

YALE LOCK MANUF'G CO. AND OTHERS V.
 NORWICH NAT. BANK.
 SAME V. NEW HAVEN SAVINGS BANK.

Circuit Court, D. Connecticut. March 29, 1881.

1. RE-ISSUE No. 8,550—IMPROVEMENTS IN TIME
 LOCKS—NOVELTY.

Re-issued letters patent No. 8,550, for improvements in “time locks,” by which the multiple bolt-work of a safe or vault door could be automatically both dogged or locked and unlocked at predetermined times,—the dogging and releasing being caused by the operation of the time mechanism, and the time for locking or unlocking being capable of alteration at the will of the operator, without disturbance of the clock-work,—contained, *inter alia*, the following claims:

“(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.”

Held, that the language of the seventh claim was not to be extended so as to include time movements which were used for any obstructing purposes whatever, but was to be considered as referring to the time lock of the specification only.

2. SAME—SAME—SAME.

Held, therefore, that such claim was not anticipated by a patent for a structure containing two similar adjusting devices, which were operated to open and close a gas-cock much after the plan of the patented lock.

3. SAME—INVENTION.

Held, further, that the changes necessary to transform old time locks which unlocked at predetermined times into structures which should also lock at predetermined times, required the exercise of inventive power.

4. SAME—SAME.

Held, further, that the application to safe doors of chronometric mechanism for automatic locking and unlocking at predetermined times involved invention.

5. SAME—INFRINGEMENT.

Held, further, that where a lock has two adjustable devices for locking and unlocking automatically at predetermined times, which are the equivalents of the mechanism of the patented lock, infringement is not avoided by the mere fact that the infringing lock can also be used as an instant locker.

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6. SAME—SAME.

Held, further, that the mere use of such infringing lock constitutes an infringement, although it has only been used as an instant locker.

7. PATENT No. 173,366—IMPROVEMENT IN TIME LOCKS—MECHANICAL DEVICE.

Letters patent No. 173,366, for improvement in “time locks,” by isolating the adjusting devices from the winding devices, and by excluding from the adjusting devices the person who winds the clocks, except when he is allowed the use of the key to the supplemental clock by which the adjusting devices are secured, contained, *inter alia*, the following claim: “In combination with the case of a chronometric lock, having a lid or door for covering the devices which control the hours of locking or unlocking, one or more winding devices, whereby, the lock being attached to the safe door, the time mechanism can be wound from the exterior of the case while the safe door is open, but is inaccessible when said door is closed.” *Held* that, so far as this claim was concerned, the alleged invention consists in simply securing the door of a time lock with a key, and in providing such door with an aperture through which the clock could be wound, and that in view of the Rutherford clock, the watchman’s time detector, and even the clocks and watches in common use, the improvement did not involve invention, and could only be regarded as mechanical.

8. RE-ISSUE No. 7,947—APPLICATION OF TIME AND COMBINATION LOCKING MECHANISM TO THE BOLT-WORK OF A SAFE DOOR—COMBINATION—PATENTABLE RESULT.

Re-issued letters patent No. 7,947, for an improvement in a combined time lock, combination lock, and bolt-work for safe and vault doors, claimed, *inter alia*, “the combination

with the bolt-work of a safe or vault door of a combination or key lock, controllable mechanically from the exterior of the said door, with the 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 the 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 a said locks have been unlocked, or have released their dogging action to enable the door to be opened, substantially as described,” *Held*, that this combination produced a new result, and was therefore patentable.

9. RE-ISSUE—ABANDONED CLAIM,—*Leggett v. Avery*, 101 U. S. 256..

Held, further, under the circumstances of this case, that this claim was not within the scope of the language employed in *Leggett v. Avery*, 101 U.S. 256, in relation to the invalidity of a claim in a re-issue which had been abandoned, or rejected with the acquiescence of the patentee, upon the original application for letters patent.—[ED.

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Edmund Wetmore, Causten Brown, and Geo. Ticknor Curtis, for plaintiff.

Samuel A. Duncan and Benjamin F. Thurston, for defendants.

SHIPMAN, D. J. The suit against the Norwich National Bank is a bill equity, founded upon the alleged infringement of three letters patent now owned by the plaintiffs, viz.: re-issued letters patent No.8,550, issued January 21, 1879, to the Yale Lock Manufacturing Company, as assignee of Samuel A. Little, the original patent to Little having been granted January 27, 1874; letters patent No. 173,366, granted February 8, 1876, to the said company, as assignee of Emory Stockwell; and re-issued letters patent No. 7,947, to James Sargent, dated November 13,1877, the original patent having been dated September 25, 1877. The first two patents are for improvements in “time locks;” the third patent is for an improvement in a

combined time lock, combination lock, and bolt work for safe and vault doors. The bill in equity against the New Haven Savings Bank relates only to the first two patents.

The object of the Little invention was to furnish a time lock by which the multiple bolt work of a safe or vault door could be automatically both “dogged,” or locked, and unlocked at predetermined times; the dogging and releasing being caused by the operation of the time mechanism, and the time for locking or for unlocking being capable of alteration at the will of the operator, without disturbance of the clockwork. Before this invention, automatic unlocking at a predetermined time, and locking whenever the door was shut and the bolts were thrown, were known. No arrangement of time mechanism had been applied to a safe door by means of which locking would take place automatically at a predetermined time. Time locks which lock by the operation of time mechanism after the bolts have been thrown are called after-lockers. Locking at the time when the bolts are thrown is called instant locking.

The inventor says in his specification: “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 380 device whereby, at certain intervals,—say on every seventh day,—the lock will remain locked during the time when ordinarily it would be unlocked.” In order to give a more clear idea of the “adjustable devices,” and the means for actuating the dogging mechanism, I quote the following description, which I believe to be accurate:

”The time movement revolves a compound disk, composed of two single disks of the same shape and size, placed face to face on a common axis, each having an equal portion of its periphery cut a way so as to leave in each a depression of the same form and size as that in the other. When these two disks or wheels

are fastened together by a thumb-screw they from one wheel or dial, having a depression in its periphery.

"The inner wheel is adjustable on the common axis relatively to the other. The depression in the periphery of the double disk, caused by the cutting away of the periphery of each of the single disks, can be made longer or shorter, therefore, according to whether the inner disk is turned so that its cut-away portion is more or less in coincidence with the cut-away portion of the outer disk or dial. The outer dial is adjustable relatively to the time movement, because the ratchets in the time movement permit it to be moved by hand in the direction it is carried by the time movement, just as the hands of a clock may be moved forward by hand.

"One end of a bent pivoted lever rests upon the edge of the double disk or dial, and the other end supports a "dog," pivoted to the side of the safe in such a position that its pivotal movement brings it behind or away from the multiple bolt work. When the dog is behind the bolt work the latter cannot be thrown back, and the door is held locked. When it drops down out of the way of the bolt work the bolt work is free to be retracted and the door may be opened.

"When the double disk revolves, and the shoulder at one end of the cut-away portion of its periphery comes under the lever, the lever drops, and when the shoulder at the other end of the cut-away portion comes under the lever, it lifts the lever up, and, as the other end of the lever supports the dog 381 the dog is oscillated in correspondence to the movements of the lever. Thus the revolution of the disk causes the dog, through the medium of the lever, to alternately move into or out of the locking position. By moving the outer disk by hand, it may be turned so that the shoulder which lifts the dog through the lever into the locking position shall come under the end of

the lever at any desired hour, and by loosening the thumb-screw and turning the inner disk to any desired position, and then screwing the disks again together, so that they move as one, the cut-away portion of the compound disk may be lengthened or shortened, so that the shoulder, which allows the dog to drop into the unlocking position, may be made to come under the lever, as the dial revolves, at any desired hour thereafter.”

The re-issue contains 17 claims, of which the first and seventh only are alleged to have been infringed. These claims are as follows:

“(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.”

The defendant, denying infringement, strenuously urges the defences of want of novelty, and want of patentability or non-invention.

There were in the art, prior to Little’s invention—(1) Time locks which opened a safe at a predetermined time, and which were instant lockers. The prominent examples of this class were the Rutherford lock, the Pye lock, and the Derby patent. (2)Time locks which were instant lockers, and never had been used as subsequent lockers, but which it is now said could have been made subsequent lockers by the appliances within reach of mechanical skill. The Derby patent is the one which is relied upon. (3) Chronometric movements, capable, at predetermined times, of opening and closing a gas-cock, 382 the periods of opening and closing being adjustable relatively to each other. The Herzberg patent and the Paine self-

illuminating clock are the members of this class. (4) The Cope patent, which was, for time mechanism, capable of being applied to open and close at predetermined times, the periods of opening and closing being adjustable relatively to each other, the door of a bee-hive.

As has been stated, no time lock or time mechanism had been applied to dog and release the bolt of a safe door at predetermined hours, and capable of being adjusted relatively to each other without disturbance of the mechanism of the clock. This fact compels a finding in favor of the novelty of the patented structure unless the seventh claim should receive a construction which would include the chronometric device which had been applied to very different structures, such as a gas pipe or a bee-hive, but does not compel a conclusion in regard to the patentability of the Little structure, of the question whether it was a new invention.

If the words "in a time lock," in the seventh claim, were omitted, or if "time lock" simply means chronometric mechanism whereby an obstruction can be interposed or removed, then the Herzberg patent is an anticipation of that claim. The Herzberg structure contains two similar adjusting devices, which are operated to open and close a gas-cock much after the plan of the Little lock. But it is a strain upon language to construe the time lock of the patent to mean chronometric movements which can obstruct the flow of gas or the arrival and departure of bees from a hive. The object of the invention was "a time lock which shall dog and release the multiple bolt work of safe or vault," etc. It was a chronometric lock which was to be used as a *lock* to bar the opening of solid doors against the violence of skilled burglars, and therefore, when the various sub-combinations of the invention are specified in the different claims, the language is not to be extended so as to include

time movements which are used for any obstructing purposes whatever, but is to be considered as referring to the time lock of the specification only. As thus construed, the seventh claim means the combination in 383 a time lock, which is a structure necessarily having a dog, which is to be moved by appropriate mechanism, of the time movement, and two adjustable devices, substantially as set forth. The Herzberg patent does not anticipate the seventh claim of the Little invention. Whether it destroys the patentable character of the Little invention will be hereafter considered.

But, although the Little device may have been novel in the sense that it was a new improvement, and although it possessed utility, it is insisted that it was not a patentable improvement because there was no invention in the thing, and improvement is not necessarily invention.

The Derby patent is first relied upon to show that while changes were necessary to transform old time locks which unlocked at predetermined times into structures which should also lock at predetermined times, yet that such changes were obvious to the skilled safe lock-maker, and required no inventive power. The prominence which was given to this patent in the proofs and on the trial requires a description of the mechanism. The patentee says, in his specification: "The nature of my invention consists in securing to the inside of the door a bar or series of bars, or cross-bars, so arranged as to revolve on one common center, which is fastened in the door in such a way as to permit a handle or knob being attached to it on the outside of the door to latch the bars when the door is closed; also the mode of constructing and operating a spring latching lever by means of a simple clock movement, so that, however ponderous the locking bars may be, the power of an ordinary clock movement will be sufficient for the purposes required." The latching lever is pivoted to the side of the safe, and

keeps the series of cross-bars in locked position. "This lever is shaped like an inverted V, pivoted at the apex, and with one arm longer than the other. It is pivoted so that the short arm latches over the top of one of the cross-bars when the latter have been turned into their sockets, and holds it there against its tendency to swing up out of engagement with the socket. The long arm of the lever projects down just behind a dial, which is revolved by a clock 384 movement. There is a series of holes all around the dial near its circumference. A pin is inserted into one of these holes and projects from the back of the dial, so that it is brought into contact with the long arm of the lever by the revolution of the dial. The whole lever being rigid, the pin, acting on the long arm, pushes it one side, and so unlatches the cross-bars, which immediately swing out of the sockets, and the door is unlocked. By putting the pin in different holes, the time when it is brought in contact with the lever, and hence the hour for unlocking, may be varied."

This device was intended merely for unlocking, but Mr. Sheppard, one of the defendants' experts, says that "if it was desired to hold this lever out of its locking position for a certain number of hours, and at the same time have it under such condition that it would be released and fall into place after a certain number of hours, without returning to the safe to manipulate it, then duplicate pins might be employed and placed in several of the successive holes." The witness is aware that there is no mention in the patent of more than one pin for the disk, but does not think that there is invention in the addition of duplicate pins, and thereafter much strength was spent in the investigation of the earnest-disputed question whether the alterations necessary to make a locking device were compatible with the construction of the Derby mechanism, as shown in the patent and drawings. It is manifest that the patent which was issued in 1858

shows no conception of the locking device; that to add one which shall be efficient, alterations must be made in his mechanism, and that nobody produced a lock of this kind until Little's invention came into being in 1874. Assertions by ingenious and able experts in the year 1880, after invention in safes has been greatly stimulated, of what could have been done by mechanical skill prior to 1874, do not press with great weight upon my mind.

There is a class of improvements which are plainly and obviously mechanical in their origin. An instance of this class will be noticed hereafter. But when the subject of investigation is an alleged invention of complex mechanism, 385 both new and useful, in the construction of which alterations had been made in previous structures of which their authors had not apparently conceived, and the alleged invention relates to mechanism in which advances have been made since its date, the conclusions of witnesses as to non-invention, if admissible at all, are to be received with hesitation, because it is, in a large class of cases, difficult for them to place their minds in the condition of the person who was groping his way towards the development of what is now plain, but was then unknown. Such testimony has not a sufficiency of power to satisfy the mind that what history indicates did demand thought, and the peculiar power which is styled "invention," could have been accomplished by the skill of the trained mechanic.

The defendant next insists that the Herzberg gas regulator and the Paine illuminating clock and the Cope bee-hive sufficiently pointed out and explained the use of chronometric mechanism for automatic locking and unlocking at predetermined times; that there was no invention in applying the same mechanism to the door to a safe.

In *Tucker v. Spaulding*, 13 Wall. 453, an action at law to recover damages for the infringement of a patent

for the use of movable teeth in saws and saw plates, the circuit court had excluded a prior patent of one Newton for cutting tongues, grooves, mortises, etc., which patent had cutters of the same general shape and form as the saw teeth of the plaintiff's patent. The supreme court said: "The court, in rejecting the patent of Newton, seems to have been mainly governed by the use which was claimed for it, and also that no mention is made of its adaptability as a saw. But if what it actually did is in its nature the same as sawing, and its structure and action suggested to the mind of an ordinarily skilful mechanic the double use to which it could be adapted without material change, then such adaptation to the new use is not a new invention, and is not patentable."

For the purposes of this case it may be admitted that the opening and closing of a gas-cock, or any other obstruction, is in its nature the same as the dogging and releasing the 386 bolt of a safe door, and that the structure and action of the Herzberg device, if examined by an ordinarily skilful safelock manufacturer, would have suggested to his mind that it could be applied to the bolts of a safe. The question still remains, could either the Herzberg or the Paine or the Cope inventions have been adapted to a safe without such a material change of structure as could not be made by the mere skill of the mechanic to whom the new use had been suggested? The bolt work of a safe is to be obstructed by a dog which must be connected with the adjusting devices by appropriate mechanism. The Herzberg and kindred devices, if applied to a safe door, are applied to purposes which demand a structure of altogether different character from that which turns a gas-cock or shuts the door of a bee-hive. The old mechanism was utterly unadapted to be used upon a safe door without material change; and the modifications which were required for the adaptation to the new use were not known by the

ordinary mechanic when Little made his invention, and could not have been devised by mechanical skill.

The defendant insists that after a person conceived the idea of applying and had applied a chronometric movement to the door of a safe, there is not, in judgement of law, invention in applying an improved chronometric movement, also old in the art, and not the invention of the patentee, to the door of the safe. If no Herzberg or kindred device had ever existed, it would obviously have been invention to have made a time lock which would automatically both lock and unlock a door at predetermined and variable times. In such case there would be new mechanical function. The same function is introduced upon it. But it may have required no inventive skill to put the old device upon the door, because mechanical skill only was requisite. If, however, it required the power of inventing to adapt and apply the Herzberg machine to the safe door so as to make it of the least value, there is all the invention which the law demands.

The remaining question is in regard to infringement. So much of the Chinnock lock, which is the one used by the 387 defendant, as relates to the first and seventh claims, is thus described: The multiple bolt work of the safe door is held by a sliding dog, which holds the bolt work fast when it is thrust forward, and releases it when it is retracted. A spring in the rear of the dog tends to keep it thrust forward in the locked position. This dog is moved by a bent pivoted lever. When one arm of the lever is pressed down, the other arm moves the dog back against the force of the spring into the unlocking position, and when the pressed-down arm is released, the resistance of the other arm is withdrawn and the dog moves by the force of the spring into the locking position.

For the purpose of moving the lever, and through it the dog, into the locking or unlocking position, the lever is governed by two adjustable locking fingers,

carried by a dial revolved by the time movement. Each of these fingers has a trip pin projecting from it. When one of these pins strikes the arm of the lever it presses it down, and thus moves the dog back into the unlocking position. When the other pin comes around it releases the lever, and thus permits the dog to move forward into the locking position. For the purpose of retaining the lever in the unlocking position during the interval which elapses after it has been unlocked, and before the locking pin comes around, a catch is provided. When the unlocking pin has pressed the arm of the lever down into the unlocking position, the arm passes under the end of the catch, and is held in that position. When the locking pin comes round it strikes the catch and releases the lever. The important difference between the two locks is that the Little lock can only be used as a subsequent locker, unless by the addition of some other device, as the invention specified in the patent to Emory Stockwell, No. 168,062, of September 21, 1875. The locking mechanism of the Little lock proper operated positively upon the bolt work, so that if the bolts were left retracted at the time when the locking mechanism was to operate, the dog would be held in check by the retracted bolt work, and the clock mechanism would be stopped.

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The Chinnock lock may be both an instant and a subsequent locker. If the locking mechanism was set for an hour after the door has been shut and the bolts have been pushed, it is a subsequent locker. If the locking mechanism was set for an hour before the closing of the door, and the lever is tripped before the bolts are thrown, the dog will be released; but inasmuch as it is moved by the spring into the locking position, it will be prevented from yielding to the spring by the hindrance of the bolts. When the bolts

are thrust forward, the dog will instantly move to its locking position, so that the lock is then an instant locker.

Infringement of the Little patent is not avoided by the fact that although the Chinnock lock has two adjustable devices for locking and unlocking automatically at predetermined times, which are the equivalents of the Little cam mechanism, yet it can be used as an instant locker. The principle of locking automatically is not affected by the instant locking. The lock is, and is use as an automatic locker at a predetermined time. The lever is tripped at the appointed time, and is ready to act upon the bolt work when the bolts are in proper position.

The other main point of alleged difference between the two locks is that the locking devices are actuated by mechanism of different methods of operation. It is said that the Little patent shows a direct combination of time mechanism with a movable dog, while the Chinnock lock has a combination of time mechanism, latching gear, and a movable dog, and the adjustable devices are in combination directly with the latching gear. "The time mechanism works on independently of the locking dog until a pin on the revolving dial trips the latch that holds the dog, whereupon the dog is shot like the bolt of a spring lock."

I do not regard the latching gear and the tripping of the latch that holds the dog as strictly a mechanical equivalent for the direct action of the cam upon the dog, but it is plain that at the date of the Little patent the Chinnock method of holding and releasing a dog was a well-known substitute for that part of the Little mechanism which performs the same 389 office, and therefore, so far as this mechanical combination is concerned, the latching gear and the tripping mechanism are a mechanical equivalent for the action of the cam upon the dog. *Foster v. Moore*, 1 Curtis, 291.

The point is made in the New Haven Bank case that the defendants are not infringers because they are mere users of a Chinnock lock, and, confessedly, have so used it heretofore; that it has always had the revolving pin which trips the latch lever so adjusted, with reference to the hours of closing the safe, as to act upon such lever at a time prior to the hour when, by the rules and custom, of the bank, the door of the safe is closed. The defendants use the lock, but do not use it as a subsequent locker. The lock has the capacity of being so used, and the defendants have the capacity so to use it. The lock is used as an automatic locker at a predetermined hour, for the reason which has been heretofore given.

In the specification of the Stockwell patent, No. 173,366, the patentee says: "Heretofore time locks have been constructed or arranged so as to allow the person who performed the winding of the clocks free access also to the adjusting devices, by which the hours of locking or unlocking are regulated and controlled. This construction involves a source of insecurity in affording to the said person, charged with the duty of winding, facilities for the accidental or fraudulent alteration of the adjusting device. My invention obviates this source of insecurity by isolating the adjusting devices from the winding devices, and by excluding from the adjusting devices the person who winds the clocks, except when he is allowed the use of the key to the supplemental lock by which the adjusting devices are secured. * * * The cover, A¹, is hinged at a² to the case, and is secured by a supplementary lock, a², and is provided with apertures, JJ, (shown by dotted circles over the winding posts,) through which apertures the clocks may be wound."

The first claim, which is the only one said to have been infringed, is as follows: "In combination with the case of a chronometric lock, having a lid or door for

covering the devices which control the hours of locking and unlocking, one 390 or more winding devices, whereby, the lock being attached to the safe door, the time mechanism can be wound from the exterior of the case while the safe door is open, but is inaccessible when said door is closed.”

So far as the first claim is concerned, the alleged invention is simply securing the door of a time lock with a key, and providing such door with an aperture through which the clock can be wound. In view of the Rutherford clock, the watch-man’s time detector, and, indeed, the clocks and watches which are commonly in use, the improvement seems to me to have been so obviously and plainly a mechanical one, that it is unnecessary to dwell upon this part of the case.

The Sargent invention, being re-issue No. 7,947, consisted, in the language of the specification—”*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 hereinafter described.”

The patentee further says: “The combination and arrangement of the time lock will be more fully hereinafter described; 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 predetermined hour, thus placing it beyond the power of any 391 person, until the arrival of the appointed time, to open the door; but, so 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 said door it was unlocked and the door could be opened by 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 constituted 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.

“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. 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 392 open the combination 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 banks and forced to open the locks. Neither can tampering with the combination lock affect the time lock. 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 as 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 applied 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.”

The Third claim is as follows: (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 the said door, with the time lock, having a lock bolt or obstruction for locking and unlocking, controllable from the interior of 393 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 the 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.”

The patentability and novelty of the combination which is the subject of the third claim, and the validity of that part of the re-issue, are the questions in this part of the case. Infringement is not denied. The history of the art shows, in addition to the statements made in the specification, that prior to the date of the invention two combination locks were used to dog the same bolt work; that a time lock upon the outer door and a combination lock upon the inner door of the same safe had been used, and that upon the same door a combination lock and a time lock had dogged

different and independent sets of bolt work. Sargent, however, was the first to dog and release the same bolt work of a door by a time lock and combination lock acting independently of each other, the time lock being automatically unlocked by the operation of the time movement. It is useless to discuss the question of novelty, for no anticipation of the combination which Sargent put upon one door has been attempted to be proved.

The important question in the case is whether the third claim states an invention which is patentable, or whether it states a combination of old devices which is simply an aggregation and produces no new result. It is necessary to ascertain in the first place the result, if any, which Sargent accomplished. Time locks had been known but were not widely used. One disadvantage was that the owner of the safe must be present during the unlocking period or the safe was unprotected. The use of two doors, with a combination lock upon upon one and a time lock upon the other, involved a very heavy expense. Combination locks were extensively used upon a single door, but the "masked burglaries" which began 394 in 1866 proved that the knowledge of a combination could be obtained from the possessor of the key by intimidation or violence, and that when thus obtained the contents of the vault were open to the burglar. The public became alarmed, and demanded a remedy for the unexpected inefficiency. Sargent answered the demand, and placed upon the door a time lock which dogged the bolt work, and prohibited mechanical opening till a predetermined hour in the morning, and placed also, in connection with the same bolt work, an independently action combination lock, so that although the lock was unlocked during the period when the time lock was in operation, the bolt work could not be retracted, and during the day, when time locks were not demanded, the key lock securely guarded the safe. This new

device met the wants of the public. The triple combination, as it was termed, went largely into use, and its efficiency was tested and demonstrated on the occasion of the attempted burglary of the banks in Great Barrington. The tick of the time lock proclaimed to the burglars who had compelled the unlocking of the combination lock that another obstacle must be surmounted before the door could be opened, and the scheme of robbery was abandoned. Much of the commercial success of the Sargent combination is undoubtedly attributable to the fact that he put into actual use a time lock which was far superior to its predecessors, and which had the confidence of the public. The result is that by the use of the both time and combination locking mechanism upon the same bolt work is avoided, and both the advantages of time locks and of combination locks are had, and the most important disadvantages of each are avoided. The presence of the time lock supplies strength to the weakness of the combination mechanism, while the use of the combination lock removes one of the disadvantages of the time lock.

The argument is most strongly and skilfully pressed that each of these locks furnished its own independent result; that each has its own separate and independent grip upon the bolt; that although they produce a combined result in 395 increased efficiency, this combined result arises merely from bringing two old devices into juxtaposition; that each device works out its own effect, and nothing more, and that the fruit of the union is no new result, but two old results. There is, therefore, no combination, but simply an aggregation. If the defendant is right in its premises, and no different force or effect or result is produced from the union of the several parts than from that given by the several parts, (*Reckendorfer v. Faber*, 92 U. S. 347,) and if the combined locks produce no other result upon the bolt than the sum of the two

old results, then the defendant's conclusion is correct. In my opinion a new result is produced by the union. The result of all safe-lock mechanism is capacity of the bolt to resist violence under varied circumstances of danger. The result of the union of time locks and combination mechanism, when in operation during the night season, is not merely the sum of capacity of resistance imparted by the two mechanisms, but because each mechanism strengthens the weakness of the other, and by its positive advantages fills up the deficiencies of the other. The result is a product of greater efficiency than is fairly represented by the sum of the two results. The result is not a combination of two results, but a result from the combined action of two locks upon the bolt work, each acting independently, but the action of each supplying the lack of the other. On the other hand, during the day-time, when the use of a time lock would be impossible, the safe is guarded by the combination lock, and the time lock is called into action only when its activity is needed. Thus the expense of two doors or of two bolt works is avoided, and the patentee gave to the public a safe door guarded by a combination of two different kinds of mechanism. The system as applied to one door was new, and produced a resultant efficiency which is different in kind from the efficiency of either one of the old devices when acting alone.

The next point in the defence is lack of invention. This is a theoretical defence, sustained by the opinions of able and ingenious men, who had not made safe locks when Sargent was constructing his device. The facts in the history 396 of the art, the many and futile attempts to construct a secure safe door, the demand of the public or security against the enforced surrender of a combination, the success of Sargent's thought and experiment, the satisfaction with which his result has been accepted by the public, and the change which his work has wrought in the art of safe building, so

that this “triple combination” is now very extensively used, prove that the opinions of able theorizers are at variance with history.

It is next urged that the third claim of the re-issue 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 re-issue. 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 board 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 re-issue, 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, key lock and time lock, acting independently of each other but jointly upon the bolt work, 397 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 re-issue is for a different invention from the original was pressed by either of the counsel for the defendant. It is sufficient to say 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.”

Let there be a decree in the Norwich Bank case for an injunction against infringement of the first and seventh claims of the Little re-issue, and of the third claim of the Sargent re-issue, and for an accounting; and let there be a decree in the New Haven Savings Bank case for an injunction against infringement of the first and seventh claims of the Little re-issue, and for an accounting.

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