

Syllabus.

Upon the whole case we are of opinion that the legal title of the plaintiff must prevail in this action.

The judgment is reversed and the cause remanded with directions to enter judgment for the plaintiff.

YALE LOCK MANUFACTURING COMPANY v. BERKSHIRE NATIONAL BANK.

BERKSHIRE NATIONAL BANK v. YALE LOCK MANUFACTURING COMPANY.

APPEALS FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE DISTRICT OF MASSACHUSETTS.

Nos. 261, 262. Argued April 11, 14, 15, 1890. — Decided May 5, 1890.

Claim 3 of reissued letters patent No. 7947, granted November 13, 1877 to James Sargent, for an "improvement in combined time-lock, combination lock, and bolt-work for safes," the original patent, No. 195,539, having been granted to Sargent, September 25, 1877; namely, "3. The combination, with the bolt-work of a safe or vault-door, of a combination or key lock controllable mechanically from the exterior of said door, with a time-lock having a lock-bolt or obstruction for locking and unlocking controllable from the interior of the door, both of said locks being arranged so as to rest against or connect with the bolt-work, the time-lock being automatically unlocked by the operation of the time-movement, both of said locks being independent of each other, and arranged to control the locking and unlocking of the bolt-work, so that said safe or vault-door cannot be opened when locked until both of said locks have been unlocked or have released their dogging action, to enable the door to be opened, substantially as described," is invalid, because the specification of the original patent was not defective or insufficient, and the patent was not inoperative; and the sole object of the reissue was to obtain claim 3 as an enlarged claim; and the proceedings in the Patent Office prior to the granting of the original patent show that Sargent abandoned that claim; and because, although the reissue was applied for only 13 days after the granting of the original patent, there was not a clear mistake, inadvertently committed, in the wording of a claim.

Claims 1 and 7 of reissued letters patent No. 8550, granted to the Yale Lock Manufacturing Company, January 21st, 1879, for an "improve-

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ment in time-locks," the original patent, No. 146,832, having been granted to Samuel A. Little, as inventor, January 27th, 1874, and having been reissued as No. 7104, to that company, May 9th, 1876, and again reissued to it, as No. 8035, January 8th, 1878; namely, "1. The combination of independent multiple bolt-work with the time mechanism and locking or dogging mechanism of a time-lock, automatically both dogging and releasing the bolt-work at predetermined times, substantially as described." "7. In a time-lock, the combination, substantially as above set forth, of the time movements and two adjustable devices, one for determining the time of locking, and the other of unlocking," are invalid, because the original patent was not inoperative or invalid by reason of a defective or insufficient specification, within the terms of the statute, so as to warrant the reissues; and because the claims are enlarged; and because of the unexcused delay of more than two years in applying for a reissue; and because the claims were formally abandoned during the proceedings in the Patent Office.

IN EQUITY. The case is stated in the opinion.

Mr. George Ticknor Curtis and *Mr. Edmund Wetmore* for the Yale Lock Manufacturing Company, Sargent and Greenleaf.

Mr. William C. Cochran for the Berkshire National Bank and Hall's executors.

MR. JUSTICE BLATCHFORD delivered the opinion of the court.

This is a suit in equity, brought January 29, 1879, in the Circuit Court of the United States for the District of Massachusetts, by the Yale Lock Manufacturing Company, a Connecticut corporation, and James Sargent and Halbert S. Greenleaf, composing the firm of Sargent & Greenleaf, against the Berkshire National Bank, a national banking corporation doing business at North Adams, in Massachusetts.

The suit was brought for the infringement of two reissued letters patent. One of them is reissue No. 7947, granted November 13, 1877, to James Sargent, as inventor, for an "improvement in combined time-lock, combination lock, and bolt-work for safes," on an application filed October 8, 1877, the original patent, No. 195,539, having been granted to Sargent, September 25, 1877. Only claim 3 of reissue No.

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7947 is alleged to have been infringed. The other reissue is No. 8550, granted to the Yale Lock Manufacturing Company, January 21, 1879, on an application filed October 14, 1878, for an "improvement in time-locks," the original patent, No. 146,832, having been granted to Samuel A. Little, as inventor, January 27, 1874, and having been reissued as No. 7104, to the Yale Lock Manufacturing Company, May 9, 1876, and again reissued to that company, as No. 8035, January 8, 1878. Only claims 1 and 7 of reissue No. 8550 are alleged to have been infringed.

After the filing of the bill, and by agreement of the parties, Joseph L. Hall, of Cincinnati, Ohio, was admitted as a defendant. An amended bill was filed, and the bank and Hall answered it. As to both reissues, the answer denied that, before they were granted, the patents were inoperative by reason of a defective or insufficient specification; that any errors arose by inadvertency, accident and mistake; that any reissues were necessary or are valid; and that the reissues were for the same inventions as were shown and described in the original patents. It also set up want of novelty and non-infringement.

After replication, proofs were taken on both sides, and the case was heard in the Circuit Court by Judge Lowell. His opinion is reported in 17 Fed. Rep. 531. He held that claim 3 of the Sargent reissue, No. 7947, was invalid, and ordered a decree for the plaintiffs as to claims 1 and 7 of the Little reissue, No. 8550. On the 14th of August, 1883, an interlocutory decree was entered, adjudging reissue No. 8550 to be valid, as to claims 1 and 7; that the defendants had infringed those claims; and ordering a reference to a master to take an account of profits and to report damages.

In July, 1884, the defendants were allowed to amend their answer by setting up an additional anticipation of the Little patent, proofs were taken thereon, and the case was reheard, before Judge Colt, on the new evidence. He affirmed the former decree, in an opinion reported in 26 Fed. Rep. 104.

The master reported \$60 damages in favor of the plaintiffs, and both parties excepted to the report. A final decree was

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entered on the 12th of February, 1886, confirming the report, overruling the exceptions of both parties and adjudging a recovery in favor of the plaintiffs for \$60 damages and certain costs, dismissing the bill as to the Sargent reissue, No. 7947, and awarding a perpetual injunction as to claims 1 and 7 of the Little reissue, No. 8550. From this decree both parties have appealed. Joseph L. Hall having died, his executors and trustees have been made parties in his place.

The respective specifications and claims of the original Sargent patent, No. 195,539, and of its reissue, No. 7947, are set forth below in parallel columns, the parts in each which are not found in the other being in italic. The drawings are the same in both.

Original patent, No. 195,539.

"Be it known that I, James Sargent, of the city of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful improvement in locks; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, in which figure 1 *is an elevation of my improvement applied to a safe-door*. Fig. 2 *is a section of the bolt of the time-lock*. Fig. 3 *is an inside view of the same*. Fig. 4 represents detached views of the dial, pallet, and escape-wheel. Fig. 5 *is a bolt constructed as integral with the holding-latch*.

Reissue No. 7947.

"Be it known that I, James Sargent, of the city of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful improvement in *combined time-locks, combination-locks, and bolt-work for safe and vault doors*; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, in which figure 1 *illustrates a portion of a safe or vault door having thereon a time-lock and a combination lock, both of said locks being represented in a locked condition, with the bolt-work projected and locked*. Fig. 2 *illustrates one form of lock-bolt or obstruc-*

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tion for use in a time-lock. Fig. 3 illustrates an inside view of said lock-bolt or obstruction. Fig. 4 represents detached views of the pallet and escape-wheel, and a portion of one of the revolving dials. Fig. 5 illustrates another form of lock-bolt or obstruction for use in connection with the time-lock for admitting of locking or unlocking of the bolt-work.

“My invention consists, first, in the combination with the bolt-work of a safe or vault-door, of a time-lock and a combination or key-lock, both constructed to be applied on a safe, vault, or other door, so as to rest against or connect with the bolt-work on said door, and provided with a device whereby the bolt-work may be retained in the unlocked position for shutting the door, and be automatically locked by the lock-bolt or obstruction of the time-lock, and mechanically by the combination or key lock, the whole so arranged that the bolt-work cannot be withdrawn when locked till both locks have been unlocked; second, in the combination of a time-lock and a combination or key-lock, both constructed to be applied on a safe, vault, or other door, so as

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to rest against the bolt-work, each of said locks being provided with a lock-bolt or obstruction, that of the combination-lock or key-lock being of the usual construction, while that of the time-lock has an opening or offset, which is automatically brought into and out of coincidence with the tongue of the bolt-work, whereby the bolt-work may be retained in the unlocked position for shutting the door, and prevented from being retracted when locked, until both locks have been unlocked; third, in the combination, with the bolt-work of a safe or vault-door, of a combination-lock, controllable mechanically from the exterior of said door, with a time-lock, controllable automatically for unlocking by the operation of its time mechanism, both of said locks arranged to control the locking and unlocking of the bolt-work, so that said safe or vault-door cannot be opened when locked until both of said locks have been unlocked or released their dogging action to enable the door to be opened, substantially as herein-after described.

"My improvement relates to that class in which two independent locks are employed

"The construction and arrangement of the time-lock will be more fully hereinafter de-

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upon a safe, vault, or other door for the purpose of preventing the unlocking of the door-bolts until both locks have been unlocked. Combination or key-locks have only heretofore been used for this purpose, so far as I am aware. As such locks are set on combinations, or operated by means of keys, burglars can force the holders of the combination or key to unlock the door, and hence such locks are not a perfect safeguard against robbery. Clock-locks have also been used upon doors for the purpose of opening the door only at a determined hour, thus placing it beyond the power of any person to open the door until that hour arrives; but so far as I am aware, such locks have either been used singly on a door (in which case when the lock releases the bolt or other fastening the door is unlocked and may be opened by any one,) or else a time-movement has been combined directly with a lock in such a manner that the two really constitute but a single lock, in which case if violence is applied to the lock it at once destroys the efficiency of the time movement.

scribed; but it is evident that any form or construction of a time-lock may be used as a part constituting one element of the combination called for in my claims.

“Combination or key-locks have heretofore been used by bankers and others for the purpose of preventing the unlocking of the bolt-work of a safe or vault-door; but as such locks are “set on” combinations, or operated by means of keys, burglars can force the holders of the “combination” or key to unlock the combination-lock or locks, and thus admit of the bolt-work being retracted and the door thrown open. Therefore such locks are not a safeguard against robbery.

“Clock-locks have also been used upon safe or vault-doors for the purpose of opening the door at a pre-determined hour, thus placing it beyond the power of any person, until the arrival of the appointed time, to open the door; but as far as I am aware such clock-locks have either been used singly on a safe-door, so that, when said lock released the bolt-work or other fastening of the said door it was unlocked, and the door could be opened by

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"My invention consists, primarily, in the combination, with the door-bolt, of a clock-lock and a combination or key-lock applied separately upon the door, having each an independent action, whereby the clock-lock will not release its bolt until a certain determined hour, and when it does release its bolt the combination or key-lock still remains locked and secures the door.

"My invention further consists in combining a clock-lock with a combination or key-lock, both constructed to be applied on a safe, vault, or other door, to operate in connection with the bolt-work of such door, said clock-lock being provided with a lock-bolt constructed with an opening or offset, which is automatically brought in and out of coincidence with the tongue of the door-bolt in such a manner that the door-bolt may be retained in an unlocked condition for shutting, and prevented from being withdrawn when locked until both locks have been unlocked, the prime object being that each lock shall have an independent action, so that the clock-lock will not release the bolt until a certain determinate hour, and when it does release its bolt the combination

any one, or, in another instance, when a time-movement had been combined with a combination-lock in such a manner that the two really constituted but a single lock, the time mechanism constructed and provided with a lever to engage with the fence or dog of the combination-lock, so that the entire mechanism of the time-movement and combination-lock really constitute but a single lock, as aforesaid, the result being that, if violence be applied to such a lock through the dial spindle or otherwise, the efficiency of the time-movement will be destroyed.

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or key-lock still remains locked and secures the door.

"A represents the combination or key-lock, and B the clock-lock. These locks are provided with bolts C D, of any desired kind, against which strike the studs a a' of the tie-piece E. When the locks are locked, the bolts hold said studs out and both locks have to be unlocked to allow the door-bolt to retract.

"Referring to the drawings, the letter A designates a combination or key-lock, and B the time-lock. These locks are illustrated as being upon a portion of a safe or vault-door, with the bolt-work projected and locked, the lock-bolts or obstructions being in a locked position. The lock-bolts or obstructions C D are, in the present example, shown as being constructed each with a notch or recess, so that, when said notches or recesses are brought in line with the tongue-pieces or studs a a', arranged upon the carrying-bar E of the bolt-work, they (the said tongue-pieces or studs) can, by a movement of the bolt-work, be made to enter said notches or recesses, and thus the bolt-work can be retracted and the safe or vault-door thrown open. When the bolt-work is projected or cast so as to lock the safe or vault-door, the lock-bolts or obstructions can be brought into a locked position, the lock-bolt or obstruction of the combination-lock being placed in a locked position by mechanically operating the dial-spindle, which controls the movements of the tumblers and

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other portions of the lock, while the lock-bolt or obstruction of the time-lock will automatically bring itself into a locked position after the door is closed, whereby the door of the safe or vault will be locked and guarded by two locks, one of which is operated from the exterior mechanically, while the other operates on the interior automatically, there being no hole through the door whereby it might be operated upon by any mechanical means.

"The locks A B are separate and independent of each other, and complete in themselves, and may be located at any position on the door. The combination or key-lock will naturally be located in line with the spindle that operates it; but the clock-lock may be placed anywhere where space is best found for it on the door, and the stud a' of the door-bolt, which connects with it, may be lengthened, bent, or otherwise arranged to rest against the lock-bolt in whatever position it may be, as shown in Fig. 1.

"The combination-lock and the time-lock are separate from each other in performing their office or function with respect to the bolt-work on the safe or vault-door, and each of said locks should be complete in itself, and so constructed that they may be placed at any position on a safe or vault-door.

"The combination or key-lock should be located in line with the dial-spindle or key which operates it, but the time-lock may be located anywhere on the safe or vault-door where sufficient space is present for it, and the tongue-pieces or studs on the carrying-bar of the bolt-work may be of any required length, bent or otherwise arranged so as to connect with or

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rest against the lock-bolts or obstructions, when the latter is moved to the proper position for obstructing or dogging the bolt-work, and prevent its retraction or unlocking, thus retaining the door in a locked position until both locks have been unlocked.

“ In locking the safe or vault-door some device is necessary to allow the door-bolt to remain back in the unlocked position until the door is closed, without interfering with the clock-lock.

“ When it is desired to lock or fasten the bolt-work of the safe or vault-door by means of a combination-lock and a time-lock, some mechanical arrangement or device should be employed to enable the lock-bolt or obstruction of the time-lock to be set or adjusted while the safe-door is open and the bolt-work in a retracted or unlocked position, so that the door can be closed to admit of the bolt-work being projected or cast. The lock-bolt or obstruction will, as hereinafter set forth, present its lock-bolt or obstruction automatically, thus securing the door in a locked position until the arrival of the time determined by the time mechanism or register, at which time the lock-bolt or obstruction will be automatically moved and brought into a position for admitting of the releasing and unlocking of the bolt-work, so that said door can be opened.

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"To accomplish such mechanical arrangement or device in the time-lock, a lock-bolt or obstruction is employed in the time-lock itself, or by means of an adjustable tongue-piece or stud connected with the carrying-bar of the bolt-work—such, for instance, as those illustrated in Figs. 1, 2, 3, 5 of the accompanying sheets of drawings.

"The lock-bolt or obstruction D, illustrated in Figs. 1, 2, and 3, is one of the devices that should be employed to enable the time-lock to be set while the bolt-work remains in a retracted or unlocked position, so that the bolt-work will remain in such retracted position without interfering with the time-lock, the combination-lock, of course, during such interval, being in an unlocked position, and through such mediums the bolt-work when projected for closing the door will be held in a locked position by the automatic movement of the lock-bolt or obstruction of the time-lock, and by the lock-bolt of the combination-lock, which is brought into a locked position by the mechanical operation of the dial-spindle.

"In Fig. 1 the bolt D of the clock-lock is constructed in two

"The lock-bolt or obstruction of the time-lock is constructed

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parts, $D' D^2$, turning independently on the same bearings c . The inner part, D^2 , has the socket d , into which the stud of the door-bolt enters in drawing back. It is connected to the outer part, D' , by a coiled spring, f , Fig. 3, resting in a cavity in the side of the outer part. The outer part is also connected by a similar coiled spring, g , with the fixed bearing, c . Instead of the spring g it may have a counter-weight, g' , Fig. 5. The spring g causes the outer part, D' , to turn back or fall, so that the socket d of the inner part comes in position to allow the stem a' of the door-bolt to enter therein. When this is done, the outer part is turned up to engage the dog, (presently to be described,) while the inner part remains stationary on the stem of the door-bolt. The door is then shut and the door-bolt thrown out, and the tension of the spring g causes the part D^2 to turn when released, thereby locking the door-bolt. The parts $D^1 D^2$ are provided with suitable stops, by which the motion is gaged to bring the socket of the part D^2 in proper position in its throw.

in two parts, $D^1 D^2$ adapted to turn independently of the other on the same bearing c . The inner part, D^2 , has a notch or recess, d , into which the tongue-piece or stud on the carrying-bar enters when the bolt-work is retracted, so as to open the safe or vault-door if the combination-lock be unlocked. The said inner part D^2 is connected to the outer part D^1 by a spring, f , resting in a cavity or recess in the side of the outer part. The outer part D^1 is also connected by a spring, g , with the bearing c . The spring g being connected with the outer part D^1 , and with its bearing c , causes the outer part D^1 , to be moved or turned on its axis, so that the notch, recess, or offset d of the inner part D^2 is brought into a position to allow the tongue or stud a' of the carrying-bar to enter it, and thus the bolt-work can be retracted, and when so retracted the outer part D^1 is turned or moved, and made to connect and engage with the portion of a yoke, while the inner part D^2 remains stationary, being prevented from moving or turning on its axis by the tongue-piece or stud on the carrying-bar resting in the notch

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"The device above described forms a part of the clock-lock, being the bolt of the same. In Fig. 1 is shown another device for the same purpose, situated outside the lock, which is the subject-matter of a separate application. It consists of a socket or bearing, h, attached to the tie-piece E of the door-bolt and sliding on an independent stud, a', resting against the lock-bolt. A spring locking-pin, i, is used to connect the parts when the door-bolt is thrown forward to connect with the jamb. In this case the lock-bolt D may be made solid, and may be either of the turning or sliding kind. or recess of the part D² of the bolt-lock or obstruction.

"The parts constituting the lock-bolt or obstruction, and forming a part of the time-lock, being thus constructed, arranged, and adjusted, the time mechanism having been previously wound, and the dials set for a certain predetermined time, the bolt-work is projected or cast, when the lock-bolt or obstruction of said time-lock will automatically be brought into a locked position, and the door of the safe or vault securely guarded by a combination-lock, if it be locked, and a time-lock, and the bolt-work be

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prevented from being retracted, or the safe or vault-door opened, until both locks have been unlocked.

“The parts D¹ D² composing the lock-bolt or obstruction are supplied with suitable stops, by which their motion or throw is limited so as to bring the notch recess, or offset of the part D² in proper position in its rotation to coincide with the tongue-piece or stud on the carrying-bar of the bolt-work.

“In lieu of forming the lock-bolt or obstruction in two parts, as above described, it has been found eminently practical and successful to employ a lock-bolt or obstruction made in a single piece, or as an integral. Such a lock-bolt or obstruction is shown in Fig. 5 of the drawing, and, as it will be perceived, it is constructed with a notch, recess, or offset, to admit of a tongue-piece or stud entering it when the bolt-work is retracted for unlocking the safe or vault-door, and said lock-bolt or obstruction is likewise provided with an arm, g', having a pin or stud for connecting or engaging with a yoke in such a manner that when said arm and yoke are in connection the lock-bolt or obstruction will be

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placed so as to prevent the retraction of the bolt-work, and when said arm and yoke are disconnected through the medium of revolving dials, to be hereinafter mentioned, the lock-bolt or obstruction will be automatically brought to a position for allowing the bolt-work to be retracted, and such automatic movement of the lock-bolt or obstruction is due to the action of the arm g' acting as a counterweight.

“ When a lock-bolt or obstruction of the character last described is employed, some provision must be made for adjusting and setting the time-lock or the lock that measures time, prior to closing the safe or vault-door, and this must be accomplished while the bolt-work is in a retracted position; therefore to enable such to be done, there is arranged on the carrying-bar of the bolt-work a socket or bearing, which is provided with a movable tongue-piece and a spring-bolt, constructed and arranged in such a manner that when the spring-bolt is moved out of contact with the socket or bearing of the movable tongue-piece or stud of the carrying-bar, it, together with the bolt-work, can be retracted as the

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socket or bearing on said carrying-bar moves or slides along the tongue-piece or stud in a longitudinal direction, one end of it bearing upon the lock-bolt or obstruction of the time-lock, and in such condition the safe or vault-door can be closed, and when the bolt-work is projected or cast into the jamb of the door, the socket or bearing moves along the tongue-piece until the spring-bolt engages with it, when it — the socket or bearing — will be automatically locked in place, and the bolt-work, performing its office, will securely fasten the safe or vault-door, upon which the combination-lock is placed, together with the time-lock.

“From the foregoing it will be seen that the lock-bolt or obstruction shown in several figures are each stationary except during the brief interval of time when locking or unlocking is being effected, and that each is adapted to be turned on its pivot or bearing for obstructing or dogging the bolt-work for preventing its retraction or for releasing the bolt-work at the time appointed, so that it can be retracted; and it should be noticed that the lock-bolt or obstruction of the time-lock is so

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located in the time-lock that if pressure be exerted upon the lock-bolt or obstruction by force applied to the bolt-work, such pressure will not be transmitted to the delicate workmanship forming part of the time-lock, for the lock-bolt or obstruction, so to speak, is isolated from the time mechanism, in order to bring and retain the lock-bolt or obstruction in a position to have the same obstruct and prevent the retraction of the bolt-work, or to move it to release the bolt-work, whereby the same may be retracted.

"G is a dog for holding the lock-bolt D up in the locked position. It turns on an axis, k, and its point engages under a stop, l, preferably a roller, of the bolt when the latter is raised. It is held in engagement by a light spring, j. The dog has two branching arms, m, m, projecting inward over the faces of the dial-wheels H H. The dial-wheels have pins n n projecting out from their faces, and when they or either of them strike the levers m m they release the dog from its engagement with the bolt and the latter turns back or falls, thereby unlocking the lock, as before described.

"There is arranged within the time-lock a yoke, G, which is capable of being oscillated or turned on its axis or pivot, said yoke being acted on by two rotating dials, H H, in such a manner that said yoke will be operated by either or both of said dials at the predetermined time for which said revolving dials have been set.

"In the example shown in the time-lock in Fig. 1, the yoke engages under a stop, l, preferably a roller, arranged on the lock-bolt or obstruction, and when the latter is brought into a position for obstructing the bolt-work, to prevent its retraction until the arrival of the

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predetermined time, while in the example shown in Fig. 5 said yoke connects or engages with the bolt-lock or obstruction.

"In both examples the yoke retains the lock-bolt or obstruction in a position for obstructing and preventing the retraction of the bolt-work until the arrival of the predetermined time for which the revolving dials carrying pins have been set.

"The arms or members m m of the aforesaid yoke extend over a portion of the revolving dials, from which project pins, and when either of said pins comes in contact with the arms or members of said yoke, which will occur at the arrival of the time previously determined upon when setting the revolving dials, it (the said yoke) will be operated or turned on its axis or pivot, and release the lock-bolt or obstruction, and leave the same to be brought into a position to permit the bolt-work to be retracted, which is accomplished by turning the knob or handle connected with the carrying-bar, said knob or handle being on the outside of the safe or vault-door.

"I prefer to use two independent time-movements or

"It is preferred to use two independent time mechanisms,

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clocks, each connected with and operating one of the *dial-wheels H*, so that if one *movement* should accidentally stop the other would be sure to *unlock the lock*.

each connected with and operating one of the *revolving dials*, so that if one of the *time mechanisms* should accidentally stop the other would be sure to *operate the yoke*, and by its *movement release the lock-bolt or obstruction*, which would *automatically assume such a position as to present an unobstructed pathway for the tongue-piece or stud to move in and thus the bolt-work could be released and be left free to be withdrawn or retracted*.

“The revolving dials are cogged — that is, provided with teeth, which engage with the arbor O of the mainspring-barrel, either directly or by means of the pinion p attached to said arbor, or through intermediate gearing — so that the setting of the time mechanism for operating the yoke at any given time will necessarily wind up the time mechanism, to the extent, at least, that it will unwind by the arrival of the predetermined time at which the lock-bolt or obstruction is to be released for enabling the bolt-work to be retracted.

“The dial-wheels are indexed or marked with a scale of hours from 0 to 48, or any other number corresponding with

“The revolving dials are indexed or marked with a scale from zero (0) upward to 48, or any other number correspond-

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the longest interval the lock is to *remain locked* at one time — say from Saturday night to Monday morning. This scale is used in conjunction with a pointer, *e*, at the top of the wheel. In setting the lock the dial-wheels are moved backward from 0 to any number in the scale that will indicate the number of hours the safe or vault is to remain closed; and the pins *n n* must be so located with reference to the scale as to *strike the levers m m* and release the bolt when the 0 mark comes forward to the pointer. The time-movements or mechanism may be of any ordinary construction to measure time.

“Each of the dial-wheels *H* is clogged, and engages with the arbor *o* of the mainspring-barrel either directly by means of the pinion *p* attached to said arbor or through intermediate gearing. The arbor *o* is the stem by which the clock is wound.

“When the clock is finished, it is fully wound up before the dial-wheel is adjusted in place. The motion is then imparted to the dial-wheel, which runs forward to unlock the lock, and in moving the dial-wheel back to

ing with the longest interval the time-lock is to *present its lock-bolt or obstruction to obstruct the bolt-work* at one time — say, from Saturday night to Monday morning. This scale is used in conjunction with a pointer or index, *e*, arranged in the time-lock above the revolving dials.

“In setting the time-lock the revolving dials are turned or moved backward from zero (0) to any number in the scale that will indicate the number of hours the safe or vault-door is to remain closed or locked, and the pins *n* of the revolving dials must be so adjusted with reference to the yoke as to come in contact with the arms or members *m m* of the yoke, so that either or both of the said arms or members will act upon the yoke, causing it to move so as to release the lock-bolt or obstruction of the time-lock when the zero (0) mark arrives at the index or pointer.

“The winding up of the time mechanism and the setting of the revolving dials is performed simultaneously by imparting proper motion to the arbor *o* of the mainspring-barrel.

“The revolving dials are provided with a pin, *r*, as shown

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reset the lock the clock is re-wound.

“The dial-wheel is turned back to *reset* the lock by a key applied at the winding-arbor *o*.

“By the means above described I obviate a great objection to common clock-locks, which run on until they run down, thus subjecting the lock to the danger of *being locked in* by neglect of winding. By this means the lock cannot be *reset* without winding, for the pins *n n*, resting in contact

in Fig. 4, *the same serving as a stop.*

“On the pallet *s*, which engages with the *escape-wheel t*, is a pin, *u*, which projects out through a slot, *v*, of the stationary *time-mechanism frame*, *the whole arranged in such a manner that* as soon as the revolving dial has acted upon the yoke for causing it to *release the lock-bolt or obstruction*, the pin *r*, of the said revolving dial *will strike the pin u of the pallet*, and *lock the latter in the escape-wheel*, thereby stopping the *time mechanism*, so that there will be no loss of power, as it is intended that the *time-lock should be wound up when first finished, prior to adjusting in place the revolving dials*; and, further by stopping the *time mechanism*, as above described, the revolving dials cannot get out of position with respect to the *index or pointer*.

“*By my invention the time-lock cannot be reset without winding, for the pins of the revolving dials, resting in contact with the arms or members of the yoke, prevent it from being brought into action with the lock-bolt or obstruction until the revolving dials have been moved back the number of hours*

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with the levers *m m*, prevent the dog *G* from being engaged with the bolt until the dial-wheels have been moved back, as described. The *relocking* of the lock therefore requires rewinding of the clock as a necessity.

"On the back of the dial-wheel *H* is a pin, *r*, Fig. 4, forming a stop. On the pallet *s*, which engages with the scape-wheel *t*, is a pin, *u*, which projects out through a slot, *v*, of the stationary clock-frame. As soon as the dial-wheel has acted upon the lever *m* to *unlock* the lock the pin *r* of the dial-wheel strikes the pin *u* of the pallet and locks the latter in the scape-wheel, thereby stopping the clock. There is, therefore, no loss of motion, nor can the dial-wheel get out of position with respect to the pointer.

"By combining an independent clock-lock and combination or key-lock with the door-bolt, as described, I produce an effect which cannot be produced by a clock-lock alone or by two or more combination-locks together. The

for which it is designed to obstruct the bolt-work. Thus the resetting of the time-lock requires rewinding of the time mechanism as a necessity, and hence no danger of its being unlocked accidentally during the period of hours for which it is set.

"The dial-wheel is turned back to set the time-lock by a key applied at the winding-arbor *o*.

"By the means above described I obviate a great objection to common clock-locks, which run on until they run down, thus subjecting the lock to the danger of a 'lock-out,' caused by neglect of winding.

"By this means the time-lock cannot be set without winding, for the pins *n n*, resting in contact with the arms of the yoke, it (the yoke) cannot be engaged with the lock-bolt or obstruction until the dial-wheels have been moved back to set the lock, as before described.

"By combining an independent time-lock of the character described and a combination or key-lock, I produce an effect or result which cannot be produced by a time-lock alone, or by two or more combination-locks together.

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clock-lock serves as a safeguard by night and the combination-lock by day. If the holder of the combination is forced to open the combination-lock at night, the *clock-lock* remains intact, and cannot be opened by the burglars or the holder of the combination. On the other hand, when the *clock-lock* releases its bolt in the morning, the combination-lock still remains locked, and burglars cannot make an entrance to the safe. Such results cannot be accomplished by a *clock-lock* alone, because when it releases its bolt the safe is absolutely unlocked; nor by two or more combination-locks together, because the holders of the combination may be taken to the bank and forced to open the lock. Neither can tampering with the combination-lock affect the *clock-lock*.

“The *time-lock* serves as a safeguard by night, in connection with the combination-lock, for holding the bolt-work in a locked condition; but when the *time-lock* releases the bolt-work at the appointed hour, the bolt-work will remain locked, and the safe or vault-door closed, until the combination-lock is unlocked by the holder of the combination on which said lock is set, when the bolt-work can be retracted and the door opened, thus leaving the *time-lock* free from performing any locking action, which leaves the combination-lock free for use during the day for locking or unlocking the safe or vault-door — an important desideratum present in my invention.

“If the *time-lock* present on the safe or vault-door is set for holding the bolt-work from the time the bank closes in the afternoon to release the bolt-work at a certain hour the next morning, it will admirably and with certainty perform its office, leaving the combination-lock to be opened before the bolt-work can be retracted; and should the officer of the bank holding the combination be seized during the night, carried to the bank, and forced to open the combi-

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nation-lock, the *time-lock* will remain intact, and cannot be opened by the burglars or the *officer in charge* of the combination. Such results cannot be accomplished by a *time-lock* alone, because when it releases its bolt-work the safe or vault-door is absolutely unlocked, and no lock present for use during the day; nor by two or more combination-locks together, because the holders of the combinations may be taken to the bank and forced to open the locks. Neither can tampering with the combination-lock affect the *time-lock*.

“The combination-lock may be punched from *place*, but the *clock-lock*, being separate and independent from it, and having no opening through the door, cannot be affected. It is therefore superior to a lock which has the time-movement combined directly with the combination-lock, both forming one lock, in which case any violence to the lock-work disarranges the *clock*. Another advantage of *this* invention is the capability of the separate locks of being applied on different parts of the door indifferently. The bolt-work on different doors is frequently

“The combination-lock may be punched from *its position* by burglars; but then the *time-lock*, being separate and independent from it, cannot be affected or disturbed, because there is no opening through the door by which it can be reached. It is therefore superior to a lock which has the time-movement combined directly with the combination-lock, both forming one lock, in which case any violence to the lock-work disarranges the *time-movement*.

“Another advantage of *my* invention is the capability of the separate locks being ap-

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such that the *two locks* cannot be applied together. The *clock-lock* in such case may be attached at the most convenient location, as before described. It can also be applied with facility on old safes having the combination or key-lock already on, thus securing the advantage of a *clock-lock* and combination-lock without the necessity of removing the old lock and substituting a new one having a time-movement combined directly with the lock.

"I do not claim, broadly, a *clock-lock*; nor do I claim two or more combination-locks combined with the *door-bolt*; but

"I claim —

"1. The combination with a *door-bolt*, *E*, of a *clock-lock*, *B*, and a combination or key-lock, *A*, applied independently on a safe, vault, or other door, so as to rest against or connect with *said door-bolt*, and

plied on different parts of the *safe* or *vault-door*, with respect to the *bolt-work*, indifferently.

"The bolt-work on different *safe* or *vault-doors* is frequently such that the *time-lock* and the *combination* or *key-lock* cannot be applied together; but in such case the *time-lock* may be attached at the most convenient location, as no opening through the door is requisite.

"The *time-lock* can be applied with ease and facility to the doors of old safes or vaults having the combination or key-lock already thereon, thus securing the advantage of a *time-lock* and a combination or key-lock without the necessity of removing the old lock.

"I do not claim, broadly, a *time-lock* of any peculiar construction; nor do I claim two or more combination-locks combined with the *bolt-work* of a *safe* or *vault-door*, as such are old and well known.

"What I claim, and desire to secure by letters-patent, is—

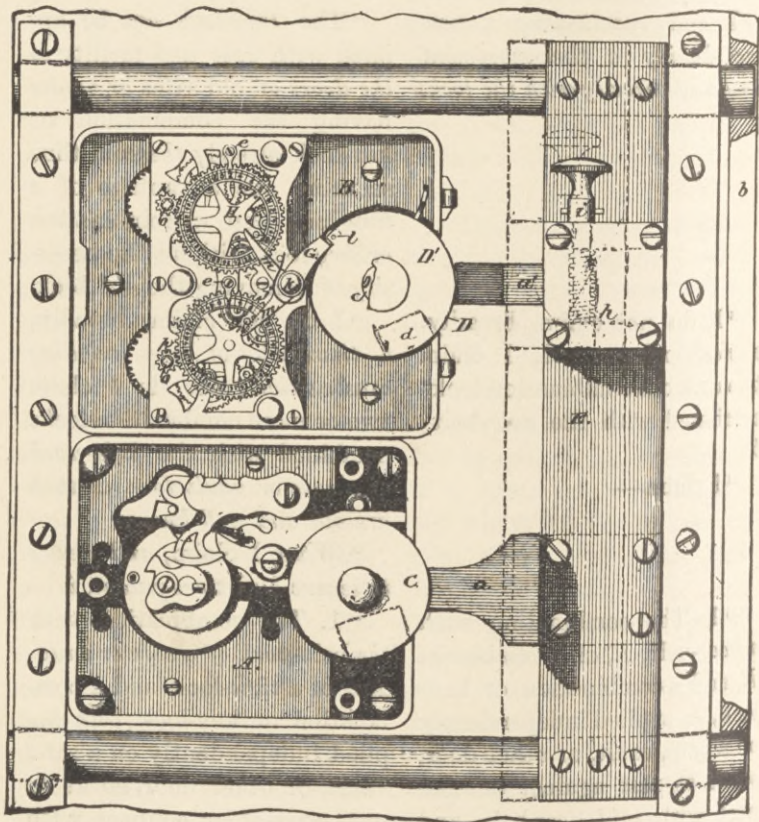
"1. The combination, with the *bolt-work* of a *safe* or *vault-door* of a *time-lock* and a combination or key-lock, both applied independently on a safe, vault, or other door, so as to rest against or connect with

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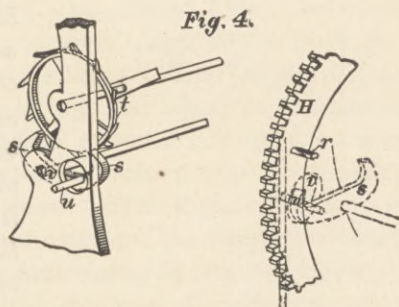
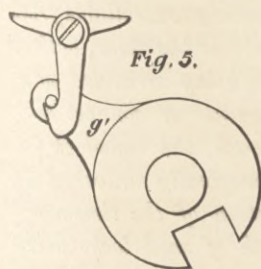
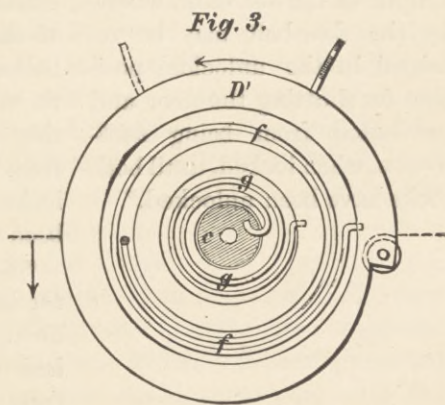
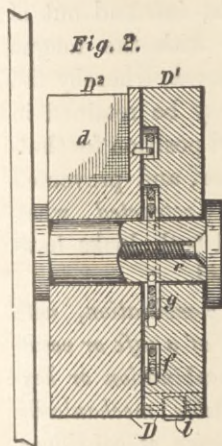
provided with a device whereby the *door-bolt* may be retained in the unlocked position for shutting the door, the whole arranged so that the *door-bolt* cannot be withdrawn, when locked, until both locks have been unlocked.

the bolt-work on said door, and provided with a device whereby the bolt-work may be retained in the unlocked position for shutting the door, and be automatically locked by the time-lock and mechanically by the combination or key-lock when the bolt-work is cast, the whole so arranged that the

Fig 1.



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"2. The combination of a *clock-lock* and a combination or *key-lock*, both constructed to be applied on a safe, vault, or other door, so as to rest against the *door-bolt*, and provided with a lock-bolt having an opening or an offset, which is automatically brought in and

bolt-work cannot be withdrawn when locked till both locks have been unlocked.

"2. The combination of a *time-lock* and a combination or *key-lock*, both constructed to be applied on a safe, vault, or other door, so as to rest against the *bolt-work* and provided with a lock-bolt or *obstruction* having an opening or offset, which is automati-

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out of coincidence with the tongue of the *door-bolt*, whereby the *door-bolt* may be retained in the unlocked position for shutting the door and prevented from being *with-drawn*, when locked, until both locks have been unlocked."

cally brought *into* and out of coincidence with the tongue of the *bolt-work*, whereby the *bolt-work* may be retained in the unlocked position for shutting the door, and prevented from being *retracted* when locked, until both locks have been unlocked.

"3. *The combination, with the bolt-work of a safe or vault-door, of a combination or key-lock controllable mechanically from the exterior of said door, with a time-lock having a lock-bolt or obstruction for locking and unlocking controllable from the interior of the door, both of said locks being arranged so as to rest against or connect with the bolt-work, the time-lock being automatically unlocked by the operation of the time-movement, both of said locks being independent of each other, and arranged to control the locking and unlocking of the bolt-work, so that said safe or vault-door cannot be opened when locked until both of said locks have been unlocked or have released their dogging action, to enable the door to be opened, substantially as described.*"

Claim 3 of reissue No. 7947 was passed upon by Judge Shipman in the Circuit Court for the District of Connecticut, in March, 1881, in the suits of *Yale Lock Manufacturing Com-*

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pany v. Norwich National Bank, and the *Same Company v. New Haven Savings Bank*, reported in 19 Blatchford, 123, and 6 Fed. Rep. 377. He held that claim 3 covered a new and patentable invention and was valid. On the question of the validity of the reissue as to claim 3, he said: "It is next urged that the third claim of the reissue is void, because it was abandoned by the patentee upon the objection of the Patent Office, when the original application was pending. In Sargent's original application he made one broad claim. The application was rejected by the examiner, whose decision was reversed by the board of examiners. The examiner then requested that a new application be made, upon the ground that the case presented to the board was not the same case which had been presented to him. A new application was made, containing only the first two claims of the reissue. Then followed a long and earnestly contested litigation in the Patent Office between various interfering applicants, in which, apparently, both patentability and priority were discussed. The Little application contained the broad claim, and the board of examiners said, at one stage of the litigation, whether this question was properly before them or not, that this claim was patentable; so that, when the question came before them upon appeal from the decision of the examiner against the Sargent reissue, the board say: 'The claim in controversy is the same, in substance, as the first claim of Little, whose application was once in interference with Sargent, and which was admitted to be patentable by the Office at the time of the declaration of the interference. The patentability of Little's claim has once been before us in the aforesaid interference, and, after full argument, we concluded that his claim was tenable, and held that some one who was first to combine with the bolt-work on a vault or safe-door, a key-lock and time-lock acting independently of each other, but jointly upon the bolt-work, might have a valid patent therefor.' These facts exclude the third claim from the decision, or the *dicta*, in the case of *Leggett v. Avery*, 101 U. S. 256. I do not understand that the objection that the reissue is for a different invention from the original was pressed by either of the counsel for the defendant. It is sufficient to say,

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that the claims of the original were for the combination of the third claim, provided with a device whereby the bolt-work may be retained in the unlocked position, for shutting the door, and be automatically locked by the time-lock and mechanically by the key-lock when the bolt-work is cast. The patentee had shown 'means whereby' but, if I have been correct thus far, the gist of his invention consisted, not in that device, but in the triple combination. Other different 'devices whereby,' could be introduced by other inventors, which would destroy the value of his patent, if it was unduly limited. As said by the board of examiners, 'means whereby,' while being essential to the convenient use of this combination, is merely incidental to the main idea, and may be varied indefinitely without departing from the spirit and scope of the applicant's invention."

The only remark made by Judge Lowell, in his opinion in the present case, as to the validity of reissue No. 7947, as respects claim 3, is, that the patent "was reissued so soon after its granting that it is not obnoxious to the objection of undue delay." The application for the reissue was filed 13 days after the original patent was issued, and the reissue was granted 36 days after the application for it was filed. Judge Lowell held claim 3 to be invalid on the ground that, if it was a claim irrespective of any particular means for carrying it out it was void as a patent for a principle, independently of the state of the art; and that, in view of the state of the art, it was void. He was of opinion, that there was no patentable novelty in putting a time-lock, which was old, in place of one of two combination locks, where two combination locks had been before used to dog one combined bolt-work; that it was not patentable to substitute a well-known multiple bolt-work for two such bolt-works, where a time-lock and a combination lock had been before combined in the use of two multiple bolt-works; and that there was no patentable novelty in combining two locks with a single door.

A history of the proceedings in the Patent Office in regard to patent No. 195,539 and reissue No. 7947, shows that claim 3 of that reissue must be held to be invalid.

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On the 9th of May, 1874, Sargent filed an application for a patent which claimed broadly the combination of a time-lock, an ordinary lock and a safe-bolt connected with both of them. The claim he made was as follows: "What I claim is the combination, with a clock or time-movement lock and an ordinary lock, attached independently to a safe or vault-door, of a safe-bolt constructed so as to rest against or connect with both of said locks, substantially as described, whereby the safe-bolt cannot be withdrawn till both locks have been unlocked."

In the specification he then filed he said: "This improvement belongs to that class in which two locks are applied upon a safe or vault-door for the purpose of preventing the withdrawal of the safe-bolt till both locks have been unlocked.

. . . I employ one ordinary combination or key-lock and one time-movement or clock-lock, attached independently to the door, and employ in combination therewith a safe-bolt that bears against or connects with both of said locks in such a manner that though the ordinary lock may be picked or opened, yet the clock-lock cannot be reached, and the safe-bolt therefore cannot be released till the clock has performed its office and unlocked its lock at the predetermined hour. . . .

But it is by no means essential to this invention that the circular form of lock-bolt should be used, as the ordinary style of sliding-bolt, or other forms of shifting bearings, could be employed, if desired. . . . Clock-locks have before been used both separately and in connection with combination locks.

Where used alone they are insecure, for the reason that burglars, ascertaining the hour upon which the lock is set, may, by confining or disabling the officers of the bank having control of the same, open the safe when the hour arrives. In my improvement such result cannot occur, because the combination lock still locks the safe. Where clock-locks have been combined with ordinary locks heretofore, so far as I am aware, the said locks have been connected by a lever or other connection, so that their actions are dependent on each other. In such case, if the combination or key-lock is injured by a lock-pick, by violence or otherwise, the clock-lock is liable to

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injury also. By making these independent, as described, I avoid these difficulties."

This application was rejected by the examiner, but, on appeal, his decision was overruled by the examiners-in-chief, February 17, 1875. The examiner then ascertained that the case had been argued before the examiners-in-chief on an invention which had not been before the examiner, and that another model was used before the examiners-in-chief in place of the one properly in the case. The new feature of invention was a device by which the time-lock could be properly set and the door then be closed; but that device, which made the invention an operative one, was not shown in the drawing, the specification or the model, which had been before the examiner. In a communication made to Sargent by the examiner at the time, February 20, 1875, he said: "As far as the Office knows by the record of the case, this new invention may not have been contemporaneous with the first one. The examiner would suggest that a new case be at once filed embodying this invention, which makes the devices operative, and against the patentability of which no question will be raised. The claim, however, must be not broadly for A combined with C, which is not conceded to be entirely inoperative, but A and B combined either with C or some mechanical equivalent thereof, which alone makes A and B operative." He also said: "It is suggested to applicant that he file a new case introducing the new combining device which allows the door to be shut after the time-lock is set, and thus takes it out from the new reference cited, and the examiner will, in all proper ways, hasten the case forward upon a legitimate claim for A and B with suitable combining device to allow the door to be closed after the time-lock is set, inasmuch as no obstacle exists, as the examiner is at present advised."

In accordance with this suggestion, Sargent, on the 10th of March, 1875, filed a new application, which resulted in the granting of patent No. 195,539. The specification of this application said: "In locking the safe or vault-door, some device is necessary to allow the door-bolt to remain back in the unlocked position until the door is closed, without interfering

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with the clock-lock. [A variety of devices may be employed for this purpose.]” This clause in brackets was afterwards erased.

The specification of this application also said: “In Fig. 1 is shown another device for the same purpose, situated outside the lock, which is the subject matter of another application. It consists of a socket or bearing, *h*, attached to the tie-piece, *E*, of the door-bolt, and sliding on an independent stud, *a'*, resting against the lock-bolt. A spring locking-pin, *i*, is used to connect the parts, when the door-bolt is thrown forward to connect with the jamb. In this case, the lock-bolt, *D*, may be made solid, and may be either of the turning or sliding kind. [Other devices might be used to allow the door to shut. I do not wish to confine myself to any particular form of the device.]” The sentences in brackets were afterwards erased.

Sargent thus limited himself to combinations wherein one or the other of the peculiar devices invented by him should be an essential element, which is further evidenced by the fact that, in claim 1, as accepted by him, the combination of the clock-lock and combination lock, as applied to the door-bolt, was to be provided with a device whereby the door-bolt might be retained in the unlocked position for shutting the door; and in claim 2, the same combination was to be provided with a lock-bolt having an opening or an offset which was automatically brought in and out of coincidence with the tongue of the door-bolt, whereby the latter might be retained in the unlocked position for shutting the door.

On the 16th of March, 1875, the examiner rejected claim 1, saying that it was to be found substantially in the patent granted to Cornell, August 10, 1858, for “safe bolt-work,” and referring also to three prior patents for time-locks, and adding, that “merely to substitute either one of the above time-locks for one of the locks shown in Cornell’s patent, is not regarded as a patentable difference.” To this Sargent’s attorney replied, on the 17th of March, 1875: “The combination is such as to require something else to be done other than to simply substitute for one of the key-locks shown in Cornell’s patent one of the time-locks cited by the examiner.”

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This referred to the devices invented by Sargent, by which his combination was made operative.

On the 19th of March, 1875, Sargent's attorney struck out the parts in brackets, before quoted, and also struck out claim 1 and substituted as claim 1 what is claim 2 in the original patent as granted. On March 20, 1875, the attorney reinstated claim 1, and added as claim 2 what is claim 2 in the original patent.

On the 22d of March, 1875, the examiner rejected both of the claims, on the references before made, and referred also to the English patent to W. Rutherford, of April 14, 1831. He added, that "a rotating lock-bolt having an opening or an offset is not new," and referred especially to two prior patents, and said: "The second claim may possibly be allowed if amended by inserting the words 'constructed in two parts and' after 'lock-bolt.'"

An appeal was taken from this decision, and on the 27th of March, 1875, the board of examiners-in-chief reversed the decision of the examiner, doing so on the ground that the combination embracing Sargent's peculiar devices for retaining the door-bolt in an unlocked position, for shutting the door, were new and patentable. Before Sargent's patent could issue, he was put into interference with Stockwell, Burge and Little, and also with Pillard and Lillie. It is evident, from decisions made by the examiner of interferences, and by the Commissioner of Patents, in questions arising in some of these interferences, that Sargent was regarded as making no claim to a broad combination between the bolt-work of a door, and a time-lock, and an independent non-time-lock, which is the subject matter of claim 3 of reissue No. 7947.

The examiner, the examiners-in-chief and the Commissioner of Patents decided priority of invention in favor of Sargent, as to the combination, by Sargent, of the bolt-work, with a time-lock, and a non-time-lock, and his device for retaining the door-bolt in its retracted position, for shutting the door without interfering with the lock mechanism. The patent No. 195,539 was then issued, on September 25, 1877, with the

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two claims before set forth, limited by the proceedings which so took place in the Patent Office.

The lock of the defendants did not infringe either of the two claims of the original patent, for it did not contain what is called in claim 1 "a device whereby the door-bolt may be retained in the unlocked position for shutting the door," after the time-lock is set ; nor did it contain what is called in claim 2 "a lock-bolt having an opening or an offset which is automatically brought in and out of coincidence with the tongue of the door-bolt." This is apparent from the fact that it is not contended that the defendants' lock infringes either claim 1 or claim 2 of reissue No. 7947, which two claims are substantially identical with claims 1 and 2 of the original patent.

On the 8th of October, 1877, Sargent filed an application for a reissue of patent No. 195,539. He inserted in his specification what is claim 3 of the reissue as granted. That claim is as broad as the claim made in his application of May 9, 1874, which, as before shown, he abandoned. The examiner rejected this claim twice, and after the second rejection, and on the 26th of October, 1877, Sargent appealed to the examiners-in-chief. In the statement of appeal his attorney said: "All time-locks used with bolt-work must have some mechanical arrangement to enable the bolt-work to be retracted for closing the door. Such is present in many old patents, and has never been claimed by my client ; but what is claimed by him is for the union of such an old, well-known time-lock with a combination lock and bolt-work all arranged on the same door." This shows the breadth of the claim, as compared with claims 1 and 2 of the original patent.

The examiner, in his answer to the reasons of appeal, said: "Leaving out the descriptive and recitative parts of the claim as well as all superfluous and misleading matter, we have as the claim, the following elements and arrangements, viz.: A combination or key-lock, and a time-lock, combined with the bolt-work of a safe-door, both used independently and resting against or connecting with the bolt-work. The only elements are the two locks and the bolt-work, no other element being hinted at even, and the arrangement of

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said elements is, that the locks rest against or connect with bolt-work and are used independently of each other. To recite, in the claim, that the 'key-lock is controllable from the outside' and the 'time-lock upon the inside only' is entirely unnecessary, for all key or combination locks of safes are controlled only from the outside, and all time-locks, as a matter of course, upon the inside, are automatically unlocked. It is a well-settled principle that a mere explanation of parts or recital of functions neither adds to nor takes away from a claim. All the matter which recites that the door cannot be opened until the lock allows it is a mere superfluity. If, in an ordinary lock patent, we were to add to the claim 'the arrangement being such that the door cannot be opened until it is unlocked,' it would be simply laughable, as all locks of all sorts serve just this purpose. This vast mass of words in the claim, while at first glance seeming to restrict the claim, will be found to be entirely misleading, the indisputable scope of the claim being 'the simple independently-acting time and combination or key-lock resting against bolt-work of a safe.' That is all—no more, no less. It is to be carefully noted, that the claim does not restrict to using the locks upon the door, but only 'in combination with the bolt-work of the door,' and that the claim covers putting on Little or Derby, in the usual way, a Sargent or other combination-lock." After reviewing the various decisions which took place during the pendency of the application of Sargent for his original patent, and showing that the limitation of claims 1 and 2 thereof so as to embrace the peculiar devices of Sargent was what saved them on the question of patentability, the examiner said: "It very clearly follows, that the claim, expanded so as to omit those restrictions, is entirely untenable, in accordance with the very terms of the commissioner and board decisions." The examiners-in-chief, however, on appeal, reversed the examiner's decision, and the reissue was granted.

It is very clear, from a comparison of the specification of the original patent No. 195,539 with that of reissue No. 7947, that the specification of the original was not defective or insufficient, and that the patent was not inoperative. Not only is there no

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evidence in this suit to that effect, but the evidence is to the contrary. The sole object of the reissue was manifestly to obtain claim 3 as an enlarged claim. Not only is claim 3 an enlarged claim, but, assuming that it was new and for a patentable combination, and that Sargent would have been entitled to make it in his application for his original patent, he was debarred from making it in his reissue. As has been shown, he made such a claim in May, 1874, and abandoned it. The application on which his patent, No. 195,539, was granted, was pending in the Patent Office from March 12, 1875, to September 25, 1877, and no such claim was made. On the contrary, he struck out from his specification matters evincing an intention to claim something more than the specific devices he had invented; and it is quite evident that the consideration by the Patent Office of those specific devices, and the evidence of invention afforded by them, enabled him to procure his original patent with its limited claims 1 and 2.

The effect of such an abandonment of a claim upon the validity of a reissue has been often adjudged by this court. *Leggett v. Avery*, 101 U. S. 256, 259; *Mahn v. Harwood*, 112 U. S. 354, 359; *Cartridge Co. v. Cartridge Co.*, 112 U. S. 624, 644; *Shepard v. Carrigan*, 116 U. S. 593, 597, 598; *Roemer v. Peddie*, 132 U. S. 313, 317.

Nor does the fact that reissue No. 7947 was applied for only thirteen days after the grant of the original patent establish its validity. In *Coon v. Wilson*, 113 U. S. 268, 277, enlarged claims in a reissued patent were declared invalid, although the reissue was applied for a little over three months after the original was granted, on the ground that a clear mistake, inadvertently committed, in the wording of a claim, was necessary, without reference to the length of time. See also *Ives v. Sargent*, 119 U. S. 652, 663; *Parker & Whipple Co. v. Yale Clock Co.*, 123 U. S. 87, 103.

These views dispose of claim 3 of reissue No. 7947, independently of the ground on which the Circuit Court held it to be invalid and all other considerations urged by the defendants.

We come now to consider claims 1 and 7 of reissue No. 8550

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of the Little patent, granted January 21, 1879, on an application filed October 14, 1878.

The specification, drawings and claims of Little's original patent, No. 146,832, were as follows:

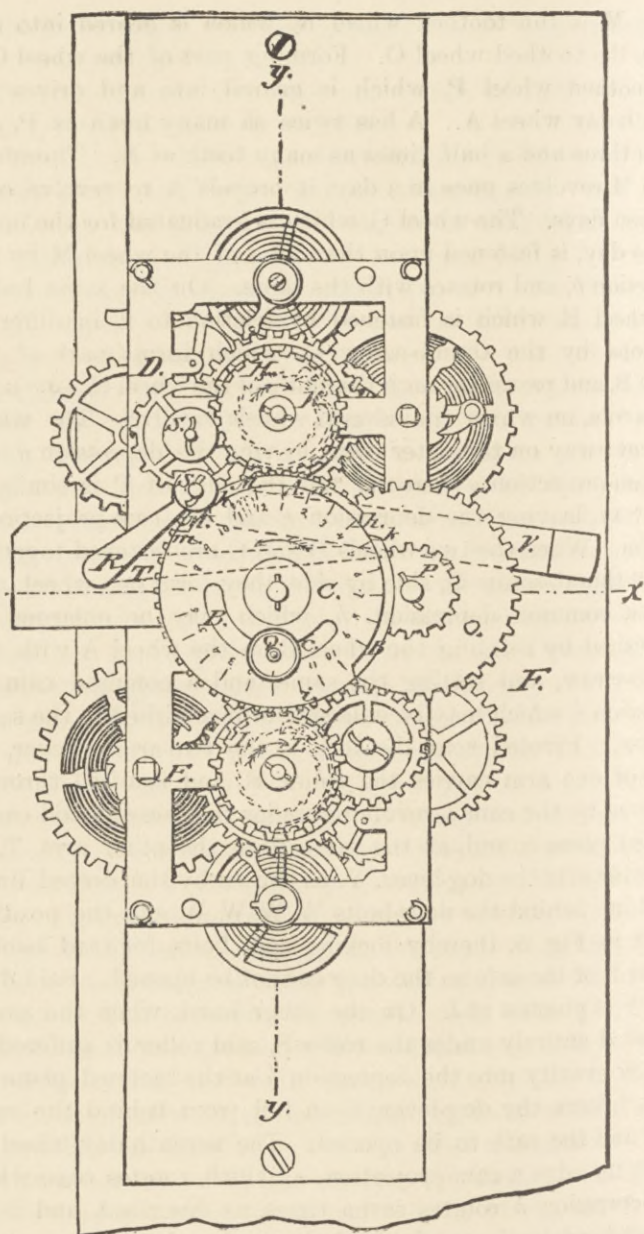
"Be it known that I, Samuel A. Little, of Buckland, in the county of Franklin and State of Massachusetts, have made certain new and useful improvements in clock-locks, whereof the following is a specification, reference being had to the accompanying drawings, in which Figure 1 is a front view of my improved clock-lock attached to the inside of a safe, adjacent to the hinged part of the safe-door. Fig. 2 shows a seventh-day wheel, marked A in Fig. 1. Fig. 3 shows a cam-wheel, marked B in Fig. 1. Fig. 4 shows a graduated cam-wheel, marked C in Fig. 1. Fig. 5 represents the inside of a safe with the door-bolts locked forward by the lever-dog, which is elevated by the clock-lock. Fig. 6 represents a horizontal section of my clock-lock detached from the clocks, the dog-lever excepted, taken through the line *xx* of Fig. 1. Fig. 7 represents a vertical section of the same, (similarly detached, except that the clock-wheels to which the same is immediately attached are shown,) taken through the line *yy* of Fig. 1. In the various figures, similar letters indicate similar parts.

"D and E are two clock-movements fastened to the inside, F, of a safe, adjacent to the hinged part of a safe-door, G. Said clock-movements, through the wheels and ratchets K and L, (shown by the dotted lines, Fig. 1,) which are rotated once in twelve hours by the clock, propel the wheels H and I in the same time in the direction of the arrows thereon. The wheels H and I are both geared to the common wheel M, having twice as many teeth as either H or I, and propel the same in the direction of the arrow thereon, so that, while H and I are rotated once in twelve hours, M is rotated once a day. It will therefore be seen that both clocks work together in turning the wheel M, and thereby operating the lock, while, if either clock stops, the wheel H or I of the other will alone continue to rotate the wheel M and operate the lock, as the ratchet allows free motion to the wheel I or H of the other clock, although said clock may be stopped. Forming part of the

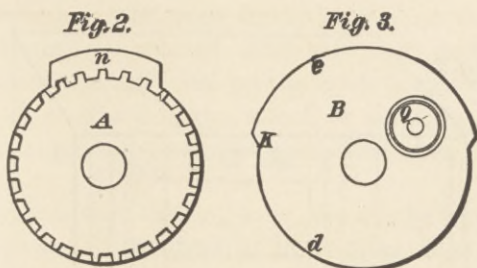
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wheel M is the toothed wheel N, which is geared into and drives the toothed wheel O. Forming part of the wheel O is the toothed wheel P, which is geared into and drives the seventh-day wheel A. A has twice as many teeth as P, and O has three and a half times as many teeth as N. Therefore, while M revolves once in a day, it propels A to revolve once in seven days. The wheel C, which is graduated for the hours of the day, is fastened upon the hub *a* of the wheel M by the projection *b*, and rotates with the same. On the same hub is the wheel B, which is fastened by friction to C in different positions by the thumb-screw Q, which forms part of the wheel B, and passes through the slot *c* of the wheel C. *ppppp* are pivots, on which the several wheels revolve. The wheel B is cut away on the outer edge, leaving the depression *d* and the cam-projection *e* thereon; and the edge of C is similarly cut away, leaving the depression *f* and the cam-projection *g* thereon. When the two wheels B and C are fastened together by the thumb-screw Q, side by side, they form one wheel, and have a common depression, *h*, which may be enlarged or diminished by rotating the wheel B on the wheel A with the thumb-screw, and setting the same, and a common cam or projection *i*, which may be enlarged or diminished in the same manner. Pivoted near the lock is the two-armed lever, R, whereof one arm carries the roller, S, and is lifted through the same by the cam *i*, revolving under the same at said cam's inclined plane *k*, and, at the same time, the other arm, T, of said lever lifts the dog-lever, V, as shown by the dotted lines, Fig. 1, up behind the door-bolts W W W W into the position shown in Fig. 5, thereby locking said bolts forward behind the jamb of the safe so the door cannot be opened. Said dog-lever V is pivoted at *l*. On the other hand, when the cam *i* is rotated entirely under the roller S, said roller is suffered to drop by gravity into the depression *h* at the inclined plane *m*, which allows the dog-lever V to fall from behind the safe-bolts, and the safe to be opened. The seventh-day wheel A has on its edge a cam-projection, *n*, which rotates once while the depression *h* rotates seven times, as described, and is so arranged relatively to the said depression *h* that, on every

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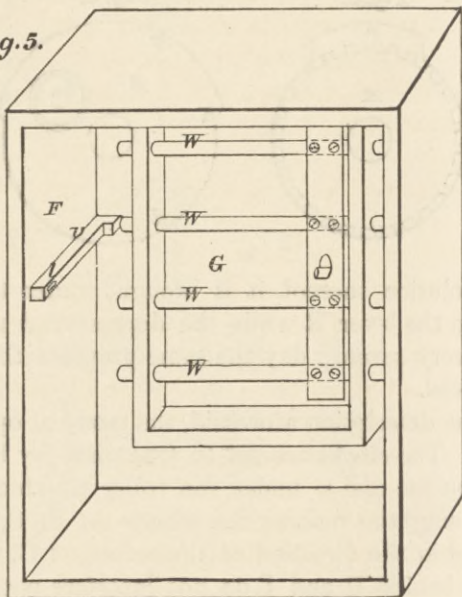
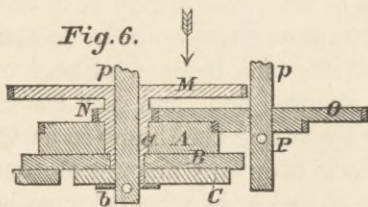
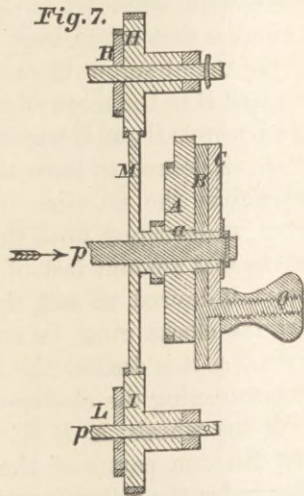
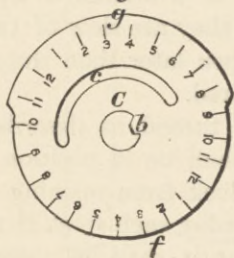
seventh revolution thereof, it is brought under the roller S, and holds up the lever R while the depression *h* passes under it, so that every seventh day the same prevents the safe from being unlocked.

"From the description aforesaid, the mode of operation will be obvious. The clocks are set to true time by bringing the hour-mark on the dial C under the roller S, which is readily done by turning the dial, as the wheels A, B, C, and M are freely turned in the direction of the arrow on C, inasmuch as the ratchets behind H and I do not interfere with motion in that direction, but take up, and, through the clock's force, proceed with, whatever advance of said wheels may be made. The lock is then set to lock up at any given hour, by loosening the thumb-screw Q and turning the inclined plane *k* of the wheel B to the mark of the required hour, and then fastening the wheels B and C together by setting the thumb-screw Q.

"If it is desired to have the lock open any amount of time earlier than the set time, (nine o'clock,) the wheel C must be turned, as described, until the time indicated under the roller shall be that amount fast of true time, the closing-mark being altered, if desired, to suit the case. If it is desired to open later, the clocks must be stopped until they are slow of time as much as it is desired the lock shall open later than the set time, correcting the closing-mark, if desired.

"If the wheels A, B, C, and M are turned, as described, until the cam part *n* of the wheel A shall be in position to come under the roller S, and keep the lock from opening on Sunday, it will continue to do so on Sunday each week if the clocks run on unchanged. In case that it shall be desired

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Fig.5.*Fig.6.**Fig.7.**Fig.4.*

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that the lock shall not open for a holiday or other day, the said wheels may be rotated until said cam part *n* is in position to come under and hold up the lever R on said day.

"The lock is affixed to the side F of the safe, as described, to avoid derangement or stoppage of the clocks by concussion on the door.

"It is evident that the dog-lever V and the lever R may be the same piece. The object in making the same in two parts is to save the weight of the part V, which depends upon the pivot *l*, from adding to the labor of the clocks.

"What I claim as my invention, and for which I pray letters-patent, is —

"1. The combination, with one or more clock-movements, of one or more wheels, H I, one or more ratchets, K L, and a common wheel, M, arranged as described, for the purposes set forth.

"2. The wheels B and C, with the depressions *d* and *f* and the projections *e* and *g*, located relatively to each other as described, to increase and diminish the surface of a common cam, *i*, or depression *h*, by rotation on each other, for the purposes described.

"3. The wheel A with a cam, *n*, adjusted as described, to prevent the falling of the lever R and dog V, either periodically or at required times, as described."

The specification, claims, and drawings of reissue No. 8550 are as follows:

"Be it known that I, Samuel A. Little, of Shelburne, in the county of Franklin and State of Massachusetts, have invented certain new and useful improvements in chronometric locks; and I do hereby declare that the following is a full, clear, and exact description thereof, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

"The object of my invention is to construct a time-lock which shall dog and release the multiple bolt-work of a safe or vault at certain predetermined times, both the dogging and

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releasing being caused by the operation of the time mechanism. By this means the time when the lock will dog the bolt-work depends entirely on the adjustment of the internal mechanism of the lock, hereinafter described.

“I provide adjustable devices, so that the periods when the lock shall be locked and unlocked may be varied at will; and I also provide a device whereby, at certain intervals — say on every seventh day — the lock will remain locked during the time when ordinarily it would be unlocked.

“It will thus be seen that I have constructed a lock which will, of itself, dog and release bolt-work at a regular hour each day, except on certain predetermined days — Sundays, for example — when it will remain in the locked position all day. My lock, when once adjusted, is therefore absolutely automatic, requiring no attention except winding, and it is, so far as I am aware, the first time-lock which locks at a time determined by the time mechanism, while at the same time the hours for locking and unlocking can be changed without altering the construction of the lock.

“To diminish the chances of accident from the stoppage of the time mechanism, I provide two independent movements, both of which assist in rotating the dial to actuate the lock; but, should one stop, the other will continue to rotate the dial.

“The particular construction of my lock is, that the two time-movements rotate a graduated dial so arranged that its motion oscillates, at certain regular determinable intervals, a pivoted bent lever, which in turn, in one instance, for automatic locking, lifts the free part of, and thus oscillates on its stationary pivot, a metallic dog or obstruction, so as to cause it to rest in the way, and prevent the retraction of the sliding bolt-work; and in the other instance, for automatic unlocking, it withdraws its support from under and permits the dog to oscillate by gravity, so as to clear the way for the retraction of the bolt-work.

“The adjustability of my lock for locking and unlocking I obtain by means of my dial, which is so arranged that what I may call its ‘bolt or dog-actuating points’ can readily be

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changed from one position to another, so that they will actuate the dogging mechanism at any desired hours for locking or unlocking; and it is to be noted, that in all continuously running dials, the adjustability for unlocking or locking preferably will be obtained in substantially the same way — *i.e.*, by varying the position of the dog-actuating points — because the dial itself should always be running on correct time.

“I cause the lock to remain locked on Sundays or other desired days, by means of a supplemental cam, which temporarily assumes one of the functions of my dial, and by which I can at any desired time cause the lock to remain locked during a greater period than twenty-four hours.

“Referring now to the drawings in aid of a description of my lock in detail, figure 1 is a front view of my improved time-lock attached to the inside of a safe, adjacent to the hinge part of the safe-door; Fig. 2, a view of the same, partly in elevation and partly in section, on the line 2 2 of Fig. 1; Fig. 3, a horizontal transverse section thereof on the line 3 3 of Fig. 1, with the upper time-movements removed, showing a plan of the locking mechanism proper; Fig. 4, a horizontal transverse section through the centre of the locking dials; Fig. 5, a perspective view of the interior of a safe, showing the door-bolts locked forward by the lever-dog; Fig. 6, a perspective view of the graduated dial (marked C in Fig. 1); Fig. 7, a similar view of wheel B in Fig. 1; Fig. 8, a similar view of a seventh-day wheel (marked A in Fig. 1).

“D and E designate two time-movements fastened to the inside, F, of a safe, adjacent to the hinged part of the safe-door G. These time-movements, through the wheels and ratchets K and L, propel the wheels H and I in the direction of the arrows thereon. These wheels H and I rotate once in twelve hours, and are both geared to the common wheel M, which has twice as many teeth as either of them, and they propel it in the direction of the arrow thereon, so that while wheels H and I are rotated once in twelve hours, wheel M is rotated only once a day.

“It will be seen that both time-movements work together

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in turning the wheel M, and thereby operate the lock ; but if either accidentally stops, the wheel H or I of the other will alone continue to rotate the wheel M and operate the lock, because each ratchet will allow free motion to either wheel I or H, in the absence of its normal impelling force.

“The toothed wheel N, forming part of the wheel M, is geared into and drives the toothed wheel O. The toothed wheel P, forming part of the wheel O, is geared into and drives the seventh-day wheel A, which turns loosely on the hub *a* of the wheel M. This wheel A has twice as many teeth as wheel P, and wheel O has three and a half times as many teeth as wheel N. Therefore, while wheel M revolves once in a day, it only causes wheel A to revolve once in seven days. The wheel C, which is graduated for the hours of the day, is fastened rigidly upon the hub *a* by means of the projection *b* and rotates with it. Loose on the same hub is the wheel B, which may be fastened by friction to the wheel C in different positions by the thumb-screw Q, that is attached to, or forms part of, the wheel B, and passes through the slot *c* of the wheel C.

“*p p p p p* designate pivots, on which the several wheels revolve. The wheel B is cut away on its periphery, leaving the depression *d* and the cam projection *e*, and the periphery of the wheel C is similarly cut away, leaving the depression *f* and the cam projection *g*, of the same form and size as the depression and projection of the wheel B. When these two wheels are fastened together by the thumb-screw Q side by side, they form one wheel or dial, having a depression *h*, which may be enlarged or diminished by rotating the wheel B by means of the thumb-screw, and then setting it, and also having a cam or projection, *i*, which may be enlarged or diminished in the same manner. Pivoted near its middle to the lock-case is the bent lever R, one arm of which carries the friction-roller S, and is lifted by the cam *i*, revolving under the roller at the cam's inclined plane *k*, and at the same time the other arm, T, of said lever lifts the dog V, pivoted at *l*, up behind the door-bolts W W W W into the position shown in Fig. 5, thereby locking the bolts forward behind the jamb of

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the safe, so that the door cannot be opened. In due time, when the cam *i* is rotated entirely from under the roller S, the latter will drop into the depression *h* at the inclined plane *m*, which allows the dog V to fall from behind the safe-bolts, when they may be retracted and the safe opened.

"It will be noted that the dog always tends to turn on its pivot automatically by gravity, so as to present a free space for the retraction of the bolt-work, and it is held up only for predetermined periods, to be measured by the time mechanism, by the bent lever.

"The seventh-day wheel A has on its periphery a cam projection, *n*, which rotates once while the depression *h* rotates seven times, as described, and it is so arranged relatively to the depression *h*, that on every seventh revolution thereof it is brought under the roller S and holds up the lever R, while the depression *h* passes under it, so that every seventh day this projection *n* prevents the safe from being unlocked.

"From the foregoing description the mode of operation will be obvious.

"The time-movements should be set to correct time by bringing the hour-mark on the dial C under the roller S, which is readily done by turning the dial, as the wheels A, B, C, and M turn freely in the direction of the arrow on wheel C, because the ratchets behind wheels H and I do not interfere with motion in that direction, but take up, and, through the force of the time-movements, proceed with, whatever advance of said wheels may be made. The lock should then be set to lock up at any given hour by loosening the thumb-screw Q, and turning the inclined plane *k* of the wheel B to the mark of the required hour, and then fastening the wheels B and C together by setting the thumb-screw Q. The dial will then indicate the time of locking and unlocking, and the operation of the time-movements will cause the oscillation of the dog into position to obstruct the retraction of the bolt-work in a little time, or at whatever time may have been decided upon, and it will be held there until the time arrives for unlocking, when the continued operation of the time-movements will withdraw its support, and it will fall out of the way.

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"If it is desired to have the safe opened any given amount of time earlier than the set time, — say 9 o'clock, — the wheel C must be turned, as described, until the time indicated under the roller shall be that amount fast of the correct time, the closing-mark being altered, if desired, to suit the case. If it is desired to open later, the clocks must be stopped until they are slow of the time as much as it is desired the lock shall open later than the set time, correcting the closing-mark, if desired.

"If the wheels A, B, C, and M, are turned, as described, until the cam part *n* of the wheel A shall be in a position to come under the roller S and keep the lock from opening on Sunday, it will continue to do so on Sunday each week, if the time-movements run on unchanged. Thus, the necessity for setting the mechanism on every Saturday, so that it shall keep the safe locked over Sunday, is obviated, which is a great convenience to bankers, and is, furthermore, a security against neglect to set the mechanism weekly, which might sometimes occur. In case it shall be desired that the lock shall not open for a holiday or other day, the said wheels may be rotated until the cam projection *n* is in position to come under the roller S and hold up the lever R on such day.

"The lock is affixed to the side F of the safe, as described, to avoid derangement or stoppage of the time-movements by concussion on the door; but it is obvious that it may be affixed to the door without modifying its construction, if desired, that being merely a change of location.

"It is evident that the dog V and the lever R may be one and the same piece. The object of making them in two parts is to save the weight of the part V, which depends upon the pivot *l*, from adding to the labor of the time-movements, and also to make the dog or obstruction entirely distinct from the time mechanism.

"I am aware of the patent granted to Williams and Cummings, No. 17,245, and dated May 5, 1857, and do not claim anything shown therein, but intend to limit my claims to comprehend only the improvements I have made over the peculiar combinations shown in that patent, whereby I reduce the number, modify the construction, change the relative

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position and mode of operation of the parts, and simplify my mechanical organization, as will fully appear by comparison.

"What I claim as my invention is —

"1. The combination of independent multiple bolt-work with the time mechanism and locking or dogging mechanism of a time-lock, automatically both dogging and releasing the bolt-work at predetermined times, substantially as described.

"2. The combination, in a time-lock, of a continuously revolving adjustable device for determining the time of operation of the unlocking mechanism, a pivoted arm or lever actuated by said device, and a dog or obstruction movable directly by said pivotal arm at regularly-recurring periods, to permit the retraction of the bolt-work, substantially as described.

"3. In a time-lock, the combination of time mechanism, a revolving dial actuated thereby, a dog and suitable connecting mechanism, whereby the continuous revolution of the dial causes the dog to move into the locked and unlocked positions alternately, substantially as described.

"4. In a time-lock, the combination of a continuously-rotating dial and mechanism which causes the lock to lock and unlock automatically, substantially as described.

"5. In a time-lock, a continuously-rotating dial provided with an adjustable device for automatically determining the time of locking, substantially as described.

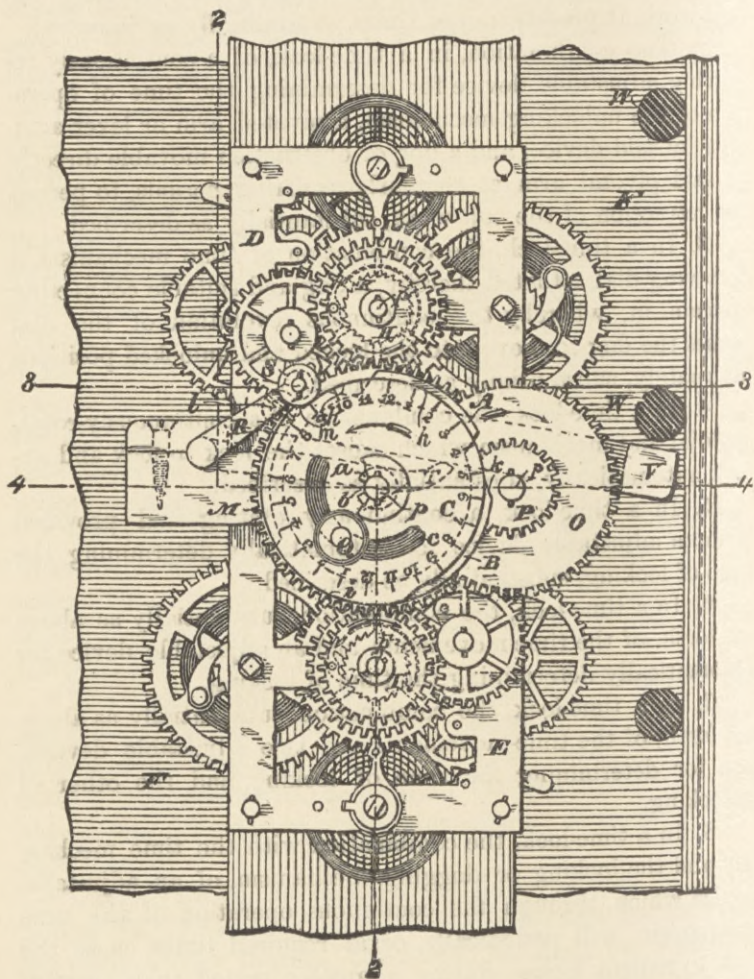
"6. In a time-lock, the combination, substantially as above set forth, of the time-movements and an adjustable device for automatically determining the time of locking.

"7. In a time-lock, the combination, substantially as above set forth, of the time-movements and two adjustable devices, one for determining the time of locking, and the other of unlocking.

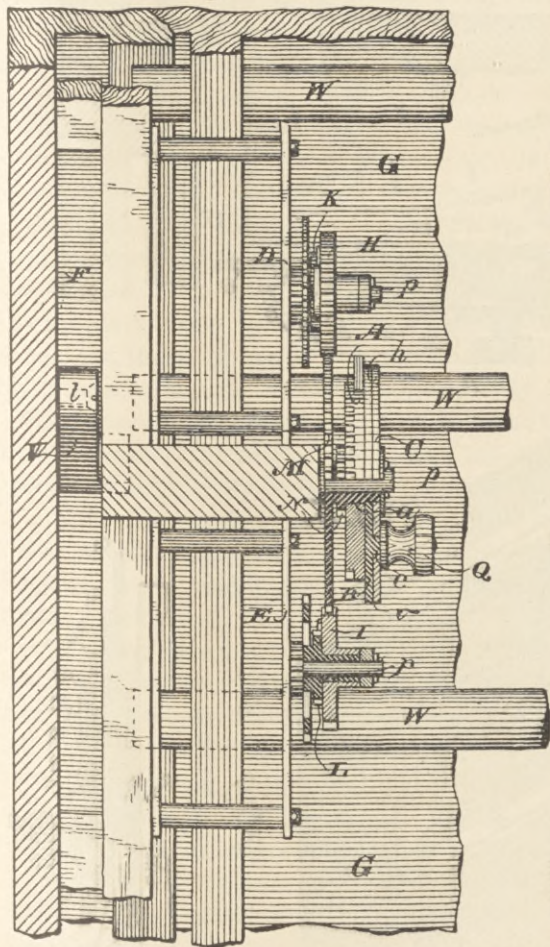
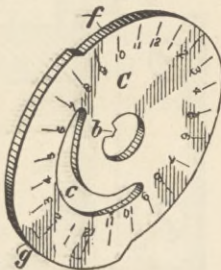
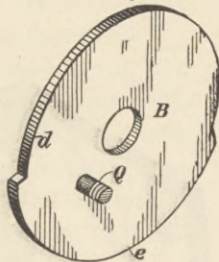
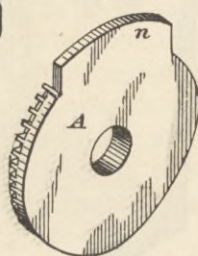
"8. In a time-lock, the combination with the time mechanism and the locking or dogging mechanism, of an adjustable device which, through the continuous operation of the time mechanism, will periodically, or at required times, cause the lock to remain locked during a greater period than twenty-four hours, substantially as described.

"9. In a continuously-running automatic time-lock, the

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Fig 1.

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Fig. 2.*Fig. 6.**Fig. 7.**Fig. 8.*

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Fig. 3.

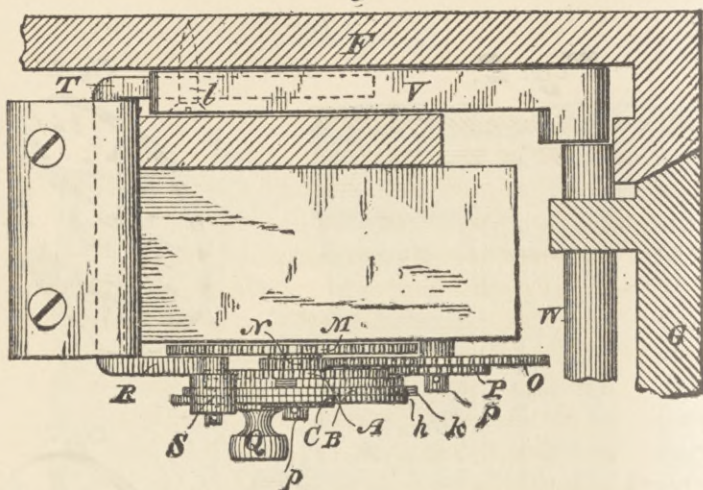


Fig. 5.

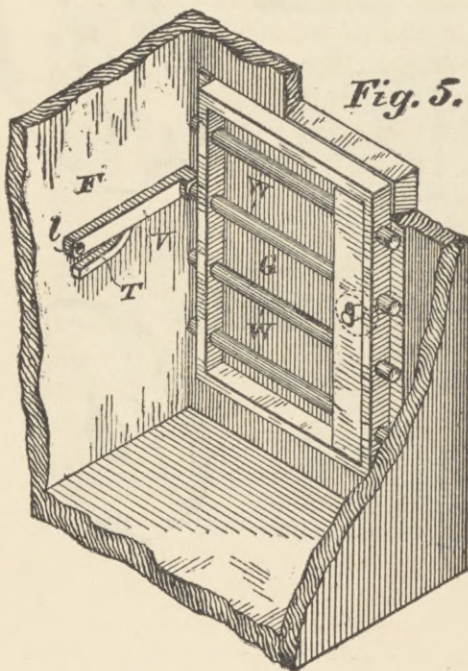
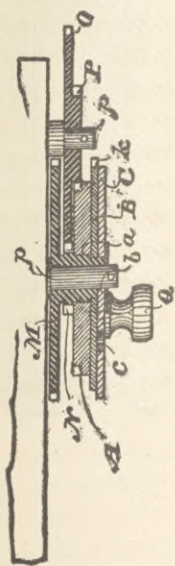


Fig. 4.



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combination, with the time mechanism and the locking or dogging mechanism, of an independent device adapted to be set to prevent, at any desired time, the unlocking of the lock for a greater period than twenty-four hours, substantially as described.

"10. The combination, substantially as above set forth, of the adjustable mechanism for continuously locking and unlocking daily the time-movements, and a device for preventing unlocking during a greater period than twenty-four hours.

"11. In a time-lock provided with two independent time-movements and an interlocking device common to both, the combination, with each of said movements, of a ratchet and pawl interposed between the last or driving arbor of each movement and the said common unlocking device, whereby the said device may be driven by either or both of the movements, and the stoppage of one movement will not necessarily cause the stoppage of the other, substantially as described.

"12. The combination, with the time-movements, of the wheels H and I, the ratchets K L, and the common wheel M, arranged substantially as described, for the purpose set forth.

"13. In combination with the dial, the seventh-day cam-wheel A, adjustable, as described, to prevent the falling of the bent lever R and dog V, either periodically or at required times, as described.

"14. The combination, in a time-lock, of time mechanism, a revolving graduated dial actuated thereby, a bent lever oscillated by the revolution of the dial on an immovable pivot, and a dog or obstruction, also oscillated on an immovable pivot, the lever and dog being so arranged that when one arm of the lever is pushed aside at a predetermined time by the revolution of the dial, the other arm withdraws its support from under and permits the dog to turn by gravity, thereby leaving a free space for the retraction of the bolt-work, substantially as described.

"15. The combination of multiple sliding bolt-work, a dog or obstruction oscillated on an immovable pivot, and tending, by gravity, to turn so as not to dog the bolt-work, a bent lever, oscillated also on an immovable pivot, for holding the

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dog in position against gravity, to dog the bolt-work, a revolving graduated dial, which, by its revolution at a predetermined time, oscillates the bent lever, and time mechanism that actuates the dial, substantially as described.

"16. The combination, substantially as before set forth, by means of suitable connecting mechanism, of the following elements, adapted, as combined, so to secure the door of a safe or vault, and to automatically release the same at a predetermined time, viz.: first, the multiple sliding bolt-work; second, the oscillating stop or dog, adapted to prevent the retraction of the bolt-work, and to be turned on its pivot to release the bolt-work at a time determined by the clock-work; third, the vibrating lever for holding the stop or dog in position to prevent the retraction of the bolt-work; and, fourth, the clock-work for determining the time when said lever shall be moved to permit the stop or dog to release the bolt-work.

"17. In a chronometric locking mechanism, the combination, substantially as before set forth, of the following elements, adapted as combined, to guard or dog the bolt-work of a safe or vault-door, and to automatically release the same at a predetermined time, viz.: first, the oscillating stop or dog, adapted to prevent the retraction of the bolt-work, and to be turned on its pivot to release the bolt-work at a time determined by the clock-work; second, the vibrating lever for holding the dog in position to prevent the retraction of the bolt-work; third, the clock-work for determining the time when said lever shall be moved to permit the dog to fall to release the bolt-work; and, fourth, the graduated wheel or dial, rotated by the clock-work, and adapted to operate said lever, and to be set for varying and controlling the time when said lever shall be moved to permit the dog to release the bolt-work."

Only claims 1 and 7 of the reissue are alleged to have been infringed. They take the place of claim 2 of the original patent. They were before Judge Shipman in the cases in 19 Blatchford and 6 Fed. Rep. above referred to, and he held that they covered new inventions and patentable improvements. Judge Lowell, in his opinion in the present case,

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states that he fully agrees with the views of Judge Shipman as to the novelty and patentability of claims 1 and 7. Although the defendants' lock has but one time-movement to control the lever which controls the dog, Judge Lowell held that that did not affect the question of the infringement of claims 1 and 7.

In September, 1887, in *Yale Lock Mfg. Co. v. New Haven Savings Bank*, 32 Fed. Rep. 167, in the Circuit Court for the District of Connecticut, Judge Shipman had before him the question of a rehearing as to the validity of claims 1 and 7, and especially the question whether claim 7 was an enlargement of claim 2 of the original patent. He held that claim 7 "should be limited to the invention which was described and claimed in the original patent, which invention was not confined to a 'common cam,' or to a device which was connected with the compound wheel in the same way in which the cam was connected, but was broad enough to include equivalent means of connection with the dog." He held also that the owners of the patent had not abandoned, by proceedings in the Patent Office in respect to the two prior reissues of it, their right to claim, in reissue No. 8550, a double or compound disc, and to obtain a valid patent therefor.

Claims 1 and 7 were sustained also by Judge Sage, in the Circuit Court for the Western Division of the Southern District of Ohio, in May, 1889, in the case of *Yale & Towne Mfg. Co. v. Consolidated Time-Lock Co.*, 38 Fed. Rep. 917.

This patent, as before stated, was reissued May 9, 1876, as No. 7104, and again, January 8, 1878, as No. 8035. The lock used by the defendants is made under letters patent No. 173,121, granted to Henry Gross, February 8, 1876, for an "improvement in time-attachments for locks." This patent was issued prior to the granting of any reissue of the Little patent. While the original patent, No. 146,832, had only three claims, reissue No. 7104 had eight claims, reissue No. 8035 had six claims, and reissue No. 8550 has seventeen claims. On comparing the various reissues with the original patent, it is found that the drawings and the description of them are substantially the same in all, with some changes in nomenclature; and it is quite apparent that the original patent was not

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inoperative or invalid by reason of a defective or insufficient specification, within the terms of the statute, so as to warrant the reissues.

There is in the record a copy of the file-wrapper and contents of reissue No. 8035, applied for December 15, 1877, and granted January 8, 1878. The specification presented with the application contained only two claims, both of which made "a revolving dial" an essential element. On the 18th of December, 1877, an entirely new specification and claims were put in, the claims being ten in number. Claim 3 was as follows: "3. In a time-lock, the combination, substantially as above set forth, of the clock-work and two adjustable devices for determining, respectively, the times of locking and unlocking." That claim 3 is very similar to claim 7 of reissue No. 8550. On the 21st of December, 1877, that claim 3 was amended by striking out the word "clock-work," and inserting the words "time-movements," so that it became almost exactly the same as claim 7 of reissue No. 8550. On the 26th of December, 1877, that claim 3 was erased.

Claim 4 of reissue No. 8035, as originally applied for, read as follows: "The combination with one or more time-movements, of one or more wheels, H I, one or more ratchets, K L, and a common wheel, M, arranged as described, for the purposes set forth." This claim 4 was erased with claim 3, and in their place there was inserted the following as claim 3: "The combination with the time-movements of the wheels H I, the ratchets K L, and the common wheel, M, arranged as described, for the purpose set forth."

Claim 5 of reissue No. 8035, as applied for, was identical with claim 2 of the original patent, No. 146,832, as granted. That claim 5 was rejected by the examiner, on the ground that it was old in valve-gear for steam engines, with a reference to a prior patent; and on the 26th of December, 1877, it was erased and abandoned. Therefore, more than a year before reissue No. 8550 was granted, claim 2 of the original patent was abandoned by Little; and at the same time he also abandoned claim 3 of his application, after he had put it in such shape that it became substantially the same as claim 7 of

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reissue No. 8550. Reissue No. 8035 was taken out without those claims. No one of the six claims of reissue No. 8035 was infringed by the lock of the defendants, which was applied to use during the existence of reissue No. 8035. A little over nine months after it was granted, the application for reissue No. 8550 was filed; and the present suit was brought eight days after that reissue was granted.

In the specification of reissue No. 8035, the following statements were made: "The object of my invention is to construct a time-lock, and to combine it with the multiple sliding bolt-work of a safe or vault-door, so that, by the continuous movement of its time mechanism, locking and unlocking will be effected daily or periodically. . . . The gist of my invention, therefore, is the combination, in a time-lock, of time mechanism revolving a graduated dial, which serves to oscillate a pivoted bent lever, that, in turn, induces the oscillation of a pivoted dog or obstruction to the retraction of the multiple sliding bolt-work. Subordinate to this main principle or chief organization of my time-lock, I provide that my dial shall be composite in its construction, whereby I obtain what I term a 'differential cam' for convenience of adjustment." These statements do not appear in the specification of reissue No. 8550. In the latter specification, what had been previously called "a revolving graduated dial" is called "adjustable devices;" the dial is said to have "bolt or dog-actuating points;" and a statement is made that the lock of Little "is, so far as I am aware, the first time-lock which locks at a time determined by the time mechanism, while at the same time the hours for locking and unlocking can be changed without altering the construction of the lock." So that, in this reissue, which was granted almost five years after the date of the original patent, and over three years after the Gross patent was issued, the attempt is made by Little to cover all devices for determining the time of locking and unlocking, on the view that he was the first to invent a lock that would lock up as well as unlock at a predetermined time. This attempt is embodied in claims 1 and 7 of reissue No. 8550, which are here repeated: "1. The combination of independent multiple

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bolt-work with the time mechanism and locking or dogging mechanism of a time-lock, automatically both dogging and releasing the bolt-work at predetermined times, substantially as described." "7. In a time-lock, the combination, substantially as above set forth, of the time movements and two adjustable devices, one for determining the time of locking, and the other of unlocking."

Although the first reissue, No. 7104, was applied for March 15, 1876, more than two months after the Gross patent was issued, no such claims as the above were applied for or taken, nor were they taken in reissue No. 8035. Claims 3, 7 and 8 of reissue No. 7104 were abandoned in reissue No. 8035, and severally appear as claims 7, 16 and 17, in reissue No. 8550, claim 7 in No. 8550 being in these words, as claim 3, in No. 7104: "3. In a chronometric locking mechanism, the combination, substantially as before set forth, of the clock-work and two adjustable devices for determining, respectively, the time of locking and unlocking." Claims 1, 2, 3, 4, 5, 8, 9 and 11 in No. 8550 are entirely new. Claim 2 of the original patent, No. 146,832, was not retained in No. 8550, and only two claims out of the seventeen in No. 8550 are found in the original patent.

Infringement is alleged of claim 1 of reissue No. 8550, which is an entirely new claim, not found in the original patent or in any prior reissue, and of claim 7, which was claim 3 in reissue No. 7104, and was first amended and then abandoned in the application for reissue No. 8035. If claim 1 of reissue No. 8550 is construed to cover only the specific devices of Little, operating in the mode described by him, and thus is no broader than claim 2 of the original patent, the defendants' lock does not infringe it. If it is not so limited, it is void, under numerous decisions of this court.

In Little's time-lock, there is a compound cam-wheel or disc, composed of two cam-wheels placed face to face on the same axis, each having a portion of its outer edge cut away, and so arranged that they can be turned with relation to each other so as to increase the length of their common projection or common depression, and be fastened together in any de-

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sired position by means of a slot and a thumb-screw in one of them. When adjusted, this compound cam-wheel is revolved by clock-work and made alternately to lift up and let down a lever which in turn lifts up or lets down another lever, the end of which is supported in a position behind one of the bolts of the door, or is allowed to drop away from behind it, thus alternately dogging and releasing the bolt. It is the office of the common projection on the wheels to lift, and then hold up, the levers in the dogging position; and the length of time the bolts will remain dogged depends solely on the length of the common projection.

In the defendants' lock there is only one time-movement, and there are no wheels of any kind, much less wheels like the cam-wheels B and C of Little's original patent, with projections and depressions, which can be rotated so as to increase and diminish the surface of a common cam or depression; nor has it any cam projection or cam depression of any kind, formed in any manner, whose office is to lift and hold up and let fall a lever, and thus dog and release the bolt of a safe-door; nor has it a device of any kind capable of performing the function of Little's cam-wheels. Little does not describe or suggest, in his original patent, any way by which he can dispense with the use of his cam projections to lift and hold up the dog; and he confines claim 2 of his original patent to a combination in which two cam-wheels, capable of being rotated and adjusted with relation to each other, so as to increase and diminish the surface of a common cam, for the purpose of lifting and holding up the dog, are essential.

Claim 7 of reissue No. 8550 was evidently drawn so as to cover the time-attachment of the defendants' lock, which does not itself lock up or unlock the bolt-work, but only determines the time when the bolt work may be unlocked by the combination-lock. Claim 7 is not limited to devices which automatically lock and unlock, but extends to devices which merely interfere with mechanical locking and unlocking. Such a construction of claim 7, a claim once abandoned in the Patent Office and restored in this reissue, cannot be admitted in consistency with numerous decisions of this court on the

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subject of reissues. If, however, claim 7 is so construed as to be no broader than claim 2 of the original patent, then the defendants' lock, as it did not infringe the latter claim, does not infringe claim 7.

It is shown that it was old to use time mechanism, revolving dials with adjustable devices, pivoted levers and dogs, to lock and unlock door-bolts; and that the combination of clock-work, adjustable cam-wheels, and a two-armed lever oscillated thereby, was old. In this view, in his original patent, Little very properly limited his claims to his mode of connecting two clocks with a common wheel, so that both could act together in turning it, and either one could turn it alone in case the other stopped; and to the employment of the specific cam-wheels with depressions and projections so located as to increase and diminish the surface of a common cam by rotation on each other, so as to lift and hold up the dog behind the bolt of the door; and to the introduction of his Sunday wheel. The lock of the defendants did not infringe any of the claims of the original patent, because it did not have the two clocks, the Sunday wheel, the cam-wheels or any mechanical equivalent therefor, and did not move the dog automatically into the dogging position.

The application for reissue No. 7104 was made more than two years after the original patent was granted, and one month and seven days after the Gross patent was issued, containing the devices which are employed in the defendants' lock. Reissue No. 8550 was applied for nearly four years and nine months after the original patent was granted, and more than two years and eight months after the Gross patent was issued, and after the lock of the defendants had been put into use. No excuse is shown for these delays; nor is there any defect or insufficiency in the specification of the original patent. In December, 1877, during the pendency of the application for reissue No. 8035, Little acquiesced in the rejection, for want of novelty, of claim 2 of his original patent, and then abandoned a claim corresponding with claim 7 of reissue No. 8550, and took out reissue No. 8035 without such claim.

The lock of the defendants did not infringe any claim of

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reissue No. 8035. Claim 1 of reissue No. 8550 is entirely new, and claim 7 of that reissue is the same as claim 3 of the application for reissue No. 8035, which claim was first amended and then abandoned. It was not lawful to introduce claim 7 into reissue No. 8550, after such formal abandonment of it. If either claim 1 or claim 7 of reissue No. 8550 covers a device which would not have been covered by claim 2 of the original patent, or by any of the claims of reissue No. 8035, it is invalid; and even if claims 1 and 7 could properly be restricted to the cam-wheels of the specification or their mechanical equivalents, operating as described, as claim 2 of the original patent was restricted, the lock of the defendants does not infringe either claim 1 or claim 7.

For these reasons, it must be held that the plaintiffs have no cause of action against the defendants under claims 1 and 7 of reissue No. 8550.

It results that the decree of February 12, 1886, must be affirmed so far as it relates to the Sargent reissue No. 7947, and reversed so far as it relates to the Little reissue No. 8550, and the cause be remanded to the Circuit Court with a direction to dismiss the bill of complaint, with costs to the defendants. As the plaintiffs fail in this court on both appeals, they are to pay the costs of this court on both appeals.

IN RE BAIZ, Petitioner.

ORIGINAL.

No. 11. Original. Argued March 31, April 1, 1890.—Decided May 5, 1890.

The Consul General of Guatemala and Honduras in New York, being a citizen of and resident in the United States, was accredited by the government of Honduras as its diplomatic representative here. The Secretary of State declined to receive him as such, on the ground that the immunities and privileges attaching to the office made it inconsistent and inconvenient that a citizen of the United States should "enjoy so anomalous a position." The Consul General then inquired whether the Department would regard him as *chargé d'affaires ad hoc* of Honduras, without relieving him of his duties and responsibilities as a citizen; to which the Department replied that it could not recognize his agency as con-