption for coinage purposes have skyrocketed. The former has occurred because of a rapidly growing demand for silver in such new scientific technologies as electronic components, silver brazing, batteries, and missiles, matched with a similar increase in photographic film. Other traditional uses, such as in mirrors, silver and jewelry, dentistry, and medicine continue at a high level of demand. Sharp increases in coin production reflect growth in population and standards of living, the rapid burgeoning of coin-operated vending devices, growth in the number of retail cash transactions, and an increase in the number of coin "collectors" for both artistic purposes and hoarding in anticipation of profit.

This problem has been with us longer than most people realize. The U.S. production surplus became a deficit as early as 1939. Today, this country produces less than 12 percent or one-eighth of its own silver needs. While we cannot pinpoint the exact date of the reversal on a worldwide basis, there is no doubt that it has continued more than a decade and that in 1964 the free world produced only about 40 percent of its silver needs. For more than 10 years, production has been less than the consumption of silver just by industry and the arts, exclusive of that used in coins. If we bring coinage into the picture, we find that in 1964 the United States required for coins alone almost as much silver as the world's total new production during that year.

*Three-year period only*

Since 1949, the accumulated deficit between production and consumption has totaled about  $1\frac{3}{4}$  billion ounces and consumption figures show that at present rates of withdrawal from the Treasury, the remaining stock of about 1 billion ounces would be completely exhausted within 3 years. We cannot afford to let this happen for two important reasons. First, silver is a strategic metal for defense purposes and the Treasury stock is the only stockpile that we have. Second, if we were to allow the Treasury silver to completely disappear, the price of silver would immediately rise to an undetermined level at least exceeding \$1.40 an ounce at which it would become profitable to melt coins for their silver content. If this were to occur, our coins would be withdrawn from circulation and none would be available for commercial transactions. One can hardly imagine the problems that would face a developed economy such as ours if this should ever happen.

Since private industry has not been able to find any substitute for silver in its processes and products, and its consumption is increasing even at the higher

prices maintained during the last 2 or 3 years, little hope for an easing of demand can come from the private sector. This has left the burden of change on the Treasury, because the Treasury cannot afford to purchase silver in the open market at prices higher than the monetary value of the coins made from that silver. Realizing the seriousness and urgency of this problem, the Treasury used its own research facilities and those of private institutions to seek a solution. After intensive investigation of all possible substitutes, the Treasury has proposed an alternative coinage system with greatly reduced silver content. To me, the recommendations are practical and reasonable and it is only proper that the Congress should act on them as quickly as possible.

#### *Continue minting present coins*

During the changeover period, there must be no interruption in the outpouring of coins from our mints if we are to escape a coinage crisis. This plan proposes that we continue to mint the present high-silver dimes, quarters, and half dollars at the same time that the new ones are being produced. Only when there is an ample supply of the latter, can a tapering off of the production of the present high-silver-content coins be permitted to occur. From what I have been given to understand, this could require as much as half of the Treasury's present silver stock.

During the changeover, it is also imperative that the value of the silver in present coins not be allowed to fluctuate substantially either upward or downward. To safeguard against a rise in the price of silver, the present silver content of the dollar will be maintained and the Treasury will continue to release its silver on demand at \$1.2929 an ounce.

To protect against a substantial decline (which I do not expect, nor does the Treasury), a provision requiring the Treasury to purchase all newly mined silver at a price of \$1.25 an ounce is contained in the bill. This new price floor is a real protection to the producer against any unforeseen adverse effect that might occur as a result of the coinage changeover. If this provision had not been a part of the bill, I would have introduced an amendment to include it, in all fairness to the mining industry.

#### *Effective immediate solution*

I think the greatest virtue of the proposed bill is that it does provide an effective solution for the immediate problems related to the necessary changeover to a new coinage system. But in an area so fraught with imponderables, it does not and cannot supply answers to the deeper, long-range problems created by the continuing overall silver production deficit. The responsibility to face these problems has been wisely left to the Joint Commission on the Coinage which this bill creates.

Through all the years in which the Government has had laws relating to its purchases of silver, the producers and users of silver have, naturally, disagreed over the price. That problem will always be with us as long as silver is bought and sold by the Treasury. In this proposed legislation, the Treasury takes as nearly a neutral position as it can, and still maintain its responsibility to supply our coinage needs.

Naturally, neither silver users nor producers are completely satisfied. Silver users would like to see the Treasury take all the silver out of the coins and sell its inventory to them at a low price. They oppose the Treasury's plan to keep 40-percent silver in the new half-dollar coin even though this will require only some 15 million ounces a year according to Treasury estimates. Producers have taken a position of maintaining some silver in the coins and have had reasonable arguments to support that position.

#### *Utah, fifth largest producer*

My own State of Utah is the Nation's fifth largest producer of silver. This has deepened my concern with the problem as I have watched it develop over all the years I have been in the Senate. During recent months, while the Treasury at long last has been preparing to face the problem squarely, I have tried to be objective in my own suggestions for its solution and to avoid any public statement that might have made it more difficult or added to the Treasury's problem. My last formal statement made in December of 1964 to the meeting of the Northwest Mining Association was enthusiastically received. In it I summarized my views on the actions needed.

*Bill conforms with recommendations*

While this bill does not correspond exactly with what I recommended at that time, it conforms with the spirit of my recommendations to a remarkable degree. I suggested at that time that :

1. We must have a change in our coinage system.
2. The change should disrupt our present system as little as possible. This recommendation included acceptability of coins to vending machines, and reactions of the public, to the new system.
3. We must be prepared for a difficult transition period and take precautionary measure necessary.
4. The sooner the change takes place the better it will be for all concerned.
5. Congress must act on the problem early in the session.
6. The system must be one that will not need to be changed again in the foreseeable future.
7. We should mint no more silver dollars.
8. The Treasury must hold the price of silver below \$1.38 an ounce until the transition is completed.
9. Reduction rather than elimination of silver should be approved.
10. Eventually, the price of silver must be released from what is now an artificial ceiling if we are ever to expect to bring supply and demand into balance.

Nothing in this bill conflicts with those recommendations.

In the same speech, I suggested that about 30 percent silver should be retained in the coins. This recommendation was based on several important considerations.

1. First, my desire that the coins be acceptable in vending machines. If they had not been, they would not have been "as good" in purchasing power as the present coins and Gresham's law would have taken its toll.
2. Second, I wanted silver retention to minimize the danger of counterfeiting and use of slugs.
3. Third, I felt that we should retain a continuity with our present system.
4. Fourth, I wanted our coins to retain their traditional beauty.

These objectives have been reasonably met in the Treasury plan before us through the development of alternatives which were not available at that time. The new coins will be acceptable in vending machines and they will not be easy to counterfeit because of the clad process used to produce them. All the new coins will be attractive, and because they are clad with an 80-percent silver alloy, even though their total content is only 40 percent, the half dollars will look and feel the same as the present ones, thus maintaining a tie with our present system.

My earlier recommendations would have introduced the new coins immediately and replaced present coins with the new ones as rapidly as possible, leaving both side by side only as long as was necessary to make the complete transition. Actually, this bill requires the use of much more silver in our coins to sustain the changeover than my recommendation would have done since the new coins in my earlier proposal would have used the silver from present coins to produce new ones and would not have used any Treasury silver until sometime late in the 1980's. It may well be that this plan will provide for a more orderly transition, though I am not sure that is the case.

No one will ever know which plan would have worked more smoothly, or taken the Treasury out of the business of supplying silver to industry earlier.

*Coinage Commission study*

As I said in the beginning, this bill provides for an orderly changeover that is reasonable and workable, in an atmosphere of calmness.

It can, if administered properly, take care of our coinage crisis and be used as a basis for our coinage system indefinitely. It does not, and again I want to emphasize this fact, propose a solution to the long-range problem of the deficit between silver supply and demand for other than coinage purposes. In 1964, excluding all consumption for coinage, the free world produced only 3 ounces for every 4 used in industry. A deficit will remain as long as there is an artificial low ceiling on the price of silver. Only after the coinage transition, however, can the market be allowed to play a part in price determination.

During the changeover, the Joint Commission on the Coinage will be in a position to follow all interrelated factors closely and by the time the transition is

completed, there will be a basis for the determination of future Treasury silver policy that is not presently available.

In the long run, everyone interested in silver faces the serious problems created by the shortage of silver and the corresponding pressure for a rising price level. This very situation offers an encouraging economic incentive to producers, who after the transition, may enjoy a sellers market for many years to come.

This bill is the latest in a series of steps which have been necessary for an orderly transition from a past of silver surpluses and subsidies, to a future based on a free market for silver with demand and supply in substantial balance at higher price levels. Until this occurs, and both the price ceiling and floor have been removed, we cannot expect to have resolved our silver problems.

Because this change is desirable and inevitable, we should make sure the program to accomplish it is both logical and orderly. Only then can it be beneficial to all concerned; the producers, the silver-using industries, the arts and most important of all, the citizens who must have an adequate supply of coins that will meet every need for their daily living. Because I feel sure that this bill will provide a basis for a desirable solution, I have joined Senator Robertson in sponsoring it, and hope that it will be quickly adopted, because delay can only create uncertainty and encourage damaging speculation.

The CHAIRMAN. According to the schedule presented to me by the clerk, the first witness is the Honorable Lee Metcalf, distinguished junior Senator from Montana.

#### STATEMENT OF LEE METCALF, U.S. SENATOR FROM THE STATE OF MONTANA

Senator METCALF. Thank you, Mr. Chairman.

I do not have a prepared statement, but I have discussed the matter of my testimony with Senator Mansfield, my distinguished colleague, the majority leader, and I am authorized to appear for him, too.

And I ask permission to revise the remarks.

The CHAIRMAN. Without objection, so ordered.

Senator METCALF. Mr. Chairman, I appear generally in support of the legislation. I favor the fact that this long overdue report has finally been filed with this committee.

The last time I appeared before this committee to testify on silver was more than a year ago when I appeared in support of my own bill to reduce the silver content of coins. Something should have been done more than a year ago. But that is ancient history, and finally this report is in.

I favor the issue of a new series of coins with the reduction of silver. I regret very much that the Treasury has decided not to have silver used in dimes and quarters as they have in half dollars. I applaud the fact that they have worked hard to develop a process by which the conductivity of coins, so important to the vending machine industry, will not be affected.

I am here, as the chairman surmised, to support the use of silver in the half dollars as recommended.

We should not completely abandon the use of silver in our coinage system. The tradition that we have in our coinage system should continue for use in the half dollars and I support the program of the administration.

I think that the bill has good features, such as standby authority for prohibition of export and melting down of coins. I think it would be improved if the provision of the Bible bill, which I have cosponsored, would be included, prohibiting bank loans for silver coins as collateral.

That would bring thousands and thousands of tons of silver, millions of dollars of silver coins, that are already in hoarding, out of hoarding and into circulation.

Mr. Chairman, I do object to the fact that we have not faced up to the business of silver certificates in this legislation. We have less than a billion ounces of silver left. A year ago when I testified before this committee we had a billion and a half ounces of silver. We have already lost a half a billion ounces of silver, and we are going to lose more.

This bill is not calculated to take care of that situation.

This misguided policy of the Treasury in continuing to redeem silver certificates that are not in circulation is draining the supply of silver. The bill is not a long-term bill. It overlooks this problem. And it will mean that before these new coins get into circulation our supply of silver will be exhausted.

My point is that our dwindling reserves of silver should be kept solely for the use of coinage and defense purposes. We should adopt the proposal of the Senator from Colorado that either by Executive order or by passage of legislation, immediately certain silver stocks should be transferred by the Treasury to the OEP for defense purposes.

In conclusion I want to mention silver dollars. The report is deceptive when it states there is no suggestion that the silver content of the silver dollar be changed. Of course there is no suggestion, because there isn't any intention to mint another silver dollar.

I would propose in the near future, when we are caught up on the minor and subsidiary coins, to mint a silver dollar in the same fineness as the half dollar—that is, 400 fine.

And I would hope that instead of prohibiting forever the minting of this fine old coin, the members of the committee will make an amendment to the bill to permit the minting of silver dollars 400 fine. Someday possibly we will get an appropriation to mint them.

Mr. Chairman, that concludes my statement.

The CHAIRMAN. Senator, you have made an interesting suggestion on how to bring silver dollars out of hoarding. We know that there are outstanding nearly 500 million silver dollars containing 90-percent silver and only 3 million left in the Treasury and very few of them, if any, in circulation. So somebody must have hoarded some.

But, unfortunately, if we act on this bill today, and I hope we can, we will have no time to take testimony about that issue nor to look into the legality of congressional action that would prohibit a bank from making a loan on the currency of its own Government.

Senator METCALF. As collateral, yes.

The CHAIRMAN. But if you and Senator Bible and others will make some speeches and outline the legal authority on which you rely to prohibit a bank from making loans on certain types of legal currency, then you can consider offering an amendment on the floor. But we will not have the time here.

Senator METCALF. We will do that.

Mr. Chairman, every Western Senator in the Senate, every Western Congressman can give you example after example of constituents who have hoarded silver dollars and have secured bank loans with those dollars as collateral.

The CHAIRMAN. I am inclined to believe that is true. I am not prepared to say that we have the legal right to tell a bank what kind of security they should have.

Senator METCALF. We will certainly make some speeches on the floor.

The CHAIRMAN. Any questions?

Senator THURMOND. No questions.

The CHAIRMAN. Thank you.

The next witness is a former member of our committee and our esteemed colleague, Hon. Peter H. Dominick, Senator from Colorado.

#### STATEMENT OF PETER H. DOMINICK, U.S. SENATOR FROM THE STATE OF COLORADO

Senator DOMINICK. Thank you, Mr. Chairman.

Mr. Chairman, I have a very brief prepared statement which I would like to have consent to put in the record.

The CHAIRMAN. Without objection.

Senator DOMINICK. I would also, Mr. Chairman, like to be able to supply the committee at the start of this statement at least two statements that I have made on the floor or at the Mining Congress in connection with this same problem.

The CHAIRMAN. We would be pleased to have you do so.

(The statements referred to follow:)

#### PREPARED STATEMENT OF SENATOR PETER H. DOMINICK

Mr. Chairman, members of the committee, I appreciate your courtesy in allowing me to appear this morning and present this brief statement on S. 2080.

I can certainly understand the sense of urgency facing the committee in dealing with this legislation. Members may know that I have shared their frustration and dismay that the Treasury waited until just last week to send its recommendations to Congress. The bill now before you does give me some concern in several ways, and I will comment briefly on those areas.

As you know I introduced S. 813 on January 28 of this year. It provides for the setting aside of a silver reserve or stockpile of 500 million ounces for national defense purposes. I am encouraged that the Office of Emergency Planning announced last Friday that it was setting aside a reserve of 165 million ounces for such purposes. There is certainly no magic to the 500-million-ounce figure that I selected, but it would insure an adequate supply for defense purposes for at least 15 years if we project present consumption figures. On the other hand, 165 million ounces would only provide approximately a 5-year supply. Both of these estimates, of course, do not take into account any type of national emergency. At the present time the Office of the Secretary of Defense advises me that they use 27-30 million ounces of silver per year for such things as missiles, nuclear submarine batteries, photographic materials, and electrical devices.

I urge the committee to give serious consideration to amending the bill to provide for a national defense reserve of silver. This certainly seems preferable to leaving the question to administrative fiat. This is particularly true when we consider that section 6 of the bill gives authority to the Secretary to sell "any silver of the United States in excess of that required to be held as reserves against silver certificates." This language could well be interpreted to allow the Secretary to sell that silver set aside by administrative order of the Office of Emergency Planning. This could certainly destroy the entire purpose of setting aside a reserve for national defense purposes.

In addition section 6 continues the Treasury policy of selling off silver, which oftentimes goes into the hands of speculators, in order to keep the price down. I fully realize that our existing coins must be protected from melting for their silver content, but it appears to me that sections 5 and 16 are designed to take care of that. Those sections, as you know, give the Secretary the authority to

prohibit the exportation, melting or treating of coins and provides criminal penalties of up to \$10,000 in fines and 5 years in prison or both. If this authority is granted, as requested, then why must the Treasury continue to sell silver in order to control the price? It just doesn't make sense to me. Even if we discontinue the use of silver in all of our coins, consumption still outstrips production of silver. It seems evident to me that we will never get an increase in the production of silver unless the price of the metal is allowed to seek its own level in the market.

Further, Government controls only compound the problems for the future. This type of Government tinkering with the economy has never worked in the agricultural field, the mining field, or in any other area of our economy. I am not convinced that the ordinary citizen would begin melting coins if the price of silver were allowed to rise above \$1.29. A \$10,000 fine or a 5-year prison term or both would certainly act as a deterrent if anybody decided to try.

One other aspect of the bill troubles me. I have already referred to sections 5 and 16 imposing criminal penalties for the exporting, melting, or treating of coins. I should think that specific criminal offenses should be written into the bill rather than leaving it up to rules and regulations to be determined later. Not only is this procedure constitutionally objectionable but it seems to me that we ought to let a person know in the law what practices or acts will subject him to a \$10,000 fine, a 5-year prison term, or both.

Again, Mr. Chairman, my thanks for your consideration of this statement.

[From Congressional Record, Apr. 23, 1965]

#### SILVER RESERVE

Mr. DOMINICK. Mr. President, on January 28 of this year I introduced S. 813 to require the Secretary of Treasury to set aside 500 million ounces of silver as a reserve for national defense purposes. When I introduced the bill I briefly reviewed the factors which indicated that we are fast approaching a silver crisis. During the past 3 months I have become even more firmly convinced that such a crisis will be upon us and in the very near future.

As we all know, Washington is a city of rumors. There are many rumors and much speculation about what, if anything, the Treasury intends to recommend on the coinage problem. I strongly suspect that there is a wide divergence of opinion among the so-called experts in the Treasury about what can and should be done, but it seems clear that we can no longer maintain the present program of trying to flood the country with coins, thus further depleting our short supply of silver, while in effect selling silver at home and abroad in order to keep the price down and thus protect the coins we have. One of the most disquieting rumors that I have heard is that the Treasury will attempt to do nothing this year because of the disagreement within that Department. In my opinion no action at all could prove to be very dangerous. The Treasury has just about 1.1 billion ounces of silver left and even if the present consumption of silver were to remain constant, we would be out of silver by the end of next year. Last year the United States consumed almost 450 million ounces and projections for 1965 are even higher. I ask unanimous consent to insert in the Record at this point a memorandum dated January 28, 1965, prepared by the Department of Commerce for the House Committee on Government Operations.

There being no objection, the memorandum was ordered to be printed in the Record, as follows:

#### SILVER CONSUMPTION FIGURES FOR HOUSE COMMITTEE ON GOVERNMENT OPERATIONS

JANUARY 28, 1965.

JOHN S. STILLMAN,  
Deputy for Congressional Relations,  
(Through Thomas G. Wyman, George Donat).

In reply to your memorandum of January 19 requesting figures on the industrial use of silver, we herewith attach a statistical table including the years 1959-65. The data, except for 1964-65 export and coinage figures, are the same as reported to the Office of Emergency Planning for supply requirements analysis.

Figures on total domestic consumption for 1959-63 are those published by the U.S. Bureau of the Mint; the data represent net quantities of silver issued by

that agency and by private refiners and dealers to consuming industries in the United States. The end-use estimates for 1959-63 were developed after consultation with industry and with interested industry divisions of this agency.

Estimated end-use consumption figures for 1964 were obtained by applying percentage uses reported by industry to the total 1964 consumption provided by Treasury. The 1965 estimates were projected from 1964 figures. No estimates have been made for 1966; it would be extremely difficult to evaluate changes in the consumption pattern that may result from legislation being prepared for consideration by the Congress. A bill (H.R. 3294) has been introduced by Representative Fino of New York to authorize the issuance of fractional (paper) currency in order to relieve the shortage of coins, as a temporary measure. Another bill, expected to be introduced early next week by Representative White of Idaho, would reduce the silver content of coins. In addition the Treasury Department is preparing a report to the House Banking and Currency Committee which will contain recommendations regarding the minting of coins. The nature of these recommendations is not expected to be known until this report is presented to the committee.

Estimated exports in 1964, based on the average of the first 11 months, show an increase of 216.5 percent over 1963. About 50 percent of U.S. exports during the first 11 months of 1964 went to the United Kingdom.

Consumption of silver in coins also increased greatly in 1964. Preliminary coinage figures show an 81.5-percent increase in 1964 over 1963.

*Silver—Consumption and exports*

[In thousands of troy ounces]

Field of use or end product	1959	1960	1961	1962	1963	1964	1965 (estimated)
Batteries.....	3,500	3,500	5,000	6,000	6,200	9,000	10,000
Brazing alloys and solders.....	10,500	10,500	11,000	13,000	13,000	15,750	17,050
Dental and medical.....	4,800	4,800	4,900	5,000	5,100	5,200	5,300
Electrical contacts and other electrical uses, electronic components.....	20,500	19,500	24,000	25,000	26,000	30,275	32,275
Mirrors.....	2,950	3,000	3,100	3,100	3,100	3,100	3,100
Missiles.....				1,000	200	1,000	1,000
Photographic film, plates, and sensitized photographic paper.....	30,750	31,700	32,300	33,300	33,300	40,300	43,650
Silverware and jewelry.....	28,000	29,000	25,000	22,000	12,000	22,500	22,950
Miscellaneous.....			200	2,000	1,100		
Total industrial use, domestic.....	101,000	102,000	105,500	110,400	110,000	127,125	135,325
Coinage, United States.....	41,400	46,000	55,900	77,400	111,500	203,000	235,000
Exports (excluding coinage).....	9,180	26,593	39,828	13,047	31,485	109,395	100,000
Grand total.....	151,580	174,593	201,228	200,857	252,985	439,520	470,325

NOTE.—Figures in last 2 columns revised as of Apr. 6, 1965.

Source: Miscellaneous Metals and Minerals Division, Business and Defense Services Administration, U.S. Department of Commerce, Jan. 27, 1965.

Mr. DOMINICK. Mr. President, these statistics are broken down into estimated uses by category but do not show what portion was used in each category by industrial nongovernmental users and the Federal Government except use for coinage. However, in conversations with the Office of the Secretary of Defense they have given me estimates of their uses in these various categories. According to their rough estimates, their yearly requirement is approximately 27 to 30 million ounces per year or roughly 20 to 25 percent of our total industrial consumption excluding coinage and exports. Most important of all, these estimates do not take into account any type of national emergency or national mobilization. The amount of silver that \$ 813 would set aside, 500 million ounces, would insure a ready supply for defense purposes for at least 15 years if present estimates hold true. However, as I have already pointed out, a national emergency or some type of crisis could cause this supply to be exhausted much sooner. There is no magic about 500 million ounces but it does seem imperative to provide at least an adequate amount for the next 10 years to be used for national security purposes. This would be in line with the recommendations of the Department of Interior, Bureau of Mines, made last year.

At this point we are still not sure what, if anything, the Treasury Department will recommend to Congress. The enactment of S. 813 seems to be the least of what we can do to prevent this serious silver crisis.

[From Congressional Record, Jan. 28, 1965]

PROPOSAL TO SET ASIDE NOT LESS THAN 500 MILLION OUNCES OF SILVER AS A RESERVE FOR NATIONAL DEFENSE PURPOSES

Mr. DOMINICK. Mr. President, I send to the desk a bill for appropriate reference. The bill would direct the Secretary of the Treasury to establish a reserve of at least 500 million ounces of silver for national defense purposes.

Mr. President, I request that the bill lie on the table until the close of business on Tuesday next for additional cosponsors.

I have a feeling that the bill is extremely important. I should like to make only a few observations in relation to it.

First, in 1963 the United States used 110 million ounces industrially and 111,300,000 ounces for coinage or a total of 221,300,000 ounces. During that same year other countries used 137 million ounces industrially and 60,900,000 ounces for coinage or a total of 197,900,000 ounces. Thus, total world use of silver in 1963 was 419,200,000 ounces. World production of silver in 1963 was 210,500,000 ounces or about one-half of the consumption. U.S. production accounted for only 36 million ounces of this figure. The Department of Interior has tried to take steps to increase our production. In September of 1964 they increased the percentage of Federal financial assistance from 50 to 75 percent of the total cost of new private silver exploration ventures. But most experts agree that this will not begin to stimulate enough increased production to help the situation. Figures for 1964 are not yet available but generally consumption has greatly increased while production remains fairly constant.

Second, we are experiencing a serious silver coin shortage. As a result, both of the mints are working on a 24-hour basis. The Denver Mint continues to carry the major burden while plans are completed to build a new mint in Philadelphia. Last year the Congress directed the Treasury to mint some additional silver dollars but to date none have been minted.

Third, in 1963 Congress passed a law repealing the Silver Purchase Act and providing for the redemption and eventual retirement of all silver certificates. Many of us, particularly those of us from the Western States, opposed this move for we saw it as a convenient method for the Treasury to depress and control the market price of silver. Our worst predictions have come true and silver continues to flow out of the Treasury to industrial users under the guise of redeeming silver certificates. Latest available figures show that over 60 million ounces have in effect been "sold" for this purpose and the end is not yet in sight. In fact, the Treasury, in its frenzy to keep the price down, has been exporting silver over the past year at a rate greater than our imports. In January through July of 1964 we imported 32,103,664 ounces and exported 32,172,130 ounces. Thus, at a time when we need silver so desperately, we exported 68,466 more ounces than we imported.

Fourth, an adequate supply of silver is necessary to our defense effort and these needs have greatly expanded. A special study conducted by the Bureau of Mines at the direction of Secretary Udall recently concluded: "New uses for silver in solid fuel rockets, supersonic jets, and special use batteries, added to conventional strategic uses, make any shortage of silver a potential threat to national security."

The bill that I am introducing directs itself to the factor involving defense needs. A potential threat to the national security is of utmost importance and should not be taken lightly. At the present moment it is estimated that we have about 1.1 billion ounces of silver remaining in the Treasury. It now appears that another round of speculative buying has begun. It has been reliably reported that most of the 64 million ounces sold by the Treasury in October and November of 1964 went to speculators who are looking for a price increase. This further contributes to an already shaky situation. At this point we do not know what the Treasury proposes to do. We hear rumors that they will call for a reduction of silver content in our coins or perhaps a complete removal of silver.

Amid all of the speculation and rumor, one fact remains clear, we must first provide a reserve of silver sufficient to take care of minimum defense and national security needs. My bill would do simply that.

I ask unanimous consent that the bill be reprinted at this point in the Record. Mr. President, in this connection I made a speech before the American Mining Congress in September of last year. I ask unanimous consent that the speech and the bill be printed at this point in the Record.

The ACTING PRESIDENT pro tempore. The bill will be received and appropriately referred; and, without objection the bill will be printed in the Record, and remain at the desk as requested by the Senator from Colorado, and the speech to which the Senator has referred will be printed in the Record.

The bill (S. 813) to direct the Secretary of the Treasury to establish a reserve of at least 500 million ounces of silver for national defense purposes, introduced by Mr. Dominick, was received, read twice by its title, referred to the Committee on Banking and Currency, and ordered to be printed in the Record, as follows:

"S. 813

*"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Treasury shall maintain the ownership and the possession or control within the United States of not less than 500,000,000 ounces of silver as a reserve for national defense purposes. Such silver shall be in addition to any other silver which the Secretary is required by law to maintain, and shall be available only to meet military and other defense requirements in accordance with such terms and conditions as the Secretary, with the approval of the President, shall by regulation prescribe."*

(The speech referred to is as follows:)

SPEECH OF SENATOR PETER H. DOMINICK, AMERICAN MINING CONGRESS, PORTLAND, OREG., SEPTEMBER 14, 1964

Mr. Chairman, colleagues, ladies and gentlemen, it is always a pleasure to have the chance to meet with those men and women whose daily business activities fall into the highest of all categories, productive creativity. Without the development of our natural resources, from water to uranium, this country, and in fact the world, would still be existing in the Dark Ages. It is a privilege for me to have the opportunity of discussing with you some problems of your industry which daily become more difficult to solve as we seem to continue the trend toward an all-powerful Central Government.

I am reminded of the problem of the patrolman who watched a covered pickup truck slowly descending a mountain road. Every 100 yards the driver would stop, get out, pick up a stick and beat on the side of the truck. The actions were so bizarre that the officer went over, stopped the driver and checked his license and registration. Everything seemed in order and he was about to let the truck go when the driver picked up a rock and heaved it at the side of the truck. The officer, admitting that it was none of his business, said, "Would you tell me why you are beating up your truck in that way?" The driver replied, "Well, it is not really your business but I will be happy to tell you. I have a 1½-ton truck here, 3 tons of canaries in it and I have to keep half of them flying all the time."

Now, it strikes me that the Federal Government instead of trying to keep half of you flying all the time has been going out of its way to prevent half of you from flying. In every mining field there are constantly increasing Federal controls over your activities.

Let us just outline a few. In the lead-zinc field, continued State Department pressures have prevented passage of realistic legislation to cut back import quotas and provide support for the domestic industry. As a result, the country becomes more and more reliant on foreign supplies.

In the gold mining field, constant and fierce resistance has been expressed by the executive departments of the Federal Government to all efforts to explore programs to revitalize the gold mining industry. Opposition has been sharply expressed even to holding hearings on the problems and as a result, no legislation has been possible.

In the uranium field, the Government entered into long-range contracts to purchase concentrate from South Africa and Canada. Then it provided economic exploration stimuli for U.S. production and very soon we had enough supplies in this country to supply foreseeable needs.

At that point the Federal Government started cutting back on domestic uranium procurement, limited milling contracts, and decimated the domestic uranium

mining industry while leaving a few companies in a position to stay alive perhaps long enough to enter the private industrial field. In the meanwhile the foreign contracts were stretched out and we continue to buy foreign uranium concentrates.

In the shale oilfield the Interior Department has created more complexities than a Philadelphia lawyer could invent. I have just attended the reopening of the Rifle oil shale facility for research and development of this fabulous natural resource, the reopening representing the culmination of years of intensive effort by legislators and private industry against an array of Federal executive opinion. But this reopening, while a significant step forward, is only the first of a series of steps that need to be taken. The Solicitor's office has raised a myriad of problems with respect to patent applications on oil shale lands. Recent decisions of the Department, in fact, raise questions which might well deter even the most resolute from trying to establish a valid discovery in any type of mineral. It now seems to be their position that no mining location can be patented unless the applicant can prove that the mineral is commercially profitable at the very moment of the decision. The fact that it might be a valuable mineral in the ordinary sense of the word, or that it might have been commercially operable a month before presentation or might be commercially operable 1 month later with an anticipated change in price or technology is apparently not enough. This, of course, affects all minerals but is even more pointed when directed at oil shale where commercial development has not yet occurred. In addition, despite a horde of suggested rules and regulations submitted to Interior at its request by private industry and educational research groups, no visible progress has been made in developing programs for leasing of public lands for oil shale research and development.

Without trying to detail all the problems, which are probably better known to you than to me, I do want to outline for you what can only be called a crisis—to put it mildly the silver situation is a mess. The industry has been urging the Treasury for more than 3 years to develop programs to handle the problem but to no avail. It affects every person who wants to get a cup of coffee, a coke, or a pack of cigarettes from a vending machine. It affects the manufacturers of photographic equipment, batteries, and other items to which silver is an essential ingredient. It affects our dollar bills, our banks, and our national defense. It has been tentatively discussed by Treasury officials and some witnesses for industry before the Senate Banking and Currency Committee and the House Committee on Government Operations. It has involved the Federal Reserve System in disputes with its own members and has led to a flurry of activity in the mints.

The confusion is so great that it reminds me of the apocryphal story of the Italian general in World War II. After a disastrous battle he stood on a hill with his aide and saw troops streaming over the countryside in all directions. He turned to his aide and cried, "Where are they running? Where are they running? I am their leader and must run in front."

The law of supply and demand and the efforts to avoid its effect are certainly key factors in the situation. A few figures will make this crystal clear.

As of the end of 1963, consumptive demand for silver is estimated as follows in million ounces:

	United States	Other countries	Total
Industrial.....	110.0	137.0	247.0
Coinage.....	111.3	60.9	172.2
Total.....	221.3	197.9	419.2

Against these totals production for the same period is estimated at:

United States.....	36.0
Other countries.....	174.5
Total.....	210.5

From this you can see that total world production in 1963 was 11 million ounces less than U.S. demands alone and approximately one-half of total demands. In

addition, you will note that U.S. silver production was about one-sixth of U.S. consumption.

To offset this imbalance the United States had a major supply of silver, located at West Point and San Francisco, estimated at the end of 1963 to be 1½ billion ounces. Obviously, this amount even at the noted rate of depletion would suffice for a considerable period of time but as anticipated by many industry leaders and legislators, consumptive pressures have risen sharply and changed the picture.

As we all know silver coins in the United States have become more and more scarce. It has been necessary to offset this with crash programs to provide more pennies, nickels, dimes, quarters, and half dollars. New presses have been dug out of Defense warehouses, contracts have been given by the mint to private suppliers for the necessary metallic strip, and productive capacity of our two mints had been sharply increased. It is estimated that by the fall of 1964, U.S. coin production will have tripled over the comparative period of 1963. This, of course, is a necessary and highly commendable effort by the mint officials to meet the needs of all Americans. At the same time it can be seen that our use of silver for coins will increase at a tremendous rate and there is every indication that the need for this increased use of silver for coinage will continue.

In April 1964, the Treasury informed me that for the 10-month period, June 1963 to April 1964, 91 million ounces of silver had been set aside for coinage and added that there was on hand sufficient silver for coinage requirements to 1972. Once again, as anticipated and noted above, the demand has far exceeded the hearing estimates.

In 1963, the Silver Purchase Act was repealed and provision made to retire all \$1 silver certificates and replace them with Federal Reserve notes. Silver certificates in bulk have been presented to the Treasury for silver bullion and for the period June 4, 1963, to April 2, 1964, the Treasury has informed me that \$215.5 million worth of silver certificates were redeemed.

At that time there remained outstanding \$1.9 billion of silver certificates and redemptions of these continue at an accelerated rate.

These pressures in turn have steadily increased the silver price on the open market until it threatens to break through the silver value of \$1.29 in a silver dollar. If the price should push as far as \$1.38, approximately equal to the silver content in lesser coins, considerable fear has been expressed that all U.S. coins will be melted into silver bullion and drive coinage wholly out of circulation.

Hence, the Treasury releases silver from its supply in amounts approximately equal to silver certificates returned to the Federal Reserve system and to date has held the price to \$1.29-plus to protect its coinage.

From this brief summary you can see that we have a mess. The law of supply and demand wants to raise silver prices substantially. The Treasury releases have prevented this. The time is not far off when Treasury supplies will not be sufficient to hold the price and supply silver for coinage. The vending companies want to keep present coinage as their machines use them at annual rate of \$3.2 billion. Industrial users want to continue to get silver at cheap prices. Producers recognize that silver output cannot be substantially increased without a substantial price rise.

The situation at the moment can only be compared to an overheated pressure cooker with a blocked release valve. Everything is cooking but no one has yet turned off the flame or rigged a substitute relief valve. Reliable estimates now indicate that the whole matter will explode in or before 1966 unless solutions are found.

Some of your industry have been working hard on the problems and various trial balloons have been floated by the Treasury. These have ranged from doubling the monetary value of existing coins, to calling back all existing coins and replacing them with nonsilver alloys. The former would automatically increase silver prices to the users and, hence, is being resisted strenuously. The latter would involve not only opposition from the vending companies which would have to revamp all their machines at enormous cost, but the political reaction of the American people to demonetization, particularly by an administration which has often been termed fiscally irresponsible.

I suggest that a number of solutions to the silver problem are feasible.

We need silver for defense. Then let's set aside within existing Treasury supplies an amount sufficient to meet these needs—perhaps 300 to 500 million ounces.

We need relief for our coinage. Perhaps this could be worked out with less capital dislocation to industrial users by issuing a new series of coins in 20, 30, 40,

and 70 cent pieces containing a lower silver content. Sooner or later under Gresham's law these would drive out existing coins but it might give needed time relief by letting silver prices rise to stimulate production without introducing nonsilver coins.

I do not pretend to have a pat solution for all of these problems but there are some facts which stand out.

Production of silver is artificially low because of governmental restraints on the operation of the law of supply and demand.

Production of lead-zinc is artificially low because of governmental insistence on improving the economy of other countries.

Production of gold is artificially low because of governmental enforcement of a 1935 price setting order.

Production of oil from oil shale is being sharply hampered because of governmental legal and policy restrictions.

As a result of these governmental policies, the mining industry has been forced into programs calling for subsidies and the creation of artificial markets for its products. I know that you do not like this, but you have been forced to agree in many cases in order to survive, even on a limited basis.

The American mining industry has an astounding resilience. My faith in it leads me to believe that these problems can and will be solved. Almost all solutions will require some kind of Federal legislative action or the pressure cooker will explode. Needless to say, I look forward to working with you in finding these solutions.

Senator DOMINICK. Mr. Chairman, I know how the committee has been faced with a really serious problem in the last 3 years, probably as important as anything that any committee has considered.

I had the pleasure of serving with you for 2 years on this committee, and, unfortunately, I am not on the committee now, but I can say that never probably has the committee been faced with so many problems in connection with our dollar and our money as we have had in the last 3 years.

There is not only the question of reducing our gold reserve behind our Federal deposits, but you will recall that we had the situation where we were trying to decide what mints to increase in order to increase our coinage.

And then we came into the problem of what we were going to do, if anything, about the overall silver problem.

Every single time that we had this problem with silver—and many, many of the times when we were discussing the gold reserves—we were talking about the law of supply and demand. And the chairman I know is as much an advocate of this as I am, but it strikes me that this bill, this particular legislation that we have got now, completely fails to deal with this issue.

The Treasury refused to deal with it in 1963 when we had the hearing and again in 1964.

Because if we are going to be able to supply the demand for silver, the only possible way that you are going to be able to supply it is to give an incentive for further production of silver. And you can't possibly give that incentive as long as you are going to keep the price down on silver.

So I want to say, first of all, Mr. Chairman, that it strikes me that there are two or three provisions in this bill which the committee should wrestle with to try and solve this overall problem.

First, it strikes me that we should, in view of the continuing loss of our silver supply, build in as part of this legislation a national reserve for defense purposes as a stockpile of silver.

Now, the Office of Emergency Planning has just a few days ago come out with a recommendation for 165 million ounces to be set

aside as a reserve. Earlier this year I introduced a bill for 500 million ounces to be set aside.

I don't think there is anything magic about the 500 million ounces. I don't think there is anything magic about the 165 million ounces. But it does strike me that in the interest of the national defense, where this silver is being used in our defense mechanisms of all kinds, we should build into legislation, instead of just leaving it to the executive discretion, some set amount of silver for defense purposes.

And if the committee decides this is 165 million ounces, I wouldn't complain too much, and I don't think the rest of us would, although this does not take in necessary supplies in case of any national emergency.

Now, the second thing it seems to me that the committee should wrestle with, Mr. Chairman, is the need in my opinion at least for establishing criteria under which the proposed ceiling on the price of silver will be removed.

At the present time the Treasury has stated that it is going to release silver at \$1.29 in order to keep the price of silver from going up. Their theory is that by so doing that we are going to prevent the melting of silver coins already in existence.

Now, the only problem with this is that they have already got a prohibition of a \$10,000 fine and up to 5 years in jail for anyone who melts existing silver coins. And this is proposed in the legislation.

It strikes me that if we keep that in and if we keep on saying that we are going to release this Treasury silver to the industrial users throughout this country, that we are going to find ourselves in a position very shortly, and probably within 2 years, where the Treasury supply has been exhausted even with the new coins, and where we have a ceiling on, and where the miners have made no attempt to try and do anything about development of new silver supplies solely because they can't afford to go in and develop and explore on that kind of a basis.

Now, you cannot, as I say once again, tinker with the law of supply and demand the way we have been doing for so long and expect that you are going to get any increased supply as long as you hold a lid down on the price.

This is just as important to the industrial users as it is to the western producers, because they could easily find themselves caught at the end of 2 years with no more silver in the Treasury and no more silver being produced and a tremendous demand for it and the price going completely out of sight.

This is going to be just as bad for them as it is for anybody else. Whereas if we give a lead time of approximately 2, 3, or 4 years, whatever it may be, for the purposes of trying to get production increased as far as silver is concerned, we can minimize this overall problem.

Now, there is a third problem with the existing bill, and I think this should be brought up. This is maybe a private phobia of my own. But as I read this bill, section 5 at the present time gives to the Secretary of the Treasury the right to go ahead and impose criminal sanctions for violation of rules and regulations which he will promulgate in the future.

Now, this, to my thinking, not only has constitutional objections to it, but it is not quite the correct way for Congress to legislate.

If we are going to make something a crime, we ought to outline what that crime is, as far as Congress itself is concerned, and not leave it up to the discretion of the Treasury.

Now, Mr. Chairman and members of this committee, I am not going to try and take up too much of your time here, but once again may I please reiterate and reemphasize the fact that we are dealing with a basic situation of supply and demand in this silver problem.

At the present time the United States without use of coinage is producing only about one-fourth of the domestic U.S. demand. The entire free-world production is half of the free-world demand, and it is less than the entire U.S. demand all by itself—the free-world supply.

Now, it seems to me apparent that under this, even if you cut out the silver being used in coinage entirely, which, of course, I oppose, but even if you did that, you are still not going to have enough silver to take care of this demand, and all of a sudden we are going to find ourselves out of silver and with no particular program in advance to try and do something about increasing the silver supply.

The only thing that could happen at that point in order to take care of the silver would be for the Treasury to suddenly say, "Okay, we're going to take the ceiling off and go ahead and melt the silver in the coins," because this then will be the only remaining supply of silver that there would be available, and at that point the scheme of the Treasury, whereby we are going to have the two classes of coins working together and in the market at the same time, which I don't think is going to work anyhow, certainly won't work at that point because people are going to be melting the coins down in order to get this extra I think it's 2 billion ounces of silver which can be obtained from coinage, which will then be out.

So I would implore this committee to try and establish criteria at which time the Treasury Department will be required to lift this ceiling when they have these other coins out in circulation when the demands of the people for coinage will have been satisfied with the new coins and where you can at that point give an opportunity for those who are producing silver to go in and develop new supplies in order to take care of this demand.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator. We are pleased to have your statement.

The Chair wishes to call attention to the fact that the proposal for stockpiling silver is in another bill, which will not be considered at this time, but we recognize they are all important matters. We thank you very much.

The Chair had arranged hearings with the Secretary of the Treasury being the leadoff witness because no Senator had asked to appear. Then six Senators asked to be heard. I notified the Secretary of the Treasury we would give the first 30 minutes to the Senators and he would be heard at 10:30.

I don't want to unduly limit the next witness, who is our distinguished friend from Nevada, Senator Bible.

Senator DOMINICK. Mr. Chairman, before Senator Bible does that, may I just say a word on this? We did a lot of exploration with the Defense Department in connection with the bill on this stockpile of

silver, and we were in constant touch with them. I don't mean to be testifying prior to the Secretary on this, but his estimate of national needs without a national emergency was between 27 and 30 million ounces of silver per year.

So it seems to me that with the silver going out like it is, like water going downhill, that we have got to establish something and that this would be a good spot for this committee to take action on it.

The CHAIRMAN. That proposal is not in the bill before us today but we may act on it at some later date.

Thank you very much.

Senator Bible.

#### STATEMENT OF ALAN BIBLE, U.S. SENATOR FROM THE STATE OF NEVADA

Senator BIBLE. Thank you very much, Mr. Chairman, and members of the committee.

I certainly appreciate this opportunity of having a few moments with you today.

I would hope that there are opportunities of fully exploring the bill within the committee.

I have a rather lengthy statement which I will ask to be inserted in the record in full and simply try to highlight that.

The CHAIRMAN. Without objection.

(The prepared statement of Senator Bible follows:)

##### PREPARED STATEMENT OF SENATOR ALAN BIBLE

Mr. Chairman and members of the committee, thank you for the privilege of appearing before your committee today. It is my judgment that the bill before you, S. 2080, to provide for the coinage of the United States, is one of the most important pieces of legislation which will confront the Congress this session.

While it was necessary for me to postpone hearings of my own Interior Subcommittee to make this appearance, I was happy to do so, and I am only hopeful that your distinguished chairman will recommend an extension of the hearings. This is a subject of great importance and one which should not be treated lightly.

It was not possible for me to read the hearings of the House committee on this legislation for, as all of you know, they were not concluded until yesterday afternoon. Other Senators are faced with the same situation.

I do not feel that this bill raises only one major issue, namely whether it should be passed as recommended by the administration, but that the major difference is the advisability of reducing silver in the half dollar from 90 fineness to 40 fineness, with the balance of our coinage being minted out of different minerals.

This is a highly complicated subject and I will attempt in the time allotted to me to present my views. I sincerely believe they are worthy of your committee's close study and attention.

On May 21, I introduced S. 2012, to prohibit certain practices which I considered created artificial shortages in the supply of coins to our citizenry. On May 24 this bill was reintroduced as S. 2036, and others have joined me, including our distinguished majority leader.

I believe when we have important decisions to make in order to correct injustices and imbalances, such should first be examined and attacked primarily at the base or root. There are sometimes many possible solutions. I do not believe, however, that the Treasury Department's recommendation for a change in our coinage is a realistic one. In my opinion, it will compound our troubles.

Let me explain. The Treasury and the Mint have been faced with a nationwide coin shortage for nearly 2 years. True, it has been improved as witnessed by May reports of the Federal Reserve System. Nevertheless, we are told that a shortage still exists.

I said on the floor of the Senate that the Treasury had been making policy with a flip of the coin. I am not trying to be facetious. I am dead serious. Only 2 short years ago in May 1963, the Congress repealed the Silver Purchase Act. Only 10 Members of the Senate objected. I was one of those who pointed out that if we repealed the act certain safeguards should become mandatory. The bill roared through like a Kansas cyclone, but the needed safeguards have not been taken.

S. 2080 is geared for similar action, if I am any judge of velocity.

At the time of the repeal of the Silver Purchase Act, the Treasury was in a quandry. It wanted simply to replace the silver certificates with Federal Reserve notes in order to preserve our silver and to obtain a realistic price on silver—one which would not fluctuate. We were told if we could stabilize the price of silver that the Treasury would have supplies which would last for a period of 10 or 12 years which would in turn maintain our coinage system which has not been changed since before the year 1800. Now, over 170 years later, we are asked to change the system which has served our Nation so well, simply because the officials of the Treasury Department who 2 years ago were wrong have again decided they have the answer. They are wrong again.

Our coinage system has been predicated on the theory that our coins should contain sufficient silver for over 170 years.

Is it necessary to change all of this in less than a month simply because the Treasury has again come up with a "magic" formula?

We all know they sought the advice of outside experts. They have initiated a study which took them nearly 2 years to complete and after many delays they finally reached a decision, and the Congress is asked to act expeditiously on these recommendations. I, for one, will not be a party to this type of policy.

If we have a shortage of certain coins, is it a real one? I do not consider it a real shortage. It is an artificial shortage caused by manipulation, and a disgraceful run on the silver dollar, compounded by the minting of a commemorative coin in honor of our late President which I must confess was an act of the Congress and one which no one, including myself, believed would cause any real dislocation in our coin supply. These two basic problems fed on each other until every bag and roll man in the country was busy picking up silver coins and hawking them to the public at prices far beyond their monetary value. The artificial shortage fed upon itself.

If this committee and the Congress wants to alleviate this silver coin shortage, all that has to be done is to pass legislation which will force coins back into normal channels. The employees of the mint could go on a long vacation, for, after all, while the mint has done a tremendous job in the last few years, it actually plays a small, infinitesimal part in keeping our coinage in circulation, and with all of its manufacturing facilities, the more important figure is the large number of coins which are considered to be in circulation. I do not have these figures, but they are in the billions.

I am sure the chairman of this committee can tell us all exactly how many nickles, quarters, dimes, and half dollars are in circulation, or I should say, should be in circulation.

Just last week, I was told by one of the leading coin dealers in Nevada that if the Congress displaced our silver coins with another coin of a different metal, all the dimes, quarters, and half dollars, containing the historic amounts of silver, would disappear in short order. The bag and roll boys will again be lining up at the windows of every bank in this country, eagerly awaiting an opportunity to make a profit on coins which they will, in turn, dispense to the public at a profit.

I believe this.

Did not the Secretary of the Treasury tell us in 1963 that we had a 10- to 12-year supply of silver to meet our coinage needs?

Did not he tell us that by freeing the silver certificate and issuing Federal Reserve notes that this would insure this supply?

Did not at one time he permit the disgraceful performance of allowing armored trucks to back up to the Treasury and let the speculators and hoarders literally help themselves to our then ample supply of silver dollars? This Nation had not minted silver dollars since the 1930's—and we in the West and elsewhere have had an ample supply of silver dollars. Overnight they disappeared. Houdini never performed a magic trick that equaled this disappearing act.

What happened to the 400-million-plus silver dollars in circulation? Does this committee for 1 minute think we will solve our coinage problem by substituting another metal?

Is it not realistic to believe just what my constituent has told me—that the silver coins will sell at a premium?

I am dead serious—I think it is a travesty that our commercial channels of trade are without certain coins—yes, even today some business houses are faced with a real shortage of certain coins. We are the greatest manufacturing country of all and we can't even keep up with the speculators and hoarders—can't meet their demands—for we have not used good common horse sense.

I have had numerous conversations with Treasury officials. Over a year ago I wrote to Chairman Martin of the Federal Reserve Board and voiced my concern. I made a simple request that he check with the heads of his 12 banks and its member banks and consider the feasibility of an administrative order forbidding the lending of money against coins. His reply simply stated that he would discuss this subject with his people and that after this discussion he advised me it was his and their belief that they could discourage such lending practices.

Well, they still exist.

I pointed out on the floor of the Senate last month, that one bank in California had loaned over \$1 million to a customer and secured the loan by silver dollars in its vaults, and the bank officials were quoted as saying they would be happy to make similar loans. These were not rare dollars; they undoubtedly were some which the speculators secured at the Treasury.

I am not fighting the cause of the silver dollar today. It is a deeper problem with which I am concerned—for we have a shortage of half dollars, we have a shortage of dimes, and we have a shortage of quarters. Yes, we even have an artificial shortage of nickels, and this coin does not have any silver in its content.

Why?

The answer is simple. The artificial shortage has fed upon itself. Oh, yes; there are those who say we are in the vending machine era—this business is large, admittedly so, but it did not grow in the past 2 years to this extent.

How much thought has been given to increased production of coins by the mint as compared to the increase percentagewise of vending machines? These figures are available.

Did not the advent of vending machines, sales taxes, toll bridges, etc., take place many years ago? Why did this shortage of coins not occur earlier?

Now, we can't stop what has happened in the past, but we can face our present problem foursquare.

We can pass legislation which will prohibit some of these practices and that is the reason I offered my bill. It will do a few simple things, and I believe it is worthy of consideration of this committee.

S. 2036 will prevent melting coins. It will stop the practice of banks using coins for collateral for loans. It will prevent the exportation of coins.

The Secretary of the Treasury will be charged with publishing a list of rare U.S. coins of value from time to time in the Federal Register. This can be improved upon by appointment of a commission made up of people who are knowledgeable in this business to advise on values.

Admittedly, it will take its toll of bag and roll men. I personally believe it should. I have had favorable comment from those who believe selling silver dollars by the bag and ton (and they have advertised them in this manner and are doing so today) is a national disgrace.

Our coinage system was not devised for this purpose.

There is no need for the exportation of our coins. This will make some contribution to our Treasury's silver stocks.

Should we not prohibit the melting of coins? Again this may be hard to police; however, we have a statute which prohibits defacing the coin and this must also be hard to police. It will be a deterrent.

We must know that those who are using silver dollars and other coins which are not rare for bank collateral on loans, are in the large majority, betting on an increased return by pure and simple speculation. My bill would exclude rare coins again in this particular section.

I would like to make one more suggestion that this committee consider amending title 31 of the United States Code, section 405 A-1 to prohibit the use of silver dollars or silver bullion by the Treasury for the redemption of silver certificates.

In the President's message, he stated we had 1 billion ounces of silver in the Treasury. This is the world's largest stockpile of silver. However, we also have over 900 million silver certificates in circulation, which, as all of you

know, are redeemable at the Treasury or its assay offices in New York and San Francisco for a dollar's worth of silver dust.

We can still permit our citizenry to use the silver certificate as legal tender in exchange for coins and Federal Reserve dollar bills or larger denominations when presented in multiples.

I suggest we only prohibit exchanging silver dollars or silver bullion for the silver certificate.

We were told in May of 1963 that this would be a difficult task as no one would bundle up a large amount of silver certificates and present them for silver bullion. This would be too cumbersome. It would not be reasonable to anticipate such action by our citizenry.

Nevertheless, during the year 1964, according to the American Metal Market, a leading trade journal, 141,272,068 ounces were redeemed in this fashion while 25,613,178 cartwheels were also redeemed. I have no doubt such redemption will increase if we do nothing.

In fact, figures in the same June 3, 1965, issue of American Metal Market showed that the increase had developed and at the end of April nearly 50 million ounces of silver had been redeemed. If we continue at this rate, over 200 million troy ounces of bullion will be redeemed.

If my suggestion is given consideration, I believe we should provide for Government agencies to still draw upon our bullion at the Treasury.

We all know that silver is a vital commodity in our defense effort.

At the time of the repeal of the Silver Purchase Act, we were told 1.8 billion silver certificates were outstanding. Over half of these have been redeemed in one way or another in 2 years. The April Treasury statement, as I stated, showed slightly more than 900 million certificates outstanding.

I believe there is precedent for this action. Did we not, in the early 1930's call in our gold certificates and exchange them for other legal tender?

Mr. Chairman, I believe the majority of our citizens like money which has an intrinsic value. They surely must because silver coins are disappearing. This disappearance will be accelerated if we change our coinage system to include other metal.

One billion ounces of silver in our Treasury will buy time. It may not buy 10 or 12 years as predicted by Treasury officials in 1963, but it will buy time.

Now we get to the next phase, the so-called shortage of silver. I contend the silver will come out of the ground when we get a realistic price. Figures presented to the American Mining Congress show that an increase is predicted of nearly 50 percent in the next year. We have information that the largest silver discovery in many years was made just a few months ago in Ontario and that over 200 million ounces of high-grade silver are now blocked out by a major company. We have a number of promising discoveries in the silver State—Nevada. I anticipate more.

Just a few years ago there were those who said we did not have uranium. They said we did not have tungsten. The miners disproved these predictions, for when our Government offered a bonus for uranium discoveries we soon had uranium in excess of our needs. We mined and have reserves enough today to supply the free world in tungsten just out of the State of Nevada, yet we do not have one operating tungsten mine.

New methods of prospecting have accomplished wonderful things. Just 2 weeks ago I witnessed the processing of gold in Nevada from a new discovery located by new geological methods. This mine has reserves blocked out for 10 years of profitable operation at the very low price of \$35 per ounce for gold. The mine operated and owned by one of our leading companies, Newmont Mining Co., is the second largest in the United States and fourth largest on the North American Continent. It will contribute greatly to our needed gold reserves.

Yet there are those who believe we have no major gold deposits in this Nation.

Mr. Chairman, and members of the committee, you have been patient. I beg of you to slow this hearing and to request additional information from all sources. We will not solve our coinage problem with the bill which is before you. We can solve it by the other methods which I have suggested.

I sincerely trust that you will have your staff experts develop all the information available before you reach a final decision as to what to recommend to the Senate.

In summation, Mr. Chairman, I urge this committee—I plead earnestly with this committee with my fullest force and sincerity—not to act hastily. Congress

cannot fulfill its responsibilities if it rushes through in a matter of days an issue that has been building for years.

We will be making a serious mistake if we simply stamp congressional approval on this proposal.

There have been my own proposals:

First, and most important, we must maintain at least a portion of silver in existing silver coins. We must keep silver in our dimes and quarters as well as our half dollars and dollars.

Second, we must enact laws to halt hoarding and speculating in silver and silver coins, including bans on melting down and exporting silver.

Third, we must protect our Treasury silver reserves with a stockpile for defense and a revision of silver certificate redemption policies.

Fourth, we must combat the overall silver shortage by favoring realistic methods of revitalizing our silver mining industry.

There are, I am sure, many more proposals. All of them—and I emphasize the “all”—should have full scrutiny and consideration by the Congress along with the legislation now before this committee.

My major recommendation, however, remains one basic plea. It is a plea to resist hasty and perhaps rash and ill-advised action on an issue so vital and so basic to our Nation, its people and its economy.

Senator BIBLE. I think it is extremely unfortunate that we have not had the opportunity of reading the hearings of the House committee on this legislation and finding out some of the issues and some of the problems and some of the answers that were made there.

Be that as it may, it seems to me that we are confronted here with the problem of the major difference in reducing silver not only in the half dollar from a 90 fineness to a 40 fineness but in the balance of the coinage system itself.

I recognize how complicated and complex this problem is, what great difficulty this committee as well as others who have studied it find themselves in. I have spoken out on this problem many times both before this committee and on the floor of the Senate.

I certainly intend to continue to do so.

I am convinced that I was correct in pointing out that when the Silver Purchase Act was repealed just 2 short years ago, without certain safeguards we would find ourselves in very much the situation that actually we do find ourselves in today.

It does seem to me that on a problem as grave as this we should make haste slowly.

Silver has been a part of our coinage system since 1800, and now, over 170 years later, with accelerated speed, we are asked to change this system practically overnight.

I reiterate what I said in my prepared statement: Did not the Secretary of the Treasury tell us not just 2 years ago we had a 10- to 12-year supply of silver?

Did he not tell us that by freezing the silver certificates and issuing Federal Reserve notes that this would insure the supply?

Did not he permit armored trucks to roar down Pennsylvania Avenue and load up with silver coins leading to a diminution of the supply we have there?

These silver coins are of tremendous value.

Just a year ago I wrote to Chairman Martin of the Federal Reserve Board and voiced my concern. I made a simple request that he check with the heads of his 12 banks and its member banks and consider the feasibility of an administrative order forbidding the lending of money against coins.

Now, the Chairman has commented on this and stated he believed that member banks would cooperate in controlling such activity on a voluntary basis.

The bill I introduced would make the melting of coins a crime. I think it will take the toll of the bag and roll man. And I certainly hope that it will be passed without delay.

It seems to me that we must recognize this: The present stock of silver is 1 billion ounces and dwindling every day. I am advised there are 900 million silver certificates in circulation. If those certificates were to be presented they would be redeemed and the bullion stock would disappear.

I suggest that we consider, and I am prepared to offer an amendment on the floor that would prevent the redemption of these silver certificates for silver bullion in much the same way as we handled the problem on the gold certificates.

Nine hundred million ounces is an important reserve of silver, and I certainly don't want to see it dwindle away.

Mr. Chairman, in closing—and I could speak on this at length because I feel so keenly about it—I hate to be a party to the final requiem for silver coinage. I trust this will not be the case and that we can preserve fully, silver in our monetary system.

Figures presented to me by people in whom I have confidence indicate that there will be a great increase in the production of silver, and I believe that with all my heart. My own State just 2 weeks ago had a dedication of the second largest gold mine in the United States and the fourth largest in continental America. It will produce something in the neighborhood under present reserves—and this is just the known reserves—something like 200,000 fine ounces of gold yearly. And we certainly know how important this is.

We likewise have many silver mines that are starting to produce, and at a proper and realistic price they certainly can go a long, long way in assisting in achieving a proper balance between supply and demand.

I believe a silver reserve for defense purposes should be maintained. Whether the figure is 165 million ounces or some other figure I do not know. But certainly we ought to at least protect our defense needs.

And equal to our defense needs are coinage needs.

Mr. Chairman, you are patient, and I appreciate your attention this morning.

The CHAIRMAN. We thank you, Senator. And as the chairman said to the previous witness, we would like to prevent the hoarding of silver dollars, but there may be a serious legal problem involved in a law that would prohibit banks from making loans with silver coins as security so we, with all due deference, would like to know a little more about the legality of it.

Because, for instance, suppose on the theory that we charter national banks and insure State banks, we would move in on them about what they could take as security. They would just transfer the loan to coin dealers. Are we going to make it illegal for a coin dealer to have a silver coin? If we do, we might as well just say, "Well, silver has become a scarce commodity that we will do like we did with gold—make it illegal for anybody to have a silver coin." Then out goes the silver 50-cent piece.

So it's a little, as the man said, "intrick-ate."

Senator BIBLE. We understand this, and we are prepared, as has been stated before this committee, to present amendments on the bill.

The CHAIRMAN. Thank you very much.

Senator BIBLE. Thank you very much.

The CHAIRMAN. The chair asks unanimous consent that all Senators who have not appeared but wish to have statements included in the record may have them printed in the record, and that will include a statement sent us by the Senator from Wyoming, Mr. Simpson; by the Senator from Nevada, Mr. Cannon; and by the Senator from Idaho, Mr. Church.

(The statements, along with additional material subsequently supplied, follow:)

STATEMENT OF MILWARD SIMPSON, U.S. SENATOR FROM THE STATE OF WYOMING

Mr. Chairman, let me at the outset thank you and your committee members for this opportunity to present a statement on a problem of the utmost importance to the people of my State and all the Nation. While I believe the President's message on silver coinage legislation contains important, if belated, recognition of this pressing problem, I cannot conceive of its provisions as offering a long-range solution to the vexing question which ultimately resolves itself into a shortage of silver in the free world.

This problem is not new. More than 18 months ago my distinguished colleague and ranking Republican on this committee, Senator Bennett, noted the impending silver crisis and offered concrete suggestions for a program to meet it. The leadership and foresight of the distinguished gentleman was never more amply demonstrated than in that warning, but how was it received?

It seems that the current administration, using many of the same spokesmen who now ply us with demands for instant action—or should I say reaction—to the President's request for legislation, scoffed at the Senator's warning. They blandly assured the Congress that our present reserves of silver bullion were sufficient to meet our needs in the next 10 or 20 years.

It might be advisable to stop and ask the administration just what titanic happening has occurred in the last 18 months to alter its tune from a balmy assurance to a shrill alarm.

As I have noted, there seems to be general agreement that the underlying problem which necessitates action in this area is a shortage of silver in the free world. Since the end of World War II, the demands of both government and industry have each outstripped our production, and taken together, they have created a vast imbalance between the demand and the combined production of all available resources. The growing deficit has been made up at the expense of the American taxpayer as the Treasury has been called upon to make up the balance by selling its reserve of silver bullion at an artificially depressed price of \$1.29 plus per troy ounce.

Mr. Chairman, I submit that so long as our policies require that the Treasury defend this artificially depressed price at the expense of its silver reserve, there will be no end to this shortage of production. This situation presents the classic case in which we have allowed ourselves to forget the laws of supply and demand.

As noted, the industrial demand for silver has risen and continues to rise sharply. Even were we to ignore the matter of Government consumption for coinage and defense, this demand exceeds production. Yet, with the Treasury committed by law to an unlimited sale of silver bullion at \$1.29 plus per ounce, consumer industry finds it most profitable to redeem silver certificates rather than expend the capital resources necessary to develop additional mining sources which would otherwise be the automatic reaction to the increased pulse of demand. In brief, today we find silver to be a scarce item on the commodity market because we have emasculated the market of price incentives, and so long as we maintain this policy, the pattern for the future cannot be doubted.

Faced with this stark reality, the President's message is sadly deficient in specific proposals, and only slightly encouraging in attitude. While ingeniously satisfying the need for an acceptable metallic content for our subsidiary coins which would not be tied to silver, the message pointedly calls for the continued

circulation of silver coins, side by side with the new coinage. Yet, were this policy effected, there would be continued need for Treasury action to depress the price of silver lest it become profitable for the public to begin melting down the nearly 12 billion outstanding silver coins for their metallic content.

The President's message only gives us a little more time. It removes one demand for silver, thus allowing the Treasury reserve to be stretched for a few more years as a cheap source of industrial silver. Blind passage of this bill would treat the symptom—the present shortage of coins—but leave for future solution the disease: The scarcity of silver in an artificially depressed market.

The inescapable demands of our economy make symptomatic treatment imperative and, for this reason, I am prepared to support the President's proposal. Yet, the longrun health of our economy and vigor of this vital industry make exhaustive treatment no less urgently required. Therefore, it is critical that we focus on title II of this bill and on the proposed Joint Commission on the Coinage for vitaly needed long-range solutions to the problems of our silver industry.

In closing, I should like to note one final omission in the President's program; namely, that of a realistic proposal for the long-term future of the silver dollar. Mr. Chairman, custom and economic activities have decreed that the cartwheel survive as a daily medium of exchange in many of the Western States.

The President's vague promise that future consideration might be given to the minting of a silver dollar consisting of the old 90-percent-silver content would be at variance with the condition of silver shortage that is the motivating factor behind this change.

At the appropriate time, I shall offer an amendment to the coinage bill which will specify that any further minting of silver dollars will conform to the new coinage system by utilizing an alloy consisting of 40-percent silver laminated in identical fashion to the proposed half dollar. Such an amendment would insure that any new minting would be on par with the overall change being worked in the coinage system, add to the prestige of the silver standard bearer for the coinage system, and facilitate that day when a new minting of silver dollars could be undertaken.

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TESTIMONY OF HOWARD W. CANNON, U.S. SENATOR FROM THE STATE OF NEVADA

Mr. Chairman, I appreciate the opportunity to appear before this distinguished committee whose diligence and concern for the silver coinage problem is deeply appreciated by the junior Senator from Nevada.

I have studied the question with which we are dealing with grave concern. Indeed, the Western States have for many years asked for encouragement from the Congress to continue their battle to preserve our domestic mining industry. Silver is largely a byproduct of other metals, but its price and stability is essential to any comeback for mining in this country.

This is more than a nostalgic or emotional appeal to revitalize interest in the old West. It is an attempt today, I believe, to preserve a tradition in our coinage system that has stood the test of time and made the American monetary system the envy of the world. I refer to the silver content of our coins which was established and has remained unchanged since 1792.

Certainly the Senator from Nevada is familiar with the fact that silver production on a world scale is only half of annual consumption and it is true that demands are continuing. I need not repeat that at the present rate of outflow Treasury stocks of silver will be depleted in approximately 3 or 4 years.

Clearly what is needed here is a compromise and not a total and complete debasement of our coinage system. I am firmly convinced that a worthless, non-silver coin will surely drive the present dimes, quarters, and half dollars from circulation by the hundreds of millions of pieces. I need not elaborate on what effect this will have upon confidence in our monetary policies at home and abroad.

What are the alternatives? I will engage in hindsight only long enough to remind this committee that the Silver State Senators have been urging the executive department for many years to concern itself with a program to assure production of silver in our mines whether this be by subsidy, tax benefit, or by applying the "profit" which the Treasury has made from the purchase and sale of silver to the solution of the silver coinage problem itself.

I believe that it is disastrous to go on selling silver indiscriminately from the Treasury and that there must be an alternative to this practice. We are indeed in a precarious position, but I submit that we need time to solve our dilemma.

If the silver content in coins were reduced to 40 or 30 or even 20 percent, it would provide a stretchout for our silver coinage system.

I am thoroughly opposed to the House committee's decision to delete all silver from half dollars.

In his message to Congress the President spoke of a time when the minting of silver dollars could be resumed. I was in the forefront of the congressional efforts which led to the authority recommended by this committee to mint silver dollars last year. If we are to suspend silver dollar mintage, then let us do so for a good purpose. I feel that we can only solve the problem by cutting the silver content for every coin, thereby conserving our silver and applying ourselves with all of the engineering, scientific, and economic skill at our disposal to the overall solution of the silver mining problem. In so doing, we can retain some of the wisdom which motivated the Founding Fathers when they established our silver coinage policy in 1792.

I think this goal can be achieved by amending S. 2080 in a manner which will both recognize the silver shortage and keep faith with our silver mining industry, the time-honored worth of our coinage itself, and the needs of American industry and commerce.

Thank you.

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STATEMENT BY FRANK CHURCH, U.S. SENATOR FROM THE STATE OF IDAHO

Mr. Chairman, for 173 years, most of the life of this Republic, silver has been the heart of our precious metal coinage. Surely that fact alone should cause us to abandon silver in any of our coins only with the greatest reluctance, and only after careful study by the Congress in the face of an overwhelming need for a change.

The Treasury tells us this overwhelming need is the critical shortage of silver. Everyone knows there is a shortage of silver. Members of the Senate and House and leaders of the mining industry have been pointing to this shortage for years. Early this year I introduced a bill, S. 1297, which recognized this shortage and set out to deal with it realistically by reducing the silver content in all coins.

But the Treasury tells us that the present gap between supply and demand is 335 million ounces a year. Yesterday Simon Strauss, vice president of the American Smelting & Refining Co., and Mr. Robert Hardy, chairman of the American Mining Congress Committee on Silver presented testimony during which they concluded that—when silver reclaimed through salvage, inventory levels and other factors are taken into account—the gap is actually 150 to 180 million annually, based on our present coinage system. If S. 1297 were adopted the gap would be narrowed to 50 to 60 million or less.

But even this gap should not be tolerated. Can it be closed? Robert Hardy told this committee that new geological exploration methods should result in huge new lodes which could quickly alter the supply-demand picture. Moreover, yesterday the Bureau of Mines released two publications describing research now being carried out which offers great promise of closing the gap quickly. For example, the Bureau described as "most promising" research disclosing the possibility of improving recovery of byproduct silver from copper ores in Michigan's Upper Peninsula.

In addition, consideration should be given to the tax structure with respect to mining, including the mining of silver, which discourages exploration. At present a mining company must capitalize exploration expenses and thereby delay any tax reduction until a hole is either abandoned or produces. This can take 5 years and often takes 10 years or more. S. 338, which Senator Gruening introduced and which I cosponsor, would remedy this situation, greatly increase exploration without significant loss in Federal revenue, and go a long way toward closing the supply-demand gap of silver.

It is therefore entirely possible that the silver crisis may soon pass. If it does I have no doubt we will regret eliminating silver from the dime and quarter. Public acceptance of the new coinage will be a grudging one at best, for—to cite just one instance—who can feel confident with a monetary system in which a small coin, with less intrinsic value, is supposed to be more valuable than a large coin with more intrinsic value? And yet this will be the situation with the dime and the nickel.

So I suggest that we can safely reduce, without eliminating, the silver content in our coins and still overcome the silver shortage. This would retain a coin

with intrinsic value and the public confidence that has gone with it for 173 years. At the same time, we should now take steps to increase silver exploration and production that have for too long been delayed.

At the very least the President's recommendation to retain silver in the half dollar should be upheld. Retention of the half dollar would at least provide the public with a coin which has the ring and feel of a great nation's coinage.

U.S. SENATE,  
COMMITTEE ON THE JUDICIARY,  
June 9, 1965.

HON. EDMUND S. MUSKIE,  
*U.S. Senate, Washington, D.C.*

DEAR ED: In connection with the Banking and Currency Committee hearings and markup today, on the President's bill (S. 2080) to repeal or reduce the requirements for silver in our coinage, I would appreciate it very much if you would offer an amendment in my behalf.

Actually, I think a number of our New England colleagues, especially from Connecticut, Massachusetts, and Rhode Island, would like to see the change I propose put into S. 2080. But because of the shortness of time, I understand the markup is scheduled for later this afternoon, I have not had a chance to discuss it with them.

As you know, the President recommended that in the future dimes and quarters not contain any silver. And he further recommended a decrease from 90 to 40 percent in the silver content of half dollars.

The amendment I am asking you to offer would fully repeal the silver requirement for half dollars.

The House committee has adopted the same amendment, although this could be changed at a meeting that committee will hold later this week. Approval by our Banking and Currency Committee may help insure that the House sticks with its original decision.

The merits of this amendment are, I believe, quite strong and can be stated simply.

The demand for silver by industrial users, the silver and photographic industries for example, far exceeds not only domestic but world production.

Every ounce of silver held or used by the Government should be spared, so that this source can be directed toward private use.

This is the only way that the deficit in silver can be met with any degree of success.

It is for this reason that I feel the proposed 40-percent requirement should be changed from the bill, since it would free an additional amount of silver for industrial consumption.

The President has recommended a long and important step forward with this bill, and I would like to see the job finished by inclusion of this one additional change in our coinage requirements.

All the facts and figures on this question are in the President's message, so I will not go into these details in this letter.

Needless to say, I would not ask you to do this if I thought there was some question about the validity of the amendment, a copy of which I have attached for your information, and I would be extremely grateful to you if you could try to help out.

My very best wishes.  
Sincerely yours,

THOMAS J. DODD.

[S. 2080, 89th Cong., 1st sess.]

AMENDMENT Intended to be proposed by Mr. ——— to S. 2080, a bill to provide for the coinage of the United States, viz: On page 1, starting on line 7, strike out all through page 2, line 7 and insert in lieu thereof the following:

“(1) A half dollar, or fifty-cent piece, a quarter dollar, or twenty-five-cent piece, and a dime or ten-cent piece each of which shall be composed of an alloy of 75 per centum of copper and 25 per centum of nickel clad on a core of pure copper.”

U.S. SENATE,  
COMMITTEE ON LABOR AND PUBLIC WELFARE,  
June 9, 1965.

Hon. EDMUND S. MUSKIE,  
U.S. Senate,  
Washington, D.C.

DEAR ED: It is my understanding that you intend to offer before the Banking and Currency Committee today an amendment which would repeal the silver requirement in half dollars.

I feel that this will be an important addition to the bill presently proposed, and I offer my full support for it.

As you realize, there are many industrial users of silver in my State, and they have indicated to me that every effort should be made to free silver from coinage so that there can be a greater supply of this metal available for domestic production. At the moment demand for this metal far exceeds world production, and the increasing prices resulting from this continuing situation are having a material effect on the economic growth of the industries using silver. This in turn affects the economy of Massachusetts, and New England.

I respectfully request that you file this letter with the full committee and carry to them my sincere desire that S. 2080 and your amendment be approved.

Sincerely,

EDWARD M. KENNEDY.

The CHAIRMAN. We will include also, without objection, the President's message on silver coinage and the press release of June 3. (See pp. 104 and 113.)

The Chair now recognizes the distinguished Senator from Rhode Island. He wasn't here when we announced that, in effect, we are in the morning hour.

#### STATEMENT OF JOHN O. PASTORE, U.S. SENATOR FROM THE STATE OF RHODE ISLAND

Senator PASTORE. Thank you, Mr. Chairman.

Mr. Chairman and members of the committee, first of all I appreciate the opportunity which is mine this morning to appear before this distinguished body in connection with your consideration of S. 2080. This is the bill which calls for dimes and quarters to be made of a new material which is composed of cupro-nickel clad on copper.

The bill also calls for a new half dollar piece, a silver-clad coin containing 40 percent silver.

In appearing before the House committee recently, the Secretary of the Treasury stated that the retention of silver in the half dollar piece was for prestige purposes and to continue the tradition of silver in our coinage.

Personally, I believe that this decision was reached for practical purposes which I do not have to elaborate upon at this time.

I want it clearly understood that I have complete sympathy and compassion for any element of our society that feels an economic pinch, and if I thought for one moment that what I am saying here today would be injurious to the silver producers of America, I would be slow in advancing these arguments.

I am convinced, however, that we have reached the time that the retention of silver in any coin excepting the silver dollar, which must be maintained for the purpose of facilitating the redemption of silver certificates, is not in the public interest.

We are a silver deficiency producing nation. We just do not produce all the silver that is needed for coinage and for our industries.

My primary purpose in appearing before this body today is to urge upon this committee to weigh this element of prestige and tradition against the more important factor of retention of American jobs.

Silver is essential to industry not only in my State, where we have a large silverware industry and electronics industry, but in many parts of the country where silver is an essential manufacturing component.

The fact that we are retaining a fraction of silver in the half dollar piece to me just doesn't make sense. It is no more important to maintain a fraction of silver in the half dollar than it would be in any other coin. And yet we know that if we follow this procedure it is only a question of time before we will run out of silver.

At first blush, a reduction of 90 percent to 40 percent in the half dollar piece would appear to be somewhat reasonable, but after due consideration the important question is: Why at all?

This half dollar piece with a content of silver would soon become a collector's item. It would not serve the purpose for which it was intended and at the same time would be a tremendous drain upon our silver supply and would perpetuate the problem for those users who must have it in order to keep our American jobs alive.

For those who will argue that the silver half dollar has the image of our distinguished late President John F. Kennedy, the answer is that no matter what the composition, the image could certainly be retained. It isn't the silver that makes the piece attractive. It is the picture of the President that does that, be it copper, silver, or any other alloy.

I emphasize in conclusion that the only reason why we are here considering this bill is because there is a shortage of silver and the responsibility of this Congress is to allocate the available supply in the channels where it will do the welfare of this country the most good.

It isn't that we are doing away with silver. Silver, indeed, is very much in demand—so much so that the producers can easily get rid of any supply at a very favorable price.

Since this country cannot produce enough silver to supply its own needs, we must especially be careful that whatever we do here will not adversely affect the price of silver on the world market.

I appeal, therefore, to this distinguished body to consider all facets of this problem.

As the chairman of the committee so wisely said a short while ago, we are only interested in comments on the silver half dollar. I think he is right. With all due deference to my colleagues who are interested in the production of silver, let me say that the elimination of silver completely from the half dollar piece will not destroy the incentive of producers to mine for more silver.

As a matter of fact, the very shortage of the supply as against the demand is the best incentive that I know of to keep the price high—and the price of silver will be high no matter what happens—and keep the profits within a reasonable area.

I seriously hope that this committee will take the same action with reference to the silver half dollar as it will take with reference to the quarters and to the dimes.

Thank you.

The CHAIRMAN. Thank you, Senator.

In view of the fact that the viewpoint just expressed by our distinguished colleague from Rhode Island is also sponsored by a very prominent expert on coinage from the House side, the Honorable Representative from Massachusetts, Mr. Conte, the Chair will now recognize him for 5 minutes.

**STATEMENT OF SILVIO O. CONTE, A REPRESENTATIVE IN CONGRESS  
FROM THE STATE OF MASSACHUSETTS**

Mr. CONTE. Thank you, Mr. Chairman, and members of the committee.

I am privileged to appear before the committee chaired by the distinguished junior Senator from the Commonwealth of Virginia.

My interests in the problems facing the coinage system of this Nation are longstanding. I have worked for many years with the Treasury Department, as a member of the Treasury-Post Office Subcommittee of the House Appropriations Committee, in attempting to maintain a workable coinage system in the face of unrealistic demands for our present silver-content coins.

I have advocated in the past a system of subsidiary coins of a metal content containing no silver. I urge you today to give your thoughtful consideration to such a system of subsidiary coins.

The weakness in the proposals now before this committee is the retention of silver in the 50-cent piece. The failure to propose an across-the-board elimination of silver from the three coins that are to be changed undermines the effectiveness of the proposed new coinage system.

We are facing a very difficult transition period ahead if any change is made in the coinage system. But that transition will only be made more difficult by the proposed new half dollar.

If the proposals now before this committee are enacted into law by this Congress, we will be in the position of asking public acceptance of silverless dimes and quarters, having substantially no intrinsic value. At the same time, we would be retaining silver and intrinsic value, not just in a coin, but in one of the new coins which is part of the proposed coinage system.

We know that there must be a change in our coinage system. We know that the measure of a coin's worth is not tied up in the metal content of that coin, but in the goods and services that can be bought with it by its holders. But it certainly does not appear that we are convinced of those facts so long as the proposed new half dollar retains a silver content.

And I don't believe that the millions of coin users in this country are going to be convinced nor will they be confident that we have given them a new coinage system, effective in all of its aspects, to meet the needs of this country as a medium of exchange.

Today's need for a new coinage system is the result of two factors: inadequate new production of silver at a time when industrial, art and defense uses of that metal are increasing, and, secondly, the need of this country for coins that will stay in circulation. The proposed new half dollar contradicts both of these factors.

We have reached the point where the world uses of silver, exclusive of any metal that is used in the coins of this country, exceed the total

annual free world production of that metal. This gap has to some extent been filled by the redemption of silver certificates by domestic silver users.

In 1964, for example, 141.4 million ounces of that silver stock were withdrawn to meet the legal requirement that Treasury redeem these certificates. The average monthly redemption for 1965 has been 10 million ounces and at the end of March of this year there were the equivalent of 763.9 million ounces of silver bullion remaining in circulation in the form of these silver certificates.

This silver is redeemable under existing law by the holders of the certificates. I believe it is a significant factor and one to remember. I would counsel that we should attempt to keep the Government's accounts in as proper an order as we would our own.

It will be necessary to continue minting the present silver-content coins until we have built up a sufficient quantity of the new coins that they can be placed in circulation and circulate. Based on the average monthly use of silver for coinage thus far this year, we will be consuming 25.3 million ounces of silver per month for this purpose. At a most favorable estimate, we will continue this use for at least a year and consume more than 300 million ounces of silver from our present stock.

In addition, the Office of Emergency Planning has proposed a silver stockpile for national defense needs, to which 165 million ounces of the silver now held by Treasury should be allotted.

I don't see in the midst of these figures a spare 15 million ounces of silver for a single year's production of the new half dollars. Nor do I envision a year's production of half dollars that would require only 15 million ounces of silver. The 50-cent piece is the subsidiary coin that is in shortest supply in this country today.

In 1964, Mr. Chairman, as you are well familiar, we minted 206 million 50-cent pieces and did not meet the demand for that coin.

At the proposed 40-percent silver content, that would have used up approximately 33 million ounces of silver, almost exactly equivalent to a year's production of silver in this country.

So it isn't just 15 million ounces of silver a year that we are worrying about. It is the amount of silver that will be used to bring the inventory of the proposed new silver-content half dollar up to the point where it will, in fact, circulate when placed in the hands of the public and used thereafter to maintain a supply that will insure their continued circulation.

That amount of silver must be taken from a stock that is also called upon to meet the demands of certificate redemption, continued transitional minting of the present coins, and defense stockpile needs. It just isn't there.

And the same could be prophesied for the proposed new silver-content half dollar, once it is placed in circulation. It just won't be there. It will be an exception to an otherwise functional coinage system. It will be more of a curiosity item than a medium of exchange. I am convinced that it will disappear from circulation just as we have seen the Kennedy half dollar and the much maligned cartwheel disappear.

We have managed to bring the supply of pennies and nickels into a reasonable line with the current demand. I know that everyone here

today believes that the new silverless dime and quarter can resolve the supply-and-demand conflicts for these coins. By minting a 50-cent piece of comparable metal content, we would once again have a coinage system equal to the demands that will be placed upon it.

Any justification for the continuation of some silver in the half dollar can hardly measure up to the potential ramifications of such action. The traditionalist calling for a link with the past, in the words of the Treasury study, "must not be allowed to obstruct the transition to a secure coinage system, adequate to the needs of the present."

The individual calling for a "prestige" coin for the new coinage system has a much lower estimation of the prestige of this country than I have. I will never accept the view of any man who argues that we can equate the prestige of the United States to a pinch of silver in a coin.

I am sure that the members of this committee are aware of the action taken by the House Banking and Currency Committee yesterday. I hail that action as a farsighted move that can give this country a system of coins that will not be the object of hoarding and speculating because of their metal content, but will circulate freely in commercial channels as a medium of exchange. That is their purpose and their function.

Mr. Chairman, I earnestly hope that this committee will find itself in a position to take similar action, and to take all the silver out of the 50-cent piece.

I have an amendment which has been included in the House version of the Coinage Act of 1965 and which I would like to submit for the record.

The CHAIRMAN. Without objection, it will be included in the record. (The proposed amendment follows:)

PROPOSED CONTE AMENDMENT TO COINAGE ACT OF 1965

Title 1, section 1-a-1 is deleted.

Section 2 becomes section 1 and reads as follows:

"A half dollar, a 50-cent piece, a quarter dollar, or 25-cent piece, and a dime or 10-cent piece each of which shall be composed of an alloy of 75 percent of copper and 25 percent of nickel clad on a core of pure copper."

The CHAIRMAN. Thank you, Congressman. We will bear in mind your suggestion that we enlarge the commission to be appointed to study this important matter.

We thank you.

The next witness is our distinguished colleague from Utah, Mr. Moss.

You realize we are running a little behind time. We were supposed to finish with the congressional witnesses in 30 minutes. They have now had 50. But, anyway, we want your full statement to be in the record, and we do not want to put undue restrictions on your oral statement.

You may proceed.

STATEMENT OF FRANK E. MOSS, U.S. SENATOR FROM THE STATE OF UTAH

Senator Moss. Thank you, Mr. Chairman. I appreciate the opportunity, and I will try to be brief.

I agree with the preceding two witnesses that there ought to be a uniformity of content of the coins, but I take the other view. I believe that we should have the dime and the quarter have a content similar to the half dollar as proposed in the bill that was heard on the House side, and, therefore, I am in opposition to the bill to the extent that it would eliminate silver from our coins.

I think we break tradition in doing this, and I think we can produce enough silver to mint dimes and quarters containing at least 40 percent silver and that we should do so.

Since its foundation, this Nation has based its coinage system on the intrinsic value of silver coins. This bill would break with that 173-year tradition.

This bill is proposed in answer to the shortage of coins across the land and the dwindling reserves of silver in the Treasury. Clearly we must have more coins and there is not enough silver to allow a continuation of the present coinage. The suggested remedy is to eliminate silver from our dimes and quarters and reduce it in the half dollar.

This remedy is based, necessarily, on the projected supply of silver in the free world. If there is a greater supply than currently appears available then such a drastic remedy is not warranted. But supply cannot be considered in a vacuum and must be related to price. The current price of silver is \$1.29 an ounce and has been in effect only 2 years.

Just 4 years ago, silver sold for 91 cents an ounce. The exploration that the current higher price has spawned has not yet increased production—but it will.

The current annual supply of the United States, including imports, is 108 million ounces, while our industrial requirements alone total 128 million ounces. But preoccupation with the current rate of supply may be shortsighted. The emphasis must be on what might be expected in the future under the stimulus of the \$1.29 an ounce price.

The American Mining Congress has estimated that the annual free world silver supply would increase by 38 million ounces and possibly increase by 57 million ounces by 1968. And greater increases can be expected in the more distant future when price can be allowed to respond more freely to demand.

By looking to the new silver discoveries in Idaho, Nevada, and my own State of Utah, we see newly increased production stimulated by the higher price.

Over \$400,000 worth of applications for silver exploration in Utah are in the Office of Minerals Research.

While Utah's production now is 4.8 million ounces annually, new discoveries and reopening of old mines will substantially increase this amount. The newly found deposits in Ontario, Canada, may be expected to produce 8 million ounces annually, and large deposits are available in Peru and Mexico.

But the results of the higher price and incentive programs are not yet being shown in production figures. This has been borne out with our experience with other minerals. The United States only 15 years ago was thought to have very few uranium deposits and be dependent on foreign sources. But after a price of \$3.50 per pound was set, enough uranium was discovered in the next 10 years to meet all of our foreseeable demands.

The Treasury staff study pointed out how copper and zinc far exceeded the early postwar expectations. The same can be expected of silver.

The solution then is not to eliminate silver from our coins but merely to reduce the silver content. The Treasury study states that a 40-percent-silver-clad coin is completely acceptable for a technical and a metallurgical point of view. The question then becomes whether as silver becomes more available, enough coins can be produced with a reduced silver content to alleviate the coin shortage. From all indications this can be done.

The Treasury stock is now at 1 billion ounces. The present annual deficit is estimated by Secretary Fowler to be around 300 million. But this overstates the consumption of silver. Investors and speculators have withdrawn large amounts of silver coinage from circulation. The demand for coins has been out of all proportion to the normal growth of the economy. The disappearance of the Kennedy half dollar is an example.

If a coin is produced with 40-percent silver, the Treasury study indicates that after the transition period about 60 million ounces of silver a year will be needed for coinage. This could be met by the billion ounces in Treasury stock and by recovering much of the nearly 2 billion ounces of silver in present coinage. In the longer run the production of silver will rise to supply this amount.

I would not suggest this approach if I did not feel that free world production of silver will increase to the extent of meeting industrial needs and still allow silver to be retained in our coinage. The question before this committee is whether we are willing to pay the price of providing the incentive to produce silver in order to maintain coins with intrinsic value.

The virtue of intrinsic value coins is in the confidence they inspire in the average citizen. If the citizen would maintain the same confidence in a base metal coin, Congress would not be justified in decreasing the seignorage profit accruing from such coins. But history has shown that the citizen does not maintain confidence in such a coinage. This is why France, Italy, and Germany, which have all had their currency depreciated, maintain silver coinage today.

We must be aware of the risk of removing all silver from our currency. The shortage of silver must be very acute to justify this break with our tradition of silver coins throughout our history. In my opinion, no such shortage exists. We are merely in a transition period in which production is pursuing demand. To take such drastic action as proposed in this bill when we do not know the consequences may prove a disastrous cure.

Recognizing the gravity of the situation and the need for some action, I feel the minting of the 40-percent three silver-clad coins will be in the best interests of the Nation.

The CHAIRMAN. We thank you, Senator. You raise an interesting issue about finding new silver mines.

Last Sunday I heard a good sermon, and the preacher said that good and evil have always been in the world. He said the optimist sees the good and the pessimist sees the evil. You can see new silver mines. The pessimist will say that we have been hunting for silver mines ever since Pizarro went into Peru in 1500-and-something. But that's just a difference of viewpoint.

Senator MOSS. Thank you very much. Mark me with the optimists. The CHAIRMAN. The next witness is Senator Pell from Rhode Island.

**STATEMENT OF CLAIBORNE PELL, U.S. SENATOR FROM THE STATE OF RHODE ISLAND**

Senator PELL. I thank the chairman for appearing here this morning to express my enthusiastic endorsement of the administration's proposal for revision of the coinage system but to urge that the proposal be broadened as widely as possible to remove silver altogether from our coinage.

Rhode Island has long awaited this reform. More than many other States, a high proportion of our State's industries depend on silver as a raw material for manufacturing.

For example, the 1963 Census of Manufactures, just issued last month by the Department of Commerce, shows that in our State some 289 firms, employing some 8,234 persons—or more than 7 percent of the State's work force—are engaged in the manufacture of jewelry and silverware.

For these people, the supply of silver for commercial uses means jobs and bread and butter. With the growing realization that silver is in fact obsolete as a base for our currency system, it has seemed to the people of my State that they are laboring under an undue disadvantage in having to compete with the U.S. Treasury for the very basic material on which their livelihood depends.

The proposal now made by the administration, with its assurance that it will permit a saving of some 90 percent of the silver now annually used for coinage, thus comes as especially good news to the State of Rhode Island. We hope the proposal will win swift approval in this committee and in the Senate.

But we hope, too, that the committee will consider the wisdom of complete reform at this time and eliminate the provision for 40 percent silver usage in half dollars.

I am informed that if the production of half dollars were to be continued at the same rate as prevailed last year, approximately 33 million ounces of silver would be consumed annually even if the proportion of silver is reduced to 40 percent as the administration proposes. By comparison, the entire U.S. production of raw silver in recent years has totaled only 35 million ounces.

Finally, there is one additional consideration which I would urge the committee to bear in mind. The new currency plan proposed by the administration envisions the use of copper to give the new coins the desired consistency. I am certain that this plan is well justified by necessity, but there are other factors which must be kept in mind. Copper itself is in very short supply and only recently we have been deeply involved in securing release of copper from the national stockpile for the use of copper wire mills which also comprise a significant share of the economy of my State.

It is my hope that the committee will inquire as to the impact which the new coinage system will have on the copper market and make any necessary provisions to protect the interests of copper users as well.

In conclusion, a great orator of your party and mine, Mr. Chairman, once said that man must not be crucified in the cause of gold. And we would hope he would not be crucified in the cause of silver or copper either, sir.

The CHAIRMAN. Thank you.

I feel I should apologize to the next witness, although he has been around long enough to know about the way the Senate operates.

We gave courtesy treatment to Senators, and we can't altogether limit them in time.

This next witness reminds me of a little diversion, getting my mind off of silver and bank mergers and all.

I read a piece about how the Duke of Wellington won the battle of Waterloo. This was a fascinating story in this week's issue of Life.

What won the battle were those English squares. Wellington had placed his men strategically. The French would get close up, and then those squares would open and fire and the French never broke those squares.

They finally gave up, and when they started running, it was all over.

Now, the distinguished Secretary is the next witness. He wants the distinguished assistant in charge of money as his right bower. He wants the distinguished Director of the Mint as his left bower. And in support, he wants his General Counsel and other assistants.

So, Mr. Secretary, come up and organize yourself.

**STATEMENT OF HENRY H. FOWLER, SECRETARY OF THE TREASURY; ACCOMPANIED BY EVA ADAMS, DIRECTOR OF THE MINT; AND ROBERT A. WALLACE, ASSISTANT SECRETARY**

Secretary FOWLER. Thank you, Mr. Chairman. I hope this "square" group will not be broken either.

Mr. Chairman, in the interest of time I would like to submit for the record a rather lengthy statement, too lengthy to take the time of the committee to read today, dealing with the various aspects of the problem confronting the committee, and ask the permission of the Chair to submit that statement without reading it in detail.

The CHAIRMAN. Without objection, it is so ordered. (See p. 56.)

Secretary FOWLER. I will confine my comments to a summary statement in order that the committee may have an opportunity for questions and hearing the other witnesses that come after.

I want to emphasize in the beginning that the present coinage and silver program rests upon some interdependent developments and considerations which have created a number of related responsibilities that the legislation before you seeks to discharge in some degree of balance.

It also involves some very pressing problems having to do with the ultimate role of silver and the ultimate role of the U.S. Government in relation to silver and silver users and silver producers that it is suggested not be combined at this time with this particular pressing piece of legislation but would be ultimately resolved by the Congress

at some future date when it has the counsel and advice of the Joint Commission on Coinage which is proposed in the legislation.

I cannot hope in this summary to convey more than a suggestion of how and to what extent a world shortage of silver has developed, the risks of trying to maintain a silver coinage in the face of the ever tightening scarcity of silver, the consequent unavoidable need to act promptly—while our silver stock is still large—to reduce our dependence upon silver for our coinage, the concurrent need to maintain our existing silver coinage in circulation, and the resulting requirements that we bring into being a new coinage compatible in every way with the old, while at the same time we conserve in the hands of the Government silver stocks adequate to fulfill our obligations to redeem silver certificates and to defend the silver coinage against hoarding or destruction.

#### THE PROPOSED COINAGE SYSTEM

We propose no change in the penny, the nickel, or the silver dollar. The silver dollar remains upon our books as the coin that has been made from time to time since 1837, a coin of 412.5 grains weight, 90 percent silver. We have no present plans for a new minting of silver dollars.

The dime and the quarter: We ask authority to make a dime and a quarter without silver content. The proposed new dime and quarter are composite coins with outside layers of the same copper-nickel alloy used in our 5-cent piece, bonded to a core of pure copper. The copper center gives them a copper edge—a distinctive appearance entirely fitting to their modern and functional nature. Their design and size are unchanged. These coins are carefully engineered to perform, alongside the existing silver dime and quarter, as long lasting, plentiful, and dignified media of exchange, and as technical merchandising instruments in the many millions of coin-operated devices in use in the United States.

I am compressing in the following lines an account of several highly important and interrelated factors that are spelled out in the President's message and in my accompanying statement. Taken altogether, these factors add up to one of the key factors for a new U.S. coinage—that it be "compatible" with our existing silver coinage.

The first of these factors is the need to keep our present silver coinage at work. We cannot retire it from circulation, because, first of all, it will continue for many months after enactment of new coinage legislation to be the major part of our coinage. These months are needed to bring the new coins into mass production and to build up sufficient stocks of them to begin large-scale circulation. Also, the Nation's need for coins is growing at such a pace that, although we will be able to make the new nonsilver coins in vast quantities, we foresee the need for the continued circulation of our billions of silver coins for some substantial part of their normal life, which is about 25 years.

The second "compatibility" requirement arises from the fact that our coin-operated merchandising devices—which number some 6 million out of a total 12 million coin-operated devices of all kinds now operating in the United States—are guarded against fraudulent use by coin selectors that reject anything not having the electrical properties of our traditional coins containing 90-percent silver.

If, therefore, the silver coinage is to remain in circulation, as we intend, the new coins must duplicate the electrical properties of a 90-percent silver coin, or they will be rejected by the coin-controlled vending machines through which some \$3½ billion of merchandise was sold, in 30 billion transactions, in 1964.

The sensors in these automatic vendors could, of course, be changed to accommodate a noncompatible coinage. But this would impose service delays of up to 3 years upon the public, and cause attendant business losses and disruption of trade and commerce.

Consequently, we have elected to recommend a nonsilver coinage that will operate in coin-controlled vending machines without the need for adjustment of the present sensors or the installation of new sensors.

The new dimes and quarters recommended to you use the only combination of metals, among practical alternatives, that precisely duplicates the electrical properties of a coin with 90-percent silver content. They therefore can be put into use with confidence that they can be produced in quantities sufficient to guard against coin shortages in the future, and that they will fit into our coinage system without delay or interruption to the Nation's commerce.

**The half dollar:** The proposed new half dollar is also a composite coin, made up of outer layers of a high silver content alloy bonded to a core of low silver content. The overall silver content is reduced from 90 to 40 percent. The new half dollar is nearly indistinguishable from the current 50-cent piece. It will continue to be minted with the image of President Kennedy.

It was to the end of maintaining the 173-year-old tradition of silver in the American subsidiary coinage that this coin was designed. We believe that the economies of silver resulting from the proposed new 25-cent and 10-cent pieces would make available enough silver to keep a half dollar of greatly reduced silver content in circulation, once the transition to the new coinage has been made. We think we can go safely this far toward continuation of the American tradition of silver coinage.

We think the retention of silver in the half dollar is a very important and integral part of our coinage program. Were we to abandon silver completely in subsidiary coins we believe there would be a much greater tendency toward the hoarding of existing silver coins. As long as we retain at least some silver in our coins this tendency will be abated.

Moreover, there are many people in all parts of the Nation who want very much to keep some silver in coins. The amount of silver required for use in the half dollar would amount to no more than 5 percent of current use of silver in coins. It is a small price to pay to meet the wishes of these American citizens.

#### WHY WE MUST REDUCE OUR DEPENDENCE UPON SILVER IN OUR COINAGE

I draw your attention to the information in the sections on free world silver production and consumption in the President's message and in my accompanying statement. I will only attempt in this summary the briefest outline of the case that is made there.

Examination of the past, present, and probable future silver supply and demand situation leads without room for doubt to the conclusion

that there simply is not enough silver appearing on the market to continue to satisfy the demand for it in the foreseeable future.

An attempt to maintain a coinage dependent upon silver in such a situation would expose the Nation to the risks of chronic and growing coin shortages. The overhanging threat of such a situation, to say nothing of its appearance, would be unsettling alike in our commerce and in our daily lives.

Let me point to one or two salient features of the silver situation disclosed in the table embodied in my statement. First, since 1959, the use of silver by the industry and the arts alone has been greater than total new production. Second, last year, the use of silver for industry and the arts, and for coinage, was each, taken separately, greater than new production. Third, U.S. silver output has not been rising, and would have had to be more than five times as great as it was, in 1964, to provide for U.S. coinage alone.

Only Canada and Switzerland, outside the United States, still maintain a high silver content coinage. Other nations, as we now propose, have cut back to very limited use of silver in their coinage.

For many years the United States has met its silver coinage needs, and part of its other needs for silver out of the official silver stock.

We now have on hand some 1 billion ounces of silver. Even should demands increase no more, this stock cannot last beyond 2 to 3 years. This gives us enough time to shift to a new coinage and enough silver supply to continue the protection of the silver coinage, but it requires that we act promptly.

The Treasury protects the silver coinage by standing ready at all times to redeem silver certificates, at \$1.29 and a fraction. This keeps the price below the point at which it is profitable to melt the coinage for its silver content. This maintenance of the coinage in being, in turn, is the chief protection against hoarding, since it keeps the silver coinage from being reduced in numbers to the point where people fear it will vanish.

As an ultimate protection of the silver coinage, and remembering that we intend for it to remain in circulation, we are asking for standby authority to institute controls over the melting or exporting of U.S. coins. To protect U.S. silver producers from a precipitous fall in the price of silver following the reduction of silver in the coinage, we are asking authority to buy newly mined U.S. silver at \$1.25 an ounce.

#### COIN PRODUCTION

We are gearing up for massive production of the new coins at the earliest possible time following approval by the Congress of a new coinage. We expect to place the new coins in circulation in 1966. In 1 year from the passage of legislation we expect to make at least 3½ billion pieces of the new coins—1½ billion more pieces than we will produce, under a crash production effort, of the silver coinage in fiscal 1965. In the second year after passage of coinage legislation, we expect to be able to make well over 7 billion pieces of the new coins.

Meanwhile, we will be continuing the production of our existing silver coins, until the new coins are ready in sufficiently large amounts to put into circulation. Production of silver coins will be phased out as production of the new coins comes up.

To insure the very great and speedy production needed for the shift to the new coinage, we are asking authority for the temporary use of the San Francisco Assay Office for minting. It would be converted to precious metals refining at a later time.

#### A SAFEGUARD FOR THE FUTURE

A change in coinage is a matter that runs so deep, that touches so intimately the lives of the people, and that is so delicately related to the Nation's commerce that it is best not to assume in advance that any proposal, even one as thoroughly parsed out as that the President has put before you, is final in all respects.

Consequently, the President's recommendations call for a Joint Commission on the Coinage, with Members from the Congress, the executive branch, and the public to review issues which cannot be resolved at this time—whether to continue minting silver dollars, whether the Treasury should continue to be in the silver market, and effects of any new technological developments which should be taken into account.

Its tasks would include the formulation of recommendations on these and other matters pertaining to coinage and to the future of Treasury operations in the silver market, which are a matter, I think, of very real concern to the industry and the arts that are dependent currently on the supply of silver.

It was just our feeling in making this recommendation that a number of these decisions could be made subsequently in the light of a more deliberate consideration rather than being compounded with the one very critical and pressing matter we had at this time; namely, the development and substitution of the new coinage.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Mr. Secretary.

How long do you plan to mint silver coins with the present silver content in the dimes, quarters, and half dollars?

Secretary FOWLER. We would plan to phase out that production sometime in the year 1966, Mr. Chairman.

The CHAIRMAN. In arriving at the figure that the 50-cent piece with only 40 percent silver would consume only 5 percent of the silver now being used, what limitation do you plan on its production?

Secretary FOWLER. We plan to have an annual production of the new 50-cent piece at roughly 100 million pieces a year.

The CHAIRMAN. Section 5 of the bill you prepared, and introduced by request by my distinguished colleague from Utah and myself, provides that you should have the power to issue regulations prohibiting the export of our coins. Isn't that power conferred upon the President by the Export Control Act of 1949?

Secretary FOWLER. The Export Control Act?

The CHAIRMAN. Yes.

Secretary FOWLER. I think that power applies to silver bullion and coins, and the Secretary of Commerce would be authorized to control such exports.

However, it was felt that it would be wise to include it here as a standby authority for the Secretary of the Treasury because the Treasury Department would be more familiar with the day-to-day market

requirements and in a better position to make any decision on this matter.

The CHAIRMAN. The Senator from Utah.

Senator BENNETT. Thank you, Mr. Chairman.

As the Secretary knows, after I had studied this proposal very carefully, I decided to become a sponsor of it because I think, on balance, as the Secretary said on his first page, this is a practical solution.

Other solutions might have been proposed which would also have been practical, but I think this is a practical solution, and I hope the committee will not change it.

There are one or two questions that I would like to ask as a result of this summary of your statement.

On page 4 you indicate that the present silver coins have a normal life of about 25 years. What do you do with coins when they come to that point in their life?

Secretary FOWLER. Worn coins are returned through the Federal Reserve System. We bring them back in, melt them down, and reuse the silver.

Senator BENNETT. About how many ounces do you normally have go through that process in a year? Have you any idea?

Secretary FOWLER. It is a very small amount, Senator Bennett. I don't have the exact figures, but they can be supplied for the record out of current experience.

(The following statement was supplied for the record:)

*Recoinage bullion from melting uncurrent (wornout) subsidiary silver coins, calendar years 1953-64*

Calendar year :	<i>In millions of fine troy ounces</i>	Calendar year—continued	<i>In millions of fine troy ounces</i>
1953-----	0.8	1959-----	1.3
1954-----	1.8	1960-----	1.0
1955-----	.8	1961-----	1.1
1956-----	1.6	1962-----	1.1
1957-----	1.4	1963-----	1.1
1958-----	1.2	1964-----	.5

Senator BENNETT. Two of our colleagues talking to us before you came to the stand gave conflicting estimates as to the number of ounces that would be involved in maintaining the 40 percent silver content in the half dollar. One of them said 60 million ounces a year. Another one said 33 million ounces a year. I am sure the Treasury has a figure.

Secretary FOWLER. I think the variance in the figures probably stems from a variance in estimates of the quantity of production planned. According to our current plans—which would be flexible and subject to some change—assuming we minted 100 million of the 50-cent pieces in a given production year, which would be a very substantial amount in terms of past practice and production patterns, this would use about 15 million ounces of silver, which is roughly 5 percent of the amount of silver used in coinage this year.

Senator BENNETT. I wanted to get that figure in the record because the other figures were put in and I think that we should have it straight.

In your statement on page 7 you say only Canada and Switzerland outside the United States still maintain a high silver content coin-

age. Other nations, as we now propose, have cut back to a very limited use of silver in their coinage.

I have heard the phrase used to describe the proposed new 50-cent piece as a "prestige" coin. Can you give us any idea as to the extent to which other nations are maintaining similar prestige coins in their coinage?

Secretary FOWLER. Yes, Senator Bennett. France has a 5-franc piece. The Federal Republic of Germany has a 5-deutsche mark piece. Greece has a 20-drachma, Italy a 500-lire, and the Japanese a 100-yen.

Now, those are varying finenesses of silver, but they fill the same role in those systems as we would contemplate.

Senator BENNETT. So this is not a new idea or a compromise? This is carrying out a pattern that has been developed among the other responsible and developed nations of the world when they faced a similar problem?

Secretary FOWLER. Precisely. And I think it represents the normal pattern of moving away from a heavy reliance upon silver to other metals.

And I believe in only one major country—the United Kingdom—they have eliminated silver completely. But other than that the pattern seems to be as I have indicated.

Senator BENNETT. The United Kingdom is having a lot of problems with its currency and its money.

Senator Bible raised the question of the propriety of our passing a law which would convey to the Secretary the power to write regulations effecting controls over the coins and called for us to write them specifically into this legislation. Do you have any comment on that?

Secretary FOWLER. Well, I have several comments, Senator Bennett. One, I think there is precedent for this in the Emergency Banking Act of 1933 and the Gold Reserve Act of 1934. I think Congress in those cases took a similar course of action that is being recommended here.

As a one-time lawyer, perhaps returning to it I hope some day, I recognize that there are serious considerations in Congress delegating this authority. However, we do have these precedents.

I would certainly say to the committee that if it became necessary to exercise this standby authority and to impose these regulations, this Secretary of the Treasury would want certainly to consult with the appropriate committees to have their advice before the issuance of the regulations.

And I believe that as a practical matter the regulations can be devised and any arbitrary use of this regulatory authority need not be of concern because we would certainly wish to consult with the appropriate committees of Congress in that regard.

Senator BENNETT. In the studies you made upon which this whole system has been based, this recommended system, can you answer this question: When do you expect the Treasury to run out of silver if this system is adopted to maintain the coinage system that it sets up?

Secretary FOWLER. I think perhaps the best answer I could make to that is that we expect to have supplies of silver "indefinitely." How-

ever, I would think that the final answer of the time when Treasury might possibly run out of silver would depend upon subsequent decisions that I would expect to be made in the normal course after the deliberations of the Joint Commission and subsequent recommendations dealing with the overall role of the Government in the silver field.

Senator BENNETT. You don't think it will run out of silver during the transition period under any circumstances?

Secretary FOWLER. I do not. We feel, given prompt enactment of this legislation this session, and given the success of the production program we have in mind—we see no practical reason why we cannot anticipate that success—we do not have any substantial fear that we will run out of silver during the transition period.

Senator BENNETT. Do you have a fear that you will draw your silver stock down to the point where we will not have enough silver for our defense needs?

Secretary FOWLER. Of course, it depends upon what the determinations are as to defense needs for stockpile purposes. But with the dimensions in which I have heard the problem discussed—I think the current figure of the Office of Emergency Planning is around 165 million ounces—I would not be fearful that that supply would be used up. In other words, out of the Treasury stocks now available or accruing to it as a result of the silver coinage in existence, we should be able to hold a sufficient reserve to meet whatever requirements in that general area might be ultimately determined by the Congress.

Senator BENNETT. Would you think we would be better off not to write specific figures into this legislation with respect to defense reserve so we could leave you and the Office of Emergency Planning some latitude to readjust the estimates?

Secretary FOWLER. Well, I think that there is a preference, Senator Bennett, in leaving the holding of this reserve in the Treasury stocks, because, should the Treasury stocks be officially diminished and a substantial part of them removed, there is just that much less protection against the exhaustion of those stocks in this process to which your earlier questions were related.

Senator BENNETT. But you recognize the problem and your obligation to protect the needs of the country?

Secretary FOWLER. Very definitely so.

Senator BENNETT. Even though you don't have specific legislation requiring a setaside?

Secretary FOWLER. We would under either event—whether by law, if it were officially required, or by practice and desire to comply with the requirements as determined by the Office of Emergency Planning.

Senator BENNETT. No other questions, Mr. Chairman.

The CHAIRMAN. Mr. Secretary, the chairman earlier in the morning referred to the difference between a pessimistic view and an optimistic view. The domestic users of silver take a pessimistic view of how much you are planning to use per year in the new 50-cent piece. They claim it will be 60 million ounces, nearly double the domestic production. You say it will be 15 million ounces, less than half of domestic production.

Now, in order that we may draw a fair dividing line between those viewpoints, let me call to your attention that I just received the April

statement of the mint showing that if you continue for a year the April production of Kennedy half dollars, you will mint 180,936,000.

Secretary FOWLER. That is correct.

The CHAIRMAN. How are you going to cut that down to 100 million? They will still be Kennedy half dollars, won't they?

Secretary FOWLER. Yes.

The CHAIRMAN. They still will look bright and shiny?

Secretary FOWLER. Practically the same. Our current thinking is we would hold that production to an annual rate of about 100 million pieces. And I think for the foreseeable future—that is, the next 2 to 3 years of this transition period—that is the rate we would contemplate.

I think that this question of the rate of production or the content of the half dollar is one that will continue to be in some contention. Certainly it is a matter which would continue to be raised before the Joint Commission. But it would be our intention to establish this production rate, to have available an additional 100 million pieces each year to go out into the market, and in the hope that the half dollar would become once again a useful circulating medium.

The CHAIRMAN. I am sure all the coin collectors in the country would like to hear what the Director of the Mint has to say about this subject.

Miss ADAMS. Sir, the Director of the Mint seconds what the Secretary of the Treasury has to say. As you know, we have made some 276 million. Many of those are mementos and, as someone put it, souvenir coins or at least a sentimental recognition of the people's liking for the late President.

We have good reason to believe that that source now is about taken care of, because—

The CHAIRMAN. How many Kennedy half dollars have you minted?

Miss ADAMS. We have minted 276 million.

The CHAIRMAN. How many are still in circulation? I seldom see one.

Miss ADAMS. That I cannot tell you sir. Once in a while I have received them.

But let me point this out to you: Previously the highest number of 50-cent pieces we ever made prior to the Kennedy half was in 1963 when we made 89 million, and that was sufficient. In 1962 we made 45 million, and that was sufficient. It dropped down to 28 million before that.

So, undoubtedly, the great demand for the half dollar was the sentimental feeling which went with it. And we have good reason to believe that that now is taken care of and that this half, which will look so much like the other half, will be so that no one will want a new one.

I might add that if this is made of the silver clad as the President has recommended you won't be able to tell the old and the new apart. If you make it of the cupronickel clad it will be a new type of Kennedy coin and probably will disappear more rapidly.

The CHAIRMAN. If you take all the silver out will the little sunset between the two pieces show in the 50-cent piece?

Miss ADAMS. If all the silver is removed it will, sir.

The CHAIRMAN. The Senator from New Jersey.

Senator WILLIAMS. No questions.

The CHAIRMAN. The Senator from South Carolina.

Senator THURMOND. Thank you, Mr. Chairman.

Mr. Secretary, the Members of Congress receive many, many wedding invitations, and they buy many, many wedding gifts. Is this bill going to afford some relief? [Laughter.]

Secretary FOWLER. No, I am afraid, Senator, it is likely to work the other way. I am afraid it will lend some relief to the concern of the silver users, some substantial relief to those that are engaged in that business.

However, they will appear before you subsequently and can speak better to that problem than I can, sir.

Senator THURMOND. I was just wondering what effect it would have on the price of gifts of various kinds that the public buy.

Secretary FOWLER. I would hesitate to venture a guess but I could certainly hope with you that it would have some effect.

Senator BENNETT. Senator, it will hold the present price of silver to the processors at the present level for a year or two at least, maybe for a longer period than that. So if the price of silver goes up it would be because of other cost factors rather than increase in their cost of silver.

Secretary FOWLER. That is correct.

Senator THURMOND. That was the opinion I had. I wondered if you shared that—what Senator Bennett expressed.

Secretary FOWLER. I do share it; yes.

Senator THURMOND. Mr. Secretary, do you feel this bill grants the flexibility you need now under the circumstances to meet the situation?

Secretary FOWLER. Yes, we do, Senator. We have concerned ourselves very much with just that problem, and actually, I think, that was almost, in a way, the toughest part of the decision—that is, to come up with a program that we felt would involve enough flexibility and yet not require us to ask the Congress for an undue amount of delegation of authority.

But we feel that within the confines of the program as indicated we can, if the bill is enacted, cope with the coinage responsibilities that you have placed upon us.

Senator THURMOND. On your statement and that of other witnesses and information that has come to me, it appears to be a practical approach and would go a long way to help solve this problem.

Secretary FOWLER. I think it will, sir. I think it will obviously leave to the Congress a related but a somewhat different problem, and that is the question of how long and under what circumstances the Government remains, you might say, a factor in the silver market.

I would think in the future the Congress would have more options to determine whether or not it wished to return to a free market situation in silver once Treasury has adjusted this particular program to the coinage problem.

Senator THURMOND. There is only one point that gives me some concern, and I believe that was raised by Senator Dominick in his statement. You were here and heard his statement.

Secretary FOWLER. Yes.

Senator THURMOND. He referred to sections 5 and 16. Section 5 of the bill provides that the Secretary of the Treasury is authorized under such rules and regulations as he may prescribe to prohibit the exportation, melting, or treating of coins of the United States.

Section 16 provides that whoever knowingly violates any of the provisions of section 5 of the bill or of any order, rule, regulation, or license issued pursuant thereto shall, upon conviction, be fined not more than \$10,000 or imprisoned not more than 5 years, or both.

I have some doubts about the feasibility, advisability, or even the constitutionality of this provision. I was just wondering if you had considered it.

Secretary FOWLER. Yes, Senator Thurmond, we made this proposal in the light of a precedent in what we felt was a comparable situation—when the similar problems arose under the Emergency Banking Act of 1933 and the Gold Reserve Act of 1934. And in that legislation it is my understanding that a similar authority was requested, was delegated, and has been exercised by the former Secretaries.

As I remarked in response to another question, I, as a lawyer, recognize the concern you have, and I share that concern. I think as a practical matter it is the most feasible way to go about it to have the Secretary of the Treasury with his staff draw up the regulations and determine when it is necessary or desirable to invoke this authority under section 5.

I, for one, would certainly be quite willing—as a matter of fact, I would prefer—to have the advantage of some informal consultation with members of this committee and the other committee before issuing those regulations.

The CHAIRMAN. Mr. Secretary, if you will yield, the legal staff copied this from the Export Control Act of 1949—that the President may delegate the power, authority, and discretion conferred upon him by this act to such departments, agencies, or officials of Government as he may deem appropriate except as provided in subsection (b) of this section, and so forth. Violators, upon conviction, shall be punished by fine of not more than \$10,000 or by imprisonment for not more than 1 year, or both.

They raised it up to 5 years or both. And that may be too much, but the principle is there.

Senator THURMOND. There is a fundamental principle of law that if a conviction is going to stand when a man is prosecuted that a crime has to be clearly defined.

Secretary FOWLER. That is right.

Senator THURMOND. And there has to be intent to violate. There has to be an act to violate. And unless a crime is clearly defined in law, the decisions have uniformly held that a conviction will not stand.

Secretary FOWLER. That is right.

Senator THURMOND. I practiced law for a number of years, and I was a circuit judge too, and this question has come up before me.

Secretary FOWLER. Yes.

Senator THURMOND. And I am just wondering if you know of any decision that has upheld this provision.

Secretary FOWLER. I am informed by counsel that there have been a number of cases that have arisen in the courts in which convictions have been sustained for violation of the regulations under the Emergency Banking Act and Gold Reserve Act. Some of those decisions were appealed; and in one case at least, certiorari was denied by the Supreme Court. The presumption is they did not think it was a serious question.

I think it should be said along the lines that you have noted that not only would the crime have to be precisely and definitely defined in the regulations, but in a situation of this sort I would think certainly desirable that the element of willfulness would have to enter in so that an unthinking and purely careless violation would not be involved.

Senator THURMOND. The committee could consider that later, but I wanted to get your views on it.

Secretary FOWLER. Yes, sir.

Senator THURMOND. Because I do think it is a very important point.

Secretary FOWLER. It is, and we would not want to catch up innocent people.

Senator THURMOND. Otherwise the bill appears to be practical and reasonable as an approach to the solution of the problem.

Thank you very much.

Secretary FOWLER. Thank you.

The CHAIRMAN. The Senator from Minnesota is recognized.

Senator MONDALE. I have no questions, Mr. Chairman.

Senator BENNETT. I have one more question.

The CHAIRMAN. The Senator from Utah.

Senator BENNETT. One of the earlier witnesses raised the question of counterfeiting. Have you any comments to make? If the intrinsic value is so much lower than the monetary value, this might suggest the temptation for more counterfeiting.

Is there any greater or less risk with these than with the old coins?

Secretary FOWLER. I think, Senator Bennett, one of the favorable features of the new coin that is proposed is that the new coins would be more difficult as a technical, physical matter to counterfeit than the existing coins, because of this cladding process that is involved.

And in the examination of the various criteria that are generally considered as a basis for determining what would be the best material for coinage, the assessment which appears in the Treasury staff study of silver and coinage on page VIII in table 1, under "Counterfeiting potential," is that for the cupronickel and also the silver clad on a copper core, that potential is very low. The red edge of coin is an actual advantage since these clad materials are not readily available to the public.

Senator BENNETT. Also you have the fact that it must be compatible with the silver for use in vending machines. Those counterfeit coins would show up very, very quickly if the vending machines started to reject them.

Secretary FOWLER. Reject them, yes, sir.

Senator BENNETT. That is all, Mr. Chairman.

The CHAIRMAN. We thank you very much.

Secretary FOWLER. Thank you.

(Secretary Fowler's prepared statement follows:)

STATEMENT OF HENRY H. FOWLER, SECRETARY OF THE TREASURY

This statement is presented in support of the legislation the President has recommended for a new and efficient coinage. The new coinage will use a composite copper and nickel alloy in the 10- and 25-cent pieces in place of the present 90-percent silver, and a composite silver alloy of 40 percent in the 50-cent piece.

In response to this committee's desire for a detailed description of the proposed program, my statement contains sections on "The New Coinage System," "Outline of Legislative Recommendations," "The Shortage of Silver" (including a table at p. 20), "The Choice of a New Coin Alloy," "Importance of the Operation of the New and Existing Coins in Coin-Operated Machines," and "The Adequacy of Coin Supplies."

THE NEW COINAGE SYSTEM

The new alloys reflect the latest developments in modern technology. Precisely engineered characteristics will insure the consistent operation of the new dimes and quarters alongside our high content silver coinage in all our millions of coin-operated machines. These new 10- and 25-cent pieces will be functional. They will be attractive in appearance, durable, and available in needed amounts. They will be full legal tender, circulating alongside, and with the same purchasing power, as our present silver dimes and quarters. Their copper colored edge and special production process will reduce counterfeiting potential.

The realities of the silver situation have made it impossible for us to continue much longer the production of silver coins in large volume.

During calendar year 1964, we used more than 200 million ounces of silver in coinage and we are coining silver at about a 300 million ounce rate this year. While Treasury stocks of silver of 1 billion ounces are still very large, they obviously cannot withstand this rate of use for long. Moreover, Treasury stocks must also be available for the continuing redemption of silver certificates which will keep the market price of silver from rising above \$1.29 plus.

We have no choice but to remove silver entirely from the dime and the quarter. Any other course could have serious consequences. By switching to the new cupronickel clad alloy for dimes and quarters, a major and available drain upon our supplies of silver is removed. As a result, it should be possible to maintain our tradition of silver coinage with a silver 50-cent piece in the new coinage system. At anticipated rates of production, this 50-cent piece of reduced silver content would use relatively small amounts of silver, possibly 15 million ounces a year once we are "on stream." In addition, the present legal definition of the silver dollar would remain unchanged, although planning for renewed minting of that coin would be premature.

The new coinage system looks to the future in providing functional coins for a modern America. The new system also retains a valued tie with the past by extending a 173-year-old tradition of silver in our coinage. We do not expect this combination of the new and the old to require any major modifications in the future. But, we recognize the complexity of the silver and coinage problem and the fact that any change in this area touches the daily lives of all our citizens. Therefore, in the consideration of future silver policies, the role of the silver dollar and other matters, it is fitting that we should provide now for an orderly review of the issues in the light of conditions as they develop. Provision is made as an integral part of this legislation for the formation of a Joint Commission on the Coinage. I will comment upon the duties of the Commission in a moment.

OUTLINE OF LEGISLATIVE RECOMMENDATIONS

The specific legislative proposals now before you are best summarized by a brief section-by-section review.

*Title I of the proposed legislation*

Section I describes the metallic content, weight, and other technical specifications, of the proposed new coinage.

1. The dime and the quarter: It is proposed that silver be eliminated entirely from the dime and the quarter. Instead, they should be composite, or clad, coins faced with an alloy of 75 percent copper and 25 percent nickel (the same cupronickel alloy used in the 5-cent piece) bonded to a core of pure copper. By

use of this modern technique, it has become possible to duplicate exactly the electrical properties of our existing silver coins. This is essential to avoid disruption to commerce and great inconvenience to the public, as I shall explain later in some detail.

2. The half dollar: It is proposed that the 50-cent piece should also be a composite, or clad, coin. The overall silver content would be reduced from the present 90 to 40 percent. This would be accomplished by cladding outer faces of a high content silver-copper alloy on a low content silver-copper core. The outside alloy would be 80 percent silver and 20 percent copper, and the inner core would be approximately 21 percent silver and 79 percent copper. The result is a handsome coin, not readily distinguished from our present 50-cent piece.

Samples of the 10-cent, 25-cent, and 50-cent coins are available for your inspection.

A final clause of section I defines certain technical specifications for the new coins. Among these is a requirement that the outside cladding of the new coins should be at least 30 percent of their weight. This will more than insure that the outside facing of the coins will not be worn away in circulation. Extensive wear tests have been conducted on the new coins with entirely satisfactory results. The new 10-cent and 25-cent cupronickel clad coins can be expected to outwear our present silver coins of the same denomination.

Section II proves that the new coins would be subject to the current laws as to design and inscription. This is desirable in terms of maintaining continuity with the past and increasing ready public acceptance of the new coins.

Section III provides specific recognition of the new coins as legal tender. Such express provision will eliminate any possible doubt or misunderstanding on this score and make it absolutely clear that the new coins will be accepted along with the present coinage. The present coinage would, of course, retain its full legal tender status. We expect the existing silver coinage to remain in active circulation into the indefinite future.

Section IV provides for the continued minting of the existing coins as needed. Silver dimes and quarters and the present half dollar would be phased out of production as rapidly as possible in favor of the new coins. But efficient utilization of mint capacity during the early parts of next year, may require the production of some amounts of the old coins.

Section IV also provides for the continuation without change of the present specifications of the penny, the nickel, and the standard silver dollar. Authority to make a silver dollar of the same weight and fineness (412.5 grains, 90 percent silver) made at various times since the act of 1837, would thereby be continued. That standard silver dollar, whose pure silver content has actually remained the same since 1792, defines the monetary value of silver at which we are legally and morally obligated to continue the redemption of silver certificates. No change should be made in the legal definition of the standard silver dollar. However, we would not plan to mint any new coins of this denomination under existing circumstances.

Section V provides for standby authority for the Secretary of the Treasury to prohibit the melting, exportation, or treating of U.S. coins. While these prohibitions probably will not have to be used, we seek the standby authority to use them as a precautionary measure, and as an appropriate permanent provision of law.

We plan to continue our existing silver coins in active circulation alongside the new coins. The existing high silver content coins will be protected by the Treasury supplying silver to the market through exchanges against silver certificates at \$1.29-plus per ounce. This will prevent the development of any incentive to melt or export our silver coins. And, once the large present drains from the production of silver coins have been removed, our silver stocks should be adequate to protect our coinage for an indefinitely long period ahead.

Section VI provides for sales of silver by the Treasury in excess of that needed to back silver certificates, at a price not less than the monetary value of silver. This is an additional measure designed to insure that there will be no increase in the price of silver above its monetary value, even should silver certificates not be readily available for redemption. There is general agreement that preventing an increase in the price of silver is essential to the protection of the existing coinage.

Section VII would authorize the Secretary of the Treasury to purchase newly mined domestic silver at \$1.25 per fine troy ounce. It is not believed that enactment of our proposals to reduce drastically the use of silver in the U.S. coinage

would cause any sizable or persistent decline in the market price of silver. However, since we are imposing a ceiling on the price of silver, it seems reasonable to provide domestic producers of silver with protection against any sizable decline in price. The purchase provision at \$1.25 is included for that purpose.

Section VIII provides for legal authority to procure the materials and technical assistance, equipment, and patents needed to make the new coinage in the required quantity.

Section IX provides authority to continue dating the new coins as of the first year of coinage or issuance. This will help to avoid hoarding of the initial issue of the new coins.

Section X would authorize the temporary use of the San Francisco Assay Office for the minting of coins and would authorize the conversion of that facility for the refining of precious metals, if necessary, after it is no longer needed for coin production. During early stages of the production of the new coins, the mint's production load will be particularly heavy and temporary minting facilities at San Francisco will be needed. Subsequently, the provision of refining facilities there will contribute to the efficiency of operations at the mints and assay offices.

Sections XI through XVI deal with various minor legislative changes required to assist the establishment of the new coinage system. An act requiring recoinage of all worn and uncurrent subsidiary silver received in the Treasury is repealed; the Minor-coinage Metal Fund is renamed the Coinage-Metal Fund, and the Minor-coinage Profit Fund is renamed the Coinage-Profit Fund and the amount available in the Coinage-Metal Fund is raised from \$3 million to \$30 million; expenditure of not more than \$15 million is authorized for additional mint facilities to accommodate manufacturing requirements of the new materials; the counterfeiting laws are amended to cover the new coinage; the issuance of necessary regulations by the Secretary of the Treasury under the proposed act is authorized; and penalties are provided for violations of regulations issued under section V.

#### THE JOINT COMMISSION ON THE COINAGE

Title II of the proposed legislation provides for the establishment of a Joint Commission on the Coinage.

The Commission would be composed of the Secretary of the Treasury, the Secretary of Commerce, the Director of the Bureau of the Budget, the Director of the Mint, of four public members, not representative of interest groups, appointed by the President, of the chairman and ranking minority members of the House and Senate Banking and Currency Committees and of two other Congressional Members, one appointed by the Speaker of the House and one by the President of the Senate.

The function of the Commission would be to study and report on the progress of the implementation of the new coinage program, new technological developments, the supply of various metals, and the future of the silver dollar. It would report as to whether the Government should continue to control the price of silver or get out of the silver market. And it would advise the President, the Congress and the Secretary of the Treasury on the results of its studies.

The provision for a continuing appraisal of these issues is a very useful step. The problems are complex, and final answers in some areas can only await the fuller information the future will provide. The elimination of silver from our dimes and quarters is a final step, enforced by a developing shortage of silver of inescapable dimensions. But decisions in other areas, such as the quantity of production of the silver 50-cent piece and the future of the silver dollar can be reviewed. Such decisions are better judged against what actually happens, rather than what we think, or hope, may happen. It will be the important function of the proposed Joint Commission to appraise these issues and to suggest any courses of action that may be desirable.

#### THE SHORTAGE OF SILVER

The need for the changes contained in the proposed legislation arises from a chronic, and steadily worsening, shortage of silver. That shortage has now become so severe relative to the demands for silver that we have no option but to reduce drastically our use of silver for coinage. The main dimensions of this problem are shown in an accompanying table derived from the Treasury staff study of silver and coinage.

*Estimated free world silver consumption and production, 1949-64*

[Millions of fine troy ounces]

Calendar year	Consumption				New production			Gross deficit (-)	Deficit, excluding U.S. coinage demand (-)	
	Indus- try and the arts	Coinage			Total con- sump- tion	United States	Foreign free world			Total new produc- tion
		United States	Foreign free world	Total						
1949-53 averages.....	153	37	48	85	238	39	135	174	-64	-27
1953-57 averages.....	190	38	36	74	264	38	153	191	-73	-35
1958.....	191	38	41	79	270	37	169	206	-64	-26
1959.....	213	41	45	86	299	23	165	188	-111	-70
1960.....	225	46	58	104	329	37	170	207	-122	-76
1961.....	240	56	81	137	377	35	168	203	-174	-118
1962.....	248	77	50	128	375	36	171	207	-169	-92
1963.....	252	112	56	167	419	35	179	214	-205	-93
1964.....	286	203	62	265	550	36	180	216	-335	-132

Source: Treasury staff study of silver and coinage, pt. III, tables 1 and 3, figures rounded.

The table shows a steady worsening of silver supplies from a small deficiency of production in the early postwar years to a slightly bigger deficiency in the next 5-year period, a much larger inadequacy, on the average, in the 5 years from 1957 through 1961, and a bounding growth of the deficiency in the last 2 calendar years. Last year the gross production deficit was more than 330 million ounces. It will probably be even larger this year.

Actual market deficits are smaller than this difference between total consumption and new production because the United States meets its coinage needs for silver out of its stocks. These, however, are being depleted at a rate which cannot be permitted to continue indefinitely. Even with U.S. coinage demand excluded, the production gap reached some 130 million ounces in 1964 and has been growing steadily.

It is notable that in 1964 each major type of free world consumption (the use of silver by industry and the arts, and use of silver for coinage) taken separately was greater than new production.

Thus, there is simply not enough silver appearing on the market to continue to satisfy the demand for it in the foreseeable future.

During the past 15 years, there has been a steady expansion in the worldwide use of silver in industry and the arts. Rising incomes have stimulated increases in such consumer-oriented uses as photography, silverware, and jewelry. In addition, the relatively unique physical and electrical properties of silver have led to its rapidly expanding use in a range of industrial and defense applications. As a consequence, growth in the noncoinage uses of silver has been very substantial as may be seen from the attached table.

There has been some expansion of new production of silver in the free world but not at a pace sufficient to prevent the appearance of the large and widening deficits to which I have already directed your attention. The expansion in silver production that has occurred has been outside the United States, and has largely been a consequence of rising levels of copper, lead, and zinc production with which silver is sometimes found as a byproduct.

Production of silver in this country has shown no upward trend in the postwar period, but has averaged a more or less steady 35 to 40 million ounces annually. This level of production is small relative to U.S. industrial demand for silver and this country has typically had to import substantial amounts of silver and rely on Treasury stocks.

During the past 4 years, free world industrial use of silver has grown by an estimated 60 million ounces, but free world production has grown by only about 10 million ounces, and U.S. production has not grown at all. There are some signs that new production of silver in this country and abroad may increase by modest amounts in the future.

In the opinion of experts both inside and outside the Treasury, there is no dependable—or, for that matter, likely—prospect of new economically workable sources of silver that would rapidly and appreciably narrow the gap between silver supply and demand. In fact, optimistic projections envision a production

increase of no more than 20 percent over the next 4 years. Projected increases in consumption in industry and the arts are at least equally as great. Thus, there is a standoff between future increases of silver production and noncoinage uses of silver in a situation where deficits are already very heavy. Expected increases in silver production could not, therefore, change the basic conclusion that use of silver in our coinage must be very sharply curtailed. Also, because silver is produced chiefly as a byproduct of the mining of copper, lead, and zinc, we could not count on even a very great increase in the price of silver stimulating enough new production to change the situation.

Most free world countries have long since ended or nearly ended the use of silver in their coinage. Except for Canada and Switzerland, those countries still using silver coins make only limited use of it, in one or two "prestige" coins, as we now propose to do with the new half dollar. As seen in the attached table, in the early postwar years, the United States accounted for less than half of total free world employment of silver for coins, but at present we use more than three-quarters of all silver put into coins in the free world. We have no choice but to make a large reduction of silver in the coinage, and no choice but to do so now. We have on hand some 1 billion ounces of silver in the Treasury stock. At current rates of mint production, we are using silver for coinage at the rate of about 300 million ounces a year; and for the redemption of silver certificates at nearly 120 million ounces a year.

Even should demands upon our stock increase no more, it is clear that at present rates of use we can expect to exhaust our resources in 2 or 3 years. This gives us enough time to shift to a new coinage, but requires that we act promptly.

#### THE CHOICE OF A NEW COINAGE ALLOY

In arriving at our recommendations for new coinage alloys, an overriding consideration was the necessity of continuing at all times to provide an adequate means of exchange and avoiding any disruption to commerce. Experience shows all too clearly that, under modern conditions, the essential medium of exchange function is imperiled if a subsidiary coinage alloy threatens to become more valuable as a commodity than as money. In addition to insuring that the all important needs of commerce would be met, our coinage choice has been influenced by technical and metallurgical considerations.

In order to be sure that these important technical and metallurgical considerations would be fully investigated, the mint supplemented its own intensive efforts through a contract study carried on by the Battelle Memorial Institute. This nonprofit research organization has a worldwide reputation in the metallurgical field; and by virtue of this special competence it was uniquely equipped to assist the Mint and the Treasury in a study of the alternative coinage alloys that might be appropriate for use in the new coinage system.

Battelle's investigations and those of the Treasury were guided by specific criteria essential for a modern coinage system. These included criteria relating to:

- (1) Availability and price of the raw materials required for the coinage program;
- (2) Public acceptability in terms of the technical characteristics of the coins and the effects of the overall program;
- (3) Technical characteristics of the coinage material in terms of color, density, mechanical, chemical, and physical properties, including those required at present by coin selector devices in vending machines;
- (4) Minting characteristics of alternative materials and assurance of high levels of coin production; and
- (5) Counterfeiting and slug potential.

Every coinage alloy showing any sign of promise was investigated both by Battelle and by the mint. Advocates of particular coinage materials were given an opportunity to present their case. Trial strikes of a wide range of different alloys were made by the mint in the course of its own investigations, and to assist Battelle in theirs. The results of these investigations and the extent to which the different alloys met or fell short of minimum standards of acceptability are set forth in detail in the Battelle report entitled "A Study of Alloys Suitable for Use as U.S. Coinage" and in somewhat lesser detail in section IV of the Treasury staff study—both of which have been made available to your committee.

Consequently, I shall not describe the specific reasons which led to the rejection of some alloys upon technical and metallurgical grounds and the pro-

visional acceptance of others. However, I do want to comment upon the importance we have placed upon the new coins working in vending and service machines. This was a major consideration which, along with its other desirable properties, led us to a final selection of the cupronickel clad coin for use in the 10-cent and 25-cent denominations.

IMPORTANCE OF THE OPERATION OF THE NEW AND EXISTING COINS IN COIN-OPERATED MACHINES

Because of the greatly increased reliance we now place upon the use of coin-operated devices, our coins must serve us as a technical merchandising instrument as well as a medium of exchange in the traditional sense. The extent of that reliance is suggested by the fact that there are today more than 12 million coin-operated machines in this country. In the case of merchandise vending machines alone—excluding such devices as pay telephone and most coin-operated laundries—over \$3½ billion worth of goods were dispensed to consumers last year, in over 30 billion transactions.

Our own dependence upon coin-operated machines is much greater than that in any other country. This fact has added an extra dimension to our coinage problem and imposed certain requirements which any new coinage alloy should meet, if at all possible. We now take for granted the fact of ready access to machine-vended goods and services, available by night and by day, in out-of-the-way as well as accessible places. It is clear that a coinage alloy that did not work alongside existing coins in coin-operated devices would impose extreme inconvenience upon the public and some disruption to the orderly flow of commerce would be sure to occur.

About half of our 12 million coin-operated devices are equipped with sophisticated mechanisms which subject coins to a variety of tests before accepting them and dispensing the merchandise or service. The most important of these tests is based upon the electrical resistivity of the coinage material, and has been built around the rather special properties of our existing silver coinage alloy. Yet, the continued use of any silver in our dimes and quarters is out of the question because of the overall silver situation. Therefore, the alternatives for the dime and the quarter are a nonsilver alloy which would be compatible in the sense of working in vending machines alongside the existing coinage, or one which would not.

If a noncompatible alloy were chosen, two alternatives would be presented, both of them undesirable from the point of view of the public at large:

- (1) The vending machines would have to be shut down until new sensing and rejecting devices could be developed and installed, or
- (2) Their devices for sensing and rejecting wrong coins and slugs would have to be deliberately circumvented, exposing the machines to a high rate of fraud.

In due course, entirely new rejector mechanisms could probably be developed which would accept any new alloy along with our existing coins. All evidence suggests that it would take at least 1 to 3 years, even after a successful design had been developed, to produce and install new rejector mechanisms. During this period, the public would experience serious inconvenience if machines were shut down entirely and would probably have to pay higher prices if machines were kept in operation but were subjected to a high rate of loss through the use of slugs.

My technical staff advises me that there may well be serious difficulty in designing a rejector which would accept the existing coins together with coins of very different electrical properties, without at the same time seriously compromising the ability of the mechanism to accept genuine coins and to reject slugs, low-valued foreign coins, and coins of wrong denominations. It may be, as I have noted, that these technical limitations can be overcome in time, but they represent an additional factor arguing for the use of a compatible coinage alloy.

I have not mentioned the financial costs to the vending machine industry of adapting to an incompatible coinage alloy. These would undoubtedly be sizable. Very approximate figures are suggested by the Battelle and Treasury studies. The existence of these financial costs did not appreciably influence our final recommendation of the best coinage alloy for the dime and the quarter. Every industry must be reconciled to the costs of adapting to change when it occurs. But, widespread inconvenience to the consuming public, disruption of commerce, and loss of employment were factors which did influence our choice.

The cupronickel alloy clad on a core of pure copper, that we recommend for use in the dime and quarter, is a remarkable example of technical ingenuity. The faces of cupronickel provide a tested, attractive, and durable coinage material. Solid cupronickel coins would not work, however, in the 10-, 25-, and 50-cent channels of existing rejector mechanisms. But the same cupronickel material clad on a copper core in the proportions proposed duplicates exactly the electrical properties of our existing silver coins. The new coins work alongside of the existing ones dependably in all of our coin-operated devices.

#### THE ADEQUACY OF COIN SUPPLIES

The compatibility of the new coins with existing silver coins in vending machines will do much to insure side-by-side circulation. However, it will be essential to continue to protect our high silver content coinage from hoarding or destruction.

There is no reason for our silver coins to be hoarded because of the introduction of the new coins. The existing silver coins can be expected to remain in active circulation indefinitely. There are no plans for their accelerated withdrawal.

Hoarding of coin, of course, is greatly stimulated by fear of shortages. No such fear need be felt in the case of the new coins. The mint has already shown with pennies and nickels how successfully a massive production effort can overcome an even fairly severe shortage. With silver removed from the dime and the quarter, there will be no barrier to a very large production effort on the new subsidiary coins, if such should be required.

In view of the existing tight supplies of high-denomination coins and the uncertainties inevitable during any changeover period, we are gearing up for maximum production of the new coins, beginning very soon after the actual enactment of legislation. In 1 year from the passage of the legislation, we expect to make at least 3½ billion of the new subsidiary coins. This would be a billion and a half more subsidiary coins than we will be producing in fiscal 1965 even under the greatly increased crash coinage program. It would be more than double the production of similar coins in fiscal 1964 and four or five times what we could consider as a normal year's production of silver coins. In the second year after enactment we will have the capacity to make well over 7 billion of the new coins, doubling production again if that is necessary.

Production capabilities of this size should provide an adequate safeguard against any hoarding of silver coins that might possibly occur.

In addition, however, it will be necessary to continue to protect our existing silver coins from the threat of destruction by melting them for their silver content. To make certain that the silver coinage is not destroyed in this manner, it will be necessary for the Treasury to protect it by supplying silver to the market upon demand at the present monetary value of silver of \$1.29-plus per troy ounce. The Treasury has been doing this since 1963 by exchanges of silver bullion against silver certificates.

The value of the silver in our existing coinage, as silver, would exceed the face value of the coins if the price were allowed to rise above a so-called melting point of these coins of \$1.38 per ounce. We hold the price of \$1.29-plus per ounce by standing ready freely to redeem silver certificates in silver at this price. The prudent course is to maintain the price of silver at its present level. In order to remove any possible question as to our intention and ability to maintain the current price of silver, authority is requested to sell silver not needed to back silver certificates. Such sales could only take place at or about the monetary value of silver.

As additional protection for existing silver coinage, which includes the silver dollar, we ask for standby authority to institute controls over the melting, treating, or export of U.S. coins, practices not now forbidden by law.

We believe strongly that suggestions for more extensive controls would operate against our best interests. It has been suggested that we should institute a comprehensive system of controls, including prohibitions on the hoarding of silver coin and bullion and the institution of end-use certificates to regulate the industrial use of silver.

It is our opinion that a prohibition against hoarding coins would be extremely difficult to administer and therefore of doubtful success. An essential initial step would be the determination of what would constitute a normal supply of coins for businesses and individuals. This would appear to be an insoluble problem

for which little relevant information is available, and involving massive interference in private businesses. Furthermore, it is difficult to escape the conclusion that any efforts along these lines would be quite likely to stimulate the very hoarding that it is desired to avoid, by giving rise to the impression that the Government fears large-scale hoarding is about to occur.

Controls over hoarding or exporting of silver bullion and the regulation of industrial consumption through end-use certificates might seem, in principle, a more feasible undertaking. However, such action would result in a dual-price system for silver which could jeopardize our supply of circulating silver coins. One price, \$1.29 plus, would be available to legitimate industrial, professional, and artistic users of silver who could obtain it from the Government. However, it is difficult to see how the development of a second price paid by speculators, hoarders, and foreign users of silver could be avoided. This second price which would be entirely dependent upon the unregulated supply of and demand for silver could rise high enough to constitute a threat to our silver coinage. The best way to achieve a smooth transition to the new coinage is to make silver freely available at the \$1.29 plus price that will avoid the creation of incentives to melt or export our present coinage.

#### THE SILVER DOLLAR

The silver dollar will remain as an authorized coin of the United States, with 90-percent silver. This is a central element in our program for holding the price of silver to its present level for the protection of our existing subsidiary silver coin. The future of the silver dollar can best be decided when the Joint Commission of the Coinage, which we have recommended, can take a look at the world's silver supply and demand situation and other relevant factors and make its recommendations. At that time, the facts can largely govern the decision on the issue of the future of the silver dollar.

#### MAINTAINING SOME SILVER IN THE SUBSIDIARY COINAGE

We have considered it desirable to maintain some silver in our subsidiary coinage. It was to this end that the new silver half dollar was designed. The new composite coin reduces the silver content of the half dollar from 90 percent to 40 percent. It nevertheless retains without readily apparent differences, the aspect and ring of a coin with high silver content, although it is slightly lighter than the present half dollar. It is to be of the same design as the present half dollar, that is, bearing the image of the late President Kennedy.

The reason for retaining some silver in our coinage is a desire to continue the 173-year-old tradition of American silver coinage. Inclusion of a 40-percent silver half dollar is as far as we can safely go to satisfy this tradition. We expect that, barring unforeseen changes in industrial demand for silver, we will have adequate silver to make this one coin in normal amounts for an indefinite period. After the new coins are in full production they should require no more than 15 million ounces a year—less than 5 percent of expected 1965 silver consumption for coins. One reason for confining our use of silver to this particular coin is the fact that we could, if unforeseen difficulties developed, do without the half dollar temporarily. It can be readily replaced in use by two quarters.

#### SUMMARY

A change in our coinage is unavoidable. We have reviewed very carefully the results of all of the studies which have been made on this subject. We are satisfied that, taking into account all of the various factors involved in this problem, our recommendations for the new coinage are sound proposals that will, if enacted, provide the United States with a dependable, technically perfect, and distinctive coinage that can be produced in whatever quantity desired. It is a coinage that, I emphasize, will perform not only across the counter, but will also carry out fully and without interruption its function as a technical merchandising instrument. This is absolutely necessary in the public interest. I therefore strongly urge approval of the President's recommendations on coinage and silver and that they be enacted into law at the earliest possible date.

The CHAIRMAN. We now plan to call a number of witnesses, and they will be limited to a maximum for their own statement of 10 minutes each.

The first witness is Mr. Robert M. Hardy, chairman, American Mining Congress Committee on Silver Coinage.

We are pleased to hear you.

**STATEMENT OF ROBERT M. HARDY, JR., CHAIRMAN, SILVER  
COMMITTEE, AMERICAN MINING CONGRESS**

Mr. HARDY. Mr. Chairman, Mr. Strauss is also appearing for the Mining Congress. May we appear together?

The CHAIRMAN. Yes.

Mr. STRAUSS. Thank you.

Mr. HARDY. Mr. Chairman and members of the committee, my name is Robert M. Hardy, Jr., and I reside in Santa Barbara, Calif. I am chairman of the silver committee of the American Mining Congress.

It is a privilege and a pleasure to appear before you today to discuss the legislation confronting you. I am grateful for the opportunity.

The American Mining Congress has brought to the attention of the executive branch of the Government and both Houses of Congress its views on the constitution of silver coins.

We feel very strongly that a coinage of intrinsic value is the coinage that will demand the respect not only of all people but of all nations and will best serve the purpose as a circulating medium. We have pointed out that the silver content must be reduced; the simple reason being that there is too much silver in the individual coins now being minted. We have considered the arguments advanced for the elimination of silver in the 25-cent piece and the 10-cent piece, and we do not find that they override our viewpoint. We feel that there is enough silver for retention of some in not only the 50-cent piece but in the 25-cent piece and in the 10-cent piece as well.

The main problem seems to be one of looking ahead to the supply of silver that will be available. I would like to point out that the present price of silver has existed since September of 1963 and that the short time since then has not really been long enough to properly assess the potential of the future.

We of the American Mining Congress have been studying this problem for some time and last fall released some of the results of our studies in that we would see by 1968 an increase of 38 million ounces in worldwide silver production, which I must say was a very conservative estimate and in no way optimistic. The figures were derived from projects either already underway or for which the capital had largely been committed, and was a first appraisal of a situation which changes continually and, I must say, on the upward side.

We see underway throughout the world at the present time not only the reopening of old mines, but the exploration for and the development of new properties which will, I am sure, increase that production potential remarkably over the 38 million ounces seen last fall.

After all, the production of a metal from the ground is not a procedure in which you plow, seed, fertilize, cultivate, and harvest. It is a process in which you must find the deposit and then force the earth to disgorge it. This is a project which takes time, toil, and effort and, I must say, a good deal of money.

I would like to call to your attention the story of uranium which, while not under discussion here today, illustrates so well what happens when one considers a metal that must be found and produced.

Back in 1949 we supposedly had very little uranium in this country, being dependent upon the Great Bear Lake deposit in Canada and mostly upon the Belgian Congo. Russia had just exploded her first atomic bomb and we were desperate.

After due deliberation a price of \$3.50 per pound for uranium oxide was announced and the search commenced. By 1953 the development of the Colorado Plateau deposits was underway. Soon the extensions of the area into New Mexico and Wyoming were outlined, as were the Blind River, Ontario, and other Canadian projects.

Ten years from the announcement of the guaranteed price, we had more uranium in sight than we could use for the time being, whereas we had been woefully short in 1949.

Again, the point is that it takes time and effort to bring about the development of a mineral deposit so that it goes into production. It does not occur overnight, yet production does answer the call of price. Price in this instance does not mean that the producer is looking for a higher profit. It means that price must cover the cost of exploring for, developing and paying the cost of production so that the mineral may become ore and pass into trade and commerce.

Another example that I might point out to you has already been brought to your attention through the introduction into these hearings of the Treasury staff study of silver and coinage by the Secretary, Mr. Fowler, and I quote:

Increases in copper and zinc production in the postwar period have far exceeded the expectations generally held in the early 1950's. It is interesting in this connection to compare the actual increases that have occurred with the projections for 1975 made by the Paley Commission in 1952.

The Treasury study goes on to show that by 1962 copper production had already exceeded the Paley Commission's estimate for 1975 by a wide margin, that world copper reserves are very large and that the Paley estimate for 1975 is quite unlikely to be accurate.

I might say the same is true of any Treasury estimates of the production of silver.

Another aspect which has received little attention is that of the newer techniques of exploration which are just beginning to be utilized. You have all heard of the Timmins discovery of Texas Gulf Sulphur. That was made by the diamond drilling of an anomaly initially outlined by airborne electro-magnetic-detection methods. There was no surface exposure, but the techniques pinpointed the deposit.

These geophysical techniques are strikingly effective, and we have many areas in this country alone which are susceptible to their employment. For instance, I have information concerning a deposit of over a billion tons located in the California desert which has been outlined by the newer techniques and is said to contain minable values in molybdenum and gold, with about one-half an ounce in silver per ton. If this is brought into production on a large scale, the U.S. production of silver will be enhanced remarkably.

In summation, there is silver to be had, enough to satisfy the needs for coinage and for industry. However, it must be wrested from the earth by toil and effort, and will not spring forth readily in answer to a cry of panic.

On the other hand, that cry of panic will not stop it from coming forth in answer to a need.

Thank you very much, sir.

The CHAIRMAN. Thank you, sir.

The next witness is Mr. Simon D. Strauss, vice president of the American Smelting & Refining Co. We are glad to hear from you.

**STATEMENT OF SIMON D. STRAUSS, VICE PRESIDENT, AMERICAN SMELTING & REFINING CO., AND MEMBER OF THE SILVER COMMITTEE, AMERICAN MINING CONGRESS**

Mr. STRAUSS. Mr. Chairman and members of the committee, my name is Simon D. Strauss. I am a vice president of the American Smelting & Refining Co., a large miner and refiner of silver. I am also a member of the Silver Committee of the American Mining Congress.

In his autobiography, Winston Churchill described how, having led the British to victory in World War II, he was promptly discharged from office by the electorate at the war's end. The members of this committee will pardon me if I feel there is a strong analogy here to the attitude held by some regarding the use of silver in coinage.

After 173 years in which silver has been the backbone of our coinage system, they now suggest that all silver should immediately be dropped from the coinage in the future. The silver producers agree that maintenance of the present silver content of the coinage is no longer practicable. In fact, silver producers were warning of potential trouble at a time when others saw no need to discontinue Treasury Department silver sales at a price of 91 cents an ounce as recently as 3½ years ago.

But to us it seems possible that there can be a middle ground between a coinage based on a 90-percent silver content in subsidiary coinage and one containing no silver at all.

We believe it is important to maintain coinage of intrinsic value because we know of no instance in which a coinage without such value has kept its purchasing power over a considerable period of time. The history of the world is replete with examples of currency systems based exclusively on token coinage and paper money and, in every case, they have eventually come a cropper.

General de Gaulle may not be the most admired world figure in Washington currently, but all must agree that under his rule the French have restored confidence in their currency. How did he do it? Shortly after he came to power the franc was quoted at 500 to the dollar; before the war it had been 20 to the dollar; and earlier it had been 5 to the dollar.

First he exchanged 1 new franc for 100 old ones and the new franc was minted in pure nickel. Then he caused the issuance of a silver coin, the 5-franc piece, worth \$1 at current rates of exchange but with a silver content worth about 40 cents at today's prices.

There was no compulsion on the French to revert to silver coinage, if silver coinage served no useful purpose; they had already abandoned it. If base-metal coinage would serve as well, there was much more profit for the French Government in minting nickel coins rather than silver ones. But they liked the 5-franc coin so well that now they are minting 10-franc coins also. The French public sees in the silver content of these coins a promise that their currency system will not again be allowed to collapse.

The Japanese, the Italians, and the Germans also saw the value of their currencies depreciate in World War II. They, like the French, also have made the painful climb back to economic strength and stability. And they, like the French, also are minting silver coins as a pledge to their people that they can have confidence in their newly stabilized currencies.

Certainly the Congress can decide what coins are legal tender and the majesty of the law will decide that such coinage shall be fully acceptable in the discharge of all debts. But it is the man in the street in the long run that determines the purchasing power of that currency through the confidence he has in it. You cannot legislate confidence but the precious metals, which mankind has cherished since the beginning of recorded time, can help to maintain it.

The Treasury Department, in the legislation you are considering, recommends retention of 40-percent silver content in the 50-cent coin. The future of the \$1 coin it suggests should be left to the proposed Joint Commission on the Coinage after the end of the transition period in which the new subsidiary coins go into circulation.

This strikes us as the minimum program that should be adopted in regard to silver. Just as we called attention to the deficit in silver supplies, when others considered the supplies ample, so now we would like to go on record that many of the fears regarding silver supplies are exaggerated.

For example, in the study made by the Treasury with regard to silver supplies and demand, we find that no allowance has been made at all for the substantial and growing recovery of silver from scrap. The figures contained in the report contrast total demand—industrial and coinage—with new mine production. But part of total demand is met through salvage. The extent of such recovery is unfortunately not easy to ascertain.

Handy and Harman in its 1964 report mentions 20 million ounces recovered from demonetized coin outside the United States and puts salvaged scrap, worldwide, at 11,400,000 ounces. Frankly, this latter figure seems too low. In any case, active work is now underway to increase scrap recovery, particularly from photographic film, and substantially larger yields from scrap can be expected in the future. Silver is an enduring metal as are copper, lead, and steel. With these elements we know that scrap recovery is a major factor in supply; so too is it with silver.

The Treasury has placed the 1964 deficit in silver supplies at 335 million ounces before allowing for scrap recovery. Two other major factors contributed to inflation of this deficit figure. One was the accumulation of inventories by speculators and consumers, estimated by Handy and Harman in its annual bullion review at 70 million

ounces. It is interesting that in the 4 trading days since the Treasury plan was announced, the futures market for silver has dropped sharply as some of the speculators have decided to unload their positions. The second distortion arose from the accelerated Treasury minting program.

In an effort to meet the coin shortage the Treasury minted coins containing 203 million ounces of silver in calendar year 1964, as against an average rate of about 50 million ounces during the decade of the fifties. Greater population and higher economic activity would have caused a greater rate of coin output in any case—but certainly not a quadrupling of the rate. An important factor was the Kennedy half dollar, which alone accounted for one-third of the silver used. This beautiful coin did not stay in circulation—to a great extent because of a sentimental desire by people all over the world—not just in the United States—to have a memento of our late President.

In our view, on a realistic basis, the current gap between demand and supply is more probably in the order of 150 to 180 million ounces annually. And this estimate includes minting of 900-fineness clad coin in the 10-, 25-, and 50-cent denominations would require about 50 to 60 million ounces annually after the transition period has ended. On this basis the drain on our stocks would thus be reduced by one-third.

In calculating available silver stocks one must also take into account not only the billion ounces the Treasury holds but the 1,900 million ounces now circulating in coinage. How much of this the Treasury will recover is perhaps debatable, but no one should make the mistake of assuming that this huge stock has forever disappeared from the marketplace. In one form or another most of it will eventually find its way back and will be available either for the minting of new coins or for the satisfaction of industrial requirements.

After all these calculations, however, there still remains a gap to be bridged and you naturally ask what can be done about increasing new mine supply. Mr. Hardy has dealt in detail with this problem, but let me express my conviction that a major increase in silver output can be expected. Production has been static in recent years because, until recently, economic incentives to develop new production have been lacking. The price of silver has risen in the last 3 years, but it takes more time than that to develop new mine sources.

Today more exploration and development work is underway on silver projects than at any time in the last 30 years. A substantial number of specific projects are definitely scheduled for production. Others have not yet matured to the point where one can assess their possibilities, but some of these will surely reach fruition. It is relevant to point out that U.S. mine production of silver was 17 percent higher in the first quarter of 1965, according to the Bureau of Mines, than in the same period of last year.

The legislation before you contemplates the fixing of a minimum price of \$1.25 an ounce for domestically mined silver. This floor was not sought by the mining industry; we do not attach any great importance to it. Past experience has taught us that, if we accept floors, we may also expect ceilings. So far as we are concerned, we would be just as happy without it.

We share with the Secretary of the Treasury his grave reservations about a system of elaborate controls on exports, hoarding, et cetera. We recognize and sympathize with the motives that prompt legislators to outlaw speculation and accumulation of silver at this crucial time with respect to coinage.

However, silver is a very valuable commodity and controls that will be observed by honest people are an open invitation to the racketeer and the criminal. A two-price system in silver, with higher prices abroad, would invite reverse smuggling across the borders.

Considering the large numbers of our citizens who work in Mexico and Canada, and Mexicans and Canadians who work in the United States and cross the borders daily, policing the regulations would be a herculean task. They would involve invasion of personal privacy to a degree that might be intolerable to many.

Gentlemen, we fully recognize the gravity of the situation but we do not believe it justifies swinging to the extreme of completely eliminating silver from coinage. We feel that the Treasury program for continuing silver in the half dollar is a minimum step and that actually a greater use of silver could be contemplated with reasonable safety.

The CHAIRMAN. Thank you very much.

Any questions?

The Chair hears none.

We thank you, gentlemen.

The next witness is Mr. Carl Millman, president of the Automatic Merchandising Corp., and chairman of their special committee on coinage.

Now, I understand that Mr. Hungerford with the National Automatic Merchandising Association is here. Are you both from the same organization?

Mr. HUNGERFORD. Yes, sir.

The CHAIRMAN. Then you have just 10 minutes.

**STATEMENT OF THOMAS B. HUNGERFORD, EXECUTIVE DIRECTOR, NATIONAL AUTOMATIC MERCHANDISING ASSOCIATION, CHICAGO, ILL.**

Mr. HUNGERFORD. Mr. Chairman and distinguished members of the committee, I submitted to the clerk a statement in support of the bill, and in the interest of time I would like to just give about a 2-minute summary of that statement.

The CHAIRMAN. That is fine. You may put your whole statement in, and both statements, if you have them.

(The prepared statement and an attachment follow :)

**STATEMENT IN SUPPORT OF S. 2080, BY THOMAS B. HUNGERFORD, NATIONAL AUTOMATIC MERCHANDISING ASSOCIATION, CHICAGO, ILL.**

Mr. Chairman, distinguished members of the committee, I am Thomas B. Hungerford, executive director of the National Automatic Merchandising Association, with headquarters in Chicago, Ill.

We are the national trade association of the merchandise and service vending industry. Our more than 1,400 member firms include all three segments of our business: companies which own and operate vending machines, firms which manufacture the machines, and companies which supply vendible products and services to the operators of machines.

The purpose of my testimony is to give wholehearted support to the President's message proposing the new coins and, specifically, to Senate bill 2080 which has been introduced also as House bill 8746.

In supporting this legislation, I speak in behalf of our own members, as well as several allied associations which represent other coin-operated types of businesses. These include coin-operated laundries, music machines, and soft drink bottlers.

The vending industry considers the President's proposal for new coinage a most imaginative and practical solution to the problem of dwindling silver reserves. All Americans have a stake in the various aspects of the silver shortage. Our industry has, from the beginning, gone on record for a solution which will put the public interest above other considerations. For the sake of brevity, I will refer only to the specific involvement of coin-operated equipment services.

Ever since World War II, vending services have become increasingly important to the American consumer. The American public now puts 30 billion coins into merchandise vending machines alone, every year. Our machines will sell more than \$3.5 billion worth of goods in 1965. By 1970 this important part of our retailing economy is expected to rise above \$5.5 billion in sales per year.

What this means to the average citizen, however, can be better illustrated in another way: More than 1,500,000 Americans now obtain at least one meal every day from vending machines where they work. Our customers include the employees of thousands of factories, hospitals, and offices. Colleges and other institutions depend on vending service for meals, and especially for snacks and coffee breaks. For example, in 32 different plants of the Radio Corp. of America more than 60,000 employees are served every day through vending machines. I can give you an example still closer to home. Even the employees at the White House, here in Washington, use a vending installation for snack and refreshment service.

Vending is important not only to millions of customers, but also to hundreds of product manufacturers. For example, every fourth nickel and dime candy bar now comes from a vending machine. So do 20 percent of all away-from-home soft drink sales and more than 3 billion cups of coffee per year.

Since I began speaking to you—about 3 minutes ago—the American public has put 174,000 coins into our machines. On an annual basis this amounts to over 30 billion coins.

It can easily be seen that unless these coins work properly, irritation and widespread complaints would result.

Coins are the lifeblood of our business. And the heart of each vending machine is the coin mechanism which decides whether the coin is genuine and whether the machine should therefore dispense the product or service.

It might be interesting to note that until the first of these sophisticated mechanisms was invented in the 1930's, the vending industry was literally "slugged" out of business. Only with the invention of the so-called eddy current slug rejector did we gain the ability to tell good coins from bad coins.

These coins mechanisms first check the coin for size and thickness. But the key test checks the metallic content of the coin. It so happens that our testing mechanisms were designed for the present silver coins.

If I may, I would like to demonstrate just how this works.

Only coins with similar density and electrical resistivity to our present silver coins will pass this test. All other coins, and counterfeits, are rejected.

If the new coins to be adopted by the Congress have a different metallic reaction, they will be rejected just like "slugs." Public confusion, and even indignation, would surely result. Conceivably, consumers would, so to speak, blame our Government for minting "bad" coins.

More than half of the 12 million coin-operated units of all types use the metallic content test which I have just described. It would take at least 3 years to design and produce new mechanisms in order to equip all of these units, if "non-compatible" coins are adopted. And it would cost our industry more than \$100 million to change over. This does not count hundreds of millions of dollars in loss of sales during the changeover.

Obviously this would be a serious problem to our industry, as well as to the public.

The new dimes, quarters, and half dollars proposed by the President in the legislation now before you will work reliably in our existing equipment without any change. The important thing is that the public will be able to use the proposed coins in our machines side by side with the present silver coins without any trouble.

The coins proposed by the President will be an ideal solution for our millions of customers, and also for the more than 6,000 companies which own and operate merchandise vending machines. This is also true for the other coin-operated businesses of which I spoke.

It should be understood that a satisfactory half dollar is crucial to the music machine industry and to the coin-operated laundry businesses especially. But this coin also has increasing importance for merchandise vending, because cigarette prices are approaching the 50-cent mark and many new types of merchandise which we now sell will require the half-dollar coin in the future.

Our industry strongly backs the President's proposal for the new coins and urges the Congress to vote its approval.

We are grateful to the committee for this opportunity to offer testimony.

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VENDING SERVICES FOR U.S. CONSUMER CONVENIENCE HINGE ON CONGRESSIONAL APPROVAL OF PRESIDENT'S COINAGE PROPOSAL

(By the National Automatic Merchandising Association,<sup>1</sup> Chicago, Ill.)

The future of luncheon facilities and refreshment breaks for millions of factory employees and college students is up for a vote by the U.S. Congress in the next few weeks, when it decides what to put in place of the present silver content of our dimes, quarters, and half dollars.

Serious disruption of vital services and considerable economic dislocation will result unless the Congress provides for new coins which will work satisfactorily in food and beverage machines which serve thousands of factories, offices, colleges, hospitals, service stations, and many other locations.

Included in the congressional decision will be the fate of 12,200 million cups of coffee, milk, and soft drinks and of 4,500 million candy bars. These are just a fraction of the numerous goods which poured forth last year as Americans plunked more than 30 billion coins into merchandise vending machines of all types.

With more than 83 million coins used in merchandise venders alone every 24 hours, a wrong decision could bring irritation and angry words from the millions of American consumers who buy everything from clean laundry to hamburgers, Kleenex, postage stamps, telephone calls, ice, dance music, and photostats at the drop of a coin.

The metallic content of our coins directly affects the more than 6 million mechanisms which test whether a coin is accepted or rejected before they activate coin-operated machines.

Since the mechanisms check the metallic properties of the coin based on a magnetic field, only coins which react like present silver money get the green light. All other coins—and "slugs"—are rejected. According to vending industry technicians, the fate of \$3.5 billion in annual sales of vended products depends on whether Congress votes the right kind of substitute coins.

Coins with less silver and coins based on a modern "clad" process bonding two different metals into a three-layer sandwich would be the ideal solution, because they work like present coins will be accepted interchangeably until present silver coins go out of circulation in a few years.

Clad metal is the modern process which is widely used in automobiles, refrigerators and many other industrial and consumer goods. It is easy and economical to mint and therefore guarantees an ample coin supply for the growing U.S. economy.

Since these new coins could be minted with a smaller amount of silver, and even without any silver content at all, they provide the ideal answer to the growing shortage in the Government's silver reserve.

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<sup>1</sup> NAMA is the national association of the \$3.5 billion automatic vending industry, comprising companies which operate or manufacture vending machines and those which supply products and services to the industry.

With more Americans relying on coin-operated services every year, coins which work in present equipment are crucial to the vending industry.

Growing at an average of almost 10 percent every year since the 1950's the American vending industry will sell more than \$3.5 billion in goods this year.

One out of four nickel and dime candy bars sold, one out of five soft drinks consumed away from home, and nearly 3 billion cups of coffee were bought by the American consumer from vending machines last year.

Coins are also the "open sesame" for 1,200,000 telephones, 228,000 laundry, dryer, and drycleaning machines, 470,000 music machines (plus 1,410,000 separate wall boxes), 650,000 amusement machines and kiddie rides, 250,000 wall coin changers, and 33,000 postage stamp machines, of which 8,000 are operated by the U.S. Government.

By far the greatest advance of vended services has come in factories, colleges, and hospitals. More than 1,500,000 American workers and students rely on vended food service for at least one meal each day.

Martin O'Shaughnessy, administrator of food services for Radio Corp. of American, Camden, N.J., says RCA depends heavily on vended services for its employees.

"In several of our major manufacturing plants vending services are the only medium to provide food to our employees. Even in all of our other plants, where conventional food service is used, vending represents about 50 percent of our employees' daily food purchases."

He adds that 32 RCA plants utilize vending machines, serving some 60,000 of the company's 80,000 employees.

Whether the Congress adopts coins which will work in present coin equipment is also of crucial importance to the more than 6,000 firms which own and service vending machines as a full-time business.

More than 4,000 of these companies are small independent businesses with six or fewer employees. Only a handful of large companies employ thousands of servicemen on a national basis.

To the smaller firms, especially, an adverse decision by the Congress would mean extinction, because even if they could finance the high expense of changing their coin mechanisms, they would not be able to survive the loss of sales until new coin mechanisms become available. (Production time has been estimated at 3 years, if a complete changeover should become necessary.)

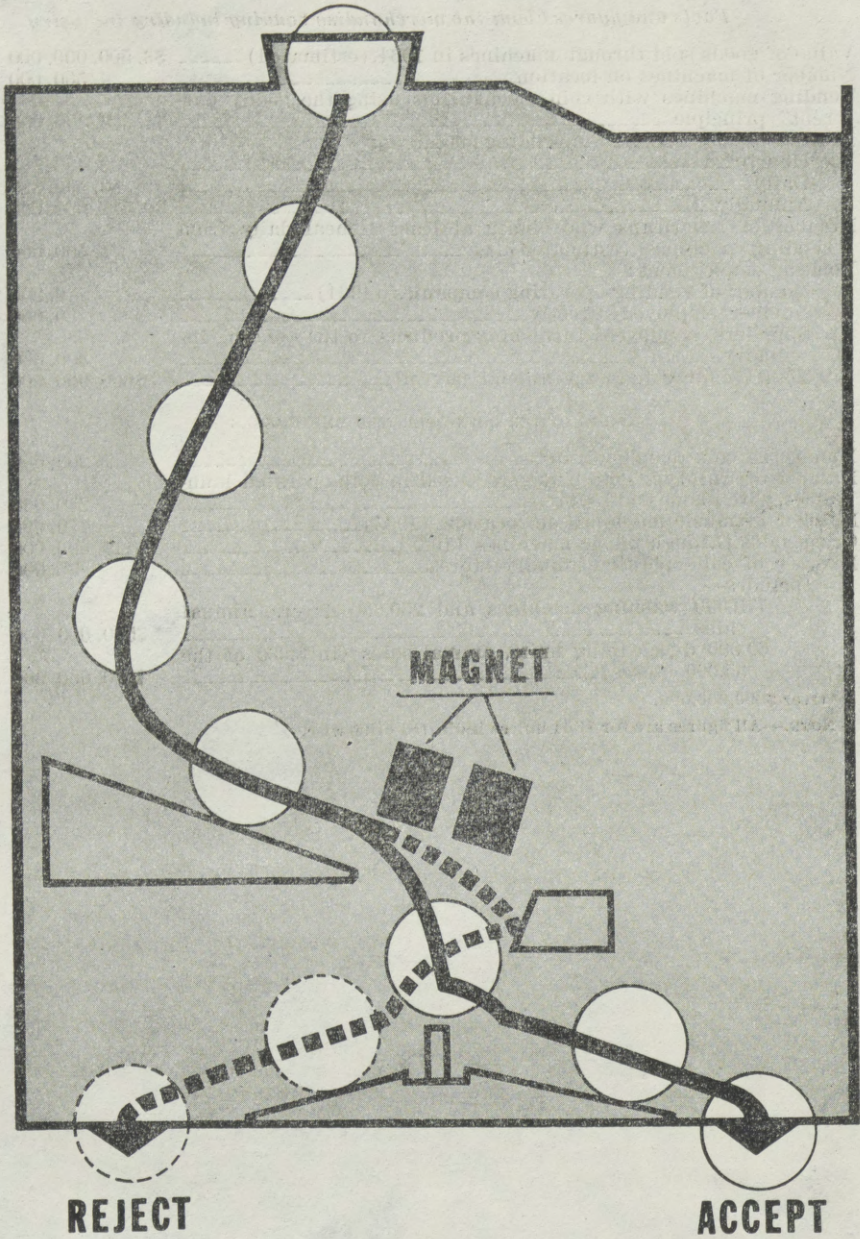
Thus, while the plink of coins into vending machines goes on at the rate of more than 58,000 every minute, the industry holds its breath, hoping that 535 Senators and Congressmen will vote for happy consumers and against "out of order" signs.

#### HOW A VENDING MACHINE COIN-TESTING MECHANISM OPERATES

This drawing (p. 73) details the metallic composition test in a typical mechanism (only the dime coin path is shown). After diameter, thickness, and surface conditions are tested in the upper portion (not detailed here), the coin passes through a magnetic field (labeled "Magnet"). The electrical resistivity and density of the coin's metallic content determine how much the coin will be slowed down as it passes through the magnetic field.

The speed of coins with proper metallic characteristics will be affected by the magnetic field in such a way that they drop into the "accept" path and activate the vending delivery mechanism.

Coins with improper metallic content will either be slowed insufficiently and thus reflected into the "reject" path (dotted line), or the magnet test will retard the coin too much. This will cause it to drop "short" into the "reject" path. Some 6 million coin-operated machines now in use are equipped with devices like this.



How a vending machine coin-testing mechanism operates. (See p. 72 for description.)

*Facts and figures about the merchandise vending industry*

Value of goods sold through machines in 1964 (estimated) -----	\$3,500,000,000
Number of machines on location -----	4,500,000
Vending machines with coin mechanisms using the "eddy current" principle -----	3,300,000
Number of coins inserted in vending machines:	
Hourly -----	3,483,183
Daily -----	83,596,333
Annually -----	30,512,680,000
Number of Americans who obtain at least 1 meal daily from vending machines (estimated) -----	1,500,000
Vending employment:	
Number of vending operating companies (1964) -----	6,200
Number employed directly -----	80,000
Suppliers' employees furnishing products to the vending industry -----	300,000
Total vending industry annual payroll -----	<sup>1</sup> \$600,000,000

## ABOUT OTHER COIN-OPERATED BUSINESSES

Number of coin telephones in use -----	1,200,000
Number of wall-type coin changers (used in coin-operated laundries, with phone booths, etc.) -----	250,000
Number of music machines on location (1963) -----	470,000
Gross sales through music machines (1963) -----	\$419,000,000
Number of coin-operated laundry stores -----	35,000
Includes—	
770,000 washing machines and 250,000 dryers, annual sales -----	\$500,000,000
60,000 drycleaning units, annual sales (in 8,000 of the 35,000 stores) -----	\$200,000,000

<sup>1</sup> Over \$800,000,000.

NOTE.—All figures are for 1964 unless indicated otherwise.

Retail sales through merchandise vending machines in the 1964 totaled \$3,494 million. At the present rate of growth, vending machine sales in 1970 will be \$5,250 million.

*Number of coin-operated machines using "eddy-current" coin mechanisms*

	1964	1970 <sup>1</sup>
Merchandise vending machines.....	3,300,000	4,420,000
Music machines including wall boxes.....	1,880,000	2,200,000
Amusement machines.....	600,000	750,000
Coin changers (wall type).....	250,000	340,000
Coin-operated laundry (washing) machines.....	115,500	150,000
Coin-operated dryer machines.....	62,500	80,000
Coin-operated drycleaning machines.....	50,000	64,000
Kiddie rides.....	50,000	65,000
Postage stamp machines (other than Government).....	25,000	43,000
U.S. Post Office Department, stamp machines.....	<sup>2</sup> 8,000	
Parking gates.....	2,400	4,800
Total.....	6,343,400	8,116,800

<sup>1</sup> At current rate of increase.

<sup>2</sup> 1965.

MR. HUNGERFORD. I am Thomas B. Hungerford, executive director of the National Automatic Merchandising Association, with headquarters in Chicago, Ill.

We are the national trade association of the merchandise and service vending industry. Our more than 1,400 member firms include all 3 segments of our business: Companies which own and operate vending machines, firms which manufacture the machines, and companies which supply vendible products and services to the operators of machines.

I speak in behalf of our own members as well as several associations which represent other types of coin-operated businesses. These include coin-op laundries, music machines, and soft drink bottlers.

The vending industry wholeheartedly supports the U.S. Treasury bill on coinage and commends the administration for this practical and imaginative solution to the problem of diminishing silver reserves.

Because the proposed coins will work reliably in present vending machines, they will be welcomed by the millions of American consumers who increasingly depend on coin-operated equipment for goods and services 24 hours a day.

The new coins have been thoroughly tested in existing coin mechanisms and will work side by side with present coins in all coin-operated devices. This is a critical requirement for more than half of the 12 million coin units now in operation throughout the country.

From the 1.5 million Americans who obtain at least one meal a day from vending machines to the young housewife who depends on the neighborhood laundromat, coin-operated services are a vital part of the modern economy. More than 30 billion coins are used by Americans annually in merchandise vending machines alone.

The distinctive appearance of the new coin offers greater protection against counterfeiting and the availability of the new coin metal will assure an ample coin supply in the future for all retail businesses.

The vending industry urges passage of the bill because it provides an ideal solution to the crucial coinage problem and assures an adequate and modern coin supply for the American economy in the years ahead.

Thank you.

The CHAIRMAN. Last week I had a call from a Virginia man interested in coin-operated machines. He wanted to testify. I said, "Any bill we put out is going to provide for a type of coin which will operate in those machines."

He said, "That's all right. I won't bother to come to Washington."

Mr. HUNGERFORD. Thank you, Mr. Chairman.

#### STATEMENT OF CARL MILLMAN, PRESIDENT, AUTOMATIC MERCHANDISING CORP., MILWAUKEE, WIS.

Mr. MILLMAN. Mr. Chairman, distinguished members of the committee, I am Carl Millman, president of the Automatic Merchandising Corp. of Milwaukee, Wis., and a past president of the National Automatic Merchandising Association, the national trade group of the merchandise and service vending industry. I am presently chairman of the association's special committee on coinage.

On behalf of the NAMA coinage committee and the entire vending industry, I wish to express our enthusiastic support of President Johnson's proposals for changes in U.S. coins as detailed in Senate bill S. 2080.

The vending industry retails over \$3.5 billion worth of merchandise every year. I state my company's vital interest in the adoption of the President's proposal, not as an isolated instance, but as representing thousands of similar companies which are part of our industry.

I employ some 30 people, including routemen who service machines on location, mechanics who keep machines in repair, commissary personnel who prepare food and beverages, office personnel, salesmen, and warehousemen. My principal customers are located throughout southeastern Wisconsin. My machines are placed in factories and plants to provide food service to the thousands of employees working there. In many of these installations, the vending machines operated by my company are the only food and beverage service available.

Our industry is composed of about 6,200 firms similar to mine. They operate in every State and in most cities, large and small. More than 4,000 of these firms employ 6 or fewer people. In other words, gentlemen, they are even smaller than my firm.

A few of our largest companies operate nationwide and have thousands of employees. But for the most part, ours is an industry of small owner-operated businesses. They could not stand the cost of changing all their equipment. They join me in urging that the Congress adopt the bill proposed by President Johnson.

Thank you.

The CHAIRMAN. Thank you.

Any questions?

(No response.)

We thank you both. We are glad we are going to have a bill that is going to please you.

Mr. MILLMAN. Yes, sir.

The CHAIRMAN. The next witness is Adm. Donald J. Ramsey, treasurer and legislative counsel of the Silver Users Association.

We are pleased to hear from you, Admiral.

**STATEMENT OF REAR ADM. DONALD J. RAMSEY (U.S. NAVY, RETIRED), TREASURER AND LEGISLATIVE COUNSEL, SILVER USERS ASSOCIATION**

Admiral RAMSEY. Mr. Chairman, in the interest of saving time I would like to ask that Mr. Wemple and Mr. Stevens come up and sit at the table in order to answer questions, and they will file statements.

The CHAIRMAN. Mr. Stevens is executive vice president of the International Silver Co. And Mr. Wemple is treasurer of Handy & Harman, New York City.

That will be fine.

You are going to consolidate them, so to speak?

Admiral RAMSEY. Yes, sir.

The CHAIRMAN. That will be good. We may finish up before the recess.

You may proceed, Admiral.

Admiral RAMSEY. Mr. Chairman, I am Donald J. Ramsey, treasurer and legislative counsel of the Silver Users Association, Washington, D.C.

I very much appreciate the opportunity to appear before your committee in behalf of the Silver Users Association in partial support of S. 2080, a bill to provide for the coinage of the United States.

It is estimated that the members of the association use 75 percent of the amount of silver consumed by the arts and industry in the United States. The estimated U.S. consumption in 1964 is 123 million ounces.

The members use silver in the manufacture of photographic film and paper, silverware, jewelry, dental supplies, mirrors, and a wide range of industrial products, many of which are vital in defense and space industries. A list of the members is attached as appendix B.

I should like to compliment the President and the Treasury for their efforts to find a solution to a very complicated problem. I also would like to compliment the chairman of this committee for his prompt action in handling this legislation.

There has been considerable talk about there being something for everyone in this bill. It has been said that the vending machine industry came out first, followed by the producers, then the users. If silver is completely removed from our coinage, and if it becomes available for industrial uses where it is essential, I would say the public has come out on top.

The Silver Users Association supports the proposals contained in S. 2080 to mint quarter dollars and dimes composed of an alloy of 75 percent copper and 25 percent nickel clad on a core of pure copper. The composition of these coins was determined by the requirements of coin-operated machines.

The association strongly opposes the proposal to mint half dollars containing 40 percent silver. It urges the minting of half dollars of materials which contain no silver.

Opposition to the use of any silver in subsidiary coins is based on the silver supply situation. It is estimated that the deficit between free world production and industrial demand in 1965 will be 75 million ounces. The deficit between U.S. production and demand will be about 90 million ounces.

These deficits will increase because industrial requirements will be increasing faster than new production increases. This deficit is now made up by the U.S. Treasury through the redemption of silver certificates for bullion. The use of any silver in subsidiary coins reduces the amount of silver available to make up this deficit.

The President and Secretary Fowler have pointed out that there is no dependable or likely prospect of new, economically workable sources of silver that would appreciably narrow the gap between supply and demand. The Secretary stated this to be the opinion of experts both inside and outside the Treasury. Both stated that optimistic projections envision an increase of no more than 20 percent over the next 4 years and the President aptly pointed out that this would be of little help.

Secretary Fowler has stated that after the proposed new coins are in full production, no more than 15 million ounces of silver should be required for the minting of half dollars. While even this amount of needless consumption is undesirable, we believe it to be a low estimate. In 1964 206 million Kennedy half dollars were minted and with the proposed silver content of 40 percent this would require 33 million ounces of silver. After 16 months of production the Kennedy half dollars are still in short supply. No one can predict the normal coinage demand.

Secretary Fowler said that what he calls the industrial and arts problem will not be solved by whether we do or we do not utilize silver in our half dollar; however, the minting of these coins at the 1964 rate would use up enough silver in 4 years to supply U.S. industry for 1 year or make up the free world deficit for 2 years. Such facts cannot—and should not—be overlooked.

The stated reasons for maintaining silver in the half dollar are for prestige and to continue the tradition of silver in coinage in spite of the fact that the President's statement and the Treasury report dispute the need for any value in our coins other than that they serve as a circulating medium of exchange. These considerations, plus the fact that the proposed coin is unique in its composition, can only mean that instead of representing prestige it will become a collector's item at least as much in demand as the silver dollar and Kennedy half dollar, neither of which is seen in circulation.

Why does this country need a prestige coin? Only now, after 173 years, when the proponents are hard pressed, to justify a 40-percent silver-clad coin are we told we must have such a coin. No nation on earth presumes to mint a "prestige" coin with only 40 percent silver.

France, often cited as a major nation using silver in coins, mints two silver coins. But both have paper equivalents. The 5-franc coin containing 83.5 percent silver has disappeared from circulation. The 10-

franc coin containing 90 percent silver is designed for hoarding in order to combat inflation. This action was announced by the French Minister of Finance.

Italy mints a 500-lire coin containing 83.5 percent silver with a paper equivalent which is being withdrawn. Both countries have had volatile monetary and financial histories. Perhaps they need a high content silver prestige coin.

Germany mints a 5-mark piece with 62½ percent silver. Japan mints a 100-yen piece with 60 percent silver.

The United Kingdom shifted all silver coins to cupronickel in 1947 and has experienced no problems with this coinage.

In 1964, while the United States was consuming 203 million ounces of silver, the rest of the world, excluding commemorative coins, used only 40 millions ounces in coins, with Canada using an estimated 14 million.

The silver policy of the United States as set forth in the President's Economic Report to the Congress in January 1963 is:

To reflect the status of silver as a metal for which there is an expanding industrial demand.

Public Law 88-63 was enacted to carry out this policy. This law spelled out the obligation of the Treasury to redeem silver certificates on demand with either silver dollars or silver bullion at the rate of \$1.29 per ounce. This law also authorized the Treasury to use excess silver for coinage and to sell excess silver to other departments and agencies of the Government.

While redeeming silver certificates, the Treasury has also been retiring certificates to obtain silver for coinage. It is this coinage drain on the Treasury stocks, far in excess of any anticipated amounts, which has created the critical coinage situation. It was estimated that 80 million ounces for coinage would be required annually on the passage of the bill in 1963.

In the 2 years since the passage of the act, 366.9 million ounces have been required. This is an average of 184 million ounces, and the rate is now 27 million ounces per month. On the other hand, redemption of silver certificates during the 2-year period amounted to 207 million ounces.

It should be borne in mind that the Treasury, although authorized to sell silver, does not sell silver outside the Government, nor does it "fix" the market price for silver. However, the fact that the Government carries out its legal obligation to redeem silver certificates at the rate of \$1.29 per ounce obviously keeps the market price from rising above that level.

The Treasury stocks of silver bullion now amount to 1 billion ounces. It has been indicated that 300 million ounces of silver will be required for the necessary continued minting of present silver coins. A stockpile requirement of 165 million ounces has been announced by the Office of Emergency Planning. Redemption of silver certificates at the present rate may require 125 million ounces. Thus Treasury stocks may be reduced to around 400 million ounces during the next year. This amount would be available to those who desire to have silver certificates redeemed with silver as guaranteed by the Government when the certificates were issued.

The Treasury's present stock of silver is excess silver removed from the market over a period of 30 years in order to raise the price. Ability to obtain this silver now makes up the deficit between production and consumption in the market. This in turn protects our silver coins in circulation by stabilizing the market price at the guaranteed redemption rate of \$1.29 per ounce.

Any coinage requirement for silver, however small, would be of serious consequence. In addition to reducing the supply of silver, it would maintain a speculative interest in silver which would result in increased redemption for speculative purposes. When the Treasury stocks are exhausted the Government would be forced into the market to buy silver for these coins where there is an ever-increasing deficit in supplies.

Senator BENNETT. Admiral, the chairman appointed me timekeeper. You have used your 10 minutes.

The CHAIRMAN. They have a total of 30.

Senator BENNETT. I am just raising the point if the other men are going to need 10 minutes each.

Admiral RAMSEY. They are not.

Senator BENNETT. They are not? That is fine.

Admiral RAMSEY. As previously pointed out, the Treasury could control the minting of the proposed 50-cent piece, but this would in fact only serve to make it more desirable. It would disappear down the way of the silver dollar. If a 50-cent piece is required as a medium of exchange in our monetary system, it should be minted in sufficient quantities to insure its circulation.

We urge this committee to amend this bill to provide for a 50-cent piece made of the same material as the quarters and dimes or alternatively of some other suitable material not containing silver.

The Treasury Staff Study of Silver and Coinage concluded that cupronickel is the best permanent material for new subsidiary coinage, ignoring the vending machine problem.

Section 4 permits the continued minting of coins now authorized by law. Secretary Fowler in his prepared statement said this section provides for the continued minting of the existing coins as needed until production of the new coinage is adequate. It is recommended that a sentence be added to this section which spells out the Secretary's intention. Suggested wording is as follows:

However, the minting of the half dollars, quarters, and dimes shall be confined to the coins provided for in this Act when the production of such coins is considered by the Secretary of the Treasury to be adequate.

Possibly this could be taken care of in the committee report.

Section 5 authorized the Secretary of the Treasury to prohibit the exporting, melting, or treating of the coins of the United States. The views of the association concerning controls were expressed in a letter to the Secretary of the Treasury dated May 10, 1964, a copy of which is attached to this statement as appendix A.

The proposed penalty for violating any rule or regulation or license issued for melting down coins is \$10,000 or imprisonment for not more than 5 years or both. While this may be intended for large-scale violators, it makes criminals out of individuals who, for instance, may even today melt down silver coins to obtain a few ounces of coin silver

for the purpose of making silver trinkets. Articles of coin silver have been very popular throughout the ages. Persons who obtain silver coins pay for them. It is not their fault that the intrinsic value of our coins is high enough to make them worth melting down. It is urgently requested that if the Treasury is forced to resort to prohibition against melting down, such prohibition be in effect only long enough to serve its purpose and that the right of citizens to do what they wish with coins is restored. The Silver Users Association is not opposed to standby controls so long as, if invoked, they are abandoned when no longer necessary.

Section 6 gives the Secretary of the Treasury authority to sell excess silver at "not less than the monetary value thereof." Section 7 not only authorizes but directs the Treasury to purchase domestic silver at a fixed price when tendered. The Secretary of the Treasury has stated that section 7 was designed to provide a floor, inasmuch as section 6 provided a ceiling. It is felt that this ceiling should be spelled out and that the Secretary of the Treasury should also be directed to sell silver at the fixed price of \$1.29 per ounce.

Title II, section 3, provides that the Joint Commission on Coinage shall review and give advice and recommendations with respect to, among other things, the time when and circumstances under which the United States should cease to maintain the price of silver. Attention is invited to the fact that the price of silver is stabilized at approximately \$1.29 per ounce as a result of the redemption of silver certificates. This redemption is the fulfillment of a pledge to redeem certificates with bullion on demand. The silver users are deeply concerned over the implication that the Government may seek the repudiation of this obligation.

It is urgently requested that this committee take action which will eliminate silver from the half dollar, as well as from quarters and dimes.

(The attachments to Admiral Ramsey's statement follow :)

#### SILVER USERS ASSOCIATION, WASHINGTON, D.C.

The members of the Silver Users Association use approximately 75 percent of the amount of silver consumed in the United States. The total consumed in 1964 is estimated to be at 123 million ounces.

#### MEMBERS OF THE ASSOCIATION

##### Photographic materials:

Eastman Kodak, Rochester, N.Y.  
 Kilborn Photo Paper Co., Inc., Cedar Rapids, Iowa.  
 Xerox Corp., Rochester, N.Y.  
 General Aniline & Film Corp., New York, N.Y.  
 Powers Chemco, Inc., Glen Cove, N.Y.

##### Silverware:

Gorham Corp., Providence, R.I.  
 International Silver Co., Meriden, Conn.  
 Samuel Kirk & Son, Baltimore, Md.  
 Lunt Silversmiths, Greenfield, Mass.  
 Oneida Ltd., Oneida, N.Y.  
 Reed & Barton, Taunton, Mass.  
 Stieff Co., Baltimore, Md.  
 Tiffany & Co., New York, N.Y.  
 Towle Manufacturing Co., Newburyport, Mass.  
 Wallace Silversmiths, Wallingford, Conn. (subsidiary of Hamilton Watch Co., Lancaster, Pa.).

## MEMBERS OF THE ASSOCIATION—Continued

Dental supplies : L. D. Caulk Co., Philadelphia, Pa.

## Chemicals :

Ames Chemical Works, Inc., Glens Falls, N.Y.  
Catalyst Development Corp., Little Ferry, N.J.

## Fabricated and industrial products :

Dixie Bronze Co., Birmingham, Ala.  
Engelhard Industries, Newark, N.J.  
Handy & Harman, New York, N.Y.

The Silver Users Associations also represents the following associations :

Manufacturing Jewelers & Silversmiths of America, Inc.  
National Association of Mirror Manufacturers.  
Retail Jewelers of America, Inc.

Hon. SINCLAIR WEEKS, *President*.  
Rear Adm. DONALD J. RAMSEY,  
(U.S. Navy, retired),  
*Legislative Counsel*.

SILVER USERS ASSOCIATION,  
*Washington, D.C., May 10, 1965.*

Hon. HENRY H. FOWLER,  
*Secretary of the Treasury,*  
*Washington, D.C.*

DEAR MR. SECRETARY : At various meetings with Treasury officials, the Silver Users Association has been asked for its views on the subject of controls and other actions which might be taken in connection with silver bullion and coins, with particular reference to proposed changes in coins. At a meeting on May 4, with Assistant Secretary Wallace and Acting General Counsel Smith, the former suggested that a letter be written to you expressing the views of the association.

The question of controls arises from the possibility that present high-content coins may disappear from circulation to the extent that trade would be disrupted. This situation will occur if these coins are more valuable for their metal content than they are for their face value as a purchasing medium, or if the public believes this will be the case.

The basic position of the association is that controls will not be necessary if—

- (1) The public is assured that the Treasury will continue indefinitely the redemption of silver certificates at the present rate as required by law ; and
- (2) If the use of silver is eliminated in subsidiary coinage.

The Treasury must continue the redemption of silver certificates at the present rate at least until sufficient new coins are in circulation to meet our coinage requirements. This redemption, or Treasury sales at this rate, should be continued indefinitely in order to stabilize the market. This silver was originally acquired to force the market price up to its present level at \$1.29 per ounce. It should now be used to stabilize the price at this level. As long as bullion is obtainable through the redemption of silver certificates, at the present rate, coins will not be melted down for their bullion content. The retention of silver in any amount in any subsidiary coin will increase the current speculative interest which obviously results in hoarding of coins.

Legislative proposals now before the Congress call for a minimum silver content of 30 percent in all silver coins. They also call for a new redemption rate for silver certificates of \$4 per ounce, which would also be the minimum "monetary value" of a proposed new silver dollar. The retention of silver in any coin at a reduced level will raise the monetary value of the coin, thus adding to the confusion and speculative interest. The monetary value is believed by many to be tied into the market price, and today they are almost identical in the case of the silver dollar.

The retention of any silver in subsidiary coins means that sooner or later the Treasury will be forced into the market to buy silver. Statistics which are available clearly indicate that there is now a 25-percent deficit between production and industrial consumption. This deficit is increasing and is made up with silver obtained through the redemption of silver certificates. Consequently any possibility of the Treasury entering the market for any amount of silver can only accentuate the speculative interest. The market supply situation is such that there is no longer any necessity to provide a market for the producers of silver through Treasury purchases.

Regardless of the material used in new coins, there will be increased interest on the part of the numismatists and collectors. This will apply to new coins as well as old. It is believed, however, that the problem will be minimized and within tolerable limits if the public is assured that the metal content of silver coins will not be worth more than their face value. On the other hand, any indication that the metal content will be worth more than the face value will result in the disappearance of such coins. This would be particularly true if the Treasury is required to embark on a program which is dependent upon the withdrawal of these high-content coins in order to provide silver for low-content silver coins.

The following actions have been suggested during the transition period:

- (1) Prohibition of the melting down or hoarding of coins.
- (2) Export controls of silver bullion and/or coins.
- (3) Requirement of end-use certificates from those who obtain silver from the Treasury.
- (4) Reestablishment of the transfer tax.

Prohibition of the melting down of silver coins will be unnecessary as long as the Treasury redeems silver certificates at the present rate, which it must do until sufficient new coins are in circulation. Prohibition of hoarding would be most difficult, if not impossible, to enforce. The establishment of a criteria as to what constitutes hoarding would be a formidable task. Unlike the situation which existed in connection with gold coins, silver subsidiary coins are fractional money and are necessary as a medium of exchange. The solution to the hoarding problem appears to be the elimination of factors which are conducive to hoarding.

The association is not opposed to actions which may be necessary to insure the circulation of coins as a medium of exchange. However, it is requested that all parties affected be given adequate opportunity to be heard prior to such actions.

It is obvious from the foregoing that the underlying problem and its solution is in the intrinsic value of coins. It appears clear that any factor which could make present or new coins more valuable for their metal content than their face value must be eliminated or avoided.

In summarizing the position of the Silver Users Association with reference to controls, it is suggested that the following steps be taken:

- (1) Eliminate the use of silver in subsidiary coinage.
- (2) Assure the public that the Treasury will continue indefinitely the redemption of silver certificates at the present rate.
- (3) Inform the public that the metal value of outstanding silver coins will not exceed the face value.
- (4) Minimize the discussion and use of controls.
- (5) Make every effort to continue the unrestricted use of present silver coins.

Respectfully,

DONALD J. RAMSEY, *Legislative Counsel.*

The CHAIRMAN. Thank you, Admiral.  
Mr. Stevens.

**STATEMENT OF JOHN B. STEVENS, EXECUTIVE VICE PRESIDENT,  
INTERNATIONAL SILVER CO., AND CHAIRMAN OF THE EXECUTIVE  
COMMITTEE OF THE SILVER USERS ASSOCIATION**

Mr. STEVENS. Thank you, Mr. Chairman.

I welcome the opportunity to appear before your committee.

I am John B. Stevens, executive vice president of the International Silver Co., Meriden, Conn., and general manager of its silverware division.

I am also chairman of the executive committee of the Silver Users Association.

My purpose in being here today is to testify before this committee as to the effects the proposed legislation to change the content of our

coins will have upon the thousands of men and women who depend upon silver for their livelihoods.

At the outset, may I commend this committee for its prompt and efficient response, and the Secretary of the Treasury for his clear and well-spoken testimony. I am pleased with the President's decision to eliminate the use of silver in dimes and quarters, but I am greatly concerned over the proposal to mint half dollars of a 40-percent silver content.

The retention of any silver in subsidiary coinage is of vital concern to manufacturers of silverware, both large and small.

This legislation represents one of the first major changes in our coinage system since 1792; it includes a new type of coin, a silver-clad 50-cent piece, which bears the likeness of President Kennedy. This would create a collector's paradise, hence a downright waste of 15 million ounces of silver, or close to 80 percent of 1 year's requirement for silverware. Think of this in terms of productive returns to our economy—in terms of employment, or lack of it.

The silverware industry uses about 20 million ounces of silver annually; it is one of the oldest industries in the United States, first established by the early settlers of New England. To quote one of my associates:

Its history is the history of American industry in the best of traditions.

We believe in tradition, but not at the expense of jobs which would be jeopardized by the continuation of silver in coins.

Our industry grew with our country. Our industry improved with the development of new manufacturing techniques, and our industry prospered through the hard labors of our self-priming economy. The question of supplies of silver is of vital concern to the silverware industry, for without it, we have not business whatsoever. The question of price is also of great concern to us, because the proportion of raw material to total manufacturing cost is extremely high. We take great pride in our craftsmanship, and we strive to provide the public with fine silver products at the lowest possible price. This may no longer be possible.

It is believed that the prestige and traditions of the silverware industry far outweigh the rather intangible "prestige" that one silver-clad half dollar is supposed to impart to our coinage system. Our silver dollar is still our only "prestige" coin. This is the very reason why it has disappeared from circulation.

The silverware industry which I represent is besieged with many of the same problems which other industries have, but by far the most important consideration is the availability of silver itself. In sterling flatware, for example, about 75 percent of our manufacturing cost is the cost of silver itself. We use a very high percentage of silver in terms of our actual product. You are all familiar enough with silver to know that the price of silver has increased tremendously over the last 10 years.

For example, in 1952, the price of silver was 85 cents an ounce. Today, silver is at the current level of \$1.29 per ounce. This represents a 52-percent increase, gentlemen. This is a very large cost to absorb. Our market has been narrowed because we must pass on this cost to our consumers in order to stay in business. We have many would-be consumers who feel they cannot afford to buy silverware.

The silverware industry feels that the upward spiral action on the price of silver was created by Government option, taking such a large stock off the market at above-market prices. This may have been necessary at the time to protect the mining industry, but it is certainly no longer necessary for the Government to resume buying of silver. The cost we have had to pass on to our consumers and would-be consumers is beyond our control.

The question of priorities has been raised by a silver producer in an article appearing in the February 1965 issue of *Mining Engineering*:

Is it more important to have silver for spoons and forks than to have silver for coins? Millions of people every day are eating meals with stainless steel flatware; others, understandably, prefer silverware. But is it more important to satisfy this preference than to have silver for coins?

Certainly people can eat with stainless steel. They can even eat with their fingers if they prefer. I ask why it is important to have silver for coins. If the proposed half dollar is to be looked on as a prestige coin, then our national prestige has dropped as a ratio from 90 to 40.

I repeat, we are very pleased with the Treasury's recommendation to eliminate silver from dimes and quarters. Given the facts, this is the only logical conclusion one could arrive at.

Mr. Chairman, I submit that the national interest would be better served if this legislation were to be amended in such a way as to permit the minting of half dollars of the same alloy as dimes and quarters. I believe your decision should be utilitarian, rather than political.

In summary, the silverware industry endorses the action taken by the administration in recommending the minting of dimes and quarters without silver.

The CHAIRMAN. Thank you very much, Mr. Stevens.  
Mr. Wemple is recognized.

**STATEMENT OF FRANCIS H. WEMPLE, TREASURER, HANDY & HARMAN, NEW YORK, N.Y.**

Mr. WEMPLE. Mr. Chairman, with your permission, in the interest of saving time, rather than reading the statement, I will submit it.

The CHAIRMAN. Without objection, that will be done.  
(The prepared statement of Mr. Wemple follows:)

PREPARED STATEMENT OF FRANCIS H. WEMPLE, TREASURER  
OF HANDY & HARMAN

I am Francis H. Wemple, treasurer of Handy & Harman, a New York corporation founded 98 years ago in 1867. Our executive offices are at 850 Third Avenue, New York, N.Y., and we have plants in Fairfield, Conn.; Mount Vernon, N.Y.; Providence, R.I.; Chicago, Ill.; El Monte, Calif.; Norristown, Pa.; and Toronto, Ontario, Canada. In addition, we have sales offices in other major cities both in the United States and Canada, and an important volume of our products is sold through distributors who have hundreds of branches all over the country.

Among other activities, we are one of the world's largest processors and refiners of silver for industry. We are manufacturers, not bullion dealers in the sense of merely buying and selling silver in the form of commercial bars. We produce a wide range of silver products made from alloys and compositions which are used in virtually all lines of industry throughout the United States and Canada. We also buy scrap materials containing silver for our own use or for return to our customers.

Handy & Harman endorses those provisions of H.R. 8746 which deal with the minting of quarters and dimes without silver. We strongly oppose section 1(a) (1) calling for a half dollar containing silver and section 7 establishing a mandatory Treasury purchase price of \$1.25 an ounce for newly mined domestic silver.

We oppose the proposed silver half dollar on the grounds that in our opinion there is a shortage of silver for industrial purposes alone which should not be aggravated by the retention of any silver in our subsidiary coinage system. The existence of this shortage and the reasons for it are clearly stated in the President's message of June 3 and are in fact given as the primary reasons for recommending the elimination of silver from the quarter and the dime. In my opinion the same considerations with respect to the elimination of silver from the quarter and the dime apply equally to the half dollar.

We oppose the establishment of a mandatory Treasury buying price for newly mined domestic silver because we believe that it is thoroughly unjustified and is a complete reversal of the Government's silver policy clearly established in Public Law 88-36 passed just 2 years ago.

The continued availability of silver at reasonable prices is vital to the industry which my company and others like us serve. It is a common misunderstanding to think of jewelry and silverware as the largest users of silver. In fact, President Johnson in his June 3 message listed these categories first in discussing private demand for silver. Actually these uses account for only about 20 percent of total industrial demand in the United States. The largest single industrial use is photography, and this involves not just snapshots but also X-ray film, industrial photography, as well as defense photography. In the consumer products group silver is used in all household appliances, in automobiles, in radios, in television sets, and in telephones to name just a few. The mirror industry is also a very large user.

Heavy industry relies on silver for motors and generators, aircraft, atomic reactor control rods, agricultural machinery, switches and controls, electronic data processing equipment, and a host of other products. Silver is used in dentistry, as silver amalgam for fillings, and for medical compounds. It is used in X-ray tubes and equipment, and in surgical and medical appliances. In the defense industry it is essential for submarine and torpedo batteries, marine plumbing, rockets and missiles, supersonic aircraft, and radar. In most of these areas no substitute for silver exists. It is essential to support our economy as we know it. The President himself states that coinage is the one part of demand for silver that can be reduced. I go further and maintain that coinage is the one part of demand for silver that can and should be eliminated.

Everyone is familiar with the fact that demand for silver, particularly for coinage in the United States, has grown very rapidly during the past few years. Attached to this statement are two charts, one showing the widening gap between demand and new production and the other showing the rising price trend for silver over the past several years. I am also attaching a copy of Handy & Harman's "Review of the Silver Market for 1964," which describes in detail historical developments in the silver market. All of these background facts were brought out in the President's coinage message.

In considering the merits of a silver half dollar we must estimate future demand and supplies of silver. To do this I am making some basic assumptions. These are:

1. That production in the free world will increase over the next 5 years by a cumulative total of approximately 35 percent. I arrive at this figure by studying the most optimistic estimate of the American Mining Congress. It may prove to be unrealistic. It is based on the assumption that higher prices will bring about substantially higher production. This is not necessarily true. Production in the United States in 1964 was just about the same as it was in 1960, in spite of a price increase of about 40 percent. Sunshine Mine, for example, reported production in 1964 of 2,700,000 ounces compared to an average production for the past 5 years of over 3 million ounces.

2. That industrial consumption in the free world will increase by about 25 percent over the next 5 years. This is slightly less than the increase over the past 5 years and may be understated.

3. That coinage demand will decrease sharply due to the proposed new coinage for the United States and less usage outside the United States. For the United States I am using a figure of 30 million ounces based on the assumption in President Johnson's message that the proposed change would reduce the current annual usage of 300 million ounces by 90 percent. I am assuming further that

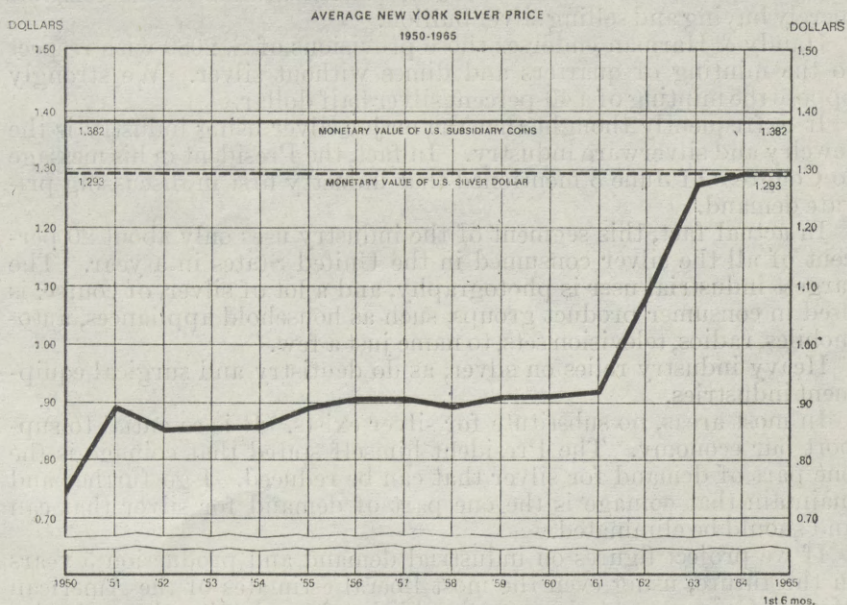
all other countries combined will not be using more than another 30 million ounces, even though they used over 60 million ounces last year.

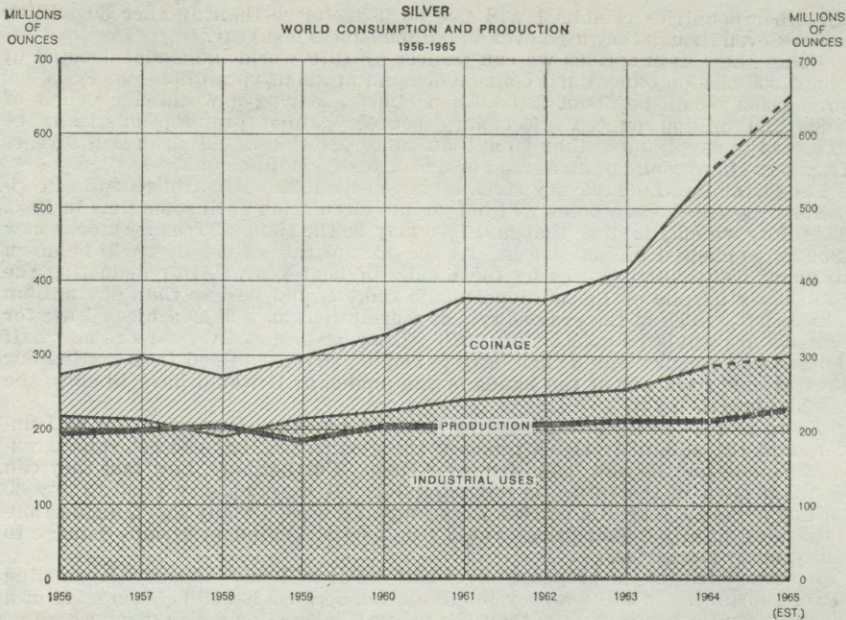
Using these assumptions we can project by 1970 world industrial demand at about 360 million ounces and coinage demand at about 60 million ounces. New production would be about 290 million ounces, leaving a worldwide deficit of some 130 million ounces. Secondary sources cannot even optimistically be expected to supply more than 50 million ounces, so this would mean that 5 years from now there would be an annual deficit of some 80 million ounces.

Let's examine the Treasury stock situation by 1970. According to the President's message the new coins will not go into circulation until some time in 1966. Therefore we may assume that mid-1966 may be the time. Treasury stocks now amount to about 1 billion ounces. At the present rate of use they will be down to about 580 million ounces by the middle of next year. After deducting the proposed stockpile of 135 million ounces, there would be less than 450 million ounces left, which at the present rate of redemptions as well as projected use for half dollars would be gone before 1970. In order to get silver for the new half dollar the Treasury would then have to rely on silver obtained from getting our present coin back out of the hands of the public, or it would have to go to the marketplace to buy it.

There is a lot of silver outstanding in the form of existing coins, but as I understand the administration's proposal these coins will have to continue circulating alongside the new coins for some time. Furthermore, how fast they can be withdrawn in the future is unpredictable. If the Treasury tried to buy 30 million ounces a year in a market where supplies were already short, unquestionably substantially higher prices would result with consequent serious damage to many, many industries.

We conclude that the proposed silver half dollar will only intensify the existing silver shortage. It will not stay in circulation because it will be even more of a curiosity and collectors' piece than the present half dollar which disappeared as fast as it has been minted. It will assuredly have to be changed again in the future, and this can only cause further disruptions and inconvenience. We conclude further that the same silver shortage which dictates the removal of silver from our subsidiary coins, including the half dollar, makes completely illogical the establishment of a Treasury buying price for newly mined domestic silver at \$1.25 an ounce.





Mr. WEMPLE. I would like to emphasize two points orally.

The CHAIRMAN. You may proceed.

Mr. WEMPLE. I am Francis H. Wemple, treasurer of Handy & Harman. We are manufacturers and fabricators of silver. We are not, as is sometimes mistakenly thought, bullion dealers in the sense of merely buying and selling silver bullion.

Handy & Harman endorses those provisions of S. 2080 with respect to the minting of quarters and dimes without silver. We strongly oppose the minting of a 40-percent silver half dollar.

It is frequently thought that the major silver using industry is the jewelry and silverware industry. In fact, the President in his message to Congress of June 3 mentioned that industry first in discussing private demand.

In actual fact, this segment of the industry uses only about 20 percent of all the silver consumed in the United States in a year. The largest industrial user is photography, and a lot of silver, of course, is used in consumer product groups, such as household appliances, automobiles, radios, television sets, to name just a few.

Heavy industry relies on silver, as do dentistry and surgical equipment industries.

In most areas, no substitute for silver exists. It is essential to support our economy. The President himself stated that coinage is the one part of demand for silver that can be reduced. I go further and maintain that coinage is the one part of demand for silver that can and should be eliminated.

If we project figures on industrial demand and production 5 years in the future, using even the most liberal estimates of the American Mining Congress as to how much additional production there may be,

and using conservative estimates on the growth in industrial demand, we nevertheless still come up with a deficit of some 80 million ounces which have to be obtained from some source by 1970.

Any silver used in a half dollar as proposed in this bill would simply aggravate this deficit and would mean that without question the coin would have to be changed again in the future.

So its adoption at this time would be a mistake.

Thank you very much.

The CHAIRMAN. Thank you very much, gentlemen.

Any questions?

The CHAIR hears none.

The next witness is a representative of the Photographic Manufacturers Association.

Mr. Morris, we are pleased to hear from you, sir.

You may put your whole statement in the record.

#### STATEMENT OF JOSEPH T. MORRIS, MANAGING DIRECTOR, NATIONAL ASSOCIATION OF PHOTOGRAPHIC MANUFACTURERS, INC.

Mr. MORRIS. Yes sir. I will make this brief, Mr. Chairman.

The CHAIRMAN. Thank you very much.

(The prepared statement of Mr. Morris follows:)

#### STATEMENT ON BEHALF OF NATIONAL ASSOCIATION OF PHOTOGRAPHIC MANUFACTURERS, INC., BY JOSEPH T. MORRIS, MANAGING DIRECTOR

My name is Joseph T. Morris. I am managing director of the National Association of Photographic Manufacturers, Inc., a voluntary association composed of approximately 80 U.S. companies engaged in the manufacture of photographic film and papers, cameras, projectors, and other equipment and photographic chemicals. Its members account for over 90 percent of these products manufactured in the United States, dollar and volumewise.

The U.S. photographic manufacturing industry is the largest industrial user of silver in the world. We, therefore, greatly appreciate this opportunity to express our views on the proposed legislation S. 2080 presently being considered by this distinguished committee.

#### SUMMARY

In 1964 the U.S. photographic manufacturing industry's usage of silver was estimated at 40.3 million ounces.<sup>1</sup>

The photographic industry is entirely dependent upon systems for image reproduction that utilize silver-based salts. There are no satisfactory alternates or substitutes for silver in the photographic process and, despite extensive research, there are no technological changes to nonsilver systems anticipated.

The members of the association and of the photographic industry have a direct and continuing interest in insuring that the supply of silver available for this use is maintained. They, therefore, have a further direct interest in any proposed legislation that attempts to deal with the present critical deficit situation existing between free world silver production and consumption.

The proposed legislation under consideration by this committee provides for the elimination of silver in U.S. dimes and quarters. We enthusiastically support this portion of the proposed bill.

The members of the association are unalterably opposed to that portion of the proposed legislation that would provide for the continued use of silver in U.S. half dollars—even on a reduced silver-content basis.

In 1964 the free world deficit between silver consumption and production, excluding all coinage demand was 70.4 million ounces.<sup>2</sup> Any continued use of

<sup>1</sup> "Treasury Staff Study of Silver and Coinage," U.S. Treasury Department.

<sup>2</sup> Table 1.—"Treasury Staff Study of Silver and Coinage," U.S. Treasury Department.

silver in U.S. subsidiary coinage can only increase this deficit and reduce the total amount of silver available for private industry where its use is vital to the continued growth of the economy.

President Johnson, in his message to the Congress of June 3, 1965, accompanying the proposed legislation, states the following: "In terms of the present pattern of coin usage, adoption of the new coinage will permit a saving of some 90 percent of the silver we are now putting into coins annually." This would indicate a contemplated continuing demand for over 30 million ounces of silver to be used in half dollars based on the 300 million ounces estimated for present consumption elsewhere stated in his message. The continued use of 30 million ounces of silver in coinage represents an almost 50-percent increase in the 1964 industrial arts free world deficit of consumption over production. Otherwise stated, this continued unnecessary demand for silver in half dollars represents approximately 75 percent of the silver used by the entire U.S. photographic industry last year based on the consumption reported in the Treasury study.

Photography is a basic industry in the Nation's economy.

#### PHOTOGRAPHY DEPENDENT UPON SILVER AVAILABILITY

The entire photographic process depends upon the unique ability of a silver salt to record an image when exposed to light. Photographic film and paper reproduce an image because they have been coated with a light-sensitive silver salt. No other material has been discovered that can produce the quality of image and continuous tones that make a photograph come alive.

There has been extensive research aimed at the development of substitutes for silver-based salts. This research has been accelerated within the past few years in part as a direct result of the substantial increase in the cost of silver which has occurred since 1961. Silver represents a considerable portion of the cost of sensitized photographic products. Yet, despite an increase in silver prices of over 40 percent in the past 4 years, no acceptable substitute system has been devised and none is foreseeable.

To date any material discovered is subject to severe limitations and would at best be suitable for extremely limited applications.

As the photographic industry has grown, its need for silver has increased from 30.8 million ounces in 1959 to 40.3 million ounces in 1964.<sup>3</sup> It is expected that this demand will continue to increase as the industry continues to expand within the economy.

Because of its extensive use of silver, the photographic industry has developed an awareness of the need for silver recovery, both as a conservation measure and as a measure of prudent business economy. Those companies in the industry engaged in the manufacture of photographic films and papers recover the maximum amount of silver possible from waste and scrap materials. Silver is also recoverable from the solutions used in the development process for photographic films and papers. During processing, a varying amount of silver is "washed" from the film or paper and remains in the solution. The extraction of this silver from photographic solutions is presently practiced by many companies in the industry. Since this recovery requires an investment in capital equipment, labor, and overhead, the economy of silver recovery in the process operation is dependent upon the volume of film processed and many other factors.

Our industry is concerned over the existing deficit between free world industrial consumption and free world silver production. Because silver is indispensable to the photographic process, we are vitally interested in the conservation of existing silver stocks to forestall the time when the lack of available silver at any price could cause a serious curtailment in the manufacture of our industry's products.

If silver supplies are curtailed, vital uses of film in the defense effort where, for example, it is indispensable in aerial reconnaissance, would be continued at greatly increased costs to the Government and taxpayer. Since the Government is the largest purchaser of sensitized photographic material, the burden would be substantial. Medical, dental, and scientific research would continue to require film. Banks and other commercial and industrial users where photography is necessary for recordkeeping, product analysis, and research would have a continuing need. Newspapers, magazines, and other periodicals where graphic arts represents the lifeblood would be supplied, but all would face mounting

<sup>3</sup> Table 4.—"Treasury Staff Study of Silver and Coinage," U.S. Treasury Department.

prices and reduced supply. Many amateur photographers faced with increased costs would cut back their photographic expenditures or possibly be forced to turn to other interests.

#### THE EFFECT OF THE PROPOSED LEGISLATION

The proposed legislation under consideration by this committee is a recognition in part of the continuing need of private industry for silver underscored by the statement of the President in his message to the Congress on June 3, 1965, accompanying the proposed bill in which he stated, "The one part of the demand for silver that can be reduced is governmental demand for use in coinage."

The elimination of silver in dimes and quarters as proposed, represents a realistic partial solution to the excessive demand placed upon Treasury stocks of silver by the continued use of silver in our subsidiary coinage and furthermore, a recognition that subsidiary coinage need not have "intrinsic value" to maintain purchasing power.

Silver has become too valuable to the industrial needs of our economy to be continued in any subsidiary coinage. Our members and our industry, therefore, are opposed to that portion of the proposed bill which would provide for the retention of a reduced amount of silver in U.S. half dollars. The continued use of silver in half dollars will impose an unnecessary and unwarranted burden upon Treasury stocks detracting from their availability to aid in filling the individual deficit and assisting in the orderly transition to nonsilver subsidiary coinage. Inevitably, these stocks will become depleted necessitating a second change in the composition of the U.S. half dollars. The Battelle Memorial Institute study indicates that this might occur in the 1970's.

Assistant Secretary of the Treasury Wallace in testimony before a subcommittee of the Committee on Appropriations, U.S. House of Representatives on May 24, 1965, indicated in discussing the subsidiary coin shortage that "the shortage of half dollars continues to be very severe." The testimony which followed indicates that the Treasury attributes this shortage to the fact that the Kennedy half dollar has become a collector's item. The minting of this coin with a reduced silver content—with an ultimate realization that a further change to nonsilver composition is inevitable, can have only one result, to further decrease the circulation of this coin.

President Johnson, in his message to the Congress of June 3, 1965, accompanying the proposed legislation, states the following: "In terms of the present pattern of coin usage, adoption of the new coinage will permit a saving of some 90 percent of the silver we are now putting into coins annually." This would indicate a contemplated continuing demand for over 30 million ounces of silver to be used in half dollars based on the 300 million ounces estimate for present consumption elsewhere stated in his message. The continued use of 30 million ounces of silver in coinage represents an almost 50-percent increase in the 1964 industrial-arts free world deficit of consumption over production. Otherwise stated, this continued unnecessary demand for silver in half dollars represents approximately 75 percent of the silver used by the entire U.S. photographic industry last year based on the consumption reported in the Treasury study.

#### PHOTOGRAPHY IN THE ECONOMY

The photographic industry employs approximately 300,000 persons in the United States. There are over 200,000 retail outlets which sell over \$2½ billion of photographic products at consumer purchase value. In 1963, 530 photographic manufacturing establishments had shipments of over \$1.8 billion at manufacturers prices. In 1964 exports of photographic goods amounted to \$180 million against imports of \$110 million, a significant contribution to the U.S. balance-of-payments situation.

Approximately two-thirds of the sales by the U.S. photographic manufacturing industry are to Government, industry, and commercial users. To this large segment of the economy, the continued use of photography is vital. In national defense where it is used for aerial reconnaissance and X-ray examination of our weapons systems, to the health of our citizens where half a billion medical and dental X-rays last year contributed significantly to the health of our population, to the printing and publishing industries where photography pictorially tells a story and, in addition, is finding increasing usage as a modern production technique.

To education where 340,000 still and movie projectors are in use in the U.S. public schools and to science and industry where it performs a wide variety of tasks ranging from data storage to use in oil exploration.

Photography also provides recreation for some 52 million American picture-takers as well as through motion pictures.

#### CONCLUSION

We appreciate this opportunity to appear before this distinguished committee and present our views on a legislative proposal which has such far-range implications for our industry and for our Nation as a whole.

We respectfully urge the committee to report the proposed legislation so as to provide for the complete elimination of silver in our Nation's subsidiary coinage and simultaneously to insure to the maximum extent possible, the continued availability of silver to meet the growing needs of the economy.

Mr. MORRIS. Mr. Chairman and members of the committee, my name is Joseph T. Morris. I am managing director of the National Association of Photographic Manufacturers, Inc., a voluntary association composed of approximately 80 U.S. companies engaged in the manufacture of photographic film and papers, cameras, projectors, and other equipment and photographic chemicals. Its members account for over 90 percent of the volume of these products manufactured in the United States.

As has been said previously, the U.S. photographic manufacturing industry is the largest industrial user of silver in the world. We, therefore, greatly appreciate this opportunity to express our views on the proposed legislation S. 2080 presently being considered by this distinguished committee.

In the interest of conserving time I will briefly summarize my statement, and I would request of the chairman that this brochure, "Photography in the Economy," which has been distributed to the members of the committee, be included as part of the record.

Senator BENNETT. We will be glad to have your statement in its complete form put in the record, but with exhibits of this kind, we put them in the committee's file, because obviously some of the things in here cannot be duplicated in the record.

Mr. MORRIS. That will be most satisfactory, Senator Bennett. Thank you.

In 1964 the U.S. photographic manufacturing industry's usage of silver was estimated at 40.3 million ounces. (Treasury Staff Study of Silver and Coinage, U.S. Treasury Department.)

The photographic industry is entirely dependent upon systems for image reproduction that utilize silver-based salts. There are no satisfactory alternates or substitutes for silver in the photographic process and, despite extensive research, there are no technological changes to nonsilver systems anticipated.

Senator BENNETT. May I ask a question at that point? Is any silver used in colored photographic film?

Mr. MORRIS. Yes, it is, sir.

Senator BENNETT. Is there as much silver per square inch of colored film as in black and white?

Mr. MORRIS. The amount of silver used in any particular type of film varies widely. It varies in a rather broad spectrum depending on the end usage of the film, so it is impossible for me to give you a definitive answer to that, Senator.

Senator BENNETT. Give me a general answer.

Mr. MORRIS. As a general answer, at the higher end of the spectrum, the most commonly used film would be X-ray film. There are certain personal monitoring films and the like which use extensive amounts of silver. But at the higher end of the spectrum would be X-ray film.

At the lower end of this group perhaps would be amateur film.

In between would be graphic arts films and a wide variety.

Now, as a figure, the amount of silver that is used in photographic film is extensive. The U.S. Department of Commerce——

Senator BENNETT. Well, may I just bring this down to a narrow point?

Mr. MORRIS. Surely.

Senator BENNETT. In terms of amateur film, comparing black-and-white film with colored film, is there any relationship that you can state in general terms?

Mr. MORRIS. I can state this in general terms, Senator: In terms of color film, after processing, the retention of silver in the picture itself, the photograph itself, would be less than in the black and white.

In other words, it would be theoretically possible to extract almost a hundred percent of the silver from, say, a colored negative. In black-and-white pictures, this, of course, is not possible.

Senator BENNETT. Then in terms of the amount of silver required to produce the same amount of black-and-white film compared to the same amount of colored film in the process of manufacture, is there any relationship that you can state for amateur use?

Mr. MORRIS. For amateur use I think the amounts would cross over depending upon manufacturers and depending upon——

Senator BENNETT. Well, are you saying that it will require approximately as much silver to produce a colored film as it would a black-and-white film?

Mr. MORRIS. I think perhaps slightly less, but you are at the lower end of the spectrum, Senator.

Senator BENNETT. Yes. That is where the real mileage or tonnage, or whatever you want to call it, of film is.

Mr. MORRIS. That perhaps may be correct, Senator, but the tonnage in terms of silver use is at the other end of the spectrum, because in the use of X-ray film, as an example, there is a great deal more silver used as compared to amateur film.

Our industry actually is divided about two-thirds and one-third on a commercial-industrial application as against amateur photography.

Senator BENNETT. I did not want to get into this technical discussion. What I really was trying to get into the record was the answer to a question: Will the increasing amateur use of colored film and the replacement by colored film of black-and-white film for amateur use tend to reduce the amount of silver that the film industry would need to supply that amateur demand?

Mr. MORRIS. I think my answer to that, in broad generalities, would have to be, "No, sir."

Senator BENNETT. Then you are saying that the colored film requires the same amount of silver across the amateur spectrum as the black-and-white film?

Mr. MORRIS. What I am saying, sir, is the amount of silver that goes into the film itself is almost, in broad generalities, the same as goes into black and white.

So that unless you can recover the theoretical maximum and process this back through the channels, the expenditure of silver would be roughly the same, sir.

Senator BENNETT. This is the point I wanted to clear up. Thank you very much.

The CHAIRMAN. You may proceed.

Mr. MORRIS. The members of the association and of the photographic industry have a direct and continuing interest in insuring that the supply of silver available for this use is maintained. They, therefore, have a further direct interest in any proposed legislation that attempts to deal with the present critical deficit situation existing between free world silver production and consumption.

The proposed legislation under consideration by this committee provides for the elimination of silver in U.S. dimes and quarters. We enthusiastically support this portion of the proposed bill.

The members of the association are unalterably opposed to that portion of the proposed legislation that would provide for the continued use of silver in U.S. half dollars—even on a reduced silver-content basis.

In 1964 the free world deficit between silver consumption and production, excluding all coinage demand, was 70.4 million ounces. (Table 1.—Treasury staff study of silver and coinage, U.S. Treasury Department.) Any continued use of silver in U.S. subsidiary coinage can only increase this deficit and reduce the total amount of silver available for private industry where its use is vital to the continued growth of the economy.

President Johnson, in his message to the Congress of June 3, 1965, accompanying the proposed legislation, states the following:

In terms of the present pattern of coin usage, adoption of the new coinage will permit a saving of some 90 percent of the silver we are not putting into coins annually.

This would indicate a contemplated continuing demand for over 30 million ounces of silver to be used in half dollars based on the 300 million ounces estimate for present consumption elsewhere stated in his message.

The continued use of 30 million ounces of silver in coinage represents an almost 50-percent increase in the 1964 industrial arts free world deficit of consumption over production.

Otherwise stated, this continued unnecessary demand for silver in half dollars represents approximately 75 percent of the silver used by the entire U.S. photographic industry last year based on the consumption reported in the Treasury study.

I would like further to mention two points briefly.

There has been extensive research aimed at the development of substitutes for silver-based salts. This research has been accelerated within the past few years in part as a direct result of the substantial increase in the cost of silver which has occurred since 1961. Silver represents a considerable portion of the cost of sensitized photographic products. Yet, despite an increase in silver prices of over 50 percent in the past 4 years, no acceptable substitute system has been devised and none is foreseeable.

To date any material discovered is subject to severe limitations and would at best be suitable for extremely limited applications.

Second, because of the industry's extensive use of silver, the photographic industry has developed an awareness of the need for silver recovery, both as a conservation measure and as a measure of prudent business economy.

Those companies in the industry engaged in the manufacture of photographic films and papers recover the maximum amount of silver possible from waste and scrap materials. Silver is also recoverable from the solutions used in the development process for photographic films and papers. During processing, a varying amount of silver is "washed" from the film or paper and remains in the solution. The extraction of this silver from photographic solutions is presently practiced by many companies in the industry. Since this recovery requires an investment in capital equipment, labor, and overhead, the economy of silver recovery in the process operation is dependent upon the volume of film processed and many other factors.

We appreciate this opportunity to appear before this distinguished committee and present our views on a legislative proposal which has such far-range implications for our industry and for our Nation as a whole.

The CHAIRMAN. Thank you very much.

The next and final witness is Mr. Richard K. Bancroft, representing the Columbiun for Coinage Association.

I understand Mr. Bancroft is going to recommend a metal not silver, nickel, or copper, but one he thinks is better than any combination of the three for new coins.

You are limited, I am sorry, to 10 minutes.

You may proceed.

#### STATEMENT OF RICHARD K. BANCROFT, ON BEHALF OF THE COLUMBIUM FOR COINAGE ASSOCIATION

Mr. BANCROFT. Mr. Chairman, Senator Bennett, I appreciate the opportunity to testify before this committee.

My name is Richard K. Bancroft. I appear on behalf of the Columbiun for Coinage Association. My purpose in appearing before the committee is to urge that columbium be considered as the material to be substituted in place of silver in the U.S. coinage system.

I have been employed by the Union Carbide Corp. for the last 19 years, first as a sales engineer and more recently as manager of product planning for the Stellite Division of the Union Carbide Corp., with offices in Kokomo, Ind.

My company, together with four others, has formed the Columbiun for Coinage Association on whose behalf I am here today. The members of the association are as follows: General Electric Co., Kaweck Chemical Co., Molybdenum Corp. of America, Union Carbide Corp., and Wah Chang Corp.

The President's message on coinage has made it abundantly clear that:

We have no choice but to eliminate silver for the most part from our subsidiary coinage.

The question is: What is the best substitute material for coinage in place of silver?

The members of the Columbiuim for Coinage Association do not oppose the proposed clad coins in place of the 10-, 25-, and 50-cent silver pieces historically used in the U.S. coinage.

Nevertheless, we believe that the adoption of the composite coin is likely to prove only an interim solution for the problems which are inherent in the coinage situation.

We believe experience with the new coins made of low-cost base metal will show that the present rejection mechanisms used in vending machines in the United States will prove to be inadequate protection against "slugging."

Certainly, the adoption of the composite coin will be a daily reminder to the public at large that a low-cost cupronickel covering bonded to a copper base metal core will actuate the release mechanism of present-day vending machines. Indeed, we believe that in time the vending machine industry will become the principal victim of the proposed composite or sandwich-type coin and will be obliged to devote substantial resources to finding a more sophisticated mechanism which will be more nearly proof against "slugging."

Not only must there be more sophisticated mechanisms, but these mechanisms must be designed around a metal such as columbium, which has intrinsic value and unique characteristics which distinguish it from base metals such as copper and nickel which may be profitably used for slugging.

Now, let me proceed to outline some of the affirmative merits of columbium as a metal for adoption in the subsidiary coinage of the United States.

Attached to the statement which has been placed before each member of the committee is a copy of a more detailed document entitled "A Proposal for Columbiuim Coinage."

(The document is as follows:)

A PROPOSAL FOR COLUMBIUM COINAGE BY THE COLUMBIUM FOR COINAGE ASSOCIATION, WASHINGTON, D.C.

INTRODUCTION

The purpose of this proposal is to acquaint the Treasury, the Congress, and other interested groups with the characteristics and advantages of columbiuim, which make it a superior candidate material for U.S. coinage, and to promote its adoption as a substitute for silver coinage.

A number of firms active in the mining, processing, and marketing of columbiuim have formed a group known as the Columbiuim for Coinage Association. This presentation has been prepared and is submitted by the association, whose members are:

General Electric Co.  
Kawecki Chemical Co.  
Molybdenum Corp. of America  
Union Carbide Corp.  
Wah Chang Corp.

SUMMARY

Columbiuim has the characteristics required of a good coin material and in addition unique attributes which, if it were adopted as a substitute for silver, would retain the dignity and prestige of U.S. coinage.

Known world reserves of columbiuim exceed 6 million tons which is equal to known reserves of sulfide nickel ores. Columbiuim is abundant in this hemisphere and supplies in Canada and the United States are ample for any emergency.

Present productive capacity is between 1 and 2 million pounds annually. With suitable long-term assurance of high-volume demand, production could

be brought to a level of 10 to 20 million pounds annually in a period of about 2 years.

In the quantity required for coinage, we estimate the price of columbium to the Government would be less than half the present price of silver. The use of columbium for coinage would so far exceed any current or envisioned applications of the metal that raw materials and stability of price could be readily assured the Government.

Publicity on "sandwich coins" has invited slugging of vending machine rejector devices now in use. What is now needed is a slug-proof rejector device. It is believed such a device could be designed, built around the properties of columbium. We have confidence the combined technical skills of the columbium industry and the vending industry could solve the problem.

Establishment of a healthy columbium industry would be beneficial to the defense and space effort, nuclear power development, and would strengthen the economies of Canada, Brazil, and many other smaller free world countries; such as the Congo, Uganda, Kenya, and Nigeria.

There are several reliable U.S. companies who are interested and capable of supplying columbium for U.S. coinage. This assures the Government of an alternate and sustained source of metal.

Nickel and copper which have been prominently suggested for all U.S. subsidiary coins are base metals widely used and essential to many basic U.S. industries. Although there are ample world reserves of these metals, availability may depend largely upon one or a very few firms and, in time of national emergency, broad demand precludes availability for coinage. We have already had experience with "white" pennies and silver nickels.

#### COLUMBIUM FOR COINAGE

Columbium has the following properties and characteristics which make it an excellent candidate for a coinage material:

##### *Public acceptance*

Columbium is silver-gray with an attractive luster, is comparable to silver in weight, has a good "feel," and a "ring" more like silver than nickel or any other known base metal used for coinage.

##### *Wearability and corrosion resistance*

Columbium is harder and tougher than either silver or nickel and may be expected to have greater wear resistance and retain imprinted detail longer than either. Of all known metals and alloys, it is second only to tantalum in corrosion resistance, and luster should be enhanced by usage.

##### *Resistance to counterfeiting*

Columbium has the inherent ability to resist counterfeiting. Its high melting point (4,400° F.), specialized processing (vacuum melting), and intrinsic value all contribute to make counterfeiting both difficult and unprofitable.

##### *Workability and adaptability to mint processing*

Columbium is very ductile and can be worked cold. Experimental columbium coins have already been struck by the Philadelphia Mint, using their standard presses. Reproduction of detail, balance, and other characteristics are excellent.

##### *Sufficiency of supply*

Columbium ore reserves are over 6 million tons. This makes it one of the most plentiful of metals. Largest deposits are in Brazil, Canada, and Africa, with a substantial ore body in the United States. Canadian columbium deposits alone would be enough to meet estimated coinage need of 5,000 tons annually for over 100 years and, at Powderhorn, Colo., reserves would sustain the same usage rate for over 30 years.

##### *Availability and cost*

Within a period of 18 to 24 months it is estimated columbium production could be scaled up to meet any annual coinage demand in the range of 10 to 20 million pounds.

Additional facilities needed for sustained high production would relate to mining and milling, extraction, reduction, and annealing. Ample melting and rolling capacity already exists.

At the outset, it is recommended that columbium strip or blanks be supplied the mint. Ultimately, there is no serious technical barrier to the mint assuming further "upstream" processing. Columbium does not require the extensive mills associated with steel or other hot-rolled metal fabrication. Operations are "clean." Because the metal is worked cold, much of the present mint equipment could no doubt be utilized.

Use of columbium in place of present silver coinage would create a columbium industry. This would be healthy for U.S. economy by establishing facilities, furthering technology, and providing a sound base from which to expand all commercial refractory metals. Many industries as well as the space and military agencies would benefit.

However, the columbium producers would have to be assured of reimbursement for the additional capital investment necessary to produce the volume of columbium required for coinage. In this regard, it is suggested that long-term (10-year) contracts with suitable amortization would be appropriate.

Today's commercial price for columbium strip ranges between \$30 to \$40 per pound. Lack of industrial demand for the metal and its alloys keeps the price high. However, with a long-term assured market in the volume necessary for coinage, the price to the Government would conservatively be in the range of \$10 to \$15 per pound or less. Since columbium is about 80 percent of the weight of silver, this would mean an equivalent volume cost of about one-half the present price of silver.

Even the most optimistic industry forecasters agree that any single commercial use for columbium would never equal its usage for coinage if adopted and required in a volume of 10 to 20 million pounds per year. It is probable, even assuming columbium were someday used in gas turbine engines and other high-temperature, space, nuclear, and corrosion applications, the total volume required would not equal coinage requirements.

This then would give the Government a high degree of control over the supply and price of columbium raw materials and, thus, the stability of coinage.

Other important considerations which favor columbium include the following:

Columbium offers a substitute for silver which will maintain the integrity and dignity of U.S. coinage.

The adoption of columbium for coinage would provide a final solution to the present problem and its abundance assures a stable coinage for a century or more.

Establishment of a healthy columbium industry would be especially helpful to the economies of Canada, Brazil, and many of the smaller countries of Africa, and the free world. To Brazil, it would mean another major export to the United States and thus contribute substantial assistance to the political and economic stability of the country. To Canada, it would mean further development of columbium properties. To many smaller nations like Nigeria, the Congo, Kenya, and Uganda, it would help build financial independence.

#### THE METAL COLUMBIUM

Columbium sometimes called niobium, is an elemental metal. Along with tungsten, tantalum, and molybdenum, it is known as one of the refractory or reactive metals—refractory, because of its melting point (4,473° F.) and high strength at elevated temperatures, and reactive, because of its affinity for atmospheric gases at temperatures above 500° F.

#### *History*

Although discovered well over 100 years ago, columbium has a commercial history of only about 15 years. After World War II, during the period of intensive development of high-temperature alloys for the aircraft gas turbine, it was found that small amounts of columbium added to steels and cobalt- and nickel-base alloys enhanced properties by refining and stabilizing grain size. However, the metal was thought to be in very short world supply—almost in the category of rare earths.

Just before and during the Korean war, under the impetus of demand, intensive exploration revealed large deposits throughout the world and columbium is now known to be most plentiful. By far, the greatest use of columbium is as an alloying addition to high-temperature alloys, chiefly as ferrocolumbium.

### Occurrence and world reserves

Columbium occurs as columbite in alluvial deposits frequently associated with tin and in the mineral pyrochlore. Largest columbite sources are found in Africa and Malaysia with smaller deposits scattered throughout the world.

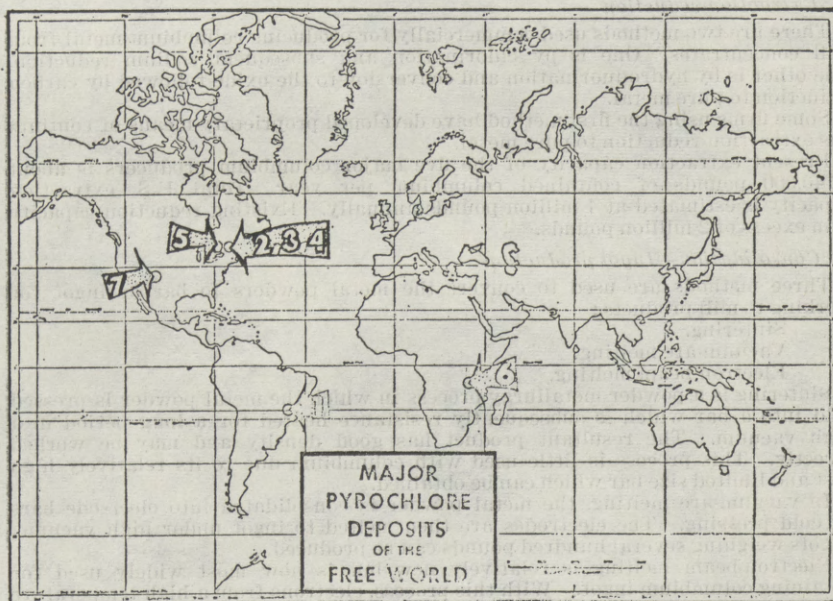
However, pyrochlore is by far the greatest source of columbium. Canadian deposits in the Oka district contain more than 1,250,000 tons of  $Cb_2O_5$  (about 875,000 tons of contained metal). Largest known reserve is the Araxa deposit in Minas Gerais Province, Brazil, where over 6,300,000 tons of  $Cb_2O_5$  (4.4 million tons of columbium metal) are proven. Other important reserves are in Africa. A recently discovered pyrochlore body in the Congo is reported as vast, but yet not fully evaluated.

In United States, there is an estimated potential resource of almost 150,000 tons of columbium metal—an ample supply for emergency use. Small columbium placer operations have been carried out in Idaho and a substantial pyrochlore deposit estimated to contain some 70,000 tons of columbium is located near Powderhorn, Colo.

Proven world reserves of columbium exceed 6 million tons, which is roughly equivalent to known reserves of sulfide nickel. Geologists say future discoveries will probably prove columbium to be as plentiful as copper.

Figure 1 shows major pyrochlore deposits in the free world as follows:

1. Molybdenum Corp. of America, Minas Gerais, Brazil.
2. St. Lawrence Columbium & Metals Corp., Oka District, Quebec.
3. Columbium Mining Products, Ltd., Oka District, Quebec.
4. Quebec Columbium, Ltd., Oka District, Quebec.
5. Beaucage Mines, Ltd., North Bay, Ontario.
6. N. V. Billiton Maatschappij, Tanganyika.
7. E. I. du Pont, Powderhorn, Colo.



### PRESENT PRODUCTIVE CAPACITY

Following is a discussion of current columbium mining and processing activity:

#### Mining

The largest columbium mining operation has been in the Oka District of Quebec where St. Lawrence Columbium & Metals Corp. is producing at the rate of 700 tons of contained metal per year.

Amalgamated Tin Smelters and a number of smaller companies are producing a substantial volume of columbium concentrates in Africa and small mine and mill operations exist in Norway and Portugal.

Mining and mill facilities at the Araxa deposit in Brazil, of which Molybdenum Corp. of America is principal owner, are now capable of producing 3 million pounds of columbium metal per year. There is an estimated 10 billion pounds of recoverable columbium in this deposit alone.

Available information indicates yearly free world mine and mill production at about 3 million pounds of equivalent columbium metal. There are now over 14 million pounds of columbium in the U.S. stockpile.

#### *Processing*

There are five major U.S. companies active in the processing and marketing of columbium products, as follows:

- E. I. du Pont.
- Fansteel Metallurgical Corp.
- Kawecki Chemical Co.
- Union Carbide Corp.
- Wah Chang Corp.

Other firms having processing capability and active in the field to a lesser degree include:

- Universal-Cyclops Steel Corp.
- General Electric Co.
- Kennametal, Inc.
- Mallinckrodt Chemical Works.
- Stauffer Chemical Co.
- Sylvania Electric Products, Inc.
- Temescal Metallurgical Co.
- Westinghouse Electric Corp.

#### *A. Extraction-reduction*

There are two methods used commercially for producing columbium metal from mill concentrates. One is by chlorination and subsequent sodium reduction. The other is by hydrofluorination and conversion to the oxide followed by carbon reduction to pure metal.

Some firms using the first method have developed proprietary means of continuous extraction-reduction to pure metal.

Present extraction capacity of the five major columbium producers is about 2,740,000 pounds of contained columbium per year. Total U.S. extraction capacity is estimated at 4 million pounds annually. Existing reduction capacity is in excess of 2 million pounds.

#### *B. Consolidation—Ingot production*

Three methods are used to convert the metal powders to bar or ingot for working to mill products:

- Sintering.
- Vacuum-arc melting.
- Electron-beam melting.

Sintering is a powder metallurgy process in which the metal powder is pressed cold into a bar which is subsequently resistance heated for a long period in a high vacuum. The resultant product has good density and may be worked directly. This process is little used with columbium due to its relatively high cost and limited size bar which can be obtained.

In vacuum-arc melting, the metal powder is consolidated into electrode bars by cold pressing. The electrodes are then melted to ingot under high vacuum. Ingots weighing several hundred pounds can be produced.

Electron-beam melting is relatively new but is now most widely used for obtaining columbium ingot. With this process, electrons from a high-temperature element are focused in a magnetic field to produce a cone of intense heat into which pure metal powder or bar is fed. The metal drips into water-cooled copper molds. Ingots weighing several hundred pounds are produced. The entire process is carried out in very high vacuum.

Existing capacity of electron-beam melting is over 2,500,000 pounds of columbium ingot per year. Consumable vacuum-arc melting capacity is easily 10 to 20 million pounds. Adequate melting facilities are presently available for any conceivable demand.

*C. Mill processing—Forging, rolling, annealing*

Columbium begins to react with gases of the atmosphere (O-N-H) at a temperature of about 500° C. The result is embrittlement. Therefore, all forging, rolling, and drawing operations are done at room temperature. This is no problem because columbium is very ductile and is capable of 99-percent reduction before annealing is necessary.

Normal processing includes conditioning of ingot followed by cold forging and rolling on conventional mill equipment. Most strip and sheet are produced on Sendzimir mills.

Annealing is done in high-vacuum furnaces. Temperature required is 2,200 to 2,250° F.

Ample forging and sheet rolling equipment is available to supply any requirement of columbium sheet per year. Present capacity of high-temperature, high-vacuum annealing facilities is estimated at 1 to 1.5 million pounds of finished product per year.

Summarizing, present mining and processing capacity for columbium is as follows:

Operation	Pounds columbium per year
Mining and milling:	
Canada.....	1,400,000
Brazil.....	3,000,000
Other free world.....	3,000,000
U.S. stockpile <sup>1</sup> .....	14,000,000
Total.....	21,400,000
Extraction of concentrates.....	4,000,000
Reduction of oxide.....	2,000,000
Consolidation and melting (approximately).....	20,000,000
Forging and rolling (approximately).....	20,000,000
Annealing.....	1,250,000

<sup>1</sup> Available at outset. U.S. columbium deposits are available as reserves for emergency use.

*Properties of columbium*

## A. Physical properties (2):

Density 0.31 pounds per cubic inch (80 percent of silver)

Melting temperature 4,474° F.

Recrystallization temperature, 2,200° F.

Modulus of elasticity,  $15 \times 10^6$  pounds per square inch.

Electrical resistivity, 12.5 microhm-centimeter

## B. Mechanical properties:

Form	Ultimate, pounds per square inch	YS, pounds per square inch	Elongation, percent
Sheet.....	53,000	37,500	26
Bar.....	41,500	28,500	45

Hardness, Rockwell B-40.

*Applications*

The greatest use for columbium is in the form of ferrocolumbium as an alloying addition to iron- and nickel-base alloys. Annual consumption in United States is about 1,000 tons. Probably less than 50,000 pounds a year of pure columbium or columbium-base alloys is consumed as mill product. Principal applications are as tubing for molten salt experimental nuclear reactors and for nuclear fuel cladding. Also, columbium alloys are used as structural elements of experimental aircraft, missiles, and aerospace craft.

## THE VENDING INDUSTRY PROBLEM

It is now a matter of public knowledge that copper disks combined with any of several other base metals of suitable weight ("sandwich" type coins) can

be joined together with household glue or even adhesive tape to provide a slug which will easily pass the most sophisticated devices now in use.

The prospect is a growing slug problem which will make today's rejector units obsolete. It seems clear that the vending industry must change rejector devices despite the cost and inconvenience.

A long-term solution to the coinage problem is certainly the objective of both the Government and the vending industry. The latter also must be assured a slug-proof rejector mechanism. It is believed a device can be designed to accept only columbium coins which would provide the safeguard needed.

The metallurgical and technical skill within the companies who are members of the Columbian for Coinage Association is available to assist the engineers of vending machine manufacturers in developing a rejector unit to handle columbium.

Vending machine merchandising is surely destined to grow. Any coin or rejector device problem which exists today will only be compounded in the future. The coinage and vending problem requires a permanent solution—not an expedient. Columbian offers a plausible answer, and the columbium industry working with the Treasury and the vending industry can work out a transition program which would minimize the effect of introducing new coinage and the impact of changing vending equipment.

#### REFERENCES

1. Metals Handbook—American Society for Metals—eighth edition.
2. U.S. Bureau of Mines.
3. Battelle Memorial Institute.
4. Handy & Hartman, 850 Third Avenue, New York City.
5. Metal Statistics, 1965, American Metal Market, 58th edition.
6. Dr. V. Clain-Stefanelli, curator of numismatics, Smithsonian Institution (address before ASM, Oct. 20, 1964).

Mr. BANCROFT. I invite the gentlemen to look at the coin attached and to take it out of the plastic envelope and feel it.

The CHAIRMAN. It is very attractive. I am going to send it to my grandson.

Mr. BANCROFT. Thank you, sir.

Columbium is a basic element like gold, silver, or platinum. It was first discovered in Connecticut. The ore was sent back to England.

It was discovered, as a matter of fact, early in the 18th century. A sample was sent to England, where it lay for many, many years, and it was finally isolated as a new element by the chemist, Hatchett.

Because it came from Connecticut in the New World, it was named after Columbia, and called columbium.

You will note that columbium is comparable to silver in weight, having approximately the same density. It has a good feel. It has a "ring" more like silver than nickel or any other base metal that we know that has been proposed for the coinage. It also has an attractive luster which we believe will be enhanced through usage.

Proven reserves of columbium ore are over 6 million tons, making it one of the most plentiful of metals. The largest deposits are in Brazil, Canada, and Africa, with a substantial ore body at Powder Horn, Colo.

Within a period of 18 to 24 months following the adoption of columbium for coinage, production of this metal could be scaled up to meet any annual coinage demand in the range of 10 to 20 million pounds.

Although today's commercial price for columbium is high for coinage purposes, because of limited industrial demand, it is certain that the price to the Government would be substantially reduced once there was an assured long-term market. For this reason, we think

that the price of columbium should conservatively be estimated for present purposes as in the range of \$10 to \$15 per pound, or less, which would be approximately one-half the present price of silver.

I might add here that in the staff report of the Treasury columbium was rejected as a candidate material at this time because of what was termed a "prohibitive cost." I would like to point out at \$10 to \$15 the price for columbium is roughly equivalent to the price of silver during the period 1945-62, and I presume that this was not considered excessive at that time.

Further, we believe that intrinsic value in high-cost material is really essential to prevention of slugging.

Therefore, we feel that this is an advantage, not a disadvantage.

In this connection I call attention to an example of the descending price of titanium which in 1950 was priced at \$20 per pound and by 1962 had dropped to less than \$3 per pound, all this as a result of the normal response of price to increased production. The same result can logically be expected to occur with columbium.

As indicated earlier, the association which I represent is not opposing the specific proposals which the President has made. However, we believe that these proposals, if adopted, will prove inadequate to a long-term solution of the problem and will lead to a tremendous increase in "slugging" of vending machines of the present type.

This is part of the answer to Senator Bennett's question to Secretary Fowler about counterfeiting, and it is in our opinion relevant to the answer to that question.

The adoption of sandwich coins will give notoriety to the fact that copper disks combined with any of several base metals of suitable weight can be joined together with ordinary household glues or even doublesided adhesive tape to provide a slug which will easily pass the vending machine devices now in use.

Thus, we believe that the adoption of the sandwich-type coin will in a period of years render obsolete today's rejection mechanisms. Ultimately, the vending machine industry, regardless of cost and inconvenience, will be obliged to develop more sophisticated rejection mechanisms than are presently in use. Because of its special characteristics, we believe columbium would make an ideal choice of metal for research on a more sophisticated rejection mechanism.

Senator BENNETT. Well, at this point, just for the record, will columbium work in the present mechanism?

Mr. BANCROFT. It will not work in the present mechanism.

Senator BENNETT. Thank you.

Mr. BANCROFT. The metallurgical and technical resources of the members of our association are available to assist engineers of the vending machine manufacturers in developing a rejector unit geared to the reception of columbium and of no other metal.

In conclusion, our specific recommendations to the committee are as follows:

1. That the committee make specific provision in the proposed legislation for an intensive study of the "slugging" problem;
2. That this study include consideration of the special advantages of columbium for use in more sophisticated vending machines which will be slugproof and thus serve the long-term interests of the vending machine industry;

3. That this study include consideration of the progressive introduction of columbium into the coinage beginning with 50-cent pieces which would have the least adverse impact on existing vending machine use and yet would offer the greatest potential per unit protection against slugging losses when a new mechanism is developed.

There is more than enough columbium in the Government's existing stockpile (approximately 14 million pounds) to assure an adequate initial supply for the new 50-cent pieces; and

4. That a representative of the columbium industry be included in the membership of the proposed Joint Commission on the Coinage.

Thank you.

The CHAIRMAN. We thank you very much.

That concludes the testimony. I am sorry on such a very important bill to limit the witnesses to this extent, but, as some of you know, we face something of a logjam, and the administration feels that there is an urgency about action on this coinage bill. They urge the House and the Senate both to expedite action on it, and for that reason, and only for that reason, have I asked the witnesses to limit their statements.

But I assure you it will all be printed in the record, and those of us who were privileged to be here clearly understood the position of the various witnesses.

Thank you very much.

When we meet this afternoon it will be at 2:30, and that will be in executive session.

(Whereupon, at 12:58 p.m., the committee adjourned subject to the call of the chairman.)

(The President's message and the White House press release, previously referred to, follow:)

[H. Doc. 199, 89th Cong., 1st sess., June 3, 1965]

MESSAGE FROM THE PRESIDENT OF THE UNITED STATES  
RELATIVE TO SILVER COINAGE

*To the Congress of the United States:*

From the early days of our independence the United States has used a system of coinage fully equal in quantity and quality to all the tasks imposed upon it by the Nation's commerce.

We are today using one of the few existing silver coinages in the world. Our coins, in fact, are little changed from those first established by the Mint Act of 1792. For 173 years, we have maintained a system of abundant coins that with the exception of pennies and nickels is nearly pure silver.

The long tradition of our silver coinage is one of the many marks of the extraordinary stability of our political and economic system.

Continuity, however, is not the only characteristic of a great nation's coinage. *We should not hesitate to change our coinage to meet new and growing needs. I am, therefore, proposing certain changes in our coinage system—changes dictated by need—which will help Americans to carry out their daily transactions in the most efficient way possible.*

There has been for some years a worldwide shortage of silver. The United States is not exempt from that shortage—and we will not be exempt as it worsens. *Silver is becoming too scarce for continued large-scale use in coins.* To maintain unchanged our high silver coinage in the face of this stark reality would only invite a chronic and growing scarcity of coins.

We expect to use more than 300 million troy ounces—over 10,000 tons—of silver for our coinage this year. *That is far more than total new production of silver expected in the entire free world this year.* Although we have a large stock of silver on hand we cannot continue indefinitely to make coins of a high silver content—in the required quantity—in the face of such an imbalance in the production of silver and the demand for it.

We must take steps to maintain an adequate supply of coins, or face chaos in the myriad transactions of our daily life—from using pay telephones to parking in a metered zone to providing our children with money for lunch at school.

*The legislation I am sending to the Congress with this message will insure a stable and dignified coinage, fully adequate in quantity and in its specially designed technical characteristics to the needs of our 20th century life. It can be maintained indefinitely, however much the demand for coin may grow.*

Much as we all would prefer to retain the silver coins now in use, there is no practical alternative to a new coinage based on materials in adequate supply.

#### THE NEW COINAGE

I propose no change in either the penny or the nickel.

The new dime and the quarter—while remaining the same size and design as the present dime and quarter—will be composite coins. They will have faces of the same copper-nickel alloy used in our present 5-cent piece, bonded to a core of pure copper. The new dime and quarter will, therefore, outwardly resemble the nickel, except in size and design, but with the further distinction that their copper core will give them a copper edge.

This type of coin was selected because, alone among practical alternatives, it can be used together with our existing silver coins in the millions of coin-operated devices that Americans now depend upon heavily for many kinds of food and other goods.

#### THE HALF DOLLAR

Our new half dollar will be nearly indistinguishable in appearance from the present half dollar.

It will continue to be made of silver and copper, but the silver content will be reduced from 90 to 40 percent. It will be faced with an alloy of 80 percent silver and 20 percent copper, bonded to a core of 21 percent silver and 79 percent copper. The new half dollar will continue to be minted with the image of President Kennedy. Its size will be unchanged.

#### THE SILVER DOLLAR

No change in this famous old coin, or plans for additional production, are proposed at this time. It is possible that implementation of the new coinage legislation that I am proposing, greatly reducing the requirement for silver in our subsidiary coinage, will actually make feasible the minting of additional silver dollars in the future. Certainly, without this change in the silver content of the subsidiary coinage, further minting of the silver dollar would be forever foreclosed.

It is our intention that the new coinage circulate side by side with our existing coinage. We plan to continue the minting of our current silver coins while the new coinage is brought into quantity production.

The new coins will be placed in circulation some time in 1966.

In terms of the present pattern of coin usage, adoption of the new coinage will permit a saving of some 90 percent of the silver we are now putting into coins annually.

*I want to make it absolutely clear that these changes in our coinage will have no effect on the purchasing power of our coins. The new ones will be exchanged at full face value for the paper currency of the United States. They will be accepted by the Treasury and by the Federal Reserve banks for any of the financial obligations of the United States. The legislation I am proposing expressly recognizes the new coins as legal tender.*

It is of primary importance, of course, that our new coins be specifically designed to serve our modern, technological society. In the early days of the Republic, silver coins served well because the value of a coin could only be measured by the value of the precious metal contained in it. For many decades now the value of a particular coin has depended not on the value of the metal in it, but on the face value of the coin. Today's coinage must primarily be utilitarian. The new coinage will meet this requirement fully, while dispensing with the idea that it contain precious metal.

It is, above all, practical. It has been specifically designed to function, without causing delays or disruptions of service, in coin-operated merchandising machines.

Furthermore, it is composed of materials low enough in value and readily enough available to insure that we can have as many coins as we need.

The legislation I am proposing also contains these additional recommendations.

#### OTHER AUTHORITY REQUESTED

*First.*—As a useful precautionary measure, I request standby authority to institute controls over the melting and export of coins to assist the protection of our existing and our new silver coinage.

*Second.*—I request authority to purchase domestically mined silver at not less than \$1.25 per ounce.

*Third.*—I am asking for authority to reactivate minting operations temporarily at the San Francisco Assay Office.

*Fourth.*—As a safeguard for assured availability of the new coinage, I am asking for new contracting authority for the procurement of materials and facilities related to it.

*Fifth.*—I propose the establishment of a Joint Commission on the Coinage composed of certain Members of the Congress, the public, and the executive branch of the Government, to report to me later the progress made in the installation of the new coinage and to review any new technological developments and to suggest any further modifications which may be needed.

#### WHY THE SILVER CONTENT OF THE COINAGE MUST BE REDUCED AT THIS SESSION

These recommendations for revision of our silver coinage rest upon extensive study of the silver situation, and of alternatives to our present coinage, by both governmental and private specialists. The Treasury Department's comprehensive report, known as the Treasury Staff Silver and Coinage Study, is being released today as background to my recommendations. Its principal finding was that the supply of silver in the free world has become progressively incompatible with the maintenance of silver in all our subsidiary coins.

On the average, in the 5 years from 1949 through 1953, new silver production in the free world amounted to about 175 million troy ounces per year, while consumption amounts to more than 235 million ounces. There was an average deficit in those 5 postwar years of more than 60 million ounces of silver per year.

In the latest completed 5 years, 1960 through 1964, free world consumption of silver has averaged 410 million ounces annually, but new production has averaged a little less than 210 million ounces a year. The result has been an average annual deficit of about 200 million ounces. That is three times the average annual deficit in the 5 years from 1949 through 1953.

If no silver at all had been used for coinage there would have been a deficit in new production in free world silver during the last 5 years averaging over 40 million troy ounces, or some 1,370 tons, a year.

The gap between the production of silver and silver consumption is continuing to increase. In 1964 the silver production deficit swelled to over 300 million ounces—half again the 1963 figure. And in 1964, the use of silver in coinage, and the use of silver for the arts and industry of the free world were each—taken separately—greater than new production.

*There is no dependable or likely prospect that new, economically workable sources of silver may be found that could appreciably narrow the gap between silver supply and demand.* The optimistic outlook is for an increase in production of about 20 percent over the next 4 years. This would be of little help. Further, because silver is produced chiefly as a byproduct of the mining of copper, lead, and zinc, even a very large increase in the price of silver would not stimulate silver production sufficiently to change the outlook.

Short of controls that are undesirable in a peacetime free society there is no way to diminish the bounding growth of private demand for silver for use in jewelry, silverware, photographic film, and industrial processes. The one part of the demand for silver that can be reduced is governmental demand for use in coinage.

Most free world countries no longer use silver in their coins. A few—as we now propose—continue to make limited use of it. It is true that U.S. coinage does not currently depend upon new silver production, because for many years we have supplied silver for our coinage out of large Treasury stocks, which still amount to 1 billion troy ounces.

*But—and this is the crux of the matter—at the present pace, this stock cannot last even as much as 3 years. We would then be shorn of our ability to maintain the coinage, and, if there were no alternative to our present silver coinage, the Nation would be faced with a chronic shortage. That is why definitive action is necessary at this session of the Congress.*

#### PROTECTION OF THE COINAGE

It is necessary for the U.S. Government to have large stocks of silver in addition to the quantity needed for coinage.

We need these stocks because our silver coins in circulation must be protected from hoarding or destruction. Protection of the silver coinage will continue to be a necessity since we plan for it to continue to circulate alongside the new coins. Our silver coins are protected by the fact that the Government stands ready to sell silver bullion from its stocks at \$1.29 a troy ounce. This keeps the price of silver, as a commodity, from rising above the face value of our coins. This, in turn, makes hoarding or melting of the silver coinage unprofitable.

*It is as additional protection for the existing coinage that I am requesting standby authority to institute controls over the melting, treating, or export of U.S. coins.*

It may be asked why we seek standby control authority since we retain a large stock of silver with which to protect our silver coins through operations in the silver market.

The answer is clear. Given the magnitudes by which demand for silver is outrunning new production, we must consider the possibility, however unlikely, that the silver stock we possess could itself require the support and protection that would be afforded by authority to forbid melting and export of our coins.

We believe our present stocks of silver to be adequate, once the large present drains from coinage are greatly reduced, to meet any foreseeable requirements for an indefinite period. *However, prompt action on a new coinage will help us protect the silver coinage by freeing our silver reserves for redemption of silver certificates at \$1.29 per ounce. Thus, we can assure that no incentive will be created for hoarding our present coins in anticipation of a higher price for their silver content.*

There is the opposite, although in all likelihood short run, possibility that a fall in the price of silver might result from the enactment of this legislation largely removing silver from our subsidiary coin. *It is for the purpose of protecting silver producer from a precipitate drop in the price of silver resulting from the action of the Government that I am requesting authority for the Secretary of the Treasury to purchase any newly mined domestic silver offered to him, at the price of \$1.25 per troy ounce.*

#### THE SAN FRANCISCO ASSAY OFFICE

Coinage operations at the San Francisco Mint were ended in 1955. Legislation converting the mint to the San Francisco Assay Office was passed in 1962. As part of our efforts to overcome the coin shortage of the past year, coin blanks have been cut and annealed at the San Francisco Assay Office. Present law forbids full minting there. However, we will temporarily need the facilities of this plant to move into large quantity production of the new coinage and to continue production of existing coins until enough new small money is made to make certain we have adequate supplies. *Consequently, I am asking for authority to reactivate minting operations at San Francisco on a temporary basis.*

A new, fully modern mint is to be built in Philadelphia. However, it cannot be completed and in operation before late 1967. It is our expectation that when the new Philadelphia Mint's capacity is added to that of the Denver Mint, our coinage requirements can be met efficiently and economically. Consequently, no more than temporary authority to mint coins in San Francisco is recommended in the draft legislation I am sending to you.

#### WHY COMPOSITE COINS ARE RECOMMENDED

We have no choice but to eliminate silver, for the most part, from our subsidiary coinage. The question was: What would be the best alternative? After very thorough consideration of all aspects of this highly complex problem, we have settled upon the two types of composite, or clad, coins I have already de-

scribed. These are 10-cent and 25-cent pieces with cupronickel alloy faces bonded to a solid copper core, and a new half dollar with outer and inner layers of differing silver-copper alloys.

This type of coin was found to be necessary if the new coinage is to be compatible with the existing silver coinage in all the 12 million coin-operated devices in use in the United States.

The convenience of using coins in automatic merchandising and service devices is a fact that, like the coins in our pockets and in our store tills, we take for granted. But if our coinage were suddenly to be such that it would not work in coin-operated devices, the public would be subjected to very great inconvenience and serious losses would occur to business with harmful effects upon employment.

The automatic merchandising industry is a large and growing part of our national economy. Last year, \$3½ billion worth of consumer items were sold through 3½ million of these machines. On more than 30 billion separate occasions a consumer made a purchase by putting a coin in a machine. In growing numbers, factories, hospitals, and other places now depend upon automatic vending for the service of goods. A million and a half people now rely upon coin-controlled vending for at least one meal a day. The use of coin-operated devices is expanding rapidly, not only in merchandise vending, but also in a number of other services.

Six million of our coin-operated devices, including nearly all vending machines, have selectors set to reject coins or imitations of coins that do not have the electrical properties of our existing silver money. Highly selective rejectors are a necessity in these machines if they are to be a low-cost source of food and other goods and services. Otherwise, fraudulent use would soon make them costly.

The sensors in these machines are set to accept or reject coins on the basis of the electrical properties of our traditional coins, which have a high proportion of silver. To be compatible in operation with our existing coinage, therefore, our new coins must duplicate the electric properties of a coin that is 90-percent silver. No single acceptable metal or alloy does so. The composite coins, made of layers of differing metals and alloys, that I am asking the Congress to approve, are coins made to order to duplicate the electrical properties of coins with a high silver content. They are the only practical alternatives we have discovered to our present coinage.

Selectors exist that can handle coins with the widely varying electrical properties of, say, nearly pure silver and nearly pure nickel. But that is not enough. When the selectors are set to accept coins with greatly differing electrical properties, the selectivity of the mechanism declines and they will accept wrong coins and imitations. Unless the coins in use have very similar electrical properties, the coin-operated machines become subject to a high degree of fraudulent use. This would be costly to all concerned.

The future may bring selectors of a different kind able to accept coins of widely varying electrical properties while at the same time rejecting imitations and wrong coins. They are not available now. When and if they become available, our new coinage will work in them. On the other hand, if we now chose an incompatible coinage, there would be delays and interruptions lasting a year to 3 years in the services of these machines. This would impose heavy inconveniences upon the public and would cause business and employment losses in a large and growing industry.

In view of these considerations of public interest, we have concluded that our new coinage must without fail be able to carry out the technical merchandising functions of a modern coinage, working alongside our existing silver coinage. *The coins that I am recommending to you do this, and do it well, because they were specifically designed for the task.*

The new half dollar was designed with the strong desire in mind of many Americans to retain some silver in our everyday coinage. We believe that by eliminating silver from use in the dime and the quarter, we will have enough silver to carry out market operations in protection of our existing silver coinage—and to make a half dollar of 40 percent silver content. It is clear and unmistakable that we would not have enough silver to extend this to the dime and quarter: they are heavily used, indispensable coins that we must have at all times in large quantity. We are convinced that we can include a 40-percent silver half dollar in the new coinage, but we cannot safely go beyond that. As a precaution, we intend to concentrate at first on getting out large quantities of the new quarter and dime before we embark upon quantity production of the new half dollar.

## THE JOINT COMMISSION ON THE COINAGE

We believe the recommendations being made for a new coinage are sound and durable and in the best public interest. However, the installation of a new coinage is a matter so intimately affecting the life of every citizen, and so delicately related to the Nation's commerce, that it is impossible to be certain in advance that all problems have been foreseen, even by such a long and arduous process of research as has gone onto the selection of the proposed new coins.

Consequently, I am including among my recommendations the proposal for a Joint Commission on the Coinage. It will be composed of the four officers of the executive branch most directly concerned with matters affected by the coinage—the Secretary of the Treasury, the Secretary of Commerce, the Director of the Budget Bureau and the Director of the Mint; of four members representing the public interest, to be appointed by the President; of the chairmen and ranking members of the Banking and Currency Committees of the House and the Senate; of one Member each from the two Houses of the Congress, to be appointed by the Vice President and the Speaker of the House. The Commission will be appointed soon after the new coinage is issued. It will study such matters as new technological developments, the supply of various metals, and the future of the silver dollar. It will report as to the time and circumstances in which the Government should cease to maintain the price of silver. It will be directed to advise the President, the Congress, and the Secretary of the Treasury on the results of its studies.

## THE COINAGE—CURRENT AND PROSPECTIVE

I am pleased to report to the Congress substantial progress toward overcoming the coin shortage the Nation has been experiencing. Greatly increased minting has eliminated the shortage of pennies and of nickels. We are still somewhat on the short side of the demand for dimes and quarters, but this deficit is rapidly being overtaken. A severe shortage of the half dollar continues, due to the popularity of the new 50-cent pieces bearing the image of President Kennedy.

I want to emphasize that we will continue to make the existing coins while the new ones come into full production, and that we contemplate side-by-side circulation of the old and new coins for the indefinite future. *There is no reason for hoarding the silver coinage we now use, because there is no reason for it to disappear.*

We are gearing up for maximum production of the new coins as soon as they are authorized by the Congress. Supply of the materials for them is assured. Both copper and nickel are economical and available in North America. Their usage in coins will not add enough to overall employment of these metals to create supply or price problems.

In the first year after new coins are authorized, we expect to make 3½ billion pieces of the new subsidiary coins. That is a billion and a half more pieces than will be made of the corresponding silver coins in the current fiscal year.

In the second year after authorization of the new coinage, we expect to be able to double the first year's output of the new coins, reaching a production total of 7 billion pieces.

We expect in this way to avoid any new coin shortage in the transition to production of the new coins, and within a period of less than 3 years to reach a point at which we could, if necessary, meet total coinage needs out of production of the new coins.

*I am satisfied that, taking into account all of the various factors involved in this complex problem, the recommendations that I am making to you are sound and right. Your early and favorable action upon the proposed legislation will make it possible to produce and issue to the public a coinage that will be acceptable, provide the maximum convenience, and serve all the purposes—financial and technical—of modern commerce. In considering this problem the needs of the economy and the convenience of the public have been placed ahead of all other considerations. They are the factors that have resulted in my recommendations to the Congress. I urge their approval at the earliest possible date.*

LYNDON B. JOHNSON.

THE WHITE HOUSE, June 3, 1965.

## A BILL To provide for the coinage of the United States

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as "The Coinage Act of 1965."*

## TITLE I

SECTION 1. (a) The Secretary of the Treasury is authorized to cause to be minted and issued the following coins:

(1) A half dollar or fifty-cent piece which shall be composed of an alloy of 800 parts of silver and 200 parts of copper per each one thousand parts by weight clad on a core of a silver-copper alloy of such fineness that the composition of each coin shall be 400 parts of silver and 600 parts of copper out of each 1000 parts by weight.

(2) A quarter dollar or twenty-five-cent piece and a dime or ten-cent piece each of which shall be composed of an alloy of 75 percent of copper and 25 percent of nickel clad on a core of pure copper.

(b) The cladding alloy used for the outside layers of such coins shall comprise not less than thirty percent of the weight of each coin. Such coins shall be the same diameter, respectively, as the coins of the United States of corresponding denominations current at the time of enactment of this Act.

(c) The weight of the half dollar provided for herein shall be 11.50 grams, of the quarter dollar 5.67 grams and of the dime 2.268 grams.

SEC. 2. Subject to the requirements of section 1, the methods of manufacture of the coins therein provided, the wastage allowances, and the allowable deviations in the metallic percentages and weights, shall be as determined by the Secretary of the Treasury. Such coins shall be subject to the laws pertaining to the designs and inscriptions on coins of the United States.

SEC. 3. All coins minted pursuant to the provisions of this Act shall be legal tender for all debts, public and private, public charges, taxes, duties and dues.

SEC. 4. Nothing herein contained shall be deemed to prohibit the continued minting of coins of the United States authorized by law at the time of enactment of this Act.

SEC. 5. Whenever in the judgment of the Secretary of the Treasury such action is necessary to protect the coinage of the United States, he is authorized under such rules and regulations as he may prescribe to prohibit the exportation, melting or treating of coins of the United States.

SEC. 6. The Secretary of the Treasury is authorized to sell on such terms and conditions as he may deem appropriate, at not less than the monetary value thereof, any silver of the United States in excess of that required to be held as reserves against silver certificates.

SEC. 7. The Secretary of the Treasury is authorized and directed to purchase at the price of \$1.25 per fine troy ounce silver mined after the date of enactment of this Act from natural deposits in the United States or any place subject to the jurisdiction thereof and tendered to a United States mint or assay office within one year after the month in which the ore from which it is derived was mined. The bullion fund provided by section 3526 of the Revised Statutes, as amended (31 U.S.C. 335), may be used for such purchases.

SEC. 8. In order to expedite acquisition of essential equipment, patents, patent rights, technical knowledge and assistance, metallic strip and other materials necessary to assure the prompt and continued availability of materials required to produce an adequate supply of the coins provided for herein, the Secretary of the Treasury, during such period as he may deem necessary, is authorized, without regard to the provisions of section 3528 of the Revised Statutes, as amended (31 U.S.C. 340), or any other law, to enter into contracts upon such terms and conditions as he may deem appropriate and in the public interest, for the acquisition or transportation of such equipment, patents, patent rights, technical knowledge and assistance, metallic strip, or other materials.

SEC. 9. (a) The Act of September 3, 1964, Public Law 88-580, is amended to read as follows:

"Notwithstanding section 3517 of the Revised Statutes (31 U.S.C. 324), all coins minted from the date of enactment of this Act shall be inscribed with the year of the coinage or issuance unless in the judgment of the Secretary of the Treasury such inscription is likely to contribute to a shortage of coins, in which case the particular coins involved may be inscribed with the last preceding year whose date has been inscribed on coins of the same denominations."

(b) Section 3550 of the Revised Statutes (31 U.S.C. 366) is repealed.

SEC. 10. The first sentence of section 3558 of the Revised Statutes, as amended (31 U.S.C. 283), is amended to read as follows:

"The business of the United States assay office in San Francisco shall be in all respects similar to that of the assay office of New York except that until such time as the Secretary of the Treasury determines that the mints of the United States are adequate for the production of ample supplies of coins, its facilities may be used for the production of any coins of the United States authorized by law."

SEC. 11. Section 4 of the Act of August 20, 1963 (31 U.S.C. 294), is amended by striking out "\$30,000,000" and inserting in lieu thereof "\$45,000,000."

SEC. 12. Section 3 of the Act of December 18, 1942 (31 U.S.C. 317c), is amended by striking out "minor" each place it appears in such section. Section 9 of the Act of March 14, 1900 (31 U.S.C. 320), is hereby repealed.

SEC. 13. Section 3528 of the Revised Statutes, as amended (31 U.S.C. 340), is amended (1) by striking out "this Act," in the first sentence and inserting in lieu thereof "law,"; (2) by striking out "minor" each place it appears in such section; and (3) by striking out "\$3,000,000" and inserting in lieu thereof "\$30,000,000".

SEC. 14. Section 485 of the Act of June 25, 1948 (18 U.S.C. 485), is amended by striking out "the gold or silver coins" and inserting in lieu thereof "gold, silver, silver-clad, or cupronickel-clad coins".

SEC. 15. The Secretary of the Treasury is authorized to issue such regulations as he may deem necessary to carry out the provisions of this Act.

SEC. 16. Whoever knowingly violates any of the provisions of section 5 hereof or of any order, rule, regulation, or license issued pursuant thereto shall, upon conviction, be fined not more than \$10,000 or imprisoned not more than five years, or both. In addition, there shall be forfeited to the United States any coins exported, belted, or treated in violation of this Act or any order, rule, regulation or license issued hereunder, or any metal resulting from such melting or treating of coins. Such coins or metal may be seized and condemned by like proceeding as those provided by law for the forfeiture, seizure or condemnation of property imported into the United States contrary to law.

## TITLE II

SEC. 1. The President is hereby authorized to establish a Joint Commission on the Coinage to be composed of the Secretary of the Treasury as Chairman; the Secretary of Commerce; the Director of the Bureau of the Budget; the Director of the Mint; the chairman and ranking minority member of the Senate Banking and Currency Committee; the chairman and ranking minority member of the House Banking and Currency Committee; one Member of the House of Representatives to be appointed by the Speaker; one Member of the Senate to be appointed by the President of the Senate; and four public members to be appointed by the President, none of whom shall be associated or identified with or representative of any industry, group, business or association directly interested as such in the composition, characteristics, or production of the coinage of the United States.

SEC. 2. No public official or Member of Congress serving as a member of the Joint Commission shall continue to serve as such after he has ceased to hold the office by virtue of which he became a member of the Joint Commission. Any vacancy on the Joint Commission shall be filled by the choosing of a successor member in the same manner as his predecessor.

SEC. 3. The Joint Commission shall study the progress made in the implementation of the coinage program established by this Act, and shall review from time to time such matters as the needs of the economy for coins, the standards for the coinage, technological developments in metallurgy and coin-selector devices, the availability of various metals, renewed minting of the silver dollar, the time when and circumstances under which the United States should cease to maintain the price of silver, and other considerations relative to the maintenance of an adequate and stable coinage system. It shall, from time to time, give its advice and recommendations with respect to these matters to the President, the Secretary of the Treasury, and the Congress.

SEC. 4. There are authorized to be appropriated, to remain available until expended, such amounts as may be necessary to carry out the purposes of this title.

## SECTION-BY-SECTION ANALYSIS OF THE BILL

*Title I*

Section 1 authorizes the minting and issuance of a new series of coins in denominations of 10, 25, and 50 cents which will be manufactured from composite metals containing three layers. In the case of the 50-cent piece, the outside or cladding layers would be composed of an alloy of 80 percent silver and 20 percent copper and the core of a silver-copper alloy of such fineness that the overall composition of each coin would be 40 percent silver and 60 percent copper. The 10- and 25-cent coins would consist of cupronickel (75 percent copper, 25 percent nickel) clad on a core of pure copper. Section 1 also prescribes the proportionate amounts of core and cladding alloys in the coins, the weight of each coin and that such coins are to be of the same diameter as the current coins of the United States of corresponding denominations.

Section 2 authorizes the Secretary of the Treasury to determine the methods of manufacture of the new coins, the wastage allowances, and the allowable deviations in the metallic percentages and weights. It provides also that such coins shall be subject to existing laws pertaining to the designs and inscriptions on U.S. coins.

Section 3 provides that the coins shall be legal tender. While existing statutes governing legal tender are broad enough to cover the new coins, an express provision in the new bill is deemed desirable to eliminate any possible doubt.

Section 4 provides continuing authority for the coinage of coins authorized by provisions of existing law. This will enable the continued production of present coinage to the extent necessary to assure the production of ample supplies of coins during the period of transition to the new coinage.

Section 5 gives standby authority to the Secretary of the Treasury to prohibit the exportation, melting, or treating of U.S. coins when necessary to protect the coinage.

Section 6 provides for sales by the Treasury of silver in excess of that required to be held against silver certificates at prices not less than the monetary value. This will clarify the authority of the Treasury to make sales of such excess silver under appropriate conditions.

Section 7 authorizes the purchase of newly mined domestic silver by the Treasury at the price of \$1.25 per fine troy ounce. This will protect silver-producing industries against any precipitate drop in the price of their product which might result from the change in U.S. coinage alloy. Silver purchased under this provision can be used in coinage at values not less than \$1.29 plus per fine troy ounce. Section 7 also authorizes the use of the bullion fund for the purchase of silver.

Section 8 authorizes the Secretary, for as long as he deems it necessary, to procure, on terms deemed appropriate and in the public interest, any materials, technical knowledge and assistance, equipment, patents, transportation services, etc., necessary to assure prompt and continued availability of materials required for the new coinage without regard to any laws requiring advertising and competitive bidding or imposing other restrictions on the negotiation of contracts for the purchase of property by the Government.

Section 9 directs that coins minted after enactment of this act shall bear the year of the coinage or issuance unless the Secretary of the Treasury determines that this is likely to contribute to a coin shortage. In this event, the particular coins involved may be inscribed with the last preceding year whose date appeared on coins of these denominations. This section would also repeal an obsolete provision of law requiring that the obverse working dies at each mint be destroyed at the end of each year.

Section 10 authorizes use of the San Francisco assay office for coinage on a temporary basis until such time as the Secretary of the Treasury determines that the facilities at the mints are adequate for the production of ample supplies of coins. It is anticipated that during the period of transition to the new coinage the mints' production load will be particularly heavy and additional facilities will be needed. Use of the San Francisco assay office is the most expeditious way of providing these. Section 10 also authorizes permanent use of the San Francisco assay office for refining gold and silver bullion. This will also contribute to the efficiency of operations at the mints and assay offices.

Section 11 increases the maximum amount authorized to be appropriated for the construction of the new mint at Philadelphia from \$30 million to \$45 million. Additional funds will be necessary to provide equipment and facilities for the new coinage.

Section 12 will authorize and provide financing for the melting of any worn and uncurrent U.S. coins, including the new cupronickel-clad and silver-clad coins, received in the Treasury and the sale or recoinage of the resulting metals. The section also repeals an act which requires recoinage of all worn and uncurrent subsidiary silver coins received in the Treasury.

Section 13 authorizes use of the minor-coinage metal fund and the minor-coinage profit fund (to be renamed the coinage-metal fund and the coinage-profit fund) for the purchase of metals for the coins provided for in the act and for certain expenses incurred in such coinage; namely, the wastage and cost of distribution of the coins. It also raises the amount available in the coinage-metal fund from \$3 to \$30 million. This increase in amount is necessary because after enactment of the bill this fund will be used for the purchase of metals used in coinage of all denominations whereas at the present time it is used only for metals for 1- and 5-cent coins.

Section 14 amends one of the counterfeiting laws so as to make it applicable to the new cupronickel and silver-clad coins on the same terms and conditions as it is now applicable to the subsidiary silver coins. It is not necessary to amend any of the other counterfeiting laws since these will be applicable by their terms to the new coins.

Section 15 is a general provision authorizing the Secretary of the Treasury to issue regulations that may be necessary to carry out the provisions of the act. Section 16 provides penalties for violations of any regulations issued under section 5 of the act, prohibiting the export, melting, or treating of U.S. coins. The penalties would be forfeiture and imprisonment up to 5 years or a fine up to \$10,000, or both.

#### *Title II*

Section 1 provides for the establishment of a Joint Commission on the Coinage, composed of four executive officials, six Members of Congress, and four public members to be appointed by the President. The public members shall not be representatives of any group having a direct interest in coinage.

Section 2 provides that the executive and congressional members shall cease to serve on the Joint Commission after leaving their public office, and provides for the filing of vacancies on the Commission.

Section 3 provides that the Joint Commission shall study the progress made in the implementation of the coinage program established by the act. It shall review and give its advice and recommendations from time to time to the Congress, President, and the Secretary of the Treasury on such matters as the needs of the economy of coins, the standards for the coinage, technological development in metallurgy, the availability of various metals, renewed minting of the silver dollar, the time when and circumstances under which the United States should cease to maintain the price of silver, and other considerations relevant to the maintenance of an adequate and stable coinage system.

Section 4 authorizes the appropriation of such amounts as may be necessary for the expense of the Joint Commission.

[White House press release, June 3, 1965]

#### A PROGRAM FOR A NEW AND MODERNIZED U.S. COINAGE—SUMMARY

This summary of the President's coinage program, the Treasury staff study of silver and coinage, and the study of alloys suitable for use as U.S. coinage are made available as background to the President's coinage program.

One underlying determination had to be made as the basic and fundamental decision affecting the U.S. coinage. This was: Will there be enough silver available to justify continued large-scale use of silver in U.S. coins?

The Treasury staff study of silver and coinage came to the unequivocal conclusion that there is not. (See point 1 of the digest of the study, and pts. III and V of the study, and the table at the end of this summary.)

*There was no choice whether the United States should turn away from its traditional high silver content coinage at this time. It had to do so because to attempt to retain it in the face of a growing imbalance between silver supply and demand could only result in a severe and chronic national coin shortage in the not distant future.*

*There was a choice in only one matter: What substitute should be used for the existing 90 percent silver coinage?*

The silver and coinage study provides a set of criteria for a modern coinage (see pt. II of the digest and of the study). The new coins the President is recommending to Congress meet these criteria:

*They will provide uninterrupted service as a medium of exchange. They can be made without further major changes for a long period ahead. They are made of materials for which there is assured access. They can be minted without undue difficulty and at moderate cost. They can be used—across the counter and in all of the 12 million coin-operated devices in use in the United States—side by side with the existing silver coins. These factors were determining in the selection of the new dime and a new quarter despite the fact that they have a distinctively different appearance from their traditional silver counterparts.*

The silver supply and demand situation is summarized in a table at the back of this document. It should be noted that:

In 1964, free world consumption of silver exceeded new production by a massive 335 million troy ounces—11,557 tons (see the last figure in the table). Even if no silver had been used anywhere in the free world for coinage, there would have been a silver deficit, on the average, from 1957 through 1961, and growing deficits in 1962, 1963, and 1964 (compare the first and the sixth columns of the table).

Coinage demand for silver has been growing fastest, and U.S. use of silver in coinage accounts for nearly all of this increase (see the second, third, and fourth columns).

The entire use of silver by the United States in coins, and in part the use of silver in the arts and industry in this country, are supplied from the Treasury's silver stock, acquired mainly in the 1930's. This stock now stands at approximately 1 billion ounces.

Thus, unless the United States acts now to ease its dependence upon silver in the coinage, the Treasury's large stock of silver would be gone in 2 to 3 years.

*Consequently, a new, largely nonsilver subsidiary coinage is proposed now, while the U.S. silver stock is large enough to insure an orderly transition to the new coinage, without danger of a coin shortage, and without major upsets to the silver market.*

Of the six coins in use in the United States, the new coinage program leaves three unchanged. These are the penny, the nickel, and the silver dollar:

(1) *The silver dollar remains unchanged as the coin it has been since 1837, a coin weighing 412½ grains overall, 90 percent of its weight silver.*

(2) There are no plans at present for new production of the silver dollar.

The new dime and the new quarter: They will be the same size and have the same design as the present dime and quarter. But they are composite coins. They are faced with cupronickel, the alloy of 75 percent copper and 25 percent nickel now used in the 5-cent piece. The cupronickel facing is bonded to a core of pure copper. The copper core gives these coins their distinctive feature: a copper edge.

This type of coin was selected because it alone, among practical alternatives, can be used without interruption of service in all coin-operated devices in use in the United States, including the 6 million coin machines that have sensors set to reject anything other than the present 90-percent silver coinage.

This is a public convenience factor that was given great weight in making selections for the new coinage, in view of the following. In 1964 the public bought some \$3½ billion worth of goods and services, in more than 30 billion transactions, through merchandise vending machines. The 1965 figures will be bigger, because this method of merchandising is expanding rapidly in the United States. The public has come to depend upon automatic merchandising for the provision of food and other small consumer items, at all times and in a growing number of places.

The new half dollar: This too will be a composite coin. But it will be almost indistinguishable from the present half dollar. It will be the silver standard bearer of the new coinage, faced with an alloy of 80 percent silver and 20 percent copper, bonded to a core of approximately 21 percent silver and 79 percent copper, giving an overall 40 percent silver content. It will continue to be minted with the image of the late President Kennedy.

*The coinage program includes as a central feature the continued circulation of the existing silver coinage.*

*Retention of the existing silver coinage in use for an indefinite period ahead means that:*

Both the old and the new coins must be accepted by the 6 million coin operated devices in operation in the United States that use sensors set to reject coins other than the present silver money. They do this by rejecting any coin, or slug, that does not have the electrical properties of a coin with a 90-percent-silver content. To be compatible in technical use, therefore, the new coins had to duplicate the electrical properties of the present silver coins. The proposed composite coins were engineered to do this. They do so precisely and consistently.

If an incompatible new coinage had been chosen, the sensors in coin machines could have been changed to accommodate them, at a cost estimated at approximately \$100 million. This cost did not enter into decisions as to the new coinage, since every industry must from time to time spend to keep in step with changes around it. The following factors were influential:

1. Changing the rejector devices in vending machines would impose upon the public service delays of 1 to 3 years.
2. Changing the rejector devices to accommodate a new coinage with electrical properties different from those of the existing silver coinage creates, rather than solves, a problem. This is so because setting rejectors to accept coins of variant electrical properties in effect desensitizes them, exposing them to extensive slugging. This would raise the cost of goods sold through coin operated vendors, as the losses through fraudulent use would be passed along to users in the form of higher prices for the goods and services sold through the machines.

The composite coins avoid all these problems.

Continued circulation of silver coins also means that the silver coinage must be protected from hoarding and destruction. This requires that the silver in them must not be permitted to become more valuable—as silver—than the face value of the coin.

*This will be prevented by continued action by the Treasury to hold the price of silver at not more than \$1.29 and a fraction cents a troy ounce. At this price it is uneconomic to melt existing U.S. silver coins for their silver content.*

The silver coinage will be protected in this way by the fact that the Treasury stands ready to supply silver from its stock at the \$1.29-plus price. It is expected that the transition can be made to the new coinage, the existing coinage can be protected, and the Treasury will still have a large supply of silver stock in hand at the end of 3 years.

Introduction of the new coinage into circulation will start next year, if legislation authorizing it receives prompt congressional approval.

Meanwhile, the mint will continue making the existing silver coinage.

The new coins will have the same purchasing power as present silver coins. They will be legal tender, exchangeable at full face value for all the financial instruments of the United States.

Use of the new coinage will permit an ultimate saving, in terms of the present pattern of coin usage, of 90 percent or more of the silver we now put into coins.

*Estimated free world silver consumption and production, 1949-64*

[Millions of fine troy ounces]

Calendar year	Use				Total consumption	New production	Deficit
	Industry and the arts	Coinage demand					
		United States	Foreign free world	Total			
1949-53 averages.....	153	36	48	85	238	174	64
1953-57 averages.....	190	37	36	74	264	191	73
1957-61 averages.....	216	47	51	98	314	200	114
1962.....	248	77	50	128	375	207	169
1963.....	252	112	56	167	419	214	205
1964.....	286	203	62	265	550	216	335

NOTE.—A troy ounce equals 480 grains, an avoirdupois pound equals 7,000 grains, a 2,000-pound ton equals 14,000,000 grains, hence, 1,000,000,000 troy ounces (480,000,000,000 grains) equal 34,285 tons.

Source: Treasury silver study, pt. III, table 1, figures rounded.

(The following material was submitted for inclusion in the record:)

U.S. SENATE,  
COMMITTEE ON THE JUDICIARY,  
April 26, 1965.

HON. A. WILLIS ROBERTSON,  
*Chairman, Senate Committee on Banking and Currency,*  
*U.S. Senate,*  
*Washington, D.C.*

DEAR MR. CHAIRMAN: On behalf of Senator Dodd, who is out of the country, I am sending you a copy of a letter sent to him by Mr. Francis J. Mason, of Derby, Conn., concerning legislation which would authorize altering the silver content of coins.

I know that Senator Dodd would be most appreciative if you would make Mr. Mason's letter a part of the record of the hearings your committee will hold on this and inform your members of his interest in this legislation.

With best wishes,  
Sincerely,

MILTON H. WERNSTROM,  
*Legislative Assistant to Senator Thomas J. Dodd.*

MASON JEFFRIES, INC.,  
*Derby, Conn., April 22, 1965.*

DEAR SENATOR: I am vitally concerned with a bill proposing a change in the silver content of our U.S. coins. This bill will be coming before you in the coming weeks.

We are in the food and vending business; therefore, any change will affect our business. Our national association, National Automatic Merchandising Association, has had a study group for some months now to see what can be done to help alleviate the silver problem and still not affect the 4 million coinage units now in operation. Our industry has made a recommendation with three alternate plans, any one of which would allow us to operate our present equipment without costly changeover.

I am enclosing a copy of these recommendations for your consideration.

Not only am I directly affected, but, also, all of my employees—40 in number. Our company operates vending machines in more than 100 locations. The havoc which a nonworkable coin would cause becomes unbelievable when you realize over 20,000 people patronize our machines in 1 day.

If the new coins do not work in our present mechanisms, it will cost our company, and all others, thousands of dollars to change these mechanisms. What really bothers me is the fact that all the people who depend on our service for coffee breaks and meals at work will be confused and irritated.

Possibly one solution to our present coin problem would be to pass a law forbidding the sale of U.S. currency for more than its face value.

Thank you.

Very truly yours,

FRANCIS J. MASON, *President.*

#### THE VENDING INDUSTRY'S POSITION ON COINAGE

The merchandise and service vending industry urges a solution to the shortage of silver for coinage which will cause the least confusion and inconvenience to the American public by assuring the continued operation of millions of existing coin mechanisms.

Such mechanisms are used in more than 3,300,000 vending machines, 250,000 coin changers, and 470,000 music machines (plus their 1,410,000 attachments) throughout the country. The operation of some 1,200,000 coin telephones is also affected.

Accordingly, the National Automatic Merchandising Association advocates one or another of the following alternates in place of the present 90 percent silver alloy currently used in dimes, quarters, and half dollars:

1. A reduction in the silver content of the present silver-copper alloy coin to any combination of silver and copper which will work satisfactorily in present coin mechanisms.

2. A clad (laminated) coin made from outer layers of silver-copper alloy on a copper-alloy core.

3. A clad (laminated) coin made of cupronickel outer layers on a pure copper core.

The first two solutions require the retention of a reduced silver content. The third requires no silver.

The vending industry is neither for nor against the retention of silver in the coinage. It supports any solution which provides for coins that will function satisfactorily in existing coin equipment, thus assuring the American public of trouble-free operation with both present and new coins.

Any coin made from an alloy of high electrical resistivity and density, such as cupronickel alloy, will require the replacement of existing coin mechanisms. The adoption of a high-resistivity alloy would also cause severe counterfeiting and slug problems, even after all coin mechanisms are replaced.

The vending industry stands in firm opposition to such a solution.

Public inconvenience resulting from "noncompatible" coins would arouse widespread resentment. Such coins would cause the disruption of operations in thousands of plants, offices, and institutions where employees rely on vending machines around the clock for food and refreshment services.

With more than 83 million vending machine transactions every day (and comparable use of coin telephones and other coin-operated devices), it is imperative that both existing and new coins work satisfactorily in present coin-operated equipment.

The vending industry supports all practical measures which will insure an adequate coin supply for U.S. commerce and which will prevent the disappearance of coins from circulation.

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STATEMENT BY DR. WELDON WELFLING, CHAIRMAN, DEPARTMENTS OF ECONOMICS AND BANKING AND FINANCE, WESTERN RESERVE UNIVERSITY, CLEVELAND, OHIO

Mr. Chairman and members of the committee, my name is Dr. Weldon Welfling, chairman, departments of economics and banking and finance, Western Reserve University, Cleveland, Ohio.

Your committee is meeting in an atmosphere of emergency and urgency and I will try to cooperate by being brief. If in doing so I raise questions, I will be glad to try to answer them later.

The solution to the coinage problem cannot be delayed much longer. The general nature of the problem has been clear for many months. Industrial demands for silver plus enormous coinage demands in the United States have put upward pressure on the market price of silver. All that prevents the price from rising higher is the Treasury's ability to redeem silver certificates in exchange for silver at the coinage value of \$1.29 per ounce. Estimates vary as to when the Treasury's stock, now down to about a billion ounces, will be depleted but even at present rates it will be exhausted in 2 years. As this point is approached, the more rapidly will the stock be depleted.

In 1964, free world production of silver amounted to 215 million ounces, only 36 million coming from the United States. The United States alone used 203 million ounces in coinage, with other nations using 61 million, for a total of 264 million ounces. Industrial consumption was 123 million in the United States, 163 million abroad, and a total of 286 million ounces. Coinage and industrial uses each exceeded total output. Output amounted to 40 percent of consumption. The other 60 percent came from accumulated stocks.

An unknown but significant fraction of the demand is undoubtedly speculative. When the Treasury is no longer able to supply the market the price will be free to rise above \$1.29. When it reaches \$1.38 the silver in dimes, quarters, and halves will make them full-bodied money and at higher prices these coins can be melted for the metal.

Such experiences have happened twice before in our history. In Andrew Jackson's time the price of silver was pushed up above \$1.29 and fractional coins disappeared. The eventual remedy was the Subsidiary Coinage Act of 1853, which was the first legislative recognition of the fact that fractional coins need not be full bodied. However, the silver content was reduced only about 7 percent, which gives us the \$1.38 figure. During the Civil War the price of silver rose by this 7 percent and more, and again coins were melted while the Treasury was unable to buy more silver. Both of these periods illustrated the great inconvenience of not having a workable system of coins and today the inconvenience would be far greater with our vending machines, coin-operated machines, telephones, toll booths, and so on.

Since the 1870's, silver supply and demand have been such as to keep the price below the silver dollar equivalent of \$1.29. In fact, at times the price has been a quarter of that figure or less. Only a variety of price-support programs in form of coinage laws, going all the way back to the Bland-Allison Act of 1878, has kept the price from being lower. Today, however, the situation is reversed and demand far exceeds supply at \$1.29.

The current situation presents an excellent opportunity to eliminate silver entirely from the coinage. There seems to be no sound, economic reason to treat the half dollar any differently than the dime and quarter. There is no reason to use an expensive, precious material for any use where a more economical material will serve as well. The Treasury is obviously convinced that the proposed dime and quarter will provide a satisfactory currency in terms of appearance, durability, machine acceptance, difficulty of counterfeiting, and cost. If this is true, there is no economic reason why the same change should not be made in the half dollar and many reasons why it should. The present bill goes a long way toward solving the silver problem, at least temporarily, but the opportunity should be taken to solve it completely for the foreseeable future.

Even if there were no emergency, logic would dictate making coins as economically as possible. It must be emphasized that fractional coins are purely a convenience. What they are made of, so long as they are truly convenient, is irrelevant. Paper would serve, as it obviously does in dollar bills, except that in small transactions it happens to be less convenient. The silver dime is no better than 2 nickels or 1 nickel and 5 pennies. Ten dimes are no better than a dollar Federal Reserve note, unless, indeed, the price of silver rises above the coinage value. Then, the 10 dimes become worth more than a dollar but only as silver, not as coins. Consequently, they become very poor coins as they tend not to circulate at all.

Under present circumstances, it is clearly preferable to eliminate the coinage demand for silver entirely rather than to reduce it. All of the available silver should be mustered to stabilize the market price until the new coinage system is fully operative. Unless this price line is held at least that long, we will be without coins until the new type is in adequate supply.

It is natural that this committee will hear arguments favoring retention of at least some silver in coins. These arguments have little economic validity. Reference is made to "sound" currency. Our convenience coins are sound if they are convenient. The soundness and value of the dollar have nothing to do with whether we make our small change out of silver, copper, nickel or plastic.

Intrinsic value has nothing to do with the problem. In the first place, nothing has intrinsic value. Value is the result of supply and demand. Reduce the demand for, or increase the supply of, gold, silver, or peanuts and their value will decline. Actually the less so-called intrinsic value a coin has, the better. It costs society less to make, and it is less likely to be used other than as a coin. The market price of the metal in a coin is irrelevant; four quarters were a dollar when silver has cost the Treasury 50 cents, 71 cents, or 92 cents. We certainly do not want full-bodied coins, as they are the most troublesome, as is in fact illustrated now by the silver dollar which has disappeared, and the fractional coins which are threatened by the same fate.

As to the arguments for retaining some silver, other than appeals for intrinsic value, the only ones appear to be tradition and prestige. Under existing circumstances, I see no persuasion in either. The tradition of using silver as a coin in the United States started when silver was used as standard money and was fostered by discoveries of silver many years ago that made it a fairly economical material. Certainly the tradition of using copper must be at least as respectable, dating also from the Mint Act of 1792. As for prestige, I wonder in whose eyes the United States of America gains prestige by using a half dollar that is 40-percent silver. I see more prestige stemming from the advanced technology that has created the sandwich coin and that releases silver for more urgent uses.

May I conclude by referring briefly to some well-known facts about silver. First, silver mining is a minor industry indeed, producing only \$45 million worth—at historically high prices—in the United States annually in recent years. Mexico and Peru both produce more. Annual output of asparagus, cabbage, and celery each exceed domestic output of silver. The silver producing industry has undoubtedly received more favorable attention from Congress, from 1792 to 1964, per dollar of output and per employee than any other industry. Second, only four mines in the United States derive their principal income from silver. Most silver is obtained in conjunction with or as a byproduct of other ores. And

against consumption of 326 million ounces in the United States in 1964, production was 36 million ounces, about 11 percent. Third, it follows that high prices of silver benefit mainly foreign producers at the expense of American consumers of photographic supplies, tableware, jewelry, and dental material and as taxpayers paying for the coinage system and for electronic devices. Fourth, it also follows that the price of silver has little effect on output. In spite of the market price rising to \$1.29, American output was 37 million ounces in 1960 and either 35 or 36 million in each subsequent year. Since 1934 the price has risen 80 percent, but annual production is still the same because it is largely tied to output of copper, lead, and zinc. Fifth, and last, silver is just another commodity. It has no inherent, intrinsic claim to be coined any more than does copper or nickel or anything else unless it is the most economical commodity for that use. In today's world, it is more true than ever that silver is too valuable in other uses to be wasted in coins, where other materials are now clearly more economical.

SERVOMATION CORP.,  
New York, N.Y., June 7, 1965.

Subject: S. 2080.

Mr. MATTHEW HALE,  
Chief of Staff, Banking and Currency Committee,  
U.S. Senate, Washington, D.C.

DEAR MR. HALE: I enclose herewith a statement on behalf of Servomation Corp. in support of the above-entitled bill with the request that it be read into and incorporated in the record of the Senate Banking and Currency Committee at the hearing of that committee for consideration of the bill scheduled to be held on Wednesday, June 9, 1965.

Sincerely yours,

JOSEPH E. McDOWELL.

STATEMENT BY SERVOMATION CORP.

Servomation Corp. is a national vending and food service company engaged in providing refreshment and food service through coin-operated automatic vending machines in industrial plants, schools, hospitals, and other institutions. Through its more than 100 subsidiaries and 7,000 employees it operates in 30 States from coast to coast throughout the country and as a publicly held corporation listed on the New York Stock Exchange it represents approximately 4,500 shareholders.

Needless to say, Servomation, its employees, stockholders, and customers all have a vital interest in a rapid solution of the current coinage problem which will not be disruptive of its operations together with those of the vending industry generally.

We are well aware of the many interests which had to be considered by the administration in formulating any proposal for change in the Nation's coinage. We believe that it has achieved a sound and workable solution to this difficult problem and that its proposal embodied into S. 2080 should be speedily enacted into law.

The major feature of the bill which is the provision of a coinage which will be compatible with the existing coinage in all of the millions of machines presently in use and providing service throughout the country, is of such paramount importance that it should not be allowed to be obscured by peripheral considerations not relevant to the basic problem and the basic issue. It should be stressed that the achievement of compatibility does far more than avoid the wastage of many millions of dollars in modifying present machines and the tremendous losses and inconveniences to the public from this process, important though these are. The fact is that a conversion of the coin mechanisms in the machines would not ameliorate the situation since the existing coins will of course continue to be used and the public would suffer as greatly from the rejection of such existing coins as it would from a failure of the machines to accept the new coins. Indeed this would serve to accentuate the shortage problem. Under the proposal contained in S. 2080, however, all of these problems will be successfully resolved.

Not only will passage of the legislation proposed bring a great and positive benefit; speed in such action is also urgently important, for such speedy action will end the uncertainties which inevitably hamper the needed expansion of facilities and services and will also reverse the tendency to hoarding which has

operated to aggravate the coin shortage. Servomation Corp., therefore, in concert with the vending industry as a whole, strongly urges the Committee on Banking and Currency to act favorably and quickly on S. 2080.

CHAMBER OF COMMERCE OF THE UNITED STATES,  
Washington, D.C., June 8, 1965.

HON. A. WILLIS ROBERTSON,  
Chairman, Senate Banking and Currency Committee,  
Washington, D.C.

DEAR MR. CHAIRMAN: The Chamber of Commerce of the United States endorses those provisions of S. 2080 and H.R. 8746 which authorize reduction of the silver content of coinage and urges their prompt enactment.

It is well recognized that current industrial and monetary demands for silver have created a shortage of supply of national significance. For this reason we support reduction of the silver content of coinage to the extent necessary to resolve the current supply problem, while maintaining a metallic coinage system.

While reasonable men might differ as to the specifics of the proposed coin composition, there can be no dissent as to the urgent need for revision in the light of the present shortage of silver. The present proposal meets the exigencies of the current situation with the least disruptive effect upon our system of coinage and our economy.

Sincerely yours,

—  
THERON J. RICE.

STATEMENT BY HARRY SPODICK, GENERAL PRESIDENT AND GENERAL SECRETARY-TREASURER, INTERNATIONAL JEWELRY WORKERS' UNION, NEW YORK, N.Y.

The International Jewelry Workers' Union, AFL-CIO, which has thousands of members throughout the United States, urges that Congress take immediate measures to halt the use of silver in U.S. subsidiary coinage (dimes, quarters, and half dollars) as there is not enough silver being produced to satisfy either the needs for coinage, or the demands of industry. It is essential that supplies of this precious metal be conserved for use in industry where it has no substitute.

The U.S. Mint is expected to use 312 million ounces of silver this year to mint dimes, quarters, and half dollars. This is 40 percent greater than the entire free world production estimated for 1965, and more than 2½ times the amount needed by American industry. The U.S. Treasury's stocks are being depleted at an alarming rate to meet this deficit in supply.

Unless action is initiated immediately, to stop this senseless drain on America's silver resources, the U.S. Treasury's supplies of silver will vanish in less than 3 years. Every day, the situation is further aggravated. The International Jewelry Workers' Union is vitally concerned with this matter, for the jewelry and silverware industry is the third largest consumer of silver in the country and, if Treasury supplies of silver are permitted to disappear, the job of many hundreds—perhaps even thousands—of our members will be in serious jeopardy.

The price of silver in our industry is exceedingly important, since it accounts for as much as 75 percent of manufacturing costs in some of our major product categories. We, therefore, strongly oppose any action that might result in an increase in the price of silver. The retention of any amount of silver in coinage, or the failure of the U.S. Government to continue its present legal obligation to redeem silver certificates, would result in increased prices.

Since 1952, we have seen the price of silver bullion increase by 52 percent. Unit sales of silverware have declined in almost direct proportion, with corresponding loss of jobs.

Serious unemployment would result from any additional increase in the price of silver. There would be hardships caused to our members and their families, and the blow would be especially heavy in those communities in which the jewelry and silverware industries represent a major economic factor.

Because of the imperative nature of the situation, we urge that:

(1) Legislation be enacted immediately, providing for the elimination of silver in the manufacture of subsidiary coins; and

(2) The U.S. Treasury continue to make its silver available to domestic industry, through redemption or retirement of silver certificates at the current conversion rate of \$1.29 per ounce.

[Press release]

Immediate legislative action by Congress to halt the use of silver in subsidiary coins was urged today by the International Jewelry Workers' Union, AFL-CIO. The union numbers thousands of members throughout the United States, employed in the jewelry and silverware industry; the third largest consumer of silver in the United States.

The union stated that silver production is insufficient to satisfy either the demands for coinage or the needs of industry.

This year, the U.S. mint is expected to use 312 million ounces of silver in subsidiary coins—dimes, quarters, and half dollars—over 2½ times the amount needed by American industry, and 40 percent more than free world production.

Treasury stocks, which are meeting this deficit in supply, will vanish within 3 years "unless action is initiated immediately to stop this senseless drain on America's silver resources," the union warned.

"If Treasury supplies of silver are permitted to disappear, the job of many hundreds of our members—possibly thousands—will be in serious jeopardy."

Expressing concern over the price of silver, which accounts for as much as 75 percent of manufacturing costs in some major product categories, the union stated: "Serious unemployment would result from any additional increase in the price of silver. There would be hardships caused to our members and their families and the blow would be especially heavy in those communities in which the jewelry and silverware industries represent a major economic factor."

In 11 years, the price of silver bullion has increased 52 percent; unit sales of silverware have dropped in almost direct proportion, with a corresponding drop in jobs.

Action that might result in price increases includes: keeping any silver in coinage, or failure of the U.S. Government to continue its present legal obligation to redeem silver certificates.

To: The Resolutions Committee of the 17th Triennial Convention of the International Jewelry Workers' Union, AFL-CIO, in session at the Carillon Hotel, Miami Beach, Fla., beginning on May 10, 1965.

Whereas the International Jewelry Workers' Union represents thousands of workers employed in the jewelry and silverware industries, and

Whereas the jewelry and silverware industries are the third largest consumers of silver in the country, and

Whereas the job security of the thousands of workers whom the International Jewelry Workers' Union represents, is vitally and directly connected with the supply of silver available to the industry in which they work, and

Whereas the job security of the thousands of workers whom the International Jewelry Workers' Union represents, is vitally and directly connected with the price of silver in the industry in which they work, and

Whereas serious unemployment would result if Treasury supplies of silver are permitted to disappear and further serious unemployment would result from any additional increase in the price of silver. There would be hardships caused to members and their families, and the blow would be especially heavy in those communities in which the jewelry and silverware industries represent a major economic factor: Therefore, be it

*Resolved*, That this 17th Triennial Convention of the International Jewelry Workers' Union, in session at Miami Beach, Fla., go on record as favoring and urging that—

1. Legislation be enacted immediately, providing for elimination of silver in the manufacture of subsidiary coins.

2. The U.S. Treasury continue to make its silver available to domestic industry through redemption, or retirement, of silver certificates at the current conversion rate of \$1.29 per ounce.

3. Copies of the attached statement be sent immediately to the following:

Representative Wright Patman,  
Chairman, House Banking and Currency Committee,  
Washington, D.C.

Senator A. Willis Robertson,  
Chairman, Senate Banking and Currency Committee,  
Washington, D.C.

4. Copies of the attached statement be sent immediately to AFL-CIO officials in Washington, D.C., involved in legislation, informing them that it is imperative and urgent that they do all in their power to assist us with this legislation. Further, to do all in their power to see that the U.S. Treasury continues to make

its silver available to domestic industry through redemption or retirement of silver certificates at the current conversion rate of \$1.29 per ounce.

5. All the delegates here assembled at the 17th Triennial Convention of the International Jewelry Workers' Union, upon returning to their respective States, immediately send communications to those above named in this resolution, and to immediately send communications to their Senators and Congressmen bringing to their attention the serious situation the members of the International Jewelry Workers' Union face, informing them that it is imperative that legislation be enacted immediately, providing for the elimination of silver in the manufacture of subsidiary coins. Further, inform them that it is imperative that the U.S. Treasury continue to make its silver available to domestic industry through redemption or retirement of silver certificates at the current conversion rate of \$1.29 per ounce.

Submitted by:

JOSEPH V. MULVEY,  
President, Amalgamated Silver, Allied Metals & Craft Workers Union,  
I.J.W.U., Local 31 (Providence, R.I.) AFL-CIO and Vice President,  
I.J.W.U., AFL-CIO.

(NOTE.—Adopted by the convention, May 1965.)

NEVADA CHAMBER OF COMMERCE ASSOCIATION,  
McGill, Nev., February 2, 1965.

Hon. A. WILLIS ROBERTSON,  
Chairman, Committee on Banking and Currency,  
U.S. Senate Office Building, Washington, D.C.

DEAR SENATOR ROBERTSON: The board of directors of the Nevada Chamber of Commerce Association, meeting in Reno, Nev., January 30, adopted a resolution in opposition to proposed elimination of silver from U.S. coinage.

The directors noted there had been proposals to the Senate seeking such legislation.

The directors asked that I convey to you their concern that total elimination of silver from coinage would do great harm to the vending machine industry and to the mining industry, and would result in an irreparable damage to public confidence in the integrity of the Nation's money. They also noted that a reduction of the present silver content in coins by 50 percent would create a large additional source of silver supplies convertible from present coins as well as double the number of coins that can be minted from current silver stocks.

The directors of the Nevada Chamber of Commerce Association hope that you and your committee will give serious study to any move to eliminate silver from coinage.

Thank you for your attention.

Yours very truly,

R. W. CROSSER, President.

WORCESTER, MASS., March 8, 1965.

Mr. MATTHEW HALE,  
Chief of Staff, Committee on Banking and Currency,  
U.S. Senate, Washington, D.C.

DEAR MR. HALE: Thank you for your letter of February 25, 1965. Your recommendations as to further research material have proven fruitful \* \* \*.

I have taken the liberty of enclosing a statement on the silver problem, which I respectfully request be submitted into the record at the next hearings on this issue.

Very truly yours,

STEPHEN J. CANNER,  
Research Fellow, Clark University.

#### CONTEMPORARY PROBLEMS IN THE SILVER MARKET

While many of the economic headlines today are concerned with balance-of-payments difficulties and gold flows, silver, which is also a part of our monetary system, has slowly but steadily evolved into a major problem.

The problem arises from a rapidly increasing demand for silver for coinage, arts, industries, and defense, coupled with a fairly constant supply.<sup>1</sup> Recent statistics reveal the following:<sup>2</sup>

Demand:	<i>Millions of ounces</i>
Industrial and arts.....	110
Coinage, fiscal 1963.....	75
Total.....	185
Supply:	
Newly mined domestic silver.....	35
Free stocks of Treasury silver.....	30
Backing for silver certificates, \$1 bills.....	1,300
Backing for silver certificates, \$5 bills and above.....	285
Total.....	1,682

[These statistics may be misleading, for when the silver which is presently backing our outstanding silver certificates is freed and consumed for coinage, the supply figure will be adjusted to 97 million ounces, assuming that net imports and domestic mine production does not increase. Using a total demand figure of 185 million ounces, a gap of 98 million ounces will occur. But when the total demand figure is adjusted to reflect Treasury requirements for coinage, from 75 million in fiscal 1963 to 312 million ounces at the present rate of production,<sup>3</sup> it is evident that the Treasury stocks of silver would rapidly be depleted.]

In light of this impending crisis, one must ask, "What has been done to head off the problem and what policies can be pursued now?"

As early as 1955, Senator Green, Democrat, of Rhode Island, proposed legislation which would have repealed the Silver Purchase Act of 1946.<sup>4</sup> By this 1946 act, the Treasury was compelled to buy all newly domestic mined silver at 90.5 cents an ounce. Moreover, it was prohibited from selling silver at less than 90.5 cents an ounce. At the time this proposal for repeal was being considered, the market price hovered around 90.5 cents an ounce. Both Secretary Dillon of the Treasury and Chairman Martin of the Federal Reserve Board supported the bill contending that conditions were ripe for the Government to abandon silver without anyone getting hurt.<sup>5</sup> Silver reserves, other than those required for backing of silver certificates, were then thought to be more than ample for coinage and defense requirements. And because the market price had risen to the Treasury price, silver mining was no longer being subsidized. Unfortunately, "the silver bloc" prevented action from being taken on Senator Green's bill. The act of 1946 remained in force.

In late 1961, the market price of silver quickly rose to \$1.20 and then to \$1.29 an ounce. The Treasury was still compelled to sell silver at 90.5 cents an ounce. The natural reaction occurred. Treasury stocks of silver were substantially reduced. As a result of this event, President Kennedy, by Executive order, directed Secretary Dillon to cease Treasury sales of silver effective November 28, 1961. Concurrently, the Treasury began to retire silver certificates of \$5 and above denominations in an effort to free its stocks of silver.<sup>6</sup>

In his Economic Report of 1963, President Kennedy urged the Congress to enact legislation which would free silver for industrial and coinage uses. On June 4, 1963, the Silver Purchase Act was repealed by Public Law 88-36. The Treasury was no longer compelled to buy newly mined domestic silver. However,

<sup>1</sup> On demand see the Annual Review of the Silver Market, 1962, published by Handy & Harman, New York.

N.B.—Especially pp. 11-12 where the review breaks down industrial demand for batteries, electronic industries, etc.

<sup>2</sup> For a projection of our coinage requirements through 1990 see the Annual Report of the Director of the Mint, 1963, p. 3. This projection of demand is taken from the Arthur D. Little study which was prepared for the mint. It understates current demand to the extent that there is considerable speculation in coinage today.

<sup>3</sup> All figures except net imports were taken from the Annual Report of the Secretary of the Treasury, for fiscal year ended June 30, 1963, pp. 400-402. Figure for net imports taken from "Content of Silver Coins," hearings before the Committee on Banking and Currency, U.S. Senate, Apr. 1 and 2, 1964, p. 124.

<sup>4</sup> See Congressional Quarterly, week ending Feb. 26, 1965, p. 322.

<sup>5</sup> See "Repeal of Silver Purchases Act," hearings before the Subcommittee on Banking and Currency, U.S. Senate, pt. I, July 13, 18, and 25, 1955, pp. 1-5.

<sup>6</sup> *Ibid.*, statement of Randolph Burgess, pp. 10-11; statement of Martin, p. 37.

<sup>7</sup> See "Repeal of Silver Purchases Act," hearings before the Committee on Banking and Currency, U.S. Senate, Apr. 29, 1963, pp. 68-69.

the Treasury was permitted to sell silver at \$1.29 an ounce, the purpose being to stabilize the price of silver at \$1.29. This legislation also permitted the Treasury to retire \$1 and \$2 silver certificates with Federal Reserve notes or subsidiary coinage.

Public Law 88-36 did not revoke the existing stock of silver certificates in circulation. Today, they are still redeemable for silver dollars or silver bullion. At the time of the hearings, there was an understanding between the respective Banking and Currency Committees and the Treasury that the process of retiring silver certificates would proceed gradually—at the rate of approximately \$35 million a year.<sup>7</sup> The necessity of moving cautiously was dictated by our balance-of-payments situation. For as Federal Reserve notes are issued, they require a 25-percent gold backing.

In 1963 Secretary Dillon stated before the Senate Banking and Currency Committee that when all the \$1 and \$2 silver certificates were retired, 1,300 million ounces of silver would be freed. This source of "new silver," along with the then existing free stocks of 30 million ounces of Treasury silver, would, he thought, be sufficient for coinage and defense for the next 10 to 20 years.<sup>8</sup>

Other authorities knew that Secretary Dillon was grossly overoptimistic in his estimate. In early 1964 a raid was conducted on the Treasury's stock of silver dollars, reducing their inventory from \$69 million in March 1963 to \$3 million in March of 1964.<sup>9</sup> No new silver dollars have been minted since 1935.

Despite increased operations at the mints, coins of all denominations were and still are in short supply. The current problem is further aggravated by the fact that speculators may push the market price above the present \$1.29 to \$1.32. At \$1.32 it would be profitable to melt down silver dollars and sell the silver as a commodity. Indeed, speculators are betting on just this happening in the near future. At \$1.38 it would be profitable to melt down half dollars, quarters, and dimes. While such action would be illegal, ways might be found to evade the law.

Several courses of action are now open to the Government, but any reasonable solution will involve short-term problems to the Government and industry.

First, the administration should propose legislation whereby the existing stock of silver certificates would no longer be redeemable into silver dollars or bullion. This measure, while only a stopgap, would free more silver immediately for coinage. True, such legislation might face stiff opposition from the silver bloc, but the silver mining interests have received more than substantial benefits from silver legislation and should now bow to "the common welfare."

A second measure is to reduce the silver content of coins. Vending machine companies have stated that they can adjust from the present 90 percent silver, 10 percent alloy coin to a 50 percent silver, 50 percent alloy coin without incurring excessive costs.<sup>10</sup> This policy would be highly undesirable as it would be a devaluation of the price of silver and push up the price of silver on the commodity market, further injuring silver manufacturers of New England. One must remember that the price of silver has risen from 42 cents an ounce in 1934 to \$1.29 today. A substantial portion of this increase in price has been caused by forced Treasury purchases of silver at artificially high prices. Moreover, following Gresham's law, the "bad" money of 50-50 percent would cause the "good money" of 90-10 percent to be driven out of circulation or melted down.

A third alternative is to retain the present content in our coins and hope to meet the demand by encouraging the mining of silver via subsidies, more liberal depletion allowances, etc. Indications are that such policies would not work, as substantial market price increases in the last 4 years have increased supply only minutely.<sup>11</sup> Moreover, the Arthur D. Little study of coinage demand for the next 20 years rules out this alternative.

The ultimate, long-range solution would have the Treasury abandon the use of the silver entirely in our coinage. England undertook a similar policy approximately 30 years ago with a fair amount of success. True, short-term problems

<sup>7</sup> Ibid., statement of Dillon, p. 15.

<sup>8</sup> Ibid., statement of Dillon, p. 11.

<sup>9</sup> See "Content of Silver Coins," hearings before the Committee on Banking and Currency, U.S. Senate, Apr. 1 and 2, 1964, p. 12.

<sup>10</sup> Ibid. See letter of Fred Wallin, vice president of National Rejectors, Inc., St. Louis, Mo., p. 71.

<sup>11</sup> Ibid. See table on p. 112, "Production of Silver in the United States Since 1792."

would arise; e.g., costs of conversion of vending machines; developing foolproof slug rejectors; the "when, how, and where" of conversion; etc.

There is a definite crisis in silver. The solution to the problem is to abandon silver completely from our monetary system. Bimetallism, even though very slight, must be eliminated from our currency.

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AUTOMATIC RETAILERS OF AMERICA, INC.,  
*April 2, 1965.*

HON. A. WILLIS ROBERTSON,  
*U.S. Senate,*  
*Washington, D.C.*

DEAR SIR: Automatic Retailers of America, Inc., is engaged in the operation of food service facilities in schools, colleges, hospitals, and industrial plants. These consist of conventional cafeteria facilities as well as some 90,000 automatic vending machines. In connection with our operations, we employ some 17,000 people in 40 States in annual payroll of close to \$56 million.

As I am sure you know by personal experience and, if not, you have doubtless read in the newspapers, there is a shortage of coins in the United States. We and other responsible members of our industry have been doing everything possible to alleviate the effects of this shortage by collecting and turning over our coins to banks promptly. As you possibly also read in the newspapers, the Treasury Department is going to propose a change in the silver content of our coins very shortly and, according to the public press, is now giving consideration to certain alternatives.

The coin mechanism in use in more than 3 million vending machines in the country now rejects or accepts coins by measuring the reaction of the coin to an induced electrical current. These mechanisms will still work if any one of several alternatives now considered by the Treasury Department are put into effect. On the other hand, at least one of the alternatives that may be proposed by the Treasury will make the present vending machine mechanisms obsolete overnight, as far as new coins are concerned, causing perhaps irreparable financial harm to vending operators throughout the country—a blow from which it would take the industry some time to recover. A very high percentage of persons employed in the vending industry now would have to be laid off pending the results of further coin mechanism research.

Please keep in mind, when a concrete proposal is put before Congress, how vital it is that any alteration in the coinage be one compatible with the mechanical needs of the vending industry, and consequently the general public who use vending machines 80 million times a day.

Yours truly,

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WILLIAM S. FISHMAN, *President.*

STERLING SILVERSMITHS GUILD OF AMERICA,  
*New York, May 12, 1965.*

HON. A. WILLIS ROBERTSON,  
*Chairman, Senate Banking and Currency Committee,*  
*Washington, D.C.*

DEAR SENATOR ROBERTSON: The Sterling Silversmiths Guild of America views with alarm the critical depletion of our Nation's silver stocks through the minting of silver-content coins.

The guild represents companies that produce approximately 95 percent of the sterling silver and silverplated flatware, and 75 percent of the sterling silver and silver-plated holloware manufactured in the United States.

Two-thirds of all silver used in the United States today goes into the minting of silver-content dimes, quarters, and half dollars—an annual consumption in excess of the entire free world production of newly mined silver, and an amount nearly eight times that of this country's silver production.

At present rates of production and consumption, the entire silver supply of the U.S. Treasury will be exhausted in less than 3 years.

Legislation must be enacted immediately in Congress authorizing the Treasury to mint subsidiary coins containing no silver if the essential needs for industry

and the arts are to be met. There is not enough silver produced in the world to satisfy expanding industrial requirements and to maintain silver in our coinage.

Our industry, which for over 150 years has remained one of the most respected in the United States for quality, beauty and tradition of its products, must not be endangered by the prospect of any further rise in the price of silver, which would surely bring widespread unemployment.

Between 1952 and 1963, the cost of silver has increased by 52 percent, causing a loss of employment in our industry, and adding seriously to the problem of manufacturing silverware. In this period, unit sales of sterling flatware decreased 48 percent. Sterling silver holloware products experienced a similar phenomenon.

Secretary of the Treasury Douglas Dillon in congressional hearings in 1963 expressed his concern by stating:

"While this increase in price (of silver) has benefited the producers, the recent rapid rise has created difficulties for the users. The silverware, jewelry, and related industries have had to cope as best they could with these increased costs. Other industrial and defense users have also been greatly affected. The legislation we have proposed will presumably result in stabilizing the market price at close to \$1.29, a price that is favorable for the producers.

"At the same time, it will benefit the user industries by giving them the much needed assurance of a relatively stable price level."

Since silver bullion accounts for about 75 percent of our manufacturing costs, we vigorously oppose any legislative proposals that would tend to raise prices, such as those advocating the retention of some silver in subsidiary coins.

We are encouraged by President Johnson's Economic Report to the Congress this year which stated his intention to oppose legislative enactments that threaten to raise costs and prices and to support those that will stabilize or reduce costs and prices.

The plants of at least four of the guild's members are the principal source of support for the communities in which they are located. The U.S. Department of Labor has classified all four as areas of substantial unemployment; one is classified as a distress area. The plant of a fifth member is one of the larger in the city in which it is located. The classification of that city is "D," defined as "high unemployment, substantial and persistent."

In the light of facts already apparent in our industry, any increase in the price of silver would produce a direct, immediate, and pernicious effect on employment.

In addition, an increase in the price of silverware to the consumer would deprive many American homes of their traditional right to the enjoyment of fine silver.

Over 120,000 Americans gain their livelihood in industries that are heavily dependent on the availability of silver, in addition to the tens of thousands who are engaged in the distribution and sales of silverware and silver jewelry.

Sincerely yours,

PIERREPONT T. NOYES, *President.*

AMALGAMATED JEWELRY, DIAMOND & WATCHCASE WORKERS UNION,  
*New York, N.Y., May 19, 1965.*

Senator A. WILLIS ROBERTSON,  
*Chairman, Senate Banking and Currency Committee,*  
*Washington, D.C.*

DEAR SIR: We wish to call to your attention a serious threat to the job security of thousands of jewelry workers employed in the jewelry and silverware industry in our country. This threat arises from the serious world shortage of silver which is resulting in the inability of the silver industry in our country to meet its requirements.

The serious problem created by this shortage of silver can be resolved in the best interests of labor and management in this field, if the U.S. Treasury Department would mint subsidiary coins from metals other than silver.

We therefore strongly urge upon you, that you use your good offices toward the end that legislation be enacted which would provide for the elimination of silver in the manufacture of subsidiary coins.

We further respectfully suggest that the U.S. Treasury Department continues to make silver available to domestic industry through redemption or retirement of silver certificates at the current conversion rate of \$1.29 per ounce.

Very truly yours,

LEON SVEBDLOVE,  
*President, Local No. 1.*

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AMALGAMATED WATCH, CLOCK &  
TIME INSTRUMENT WORKERS UNION,  
*New York, N.Y., May 28, 1965.*

Hon. A. WILLIS ROBERTSON,  
*Chairman, Senate Banking and Currency Committee,*  
*Washington, D.C.*

DEAR SIR: It is urgent that the Congress take action on the use of silver by the U.S. mint which is threatening thousands of jobs in the jewelry and silverware industry throughout the country but concentrated mainly in the New England and New York area.

Action must also be taken to safeguard against any increase in the price of silver as the use of it accounts for as much as 75 percent of the manufacturing costs. Any increase would have an extremely adverse effect in the industry.

Any action by the Congress contrary to the above will not in any way back up the President's pledge to win the war and struggle against poverty. It would certainly add to the unemployment.

We again urge that every effort be made to see that fair and equitable legislation is enacted by the Congress to prevent a serious blow and effect on the livelihood of the workers in the jewelry and silverware industry.

Very truly yours,

ERNEST W. DANDROW,  
*Secretary Treasurer, Local 121.*

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THE COCA-COLA CO.,  
*New York, N.Y., June 4, 1965.*

Mr. MATTHEW HALE,  
*Chief of Staff, Senate Banking and Currency Committee,*  
*Washington, D.C.*

DEAR MR. HALE: I strongly support the President's position with regard to coinage, and specifically H.R. 8746 and S. 2080.

Compatible coinage with existing vending mechanisms is of tremendous importance to the more than 1,000 bottlers of Coca-Cola in the United States. These local owned, locally managed businesses each has a great portion of its financial resources invested in vending machines which constitute a most substantial portion of their sales totals.

Respectfully submitted,

OVID R. DAVIS.

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INTERSTATE UNITED CORP.,  
*Lincolnwood, Ill., June 4, 1965.*

Mr. MATTHEW HALE,  
*Chief of Staff, Senate Banking and Currency Committee,*  
*Washington, D.C.*

DEAR MR. HALE: I am enclosing a statement to be filed with the committee discussing S. 2080. I will appreciate your making this statement a part of the record.

Sincerely yours,

ALEX KRAMER.

STATEMENT ON PRESIDENT'S COINAGE PROPOSAL

On behalf of our more than 8,000 employees, I respectfully submit this statement endorsing the President's proposal for new coinage.

We are in complete support of the U.S. Treasury bill on coinage. The proposed coins will work reliably in our present vending machines and will be welcomed

by our customers in 31 States who increasingly depend on coin-operated equipment for goods and services 24 hours a day.

The passage of this legislation is vital to our company, its employees, and its customers. As one of the largest companies in our industry, we provide manual food service in more than 500 industrial and institutional locations throughout America. We also provide specialized food and vending services for hospitals, schools, and the military.

The passage of this bill provides an ideal solution to the crucial coinage problem facing our country. It assures an adequate and modern coin supply for our economy through the years ahead and works no hardship on the millions of men and women who comprise our industry.

May I respectfully urge swift passage of this important legislation.

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PRINCETON UNIVERSITY,  
*Princeton, N.J., June 4, 1965.*

HON. A. WILLIS ROBERTSON,  
*Chairman, Banking and Currency Committee,  
U.S. Senate,  
Washington, D.C.*

DEAR MR. ROBERTSON: Please permit me to comment on President Johnson's proposal for replacement of our present fractional silver coins. Such a replacement is essential if we are to escape the inconvenience of a serious shortage of coins in these denominations. The President's proposal concerning quarters and dimes is practical and economical and I urge its adoption. He quite properly states:

"For many decades now the value of a particular coin has depended not on the value of the metal in it, but on the face of the coin. Today's coinage must be primarily utilitarian. The new coinage will meet this requirement fully, while dispensing with the idea that it contain precious metal."

Accepting this principle, which is completely valid, there is no justification for retaining any silver in the half dollar. Half dollars made of the same metals as the proposed new dimes and quarters would be utilitarian, economical, and completely acceptable. To retain silver in this coin would add nothing to its usefulness as money and would be expensive for both the country and the Federal Government. I am informed that there are now in circulation approximately 1,564 million half dollars. Since the gross weight of each half dollar is 0.4019 ounce, the total weight of the half dollars now in circulation is approximately 628,571,600 ounces. To replace these with coins having a 40-percent silver content would thus require 251,428,640 ounces of pure silver, which at \$1.2929 an ounce would be worth \$325,072,088. Thus merely to replace the existing half dollars, leaving aside the amounts of silver that would be required for future coinage, would lock up 251,428,640 ounces of the precious metal that would be highly useful for other purposes. And it would add nothing to the efficiency of our monetary system. Moreover, it would be highly and unnecessarily expensive to the Treasury. As already noted, it would require silver with a value of \$325,072,088. If this silver were not included in coins the Treasury could sell it. It would be far cheaper for the Treasury to make half dollars of the same copper and copper-nickel alloy to be used in the new dimes and quarters.

If these metals can be bought at 5 cents an ounce and if we allow for a 30-percent wastage in coinage, so that 898,857,388 ounces would be required, the total material cost of replacing the present half dollars would be only \$45 million. Thus the savings to the Treasury would be more than \$280 million. Even in these days of huge Federal budgets this amount is not insignificant.

Perhaps the proposal to retain silver in the half dollar reflected a desire to protect silver prices and American silver mining. But surely both the prospective demand-supply relationships for silver and the proposal to purchase domestically mined silver at not less than \$1.25 an ounce make this unnecessary.

In summary, I urge prompt enactment of the proposals for dimes and quarters and application of the same principle to half dollars.

Respectfully submitted.

LESTER V. CHANDLER,  
*Professor of Economics.*

THE AMERICAN BANKERS ASSOCIATION,  
*New York, N.Y., June 7, 1965.*

Hon. A. WILLIS ROBERTSON,  
*Chairman, Banking and Currency Committee,*  
*U.S. Senate, Washington, D.C.*

DEAR MR. CHAIRMAN: The American Bankers Association supports the changes in our coinage system as recommended to the Congress by President Johnson in his message of June 3, 1965, and urges enactment of S. 2080, a bill to provide for the coinage of the United States, which is now under consideration by the Senate Banking and Currency Committee. I expressed the association's support in a statement released to the press on June 3, 1965, a copy of which is attached.

The shortage of coins in circulation has been acute at times during the past few years and has caused serious problems to banking institutions in meeting the business needs of their customers. During the April 1965 meeting of the executive council of the association the situation at that time was discussed by the Federal agency relations, Federal legislative, and economic policy committees of the association. Following this meeting the Administrative Committee of ABA further reviewed the matter and adopted a resolution on April 19, 1965, recommending the elimination of silver from U.S. subsidiary coins, etc. I am attaching a copy of this resolution, also.

We will be glad if you will include our views in the record of your hearings on S. 2080.

Very truly yours,

RENO ODLIN, *President.*

COINAGE SYSTEM CHANGES RECEIVE SUPPORT OF THE AMERICAN BANKERS  
ASSOCIATION

WASHINGTON, D.C., June 3.—Reno Odlin, president of the American Bankers Association, today expressed the ABA's support of changes in our coinage system as recommended to the Congress by President Johnson.

Mr. Odlin, who is chairman, the Puget Sound National Bank, Tacoma, Wash., also commended the Treasury Department for its detailed study which formed the basis for the President's proposals, and gave assurance that the ABA would do its utmost to assure a smooth transition to the new system.

The text of Mr. Odlin's statement follows:

"The American Bankers Association is in full accord with the recommendations made by President Johnson with respect to changes in our coinage system. The association's administrative committee reviewed this problem on April 19, 1965, and agreed that continued use of silver in subsidiary coins had reached critical proportions and recommended that some action be taken to change our subsidiary coinage while the Treasury still possesses substantial amounts of silver that can be supplied to the market through redemption of silver certificates.

"The ABA is very much aware of the impact which these coinage proposals may have on the American public. We subscribe to the President's belief that there should be no untoward concern about the change to composite coins, and we will also urge all of our 14,000 member banks to make clear to their depositors that the purchasing power of the coins has not been diminished in any way and that they should be assimilated into business and personal use as quickly as possible. By the same token, we will urge that any tendency toward hoarding of existing silver coins be discouraged.

"The ABA is convinced that the President's proposals will provide a long-range and fundamental solution to both the existing coin shortage and the demands for silver which makes it impractical to continue for the long-term future large-scale production of silver coins. Elimination of silver from dimes and quarters with the substitution of composite coins will provide an acceptable and convenient coinage that has been proven suitable for automatic coin machine operations.

"While the association would have preferred the complete elimination of silver from half dollars also, we can readily accept the administration's assurances that half dollars of 40-percent silver content will not produce a substantial drain on existing silver stocks. The previous decision not to mint additional silver dollars at this time is also supported by this association, although we

are pleased to note that the authority to do so is being continued so as to make them available for use in the future if conditions so warrant.

"The additional recommendations for legislation made by the President should prevent or reduce hoarding of existing silver coins during the transitional period to the new system. Presidential authority to prohibit melting and exportation of subsidiary coins is absolutely necessary in this regard. Otherwise there undoubtedly would be substantial amounts of silver coins taken out of circulation and held in anticipation of a future rise in the market price of silver at which time the coins could be sold or melted for their silver content. Similarly, the authority for the Treasury to purchase domestically mined silver at not less than \$1.25 per ounce is necessary to protect silver producers from a sharp drop in the price of silver.

"The ABA wishes to commend the Treasury Department for its excellent and detailed study of a highly complex problems. During the past year we have been pleased to cooperate with the Department in eliminating coin shortages and we again offer our services in helping to assure a smooth transition to the new coin system."

#### SILVER CONTENT OF SUBSIDIARY COINS

Although the efforts of the Treasury Department and the American Bankers Association to eliminate the shortage of coin have met with some success, shortages still persist in many areas. Moreover, the rise in the market price of silver to its monetary value of \$1.29 per ounce has led to hoarding of coins and silver bullion. This, together with the increasing industrial use of silver has resulted in a 40-percent reduction—from more than 1.5 billion ounces to about 1 billion ounces—in the Treasury's silver stock during the past 2 years.

The American Bankers Association, while recognizing and the traditional role of silver in U.S. coinage, is convinced that a long-range and fundamental solution to the coin shortage must recognize the fact that the sharp and continuing rise in industrial demands for silver will increasingly limit its usefulness for subsidiary coinage. Accordingly, we urge the following steps:

1. We urge the Congress to enact legislation designed to eliminate at the earliest practicable date silver from U.S. subsidiary coins (dimes, quarters, and half dollars), recognizing, of course, that substitute materials would have to be suitable for automatic coin machine operations.

2. We urge the Treasury not to mint additional silver dollars at this time, but that the authority to do so be continued, so as to be available for use in the future if conditions so warrant.

3. Consideration should also be given to temporary discontinuation of the minting of 50-cent pieces, very few of which are moving into actual circulation. This would permit the Treasury to divert all possible facilities to the production of quarters, dimes, and nickles in order to build up stocks to prevent acute shortages if hoarding occurs during the transition to a new system.

4. In order to prevent or reduce hoarding demand for silver coins during the transition period to the new system, we urge administrative actions, or if necessary, passage of legislation to prohibit melting or exportation of subsidiary silver coins.

5. In addition, we restate our recommendations of April 20, 1964, that the year of coinage on subsidiary coins not be changed each year, but that it remain the same for all coins of each new design; and that private commercial facilities be used as much as possible to augment the output of the mint until additional Government facilities are in operation.

Resolution approved by the Administrative Committee of the American Bankers Association, April 19, 1965.

AUTOMATIC CANTEN CO. OF AMERICA,  
*Chicago, Ill., June 7, 1965.*

MR. MATTHEW HALE,  
*Chief of Staff, Senate Banking and Currency Committee,  
Washington, D.C.*

DEAR MR. HALE: Automatic Canteen Co. of America, in conjunction with the entire vending industry, is delighted by the recent proposal submitted by President Lyndon B. Johnson and the Secretary of the Treasury, for the very practical

solution to dwindling silver reserves in this country. We wish to commend the administration for the many months of research study and analysis prior to the recommendation of the cuproclad coins to replace the existing dimes and quarters, and the reduction in the silver content in the new half-dollar coins.

As a corporation employing in excess of 9,000 employees, we strongly endorse the new proposed change in coins because they will work side by side with present silver coins in the quarter of a million vending machines we operate throughout the country, and will greatly assist the Treasury Department in their efforts to maintain adequate silver reserves.

In addition, there will be no interruption in service, and this transition will be effected with a minimum of expense to our industry and will create no inconvenience to the consumer.

With the enactment of this proposed legislation, the growth of the vending industry will be assured. No other new coins will properly be accepted by our coin mechanisms. The proposed coinage will eliminate undue and immeasurable dissatisfaction and confusion among a large segment of the American public who depend on vending machines daily for snacks and meal service. At the present time, Automatic Canteen Co. of America is responsible for satisfying the feeding requirements of many thousands of employees in thousands of industrial locations where no other source of feeding is available. The trend toward automatic feeding is gaining momentum because of its availability on a 24-hour basis, and with additional leisure and recreational time becoming available to the American people, the vending industry will become even more vital to the economy.

We earnestly solicit the passage of this bill because it provides an excellent solution to the coinage problem and will assure an adequate coin supply for the country in the future.

Sincerely,

P. L. O'MALLEY.

SIDNEY, OHIO, *June 7, 1965.*

Senator A. WILLIS ROBERTSON,  
*Senate Office Building, Washington, D.C.:*

Congratulations on the outstanding contribution you have already made and will make this week, in straightening out a complex coinage situation. We respectfully urge consideration of the appointment of a numismatist as one of the four public members to serve on the Joint Commission on the Coinage. A representative of 8 million coin collectors with esthetic rather than commercial interest in the Nation's coinage could contribute much to the Commission, especially in the areas of vital information.

J. O. AMOS,  
*Publisher.*

MARGO RUSSELL,  
*Executive Editor, Coin World.*

MACKE VENDING Co.,  
*Washington, D.C., June 7, 1965.*

Mr. MATTHEW HALE,  
*Chief of Staff, Banking and Currency Committee,  
U.S. Senate, Washington, D.C.*

DEAR MR. HALE: I would appreciate your inclusion of my enclosed statement in the record of the hearings before the Senate Banking and Currency Committee on S. 2080.

Yours very truly,

AARON GOLDMAN, *President.*

STATEMENT OF AARON GOLDMAN, PRESIDENT, MACKE VENDING Co.

Mr. Chairman and members of the committee, I am Aaron Goldman, president of the Macke Vending Co., one of the largest vending companies in the Nation. I am submitting this statement to you on behalf of my company and the vending industry in wholehearted support of S. 2080, the President's proposed legislation for a new U.S. coinage.

We believe that any change in the coinage must be one which will cause the least confusion and inconvenience to the American public by assuring the continued operation of the millions of existing coin-operated vending machines. Therefore, any new coins must be compatible with existing coins in use in all existing coin mechanisms.

Most vending machines are equipped with a sophisticated coin-testing device designed to handle a large volume and variety of coins, to give the customer change automatically, and to reject foreign or damaged coins and slugs. This device tests coins for their electrical resistivity and density, among other properties. If a coin fails this test, it is diverted back to the customer. If it passes, it then sets the machine in action. The "clad" coins proposed by the administration have precisely the same properties of resistivity and density as do the present silver coins and will, therefore, work without any cost or inconvenience in present coin mechanisms.

The vending industry constitutes a significant factor in the Nation's economy. Last year over 30 billion coins were inserted in vending machines by Americans to purchase \$3.5 billion worth of retail goods. These figures do not include the number of consumer transactions involving such coin-operated devices as coin telephones and coin-operated laundries.

Automatic merchandising has become an around-the-clock convenience in the modern age. The fastest growing application of vending in recent years has been in lunch and refreshment services for employees in factories, offices, hospitals, military bases, and for students and faculty in colleges and universities. An estimated 1.5 million Americans now obtain at least one meal a day from vending machines where they work and millions more rely on vended snacks and coffee breaks.

Any changes in the metal content of U.S. coins which would affect vending machines would, therefore, have a vital impact on the public as well as on food and refreshment services in most of America's business and institutional establishments.

The merchandise vending industry in the United States is composed of more than 6,000 small businesses that own and service most of the vending machines in operation. Operating on a thin profit margin many of the small vending companies could not sustain a period of shutdown, malfunctions, and public dissatisfaction resulting from a changeover to noncompatible coinage and would thus be forced into bankruptcy.

More than 80,000 persons are directly employed by vending machine operators and manufacturers, a total payroll estimated at over \$600 million annually. These figures do not include the more than 300,000 additional persons whose employment derives from supplying the products and services required by vending companies. Any disruption of vending machine operations could lead to dislocation and unemployment of a significant percentage of these wage earners.

The coinage recommended by the President will provide the United States with a coinage which will carry out fully and without interruption and disruption its function as a technical merchandising instrument. This is absolutely necessary for the public interest. I, therefore, strongly urge your approval of S. 2080 and its speedy enactment into law.

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BELL TELEPHONE LABORATORIES,  
*Murray Hill, N.J., June 8, 1965.*

Hon. A. WILLIS ROBERTSON,  
*Chairman, Committee on Banking and Currency,  
U.S. Senate, Washington, D.C.*

DEAR MR. CHAIRMAN: This letter presents the views of the Bell Telephone System in regard to S. 2080, a bill to authorize changes in the composition of the 10-, 25-, and 50-cent U.S. subsidiary coinage.

The Bell Telephone Laboratories, Inc., is the research and development arm of the Bell Telephone System, being a subsidiary of the American Telephone & Telegraph Co., and the Western Electric Co. Technical information developed by the laboratories is made available to the Bell operating companies through the American Telephone & Telegraph Co.

Early in 1964, in my capacity as head, Public Telephone Department of the Bell Telephone Laboratories, I was requested to study the functional properties

of coins in their application in coin-operated mechanisms and to identify those properties which are essential for continued operation of the public telephones. This request by the Engineering Department of the American Telephone & Telegraph Co. resulted because of the use of 5-, 10-, and 25-cent coins in public and semipublic telephones of the Bell System operating companies.

To identify the essential properties of the subsidiary coinage used in public and semipublic telephones it was necessary to determine the operating characteristics relating to the coinage for the over 1,100,000 coin telephones presently installed. Obviously, any incompatibility in coinage would have an extremely serious effect on our ability to provide public telephone service. In this respect it is of interest to note that on the average approximately 10 million coin-operated telephone calls are made each day from Bell System telephones and a proportionate number from coin telephones owned and operated by the independent (non-Bell) telephone companies. I understand that these independent coin telephones require the same properties for coinage as the present Bell System telephones. To permit future improvements in coin-telephone service, it was necessary to investigate the operating characteristics of present coinage in new and proposed coin mechanisms which could be associated with the public telephones. The operating characteristics of the present coin telephones and of proposed coin mechanisms show that the size, weight, and electrical properties are crucial and that the latter two properties are intimately tied to the composition. Tests using sample coin-like disks in the coin equipment show that any significant departure from dimensions, weight, or electrical properties of the present silver-base coinage would produce malfunction of the equipment and rejection of the coinage. Theoretical studies which permit a broader understanding of these properties than is practicable with physical tests also support further this conclusion.

In the course of the study program at the Bell Telephone Laboratories we have identified clad metal combinations which do possess similar properties as present subsidiary coinage and which can serve as the basis for new compatible coinage. We have also tested many metal combinations which do not meet the requirements for compatible coinage. I am pleased to state that the 75 percent of copper and 25 percent of nickel clad on a core of pure copper authorized for the 10- and 25-cent coins in S. 2080 has been tested by the laboratories and meets all of the weight and electrical requirements for compatibility. Coins made from this metal to the dimensions of present 10- and 25-cent coins will permit continued service at public telephones. I can also state that the 50-cent silver alloy clad on a silver-copper alloy core also satisfies the technical requirements for compatibility.

I appreciate the opportunity of placing the views of the Bell Telephone System before the committee, and I will be available for further information at any time.

Respectfully,

W. PFERD,  
*Head, Public Telephone Department.*

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THE NEW ENGLAND COUNCIL FOR ECONOMIC RESEARCH AND DEVELOPMENT,  
*Boston, Mass., June 8, 1965.*

HON. A. WILLIS ROBERTSON,  
*Chairman, Banking and Currency Committee,  
U.S. Senate, Washington, D.C.*

DEAR SENATOR ROBERTSON: On behalf of the New England Council, I would like to present our views on S. 2080, the proposed Coinage Act of 1965.

The New England Council is a private, nonprofit organization with offices in Boston, Mass. It is composed of 2,200 members from business, labor, education, and government, and is dedicated to the development of a sound and dynamic region through the full utilization of all of the region's human, natural, and material resources. With New England's economic development as a focus, the organization seeks to identify the region's broad public interest and promotes appropriate programs of action to implement its findings.

New England is basically a silver using region. Its jewelry, silverware, photography, and electronic industries all depend on the availability of silver

at reasonable prices. It is, therefore, vitally interested in any legislation which would change the use of silver in coinage.

There is wide agreement that a serious silver shortage is developing. Current projections have established that in coming years there may well not be sufficient silver to meet both the growing needs for silver in industry and the rapidly increasing need for more and more coins as population grows and business activity increases. The administration has carefully studied the problem and proposed specific legislation, S. 2080, to help solve it.

While we support the objectives of this measure, we have reservations as to its adequacy. We believe that serious consideration should be given to completely eliminating silver from subsidiary coinage. The compelling reasons valid for the half dollar and we urge complete removal of silver in all subsidiary coinage. Such a step would in no way change the value of subsidiary coinage as currency. It should be emphasized that there is no substitute for silver in industry, but there are perfectly adequate substitutes for silver in coinage. It is important to plan for one change only and not create the need for further action in the future.

Thank you for your consideration.

Respectfully yours,

GARDNER A. CAVERLY, *Executive Vice President.*

SIDNEY, OHIO, June 8, 1965.

MATTHEW HALE,

*Chief of Staff, Senate Committee on Banking and Currency,  
New Senate Office Building,  
Washington, D.C.*

We place the services of Coin World and its background knowledge of numismatic workings at the disposal of Senator Robertson and his committee, if we can be of help in the areas of guidance in the production and distribution of the new clad coins. True coin collectors will cooperate with the position of the Government on what we are sure will be a swift favorable decision to make new useful coins.

MARGO RUSSELL,

*Executive Editor, Coin World.*

MEDIA, PA., June 7, 1965.

Senator A. WILLIS ROBERTSON,  
Congressman WRIGHT PATMAN,  
Washington, D.C.

DEAR SENATOR ROBERTSON AND CONGRESSMAN PATMAN: This letter gives my views on the proposed legislation to reduce the silver content in our coinage. Attached is a copy of my previous letter, now printed in the hearings on S. 797, S. 743, and S. 814, which contains the data to support my present conclusions. It is requested that both letters be printed in the records of the present hearings. Briefly, I believe that debasing our coinage will lead to increased hoarding, will discredit our paper dollar, and will force a revaluation of our paper dollar in terms of gold and silver. I suggest that we make the revaluation deliberately instead of waiting to be forced into it.

Newspapers have implied that the purity of our coinage is mainly the concern of silver miners, silver fabricators, and vending-machine owners. On the contrary, I believe that these are only minorities with special interests. What is really at stake is public faith in our paper money, which concerns our whole Nation and our standing in the world. Widespread hoarding would be clear evidence of lack of public faith. Our silver dollars, Kennedy halves, and wartime silver-alloy nickels have already disappeared. Table II in the previous letter indicates that the large-denomination silver certificates are being hoarded, and the scarcity of \$1 certificates relative to \$1 Federal Reserve notes near Philadelphia suggests to me that even the \$1 silver certificates are disappearing.

There will be no incentive to melt our coins because the market outlets for coin alloy can be policed easily. A law against exporting coins would be unwise because it would suggest the coming of a gold embargo. The real danger is public distrust and hoarding and trust cannot be restored with new punitive laws. As a minimum precaution against coin hoarding, I would restore to American citizens their right to the free ownership of gold.

Respectfully,

WILLIAM B. RETALICK.

MEDIA, PA.,  
January 30, 1965.

Senator A. WILLIS ROBERTSON,  
Chairman, Senate Committee on Banking and Currency,  
Washington, D.C.

DEAR SENATOR ROBERTSON: Here is a letter addressed to you and to Congressman Patman relating to the new bills to reduce the gold backing. The letter gives my reasons for opposing the reduction. I believe a reduction is wrong in principle, and it will not buy us much time anyway, because of the silver outflow.

Respectfully,

WILLIAM B. RETALLICK.

MEDIA, PA.,  
January 30, 1965.

Senator A. WILLIS ROBERTSON,  
Congressman WRIGHT PATMAN,  
Washington, D.C.

DEAR SENATOR ROBERTSON AND CONGRESSMAN PATMAN: This letter gives my views on S. 743, S. 797, and H.R. 3818, and it is requested that it be printed in the record of the hearings. Briefly, I object to reducing the gold backing because I expect the gold would go mostly into private holdings. Also, I believe the reduction would give only a short respite from a currency adjustment that is being forced by the accelerating silver outflow. Some of my evidence was printed last year in the hearings on S. 2671 and S. 2950.

Let us start by examining gold hoarding. The present gold price works out to  $35 \times \frac{45}{108} \sim 15$  1933 dollars per ounce, which naturally invites hoarding:

[In billions of dollars]

Year	U.S. Treasury gold stock, yearend	Worldwide private gold holdings <sup>1</sup>	New gold coming to market <sup>2</sup>	Gold added to free world monetary stock <sup>2</sup>
1955	21.8	11.4	1.0	0.7
1956	22.1	11.9	1.1	.5
1957	22.9	12.4	1.3	.7
1958	20.6	13.8	1.3	.7
1959	19.5	13.2	1.4	.7
1960	17.8	13.8	1.5	.3
1961	16.9	14.7	1.5	.6
1962	16.1	15.5	1.5	.5
1963	15.5	16.5	1.8	.8
1964	15.4	17	1.8	.8

<sup>1</sup> Estimates from Pick's Currency Yearbook. Some similar figures were published by Time magazine in the issue of Aug. 3, 1962. This is gold outside the Russian ruble orbit.

<sup>2</sup> Annual reports of International Monetary Fund and Bank for International Settlements, and annual gold review of the First National City Bank, January 1964.

Barclay's Bank, in their Overseas Review for last July, estimated that the world's total gold stock amounts to some \$70 to \$75 billion. The gold stocks of the IMF members add up to about \$43 billion, which leaves ample gold to support this estimate of \$17 billion for private holdings.

This hoard is still growing. The annual gold review of the First National City Bank states that in the closing months of 1964 all of the new gold coming to market was absorbed by private demand. Some other unofficial figures from Dr. Franz Pick show a similar trend:

Total for year—	Approximate gold sales in millions of U.S. dollars
1959	1,765
1960	3,920
1961	3,290
1962	3,710
1963	3,045
1964	3,700

Month of—	Approximate gold sales in millions of U.S. dollars
January 1964.....	240
February 1964.....	220
March 1964.....	300
April 1964.....	365
May 1964.....	325
June 1964.....	290
July 1964.....	235
August 1964.....	260
September 1964.....	310
October 1964.....	340
November 1964.....	400
December 1964.....	415

Pick represents that these sales do not include the official tradings of the member countries of the IMF and BIS, so that they are a measure of private sales. The \$415 million sales last December compares with Dr. Pick's estimate of \$480 million in October 1960, at the time of the London gold bubble. Montagu's Bullion Review for 1963 states that now the European central banks deal through the gold pool, so that the recent price rise in London is also an indication of private demand.

Table I at the end of this letter shows the trend that is developing in silver. The coin shortage persists despite the record production, and silver for delivery next December is approaching the coinage value of \$1.38 despite record sales of silver bullion. Also we have become a net exporter of silver, mostly to support the price in London:

Year:	Millions of ounces exported to the United Kingdom (Handy & Harman)
1960.....	5.7
1961.....	5.9
1962.....	1.6
1963.....	8.3
1964.....	48.0

Last year's price supporting exports exceeded our domestic production.

The study of coinage demand made 2 years ago<sup>1</sup> suggested coin hoarding, because the calculated amount of coinage in circulation was less than indicated by the circulation statement:

	Calculated fraction of coins in circulation that are lost annually	Calculated value of coins in circulation on Jan. 1, 1963	Calculated rate of annual loss
		Millions	Millions
Dimes.....	0.038	\$360	\$14
Quarters.....	.022	482	11
Halves.....	.028	275	8
Total.....		1,117	33
Same total, from circulation statement.....		1,756	

Because of A. D. Little's method of sampling the coins and working up the data, this \$639 million calculated loss must include any hoarding, but would not include coins temporarily tied up in vending machines and coin telephones. Testimony from the National Automatic Merchandising Association in the hearings on S. 2950 states that the inventory of coins tied up in vending machines at any instant amounts to only about \$22 million. The more recent disappearance of 482 million silver dollars and 202 million Kennedy halves is stronger evidence of hoarding. These two alone contain almost 450 million ounces of silver, out of a total of 1,932 million ounces supposed to be in circulation. This is by far the largest silver hoard in the world, and naturally results from denying U.S. citizens their right to own gold.

<sup>1</sup> "Production Facilities for the United States Mint," by Arthur D. Little, Inc., contract No. EB-88. This report is summarized in the hearings by the Senate Committee on Banking and Currency on S. 874. The particular details referred to here are in A. D. Little's "Working Memoranda" Nos. 6 and 22.

U.S. coinage is particularly vulnerable to hoarding because it is one of the few that survived World War II without being debased :

	Current dollars per ounce of silver in the coinage from U.S. Mint report	
	1934	1962
England.....	2.68	(1)
Germany.....	2.97	5.56
France.....	1.79	3.10
Switzerland.....	2.34	2.87
Italy.....	1.95	2.72
Canada.....	1.67	1.55
U.S. subsidiary coins.....	1.38	1.38
U.S. silver dollars.....	1.29	1.29
Mexico.....	1.29	1.56
India.....	1.38	(1)

<sup>1</sup> Zero silver content.

Also, silver is presently undervalued relative to gold, which adds to the incentive for hoarding. In the past, a disequilibrium between the prices of gold and silver has driven one metal or the other out of circulation. For example, when Alexander Hamilton was Secretary of the Treasury, gold was set at \$19.39 and silver at \$1.29 per ounce, giving a ratio of 15. But this ratio undervalued gold so that little of it was offered to the Treasury. In the 1830's gold was raised to \$20.67 or 16 times the silver price, but this drove the silver coins out of circulation until they were rescued by the glut of silver from the new mines in the West. If the ratio of 16 prevailed today with gold at \$35 per ounce, silver would be \$2.18 and our silver coinage would disappear again. A ratio in the neighborhood of 16 is well established in history, as shown by a table in the mint report for 1934, from which :

*Commercial price ratio, gold/silver*

Year :	Ratio	Year—Continued	Ratio
1687.....	14.9	1900.....	33.3
1700.....	14.8	1925.....	29.8
1750.....	14.6	1930.....	53.7
1800.....	15.7	(1964).....	27.1
1875.....	16.6		

As table I has shown, the Treasury has long since been unable to buy any silver, and is getting silver by canceling silver certificates. Now table II suggests that this supply may dry up eventually because of the hoarding of silver certificates. The less common denominations are not returning to the Treasury, and the rapid printing of \$1 Federal Reserve notes may force the \$1 silver certificates to disappear like the silver dollars. A reduction in the gold backing could hasten this.

These data show that our present paper dollar is overvalued relative to gold and silver. I suggest evolving a new paper dollar as follows :

	Price in dollars per ounce	
	Silver	Gold
Present price in all present dollars.....	1.29	35.00
New price in silver certificates (and silver coins).....	1.29	20.67
New price in all other present paper dollars.....	5.17	82.68
New price in new paper dollars.....	1.29	20.67

	Present dollars to buy 1 new paper dollar
Silver certificates (and silver coins).....	1.29/1.29=1.00
All other paper dollars.....	5.17=82.68=4.00
	1.29 20.67

The basis of this table is that the silver price in terms of any new paper dollar can be no higher than \$1.29, to keep the present silver coins in circulation. Historically, the gold price should be about 15 to 16 times the price of silver, and a ratio of 16 leads to the gold price of \$20.67 that prevailed from 1837 to 1933. Now to complete the table it remains only to assign the new price for gold in terms of present dollars. The \$82.68 price used here is almost enough to compensate for the increase in consumer prices since 1933, whence the price would be  $\$35 \times 108/45 = \$84$  per ounce. The \$82.68 price leads to the integral ratio of 4.00 for exchanging old dollars for new, which will minimize confusion while the new paper dollars are getting into circulation. The present silver certificates and silver coins would continue to circulate, being exchangeable into four times their face value in all other present paper dollars. The new paper dollars would be freely convertible into gold by American citizens. I suggest we pave the way for this transition as follows:

1. Rescind President Kennedy's Executive order of July 1962 which prohibits owning gold coins abroad or importing them into the United States.

2. Rescind President Eisenhower's Executive order of January 1961 which prohibits owning gold bullion abroad.

3. By act of Congress, repeal the statutes which prohibit owning gold within the United States, to reestablish a free market.

The main objection to raising the gold price has been that it would be a windfall to Russia because they own so much gold. Here are some estimates of the Russian gold position, in millions of U.S. dollars:

Source	Gold stock	Annual production
U.S. Central Intelligence Agency.....	( <sup>1</sup> )	150-175
Montagu's Bullion review for 1963.....	{ <sup>2</sup> 840	450-500
	{ <sup>3</sup> 1,200	
"Lombard" in the Financial Times, 1963.....		<sup>4</sup> 235
Franz Pick, January 1963.....		{ <sup>5</sup> 790
		{ <sup>6</sup> 740
Financial Times, Jan. 21, 1964.....	3,285	-----

<sup>1</sup> Less than 2,000.

<sup>2</sup> 1935.

<sup>3</sup> 1938.

<sup>4</sup> Mean of Russian sales of gold for the past 5 or 6 years.

<sup>5</sup> 1961.

<sup>6</sup> 1962.

None of these estimates indicate a windfall to Russia from raising the gold price, especially that of our own Central Intelligence Agency. After a price increase, sales from the \$17 billion private holdings would accrue to the Western World, not to Russia. Only a fraction of Russia's intake of foreign exchange comes from gold sales. Oil exports account for about \$400 million annually, or about one fifth of the total. By the end of 1965 the Soviet bloc will be exporting about 1 million barrels per day to the Western World, or nine times its exports for 1955.<sup>1</sup>

I object to reducing the gold backing because I expect that most of the gold released thereby would go into private holdings, like the rest of the new gold. If we are honor bound to redeem the \$1.1 billion of foreign currency (Roosa) bonds in gold, I would prefer to do this immediately and use the remaining gold to give American citizens a convertible currency. Besides, reducing the gold backing will give us only a short respite because the accelerating silver outflow in table I will force a currency adjustment all by itself. If we stop supporting the silver market or debase the coinage, the adjustment must follow quickly.

Respectfully,

WILLIAM B. RETALLICK.

<sup>1</sup> The Wall Street Journal, Dec. 30, 1964.

TABLE I

Year	Millions of ounces of Treasury silver <sup>1</sup>					Domestic production, millions of ounces of silver	Net imports	Average market price, dollars per ounce
	Backing silver certificates on Dec. 31	Free silver bullion on Dec. 31	Purchased from private sellers	Sold to private buyers	Used for coinage			
1956.....	1,708	87	16	4	31	39	60	0.91
1957.....	1,712	127	7	4	52	39	50	.91
1958.....	1,736	202	35	0	38	37	71	.89
1959.....	1,741	175	5	35	41	23	55	.91
1960.....	1,742	124	1	22	46	37	30	.91
1961.....	1,731	29	(2)	63	56	35	9	.92
1962.....	1,654	37	(2)	1	77	36	63	1.09
1963.....	1,533	25	(2)	25	111	35	33	1.28
1964.....	1,190	18	(2)	151	203	36	-45	1.29

<sup>1</sup> From U.S. Treasury, via table in hearing on S. 5389 and annual reviews of Handy & Harman.

<sup>2</sup> Less than half a million ounces.

TABLE II.—Thousands of dollars worth of silver certificates in circulation, by denomination

End of month	\$1	\$2	\$5	\$10	\$20	\$50	\$100	\$500	\$1,000	Memo- randum item, Federal Reserve notes (\$1)
December 1961.....	1,581,519	1,405	479,167	55,265	324	79	50	7	9	0
June 1962.....	1,509,289	1,405	446,058	50,004	323	79	50	7	9	0
December 1962.....	1,630,144	1,405	324,906	44,031	323	79	50	7	9	0
June 1963.....	1,560,111	1,405	243,211	41,342	323	79	50	7	9	0
December 1963.....	1,656,529	1,405	180,389	38,668	323	79	50	7	9	59,268
January 1964.....	1,523,684	1,405	173,017	38,301	323	79	50	7	9	69,517
June 1964.....	1,450,798	1,404	233,744	36,575	323	79	50	7	9	218,929
July.....	1,363,456	1,404	257,089	36,282	323	79	50	7	9	298,313
August.....	1,293,916	1,404	284,239	44,988	323	79	50	7	9	367,902
September.....	1,238,608	1,404	282,433	50,555	323	79	50	7	9	448,514
October.....	1,143,134	1,404	266,295	48,560	323	79	50	7	9	566,537
November.....	1,061,433	40	251,118	44,762	9	3	50	7	9	687,246
December.....										
January 1965.....										

NOTE.—The Old Series Currency Adjustment Act was approved June 30, 1961, and released the silver backing from \$29,958,443 worth of silver certificates issued prior to July 1, 1929. This change was first reflected in the circulation statement for August 1962, but in this table the change has been carried back to December 1961, to make the table consistent with respect to \$2, \$20, \$50, and \$100 certificates which were reduced by a total of \$1,848,000. There was a further reduction of \$14,500,000 in November 1964, but this change has not been carried back.

