

WILLIAMS MANUFACTURING CO. *v.* UNITED
SHOE MACHINERY CORP.CERTIORARI TO THE CIRCUIT COURT OF APPEALS FOR THE
SIXTH DISTRICT.

No. 332. Argued February 13, 1942.—Decided May 25, 1942.

1. In a patent infringement suit, concurrent findings of the two lower federal courts to the effect that combinations claimed, though involving old mechanical constructions, combine these in the machine in a new way, so as to produce a new result, are findings of fact which will not be disturbed by this Court where there is evidence to support them. P. 367.
2. A claim in a patent for a new combination of specified means, applicable to a portion of an old machine, which describes or refers to the older mechanism in order to show the application and operation of the improvement, is not to be construed as embracing the old as well as the new. P. 368.
3. Certain claims of a patent to McFeely for improvements in automatic heel-lasting machines, *sustained*. Pp. 364, 370.
121 F. 2d 273, affirmed.

CERTIORARI, 314 U. S. 600, to review the affirmance of a decree of the District Court, 29 F. Supp. 1015, sustaining certain claims of a patent, in a suit for infringement.

Mr. H. A. Toulmin, Jr. for petitioner.

Mr. Harrison F. Lyman, with whom *Messrs. Charles E. Hammett, Jr.* and *Thomas J. Ryan* were on the brief, for respondent.

MR. JUSTICE ROBERTS delivered the opinion of the Court.

The suit was for the infringement of Claims 6, 23, 42, 85, and 91 of the McFeely Patent No. 1,558,737 for improvements in automatic heel lasting machines. The District Court held the claims valid and infringed.¹ The Circuit Court of Appeals affirmed.²

¹ 29 F. Supp. 1015.

² 121 F. 2d 273.

The defendant sought certiorari on the ground that the claims were invalid under recent decisions of this court because they constituted attempts to repatent a broad combination of old devices—bed lasters and automatic tackers—and embodied only aggregations of new unpatentable mechanisms with old mechanical combinations. In pressing us to grant the writ, the petitioner insisted that it desired no retrial of the facts but merely a proper application of the law to the facts found by the courts below. We granted the writ.

In the manufacture of shoes, after the upper, the lining, and the counter have been placed on a wooden last, and an insole has been tacked to the last, the protruding edges of the materials are flattened over the insole and tacked down at the toe and shank of the shoe. The next operation is "heel seat lasting," which consists of conforming the upper materials and insole snugly to the contour of the heel of the last and fastening them down with tacks. Originally this was done by hand. Later so-called "bed" machines were used which employed horizontally moving plates, called "wipers," to flatten the projecting materials over the heel seat, where they were tacked by hand. Heel lasting on a bed machine involves the repeated use of levers and a foot treadle, and the result is not uniform.

March 2, 1915, McFeely obtained a patent for a machine which would automatically perform, in one power stroke, the wiping and tacking necessary to complete the process of heel seat lasting. In this patent he claimed numerous combinations of means to accomplish specific steps in the process, amongst others combinations to effect the clamping of the last, and positioning it during the process, and to operate the wipers and the tackers in proper relation to the last. A declared purpose was that the machine should be able to last the heels of shoes of different sizes. One machine was built in accordance with the patent and used for some time. It was found to work satisfactorily on

shoes of a small range of sizes, but not to work on shoes of a wide range of sizes as would be required in the operations of the ordinary factory.

October 27, 1925, McFeely obtained the patent involved in this case for improvements³ of the lasting machine described in his earlier patent. The improvements embodied in the claims in suit had to do with a new combination of elements for clamping the last in the machine, a new combination of elements for the operation of wipers and tackers in fixed relation to each other and to the heel of the last, and a new combination of means for positioning the last vertically and automatically altering the position during the operation. A manual adjustment was a part of each of these combinations by which the heel clamping, the wiping and tacking, and the vertical positioning mechanisms could be adjusted in advance for different sizes of shoes. The respondent is the assignee of both McFeely patents.

The petitioner purchased from a German maker, and used, four machines which were found by the courts below to be exact copies of the respondent's commercial machines made under the patent in suit. So thorough was the imitation that even minor features not covered by the patent were copied. At the time of the trial, alterations had been made in the petitioner's machines, but the courts below found that these were for the purpose of avoiding infringement and that they were not effective to that end.

If the petitioner's statements in support of the application for certiorari are taken at face value, the point for decision is extremely narrow. In argument, however, the

³"Any person who has invented or discovered any new and useful . . . machine . . . or any new and useful improvements thereof . . . may . . . obtain a patent therefor." R. S. 4886, as amended, 35 U. S. C. § 31.

petitioner sought to overturn the concurrent findings below and to have us redetermine the question of the novelty and usefulness of the improvements described in the combination claims held valid and infringed.

The courts below have concurrently found that none of the earlier patents cited, including that of McFeely, embodied the combinations of the challenged claims covering means for clamping and holding the last, means for the movement of wipers and tackers in fixed relation to each other, and means for the timed vertical positioning of the last during the power stroke of the machine, each combination including means for manually adjusting the mechanism in advance for different sizes of shoes. These findings are to the effect that the new combinations, while they involve old mechanical constructions, combine these in a new way so as to produce an improved result. These are findings of fact,⁴ despite the petitioner's apparent contention to the contrary, and we will not disturb such concurrent findings where, as here, there is evidence to support them.⁵ The claim that the combinations are merely of old elements, which perform no new function and produce no new result, must be overruled.

We come to the petitioner's contention that the courts below have held the patent valid and infringed on the theory that the improvements and adjustments disclosed in the claims entitle McFeely to repatent the entire combination of the old devices, known as bed lasters and automatic tackers. Petitioner argues that they have so held only because the mechanism of the patented machine permits of its operation upon a wider range of sizes of shoes

⁴ *Battin v. Taggart*, 17 How. 74, 85; *Bischoff v. Wethered*, 9 Wall. 812, 814; *Thomson Spot Welder Co. v. Ford Motor Co.*, 265 U. S. 445, 446; *Stilz v. United States*, 269 U. S. 144, 147.

⁵ *Continental Paper Bag Co. v. Eastern Paper Bag Co.*, 210 U. S. 405, 416, 422; *Adamson v. Gilliland*, 242 U. S. 350.

than the machine earlier patented, and that it does so operate merely because of three trifling mechanical adjustments which it embodies.

The contention is not in accord with the holdings below. It is true that both courts found that manual adjustments are provided which are not found in the earlier McFeely patent or in the prior art as applied to the three combinations embodied in the claims in suit. But the findings do not stop there. In respect of each claimed combination, both courts have found that they embody other improvements, in addition to mere manual preliminary adjustments, and that each combination exhibits invention in that its elements cooperate in a new and useful way to accomplish an improved result.

The petitioner, however, contends that the breadth of the claims in suit is such that, instead of patenting the combinations claimed as improvements over the prior art, and restricting the claims to the improvements, the patentee sought to blanket every machine which combines the old bed laster with the equally old automatic tacking device. It is said that our decisions in *Bassick Mfg. Co. v. Hollingshead*, 298 U. S. 415, and *Lincoln Engineering Co. v. Stewart-Warner Corp.*, 303 U. S. 545, forbid any such extension of the patent monopoly.

We think, however, that each of the claims is confined to a combination of specified means applicable only to a restricted portion and function of the whole machine. In stating his claims, the patentee sometimes says "a machine of the class described having, in combination, . . ." Obviously, no machine will infringe which does not have in combination the means specified in each of the claims for accomplishing the particular portion of the total operation covered by the claim. Other claims refer to "a lasting mechanism of the class described having, in combination, . . ." The same comment is applicable. Other claims read: "In a machine of the class described, the combina-

tion . . ." Such preliminary statement is commonly and properly used to specify the type of machine in which the claimed subsidiary combination of elements works an improvement over the prior art.⁶ In describing the novel combinations embodied in the claims, it was necessary to make reference to certain portions of the machine in connection with which the new combinations were to operate and with which they were to dovetail,⁷ but, in mentioning these other mechanical parts, the claim does not purport to embody them as elements of the claimed combination. To construe such a claim for a combination of new elements intended to be embodied in some well recognized mechanical aggregation, such as a sewing machine or a washing machine, as a claim covering all the mechanical details, or all the well known parts of the machine, would be to nullify every patent for an improvement in a type of machine long in use and would invalidate thousands of patents for improvements in standard machines. It would be difficult to describe an improvement in a washing machine without naming such a machine as the thing to which the patent is addressed, and equally difficult to refrain from referring to various parts of the machine, such as the tub or the motor which actuates the washer. But it has never been thought that a claim limited to an improvement in some element of the machine is, by such reference, rendered bad as claiming a monopoly of tubs or motors used in washing machines.

⁶ Compare e. g. *Grier v. Wilt*, 120 U. S. 412, 420, 421; *Morley Machine Co. v. Lancaster*, 129 U. S. 263, 266; *Keystone Manufacturing Co. v. Adams*, 151 U. S. 139, 142; *Deering v. Winona Harvester Works*, 155 U. S. 286, 289, 290; *Boyd v. Janesville Hay Tool Co.*, 158 U. S. 260, 264; *Kokomo Fence Machine Co. v. Kitzelman*, 189 U. S. 8, 10, 14; *Altoona Public Theatres v. American Tri-Ergon Corp.*, 294 U. S. 477, 482.

⁷ Compare *McCormick v. Talcott*, 20 How. 402, 404; *Loom Company v. Higgins*, 105 U. S. 580, 586.

Bassick Mfg. Co. v. Hollingshead, supra, and *Lincoln Engineering Co. v. Stewart-Warner Corp., supra*, lend no support to the petitioner's argument. Those were suits for contributory infringement. In the *Bassick* case, the invention was of an improved pin fitting for receiving grease. The combination claimed was stated as a combination of a grease gun, a coupler, and a pin fitting of the improved type. It was sought to convict one who sold grease guns, common in the prior art, of contributory infringement because the seller knew, and intended, that the guns should be used with the improved pin fitting. The effort was to extend the monopoly embodied in the improved pin fitting so as to prevent sale or use of well known grease guns of the prior art, although whatever was novel in the improved pin fitting was peculiar to itself and had nothing to do with the grease gun commonly used in connection with all pin fittings. Had the claim merely recited that it applied to an improved type of pin fitting to be used in connection with grease guns and couplers, the claim for the pin fitting would have been good, and would not have been rendered bad by the statement that the fitting was intended for use in connection with those other instrumentalities.

The *Lincoln Engineering* case went on the same principle.

The present suit for infringement is not for the use of an automatic bed lasting and tacking machine as such. It is for the use in such a machine of improvements of certain features of the machine. The respondent does not pretend to fix liability on the petitioner for contributory infringement by reason of the use of an automatic power driven lasting and tacking machine which does not employ the novel improvements of the combinations claimed, and could not do so. It is admitted, as it must be, that the petitioner is free to use the machine shown in the first Mc-Feely patent, which has expired, or any other automatic

lasting and tacking machine which does not embody the three improvements covered by the claims in suit.⁸ It is not free, however, to use such a machine if it embodies any one of the three combinations embraced in those claims respectively. The use of these combinations is the basis of its liability for infringement.

The decree is

Affirmed.

MR. JUSTICE BLACK, dissenting, with whom MR. JUSTICE DOUGLAS and MR. JUSTICE MURPHY concur.

I

In 1873, Mr. Justice Bradley, speaking for this Court in *Carlton v. Bokee*, said: "We think it proper to reiterate our disapprobation of these ingenious attempts to expand a simple invention of a distinct device into an all-embracing claim, calculated by its wide generalizations and ambiguous language to discourage further invention in the same department of industry and to cover antecedent inventions. Without deciding that a repetition of substantially the same claim in different words will vitiate a patent, we hold that where a specification by ambiguity and a needless multiplication of nebulous claims is calculated to deceive and mislead the public, the patent is void." 17 Wall. 463, 471-472. I believe that the patent of which the five claims now held valid are a part embodies every one of the vices referred to by Mr. Justice Bradley, and many more besides.

I recognize that the automatic power-driven heel seat laster, the machine to which these five claims relate, is a great technological achievement. But it is not the work of a single person, nor can it be attributed to any one generation. On the contrary, it represents the sum of gradual developments wrought by the skill, perseverance,

⁸ *Seymour v. Osborne*, 11 Wall. 516, 541, 548.

and creative genius of countless persons throughout many centuries. To this finished machine, contributions have been made by those who first harnessed steam, gas, and electricity to machinery, as well as those who discovered and used in combination cams, pivots, pulleys, belts, latches, triggers, springs and spring latches, brakes and brake blocks.

The exact date of the first use of machines in the manufacture of shoes is not known. But we know that, in 1790, Thomas Saint secured a patent in England on a machine for the fastening of soles to uppers; and that, in 1810, M. I. Brunel secured a patent in this country on a machine to perform the same function. The progress of the art for the next fifty years culminated in the stitching machine jointly patented by Blake and McKay in 1860. By 1876, this and subsequent McKay shoe machines were earning more than a half million dollars in annual patent royalties for him, and had given him the dominant position in the industry. During this period another current of invention produced the cable nailing machine which cut nails and drove them automatically. And in 1883, Jan Ernst Matzeler invented and patented a machine which "could simultaneously and in a minute's time hold the last in place to receive the leather; move it forward step by step so that the other coaching parts might draw the leather over the heel; properly punch and grip the upper and draw it down over the last; lay the leather properly at the heel and toe; feed the nails and hold them in position for driving; and then discharge the completed shoe from the machine."¹ The foregoing inventions and numerous others patented and put into use by the close of the century completely transformed the nature of shoe manufacturing. Reviewing these and other developments, the United States Census Report of 1900 concluded that "the

¹ Dictionary of American Biography, "Matzeler, Jan Ernst."

genius of the American inventor has provided for every detail of shoemaking, even the smallest processes being performed by mechanical devices of some kind."²

The United Shoe Machinery Company was formed in 1899. It combined in one enterprise the more important companies in the shoe machinery industry at the time, and brought under unified control the multitude of patents which those companies owned. Since that time, the United Shoe Machinery Company or its parent, the United Shoe Machinery Corporation, which is the respondent in this case, has continuously and overwhelmingly dominated the industry. The shoe machinery patents which the respondent had acquired by 1918 were recognized by this Court to be "too great in number for explanation or enumeration." *United States v. United Shoe Mach. Co.*, 247 U. S. 32, 40. In 1920, the Federal District Court for the Eastern District of Missouri found that the respondent controlled, through its system of leasing, at least 95% of all the shoe machinery used in the United States. See *United Shoe Mach. Co. v. United States*, 258 U. S. 451, 455.

The narrow field into which the patent in controversy was projected had already been so crowded by prior patents, a multitude of which were owned by the respondent, that the area left for patentable invention was very small. As the brief treatment in the Court's opinion indi-

² Census Reports (12th Census, 1900), Vol. IX, part III, 756. On the development of the shoe machinery industry, see Gannon, *Shoe Making*, *passim*, and his article "Shoe Industry in the United States" in *Encyclopedia Americana*; Hazard, *Organization of Boot and Shoe Industry in Massachusetts before 1875*, *passim*; Kaempfert, *A Popular History of American Invention*, Vol. II, 404-434; *Dictionary of American Biography*, "Goodyear, Charles [Jr.]," "McKay, Gordon," "Matzeliger, Jan Ernst," "Winslow, Sidney Wilmot"; *Encyclopaedia of the Social Sciences*, "Leather Industries," *e.g.*, 307-309.

cates, the inventions set out in the claims now held valid, if inventions at all, are comparatively simple improvements of an automatic power-driven heel seat lasting machine.

The work of a heel seat lasting machine is to bend and flatten out the overlapping part of the shoe upper over the insole and then tack it down so that it will be ready for attaching the heel. In the performance of these operations the incompleated shoe is firmly held by a clasp device in a proper position to permit the leather to be bent and flattened by "wipers" and fastened to the insole by "tackers."

It is to the clasp device, the wipers, and the tackers that the asserted improvements relate. The operation of these parts must be carefully coordinated, and the coordination must be maintained when the machine is adjusted for different sizes of shoes. Means to accomplish the necessary coordination over a range of different sizes had been claimed in a prior patent³ which, like the patent in suit, was issued to Ronald F. McFeely and assigned to the respondent. The courts below found and the respondent here argues that, although the machine made in accordance with the first McFeely patent "successfully lasted shoes of specific sizes, it proved incapable of operating satisfactorily upon a range of sizes large enough to adapt it for commercial operation in the ordinary shoe factory." 121 F. 2d 273, 278.

The improvements said to cure the deficiencies in the earlier machine are covered in the five claims here held valid. Insofar as these claims set out anything not contained in the first McFeely patent, the modifications are

³ Claim No. 167, for example, of the earlier McFeely patent (No. 1,129,881) sets out "means to adjust the back stop for shoes of different sizes including provision for indicating the correct adjustment for particular sizes."

not at all complex. The tackers and wipers, formerly connected in a manner which permitted some slight independence of movement, were now rigidly interconnected so that one could not move without the other; and a handle was substituted for a screw nut as a means of making a preliminary manual adjustment for shoes of different sizes. Changes of equal simplicity were made in the "hold-down" and the "heel band," two of the parts which clasp the shoe and hold it in place during the actual lasting process.

There is no doubt that the United Shoe Machinery Corporation, particularly since it maintains a patent department in which patent lawyers are regularly employed, could have caused these simple improvements to be patented separately and without ambiguity or prolixity. No possible justification can be offered for inextricably combining the description of the alleged improvements with a description of a complete lasting machine. Let us now turn to the patent in suit to see how far it meets the requirement of R. S. § 4888, 35 U. S. C. § 33, that a patentee "shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery."

The patent as a whole sets out 137 claims covering 16 large closely printed pages; it includes 11½ more pages of specifications and numerous drawings; it has a text of more than 25,000 words, about 14,000 of which are devoted to the claims. Remarks of Judge Learned Hand, made with respect to a patent much shorter than the one before us, are pertinent here: "Such claims violate the very purpose of any claims at all, which is to define the forbidden field. In such a waste of abstract verbiage . . . it takes the scholastic ingenuity of a St. Thomas with the patience of a yogi to decipher their meaning, as they stand." *Victor Talking Mach. Co. v. Thomas A. Edison, Inc.*, 229 F. 999, 1001. Alexander Graham Bell's basic patent on the

telephone, a pioneer invention,⁴ affords an illuminating contrast. All of Bell's claims—he found five ample—contain in the aggregate 229 words, less than many single claims of this patent; and the entire text of his patent is about one-tenth the length of this one.⁵ The second McFeely patent, unlike Bell's, discloses no pioneer invention. On the contrary, McFeely stated in his application that he was seeking to patent improvements. Yet, the features of a heel seat laster are set out so comprehensively and in such detail that a trained person would be able to build a complete machine with only this improvement patent as his primary source of information.

If the machine as a whole were being claimed in the second McFeely, arguments of some plausibility could perhaps be made to justify the length of the patent. For the automatic heel seat laster in its entirety is a highly complex machine combining a number of interrelated mechanisms in a manner which, as the court below pointed out, enables it to perform its intricate function “in the fraction of a second and too swiftly for the eye to follow.” 121 F. 2d 273, 274. But we must not allow ourselves to confuse the old and the new. The impressive speed of the machine is not the result of the improvements. Like most of the other admirable qualities of the machine as a whole, it was attainable before the improvements were patented and to it the improvements made no contribution.

Even if there is some conceivable basis for crediting the machine as a whole to McFeely's genius, he was not entitled to claim it in this patent. For his earlier patent, even lengthier than this one, had described and claimed as patentable invention every feature of the machine except the minor improvements to which we have referred.

⁴ See *Westinghouse v. Boyden Power Brake Co.*, 170 U. S. 537, 561-562.

⁵ *Telephone Cases*, 126 U. S. 1, 4-14.

One who invents improvements on a prior invention, whether his own or someone else's, may patent the improvements separately. But I do not believe that our patent system was intended to allow the indiscriminate jumbling of the new and the old which would permit the inventor of improvements to extend his domain of monopoly by perpetuating rights in old inventions beyond the 17 years period Congress has provided.

If we turn from the patent as a whole to the individual claims, we find in many of them the same ground for criticism: the introduction of something new is taken as an occasion for reclaiming the old. Claim 42, one of the five claims held valid and infringed, is illustrative. In these proceedings, the respondent makes this claim the basis of his assertion that the second McFeely embodies a patentable improvement in the hold-down mechanism, the part of the machine which holds the shoe in the appropriate vertical position during the lasting operation. But there is no clear and distinct statement in Claim 42 so limiting its scope. On the contrary, the trial court referred to this claim as "a general claim covering the machine based on the McFeely patent in suit," and the language of the claim itself purports to cover a "*machine* of the class described."⁶

⁶ Claim 42 provides: "A machine of the class described having, in combination, clamping means to embrace one end of a last and shoe, end wipers positioned to operate on the edges of the upper at said end of the shoe, a hold-down mounted for vertical movement and positioned to engage the bottom of the last and shoe, a support for a last and shoe constructed and arranged for manually effected movement to engage the last and shoe with said clamping means and hold-down, power operated mechanism effective to move said support forcibly to press the last and shoe against said clamping means and hold-down and to actuate the clamping means, mechanism effective in timed relation to the clamping means to depress the hold-down and support to position the shoe bottom determinately below the plane of the wipers, mechanism operative to actuate the wipers to break down the edge of

Not only does 42 claim many old elements, but they are claimed in the same manner and with the same emphasis as the hold-down mechanism. Included among these old elements are: "clamping means to embrace one end of a last and shoe"; "end wipers positioned to operate on the edges of the upper at the said end of the shoe"; "a support for a last and shoe constructed and arranged for manually effected movement to engage the last and shoe with [the] clamping means and hold-down"; and "mechanism operative to actuate the wipers to break down the edge of the upper over the bottom of the positioned last and shoe." All of these old elements were to operate in exactly the same manner prescribed either in the first McFeely or other prior patents, and they were to perform the same functions they had always performed.

We have held that if a claim does not contain a distinct and specific statement of what the patentee claims to be new, it is void. *General Electric Co. v. Wabash Co.*, 304 U. S. 364. And we have also held void a claim which sets out an improvement of one part of an old combination but at the same time purports to cover the improvement in combination with old parts which perform no new function. *Lincoln Co. v. Stewart-Warner Corp.*, 303 U. S. 545. Claim 42, today held valid, clearly violates both of these standards.

the upper over the bottom of the positioned last and shoe, the said hold-down mechanism being automatically operative subsequently determinately to raise the hold-down, the said power operated mechanism being operative substantially coincidentally correspondingly to raise the said support to engage the bottom of the last and shoe with said hold-down with the shoe bottom positioned substantially in the plane of the wipers, and the end wiper mechanism being subsequently operative in timed relation to wipe over and compact the broken down edge of the upper over the bottom of the last and shoe, and manually adjustable means for determinately varying the amount of vertical movement of the hold-down."

I believe it could be conclusively shown that almost all of the 137 claims are objectionable for one or both of the same reasons as Claim 42. But the unnecessary length of this patent makes it impracticable to present a complete exposition of the vices of each separate claim in a judicial opinion. It may be possible, however, to suggest in a few brief statements the extent of the deficiencies and their cumulative tendency "to deceive and mislead the public" with respect to the scope of the patent. *Carlton v. Bokee*, *supra*, 472.

Of the 137 claims, 68 purport to cover in unambiguous language either "a machine of the class described" or "a lasting machine" or "a heel seat lasting mechanism" without any hint of limitation to a claimed improvement. The use of such broad language cannot be dismissed as an inconsequential matter of form, since in substance these claims embrace, with varying degrees of comprehensiveness, all the fundamental features of an automatic power driven heel seat laster.⁷

⁷ Claim 55 is illustrative. It provides: "A heel seat lasting machine having, in combination, clamping means to embrace the heel end of a shoe, wipers to operate upon the upstanding edges of the upper at the clamped end of the shoe, means to support a last and shoe in inverted position, means to raise said support to position the last and shoe for co-operation with the clamping means with the bottom of the shoe above the operating plane of the wipers, means to operate the clamping means to embrace the heel end of the positioned shoe, mechanism operative determinately to depress said last and shoe support relatively to the clamping means to upwipe the upper over the sides of the last and to position the shoe with its bottom in a plane determinately below the operating plane of the wipers with the upper edges in said operating plane, and means subsequently to operate said wipers in timed relation to the shoe support to break down the upstanding edges of the upper over the heel seat, said support operating mechanism being subsequently effective in timed relation determinately to raise said support and shoe to position the shoe bottom in the operating plane of the wipers, and said wiper operating means being subsequently effective in timed relation to operate the wipers to wipe down and compact over the heel seat the broken down edges of the upper."

All but one⁸ of the remaining 79 claims are introduced by the somewhat limiting phrase "*in a machine of the class described.*" But in almost all of these the introduction is followed by a recital of old elements claimed in the same manner as they were in the earlier McFeely,⁹ and here again the aggregate effect is to reclaim a heel seat lasting machine in its entirety.

Recent studies conducted by the Temporary National Economic Committee show that the technique employed in the second McFeely patent is not unusual.¹⁰ In essence,

⁸ Claim 39 purports to cover "an end lasting mechanism," but it, too, attempts to reclaim various old elements.

⁹ Claim 84 is illustrative. It provides: "In a machine of the class described, the combination with last and shoe positioning means, of end embracing wipers, operating means for said wipers including parts movable to effect a preliminary adjustment of the wipers to the contour of the shoe while other portions of said operating means are stationary, and tackers movable inwardly over the shoe and connected to said wipers for preliminary adjustment with them."

¹⁰ *E. g.*, a "Memorandum of Policy" from the files of an industrial corporation, set out in the TNEC Hearings, contains the following guidance for the corporation's patent division:

"Continuing the Monopoly by Us or Others

"It often happens that if minor improvements are protected by patents, machines and processes licensed under the original basic patents are given a much longer earning life by the fact that the minor improvements continue the protection on the machines, and even when the basic patents expire, others are prevented from using the latest commercial form of the machine.

"Example: The . . . basic patents expired several years ago. Nobody, however, dare use the present type of . . . machine because of improvements covered by minor patents. Likewise, if the original patent protection obtained on particular machines should not be sustained by the Courts, yet a second line of defense patents covering details and improvements may become a most valuable asset.

"It has always been our ambition to obtain patents which will be related to furnace, melting and refining, feeding, delivery, forming, automatic handling, carrying, stacking and annealing. Conceivably

it is an attempt to utilize minor improvements to perpetuate exclusive enjoyment of a major instrument of production which rightfully belongs to the public. Distinct separation of the new would afford guidance to those who wished to use the old when the exclusive rights to it expired. On the other hand, blurring the lines of separation places anyone who attempts to use any part of the amalgam in jeopardy of burdensome infringement suits. Where the patent owner has ample resources to bear the costs of repeated litigation, the power of the infringement suit to stifle competition is increased. And where potential competitors are weak and few, it may afford a practically complete protection for the preservation of undeserved monopoly.

The circumstances here are most favorable for the use of patent privileges as a deterrent to all competition. By its vagueness and generality, the patent in suit creates an overhanging threat to anyone who might want to produce any kind of heel seat lasting machinery. And this threat is intensified by the universal recognition of the patent owner's long established rule over the entire shoe machinery industry.

Moreover, it is entirely unrealistic to judge this patent in isolation. It is a stage of a process which the record shows

we might lose patent domination of one or more important links, but still retain practical control of the whole chain by means of controlling the most efficient form of the other links." TNEC Hearings, Part 2, 777-778.

Cf. TNEC Monograph No. 31, 160: "A patent provides a sanction but it is about to expire—by some means or other its life must be prolonged. An improvement alone is hardly enough; its importance must be magnified until the line between invention and improvement is completely blurred. A multiplication of improvements is far better; it creates at least an appearance that an industrial art is being transformed."

began years before and is still continuing, a process by which it appears possible for the respondent to make the monopoly endless. The first McFeely patent, assigned to the respondent, embraced the whole universe of prior development in heel seat lasting machines. About a year after it was issued, the United Shoe Machinery Company became the owner of another patent on a lasting machine, Brock No. 1,188,616. The 77 claims of this patent reëmbodiment too many of the features previously covered by the first McFeely to allow enumeration here. Four years later, Pym No. 1,368,968, also on a lasting machine, was issued and assigned to the respondent. Of the 172 claims of this patent, there is another multitude embodying identical features of the first McFeely. Although applied for about a year after the first McFeely, the patent in suit was not issued until 1925, four years after the Pym patent. The second McFeely appears to be only the currently used weapon; the record reveals another in the respondent's arsenal, awaiting service when this one is no longer useful.¹¹ To date, the series of overlapping patents has been continuous. There is no reason to suppose that abandonment of so successful a practice is contemplated for the future.

The discouragement to future invention and the potentialities of deceiving and misleading the public, which this Court condemned 70 years ago, are here present in fullest measure. *Carlton v. Bokee, supra*. Opposed to departure from the salutary rule announced by Mr. Justice Bradley, I believe the patent before us should be declared void.

¹¹ Jorgensen No. 1,852,015, issued in 1932 and assigned to the respondent, purports to cover improvements on a machine for shaping shoe uppers "over lasts or other forms." It states that the invention "is herein illustrated as embodied in a machine for lasting the heel ends of shoes, but it is to be understood that in its more general aspects it is not limited to heel-end-lasting machines."

II

In addition to the foregoing reasons for declaring the entire patent void, there is an independent narrower ground for reversing the decision below. The five claims here relied upon set out only an aggregation of old elements not constituting patentable invention.¹² And where, as here, an appellate court can determine from a mere construction and comparison of patents that an alleged new invention is in reality identical with inventions claimed in prior patents, the question of patentability should be reviewed. *Heald v. Rice*, 104 U. S. 737, 749. Cf. *Singer Co. v. Cramer*, 192 U. S. 265, 275.

It was the view of both courts below that, although a machine manufactured under McFeely's earlier patent had "successfully lasted shoes of specific sizes, it proved incapable of operating satisfactorily upon a range of sizes large enough to adapt it for commercial operation in the ordinary shoe factory." The five claims in suit relate to three small adjustments of the first McFeely machine, intended to cure this alleged deficiency. The respondent nowhere asserts that the adjustments were intended to accomplish any other purpose or that in fact they did. Nor did the courts below rest their conclusions upon findings that any other purpose was accomplished. They found novelty and usefulness in the increased adaptability of the later machines over a wider range of sizes; and in the minor mechanical changes made to cure the shortcomings of the earlier machine, they found patentable invention.

¹² The petitioner's application for certiorari clearly raises this issue. One of the reasons we brought the case here was the opportunity it would afford to consider the petitioner's contention that the second McFeely "merely aggregates old adjusting features with an old combination . . . in conflict with the principles applied in such cases as *Grinnell v. Johnson Co.*, 247 U. S. 426."

But novelty and usefulness are not enough, for, to be patentable, improvements "must, under the Constitution and the statute, amount to an invention or discovery." *Thompson v. Boisselier*, 114 U. S. 1, 11. And even though improvements produce "a more convenient and economical mechanism," or a "more convenient and more salable" product, or a machine of "greater precision," they are not patentable if they "sprang naturally from the expected skill of the maker's calling."¹³ As this Court said in 1875, "Perfection of workmanship, however much it may increase the convenience, extend the use, or diminish expense, is not patentable." *Reckendorfer v. Faber*, 92 U. S. 347, 356-357. Cf. *Cuno Engineering Corp. v. Automatic Devices Corp.*, 314 U. S. 84, 90-92.

A comparison of the patent in suit with patents of the past shows that the improvements here were but duplications of old elements to obtain an old result and their application to the first McFeely machine was no more than a common mechanical expedient. The objective, adapting the machine to shoes of different sizes, suggests its own means of accomplishment.

Even before 1900, automatic tacking machines and automatic wiping machines, adaptable to shoes of different sizes, had been in use commercially. In connection with the issuance of his earlier patent, McFeely represented that he had succeeded in combining tackers and wipers in a single machine and that his patent therefore set out a pioneer invention, disclosing the first machine organized for the entire process of heel seat lasting. The United Shoe Machinery Company built a machine in accordance with the patent and placed it in a factory for testing pur-

¹³ *Grinnell Washing Mach. Co. v. Johnson Co.*, 247 U. S. 426, 434; *Office Specialty Mfg. Co. v. Fenton Mfg. Co.*, 174 U. S. 492, 498; *Altoona Theatres v. Tri-Ergon Corp.*, 294 U. S. 477, 486; *American Road Mach. Co. v. Pennock & Sharp Co.*, 164 U. S. 26, 41.

poses. Shoes lasted on it were sold to the factory owner's regular shoe trade. McFeely had described in detail means to set the parts before the lasting operation began so that the machine would properly do its work whatever the size of the shoe.¹⁴ It is said the tests revealed that these preliminary adjustment devices were not adequate to accommodate all sizes, although they did permit the machine to function satisfactorily on some.

The problem was to enable the operator in advance to enlarge or diminish the area within which the tackers, wipers, and shoe clasp devices would do their work as the shoe to be lasted might be larger or smaller. The most obvious answer was adjustments to permit appropriate positioning of the parts. Three separate hand adjustments were therefore provided to set the tacker-wiper combination, the heel clasp device, and the hold-down mechanism. The adjustments were so arranged that the operator of the machine could either by use of a set screw or handle place these separate parts in appropriate positions for the particular size of shoe to be lasted. The positions set by the operator are maintained until reset for shoes of another size.

Technological knowledge and development had advanced too far by 1916 to warrant elevation of such hand adjustments to the privileged position reserved for inventions. Either in or out of the combination these adjust-

¹⁴ The following excerpt from the specifications of the earlier McFeely is illustrative: "In Fig. 18 the back stop is shown as formed on a rack bar adjustable by a shaft 690 having a handle at the side of the machine with a pawl in it to engage a locking ratchet 691 having marked on it graduations indicating the proper adjustment for different sizes. The ratchet can be adjusted to position the graduations for different groups of sizes such as men's, women's or children's sizes." And the first claim sets out "means for fixing the gripper in different positions of adjustment both vertically and horizontally relatively to the last spindle for lasts of different heights and lengths."

ments performed no more than the old functions that adjustments by hand levers and set screws had always performed. Yet without these hand adjustments the problem alleged to have been revealed by operation of the first McFeely machine would not have been met. For hand adjustments were the indispensable elements of the claimed improvements. Since I believe that such adjustments should not be raised to the dignity of patentable invention I think the five claims should be held invalid.

No argument is made that the remaining elements standing alone would have caused the machine to function satisfactorily on shoes of all sizes. Nevertheless, I shall give the reasons for my belief that there is not patentable invention in the remaining elements of the five claims.

Tacker-Wiper Connection. In the first machine, the tackers and wipers were loosely connected in a manner allowing a slight independence of movement. Demonstration of the machine indicated that more satisfactory results would be obtained if tackers and wipers maintained a fixed relationship to each other throughout all the movements of the lasting operation. Here again the problem suggested its own answer. It is difficult to imagine that any mechanic would be ignorant of the principle that if two parts are fastened together, they will move simultaneously. The change in the tacker-wiper mechanism was no more than the application of this principle. Tackers and wipers were more rigidly interconnected. Even if such an expedient could ever have been invention, it had been anticipated in the field of shoe machinery as far back as 1881, when Geoge W. Copeland, Matthias Brock, and Joseph E. Crisp obtained Patent No. 244,714 on an automatic power-driven lasting machine which claimed a combination of wiper plates and fasteners to be moved simultaneously to the proper position for wiping and fastening the sole. I can see no evidence whatever of an exercise of

the inventive faculty in the fastening of tackers and wipers rigidly together so as to cause them to move simultaneously and maintain a fixed relationship with each other.

Heel Band and Hold-Down. The first McFeely, as had many prior patents, described a U-shaped leather heel band adapted to grip and hold the shoe while it was wiped and tacked. It is asserted that the patent in suit added attachments which permit the heel band to slide relative to its supports. The first McFeely also described a hold-down device for maintaining the shoe in appropriate vertical position for the lasting operations. It is asserted that the claim of the second McFeely which provides for the hold-down mechanism modifies the first by introducing a new "sequence of operations." The asserted modifications of both heel band and hold-down are claimed in conjunction with the hand adjustments previously discussed.

Since the beginning of shoe lasting, it has been recognized that the shoe must be held firmly in the proper position for wiping and tacking. Heel bands and hold-downs similar to those claimed here appear in the record in numerous drawings, specifications, and claims of a long series of patents prior to the one before us. The great number of patents, embodying apparently limitless variations of the same basic principles, suggests that the public had before McFeely's second patent already paid in fullest measure for heel bands and hold-downs.

Examination of only three of these patents—Plant No. 958,280 (1910), Keyes No. 1,023,854 (1912), and Brock No. 1,188,616 (1916)—is enough to show complete anticipation of the entire principle of the sliding heel band capable of forward and backward movement if not every essential mechanical detail.

The general claim of the second McFeely which sets out the hold-down mechanism is said to provide for a "particular sequence" of operations. Insofar as the ambiguities

of this claim¹⁵ permit such a deduction, there is nevertheless a failure to disclose any patentable invention. Of course, the sequence of operations in which the hold-down plays a crucial part is important. For the shoe must be maintained in such a vertical position that the successive strokes of the wipers will perform their proper function. If the shoe is too low with respect to the wipers, the leather will not be bent down sufficiently far; if the shoe is too high with respect to the wipers, the wipers will hit the shoe below the insole and therefore will not produce any bending of the leather at all. But in setting out a mechanism to insure the proper relationship between the level of the shoe and the level of the wipers during successive strokes of the machine, the second McFeely patent is by no means new. Claim 49 of the first McFeely patent includes a "provision for changing relatively the plane of action of the wipers and the position of the shoe between successive actuations of the wipers." And in Claim 164 of the first McFeely it appears that the hold-down mechanism was recognized as having a major role in accomplishing this purpose. For Claim 164 specifically provides "means for automatically actuating the hold down upwardly and then downwardly again between the initial advance of the wiper and a final retraction of the wiper." If the "sequence" of the second McFeely is any different, the difference cannot be seen in the provisions of the claim relied upon, nor is it explained in the record; if, as I believe, the "sequence" in both patents is the same, the second is invalid because anticipated.

In short, this record shows that the old elements composing the asserted improvements here had been described and redescribed, claimed and reclaimed as patentable inventions. The respondent has used every one of

¹⁵ See discussion of the invalidity of this claim (No. 42) at pp. 377-378, *supra*.

them in previous patents now expired. It should not be allowed to continue its exclusive control over their use and enjoyment.

There is perhaps another possible ground for concluding that the five claims set out patentable invention. Conceivably the three asserted improvements, although each separately is no more than a mechanical expedient or a simple adaptation of prior invention, could be accepted in combination as an exercise of the inventive faculty. The court below apparently did evaluate the improvements in combination, for it found that, taken together, they resulted in a "new unitary mode of operation of the entire machine." 121 F. 2d 273, 278. But the statement is unexplained, and I cannot find support for it in the record. On the contrary, comparison of the first and second McFeely patents shows that the basic mode of operation of the entire machine in both was identical. In the earlier machine, the shoe was placed on a last at the end of a jack, firmly held in position while the wiping and tacking took place, and then released. In these fundamental respects, the mode of operation provided for in the second McFeely patent is the same, whatever modifications McFeely may have added for the purpose of increasing adaptability to different sizes of shoes not having affected it in the slightest.

In any event, "each claim must stand or fall, as itself sufficiently defining invention, independently of the others." *Altoona Theatres v. Tri-Ergon Corp.*, 294 U. S. 477, 487. None of the five claims here in suit discloses a "new unitary mode of operation of the entire machine." Even if it were possible to deduce from the five claims taken together that McFeely had made such a disclosure, nevertheless the patent ought not to be treated as if the disclosure had actually been made in appropriate form. For the creation of a sixth claim, a combination of the other

five, which McFeely himself failed to include in his patent would entail a kind of constructive patenting procedure for which there is no judicial or statutory precedent.

The courts below concluded that the five claims in suit embodied patentable invention. In reaching this conclusion, which I believe is overwhelmingly refuted by examination of the claims themselves against the background of prior developments in the art, heavy reliance was placed on two extrinsic considerations: commercial success and the presumption of validity arising from the fact of issuance of a patent by the Patent Office.

Commercial Success. When it is a close question whether the changes embodied in a later patent are a sufficient advance over earlier patents to constitute patentable invention, the measure of commercial success of the later patent has been recognized by courts as affording some aid in reaching a conclusion. But while commercial success has been said to have relevance in resolving doubts, *Smith v. Hall*, 301 U. S. 216, 233, it cannot transform an exercise of the common skill of a calling, or an adaptation readily suggested by experience with prior inventions, or an aggregation of familiar mechanical expedients into patentable invention. Cf. *Hildreth v. Mastoras*, 257 U. S. 27, 34. And where the patent in question reëmbodies a prior patent not yet expired, its commercial success does quite the reverse of establishing patentability; it establishes the seriousness of the infringement. If the reëmbodied prior patent has expired, or if it is owned by the owner of the later patent, commercial success is one index of success in appropriating what should have been available to the public or in extending special privileges beyond the legally permitted term.

I have already given the reasons which convince me that no patentable invention is set out in the five claims in suit. The force of none of those reasons is affected by the commercial success which the respondent has realized. After

examining the record, I can find no serious doubts to be resolved. All I can deduce from the commercial success of the respondent with these machines is the magnitude of the consequences to the public who have had to pay for the respondent's extension of an undeserved monopoly through the use of an invalid patent.

Even if the issue of patentable invention were a doubtful one, the force of deductions that might normally be drawn from commercial success is greatly reduced in the circumstances of this case. For, by virtue of its dominant position in the shoe machinery industry, the United Shoe Machinery Corporation was not seriously threatened by loss of business to competitors when it withdrew the first McFeely machine from commercial use. Because there was no compelling economic incentive to hasten the commercial adaptation of the first McFeely machine, the inferences to be made from its withdrawal are extremely weak. Controlling the shoe machinery business to the extent that it did, the respondent was able to accelerate or delay the commercial exploitation of its heel seat lasting machine at its pleasure.

Moreover, the record indicates that the commercial success relied upon by the courts below would be inconclusive with respect to the second McFeely patent under any circumstances. For there is uncontroverted testimony that of the 1250 later machines in commercial use only 12 were built in accordance with the disclosures of the second McFeely patent. The remainder embody features set out in a subsequent patent, Jorgensen No. 1,852,015, or a prior patent, Hoyt No. 1,508,394, (declared invalid by the court below) or both. Since I believe that the commercial success of the respondent's machine could in no event establish the validity of the five claims in suit, I do not find it necessary to determine how much of the commercial success of the respondent's machines is to be attributed to features not set out in the second McFeely

patent. Such a determination does not appear to have been made in the entire course of proceedings in this case.

Presumption of validity arising from issuance. Quoting from the opinion of this Court in *Radio Corp. v. Radio Laboratories*, 293 U. S. 1, 8, the court below stated that the present case obliged it "to give consideration to the rule that 'one otherwise an infringer who assails the validity of a patent fair upon its face bears a heavy burden of persuasion, and fails unless his evidence has more than a dubious preponderance.'" 121 F. 2d 273, 277. For reasons I have already set out I can agree neither that the second McFeeley is "a patent fair upon its face" nor that the evidence of non-patentability has no more than a "dubious preponderance." Hence, the prerequisites for establishing a presumption of validity are not here present. In the absence of a statutory prescription to the contrary, I see no reason for extending the presumption of validity arising from the mere issuance of a patent beyond the narrow compass indicated by the passage quoted from the *Radio Corporation* case.

On the other hand, there are many positive reasons for not doing so. A patent is a grant of exclusive privilege. Yet it is normally issued in a non-adversary proceeding. Indeed, it is the practice of the Patent Office to keep patent applications on file in secrecy until the time of issuance.¹⁶ The public, who will be excluded for 17 years from the field granted to the applicant, are represented only insofar as the enormous volume of business permits the examining staff of the Patent Office to watch out for the public interest.¹⁷ Moreover, the patent examiner, unlike the court in an infringement suit, does not have the benefit of the

¹⁶ Rule No. 15, Rules of Practice, United States Patent Office.

¹⁷ See Report of Science Advisory Board, set out in TNEC Hearings, Part 3, 1139, 1140.

researches of opposing counsel upon the state of the prior art. Even where the Patent Office conducts interference proceedings for the purpose of determining priority of invention, a contestant is not permitted to prove that a stranger to the proceedings was the first inventor. He can oppose only his own claim of priority against that of the other party. See *Loftin v. Smith*, 126 F. 2d 514, 515.

Whatever the small weight to be given to the presumption arising from issuance of a patent, it is here overcome by the special circumstance of this case. For the patent in suit, like the prior one on which it is asserted to have made improvements, was issued to the same patentee and assigned to the same owner. In this kind of situation, the burden of establishing the validity of the second patent is increased, this Court having said that in this "class of cases it must distinctly appear that the invention covered by the later patent was a separate invention, distinctly different and independent from that covered by the first patent." *Miller v. Eagle Manufacturing Co.*, 151 U. S. 186, 198. At very best, the presumption of validity arising from the mere issuance of a patent might be permitted to tip the scale when other considerations leave the issue of patentability in equilibrium. In the present case, I believe that the emphasis of the court below on this presumption was entirely misplaced.

As I view this patent its total impact is appalling. Out of its great bulk, the respondent is able to assert only three simple improvements embraced in five claims. And on examination, it appears that these improvements fall far below the established requirements of patentable invention. Yet by its terms the patent as a whole purports to appropriate for exclusive use, not merely these improvements, but a major instrument of production in its entirety. Furthermore, this patent is one of a group which seems to have an interminable capacity for self-perpetua-

tion. If judicial approval is to be given to patents of this kind, the public benefits which might reasonably be hoped for under the constitutional provisions and the federal statutes relating to patents can never be attained.

MAGRUDER, COLLECTOR OF INTERNAL REVENUE, *v.* SUPPLEE ET UX.

CERTIORARI TO THE CIRCUIT COURT OF APPEALS FOR THE FOURTH DISTRICT.

No. 947. Argued April 30, 1942.—Decided May 25, 1942.

Where, in a sale of real estate, current taxes, which are a lien on the property and for which the vendor is personally liable under the state law, are apportioned, so that the vendee pays the part proportional to the fraction of the tax year ensuing after the purchase, the payment is not deductible by the vendee in his income tax return as "taxes paid" within the meaning of § 23 (c) of the Revenue Act of 1936, but is part of the purchase price. P. 397.

123 F. 2d 399, reversed.

CERTIORARI, 315 U. S. 794, to review the affirmance of a judgment for a refund of income taxes, 36 F. Supp. 722.

Mr. Douglas Maggs argued the cause, and *Solicitor General Fahy*, *Assistant Attorney General Clark*, and *Messrs. Sewall Key*, *Arnold Raum*, and *Michael H. Cardozo, IV*, were on the brief, for petitioner.

Mr. Nathan J. Felsenberg, with whom *Mr. James M. Hoffa* was on the brief, for respondents.

MR. JUSTICE MURPHY delivered the opinion of the Court.

During the years 1936 and 1937, respondents purchased various parcels of real estate in Baltimore, Maryland. In each instance, the state and city taxes on the real estate for the current year had not been paid at the time of