3 Sheets—Sheet 1.

S. M. LILLIE.

Time-Lock Unlocking Attachment.

No. 223,933. **Patented Jan. 27, 1880.**

Fig. 1.

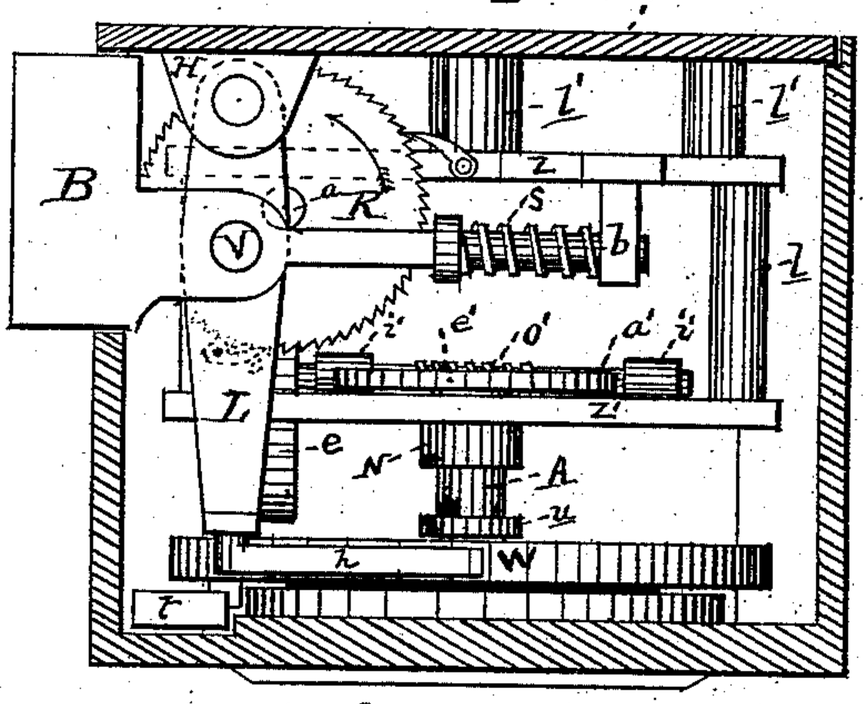


Fig. 4.

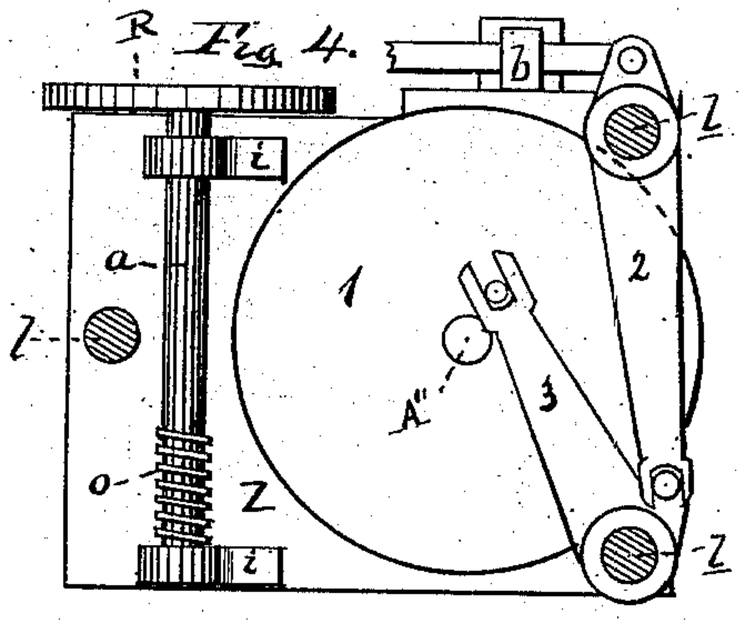


Fig. 2.

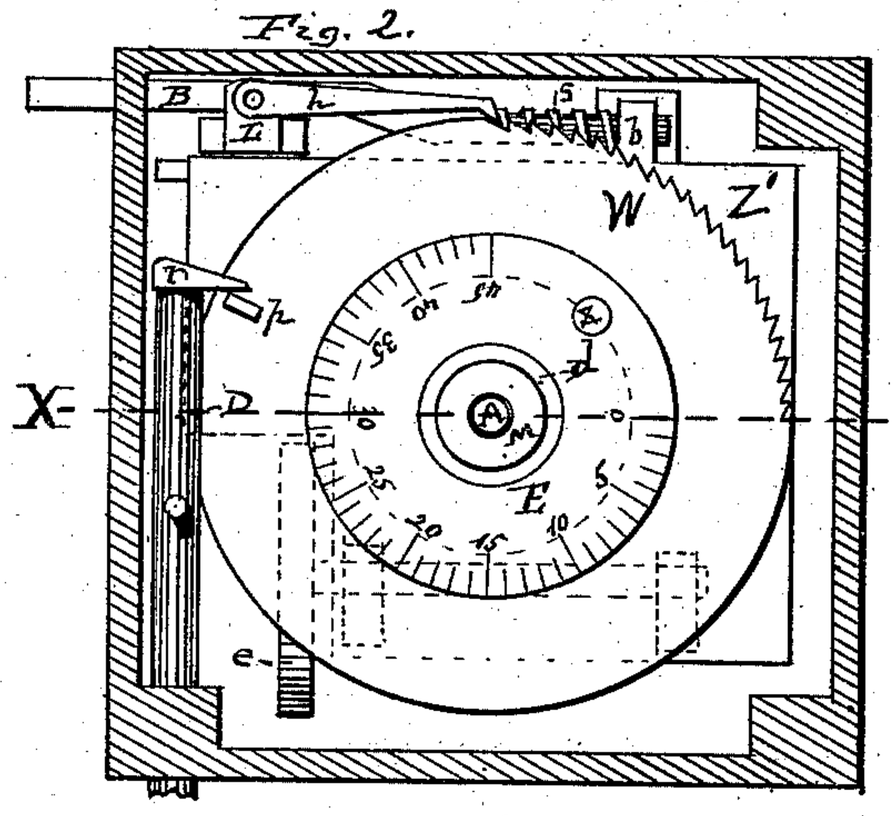


Fig. 5.

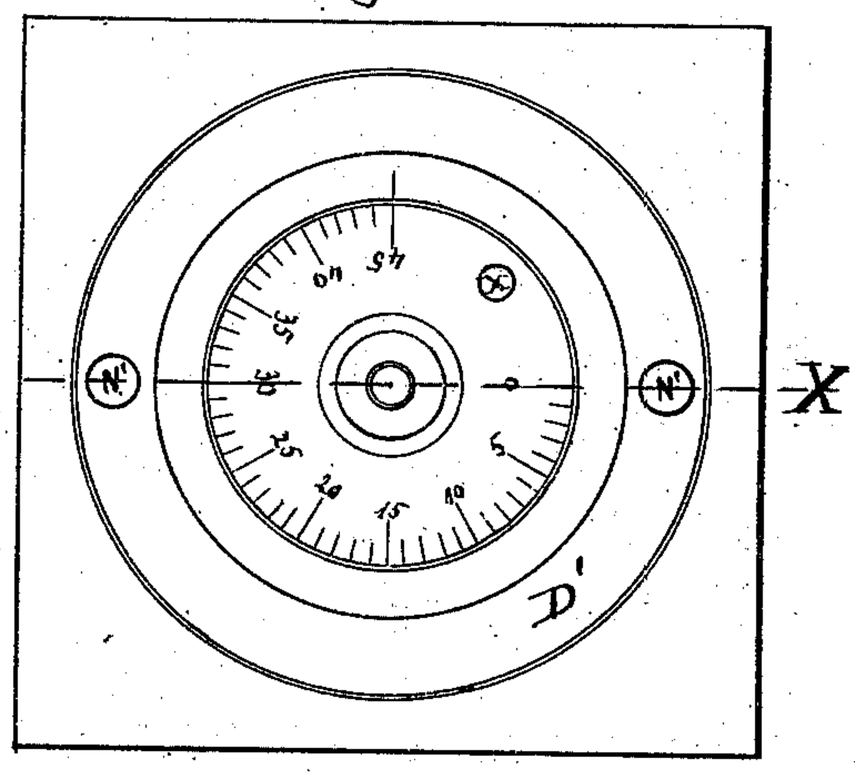


Fig. 3

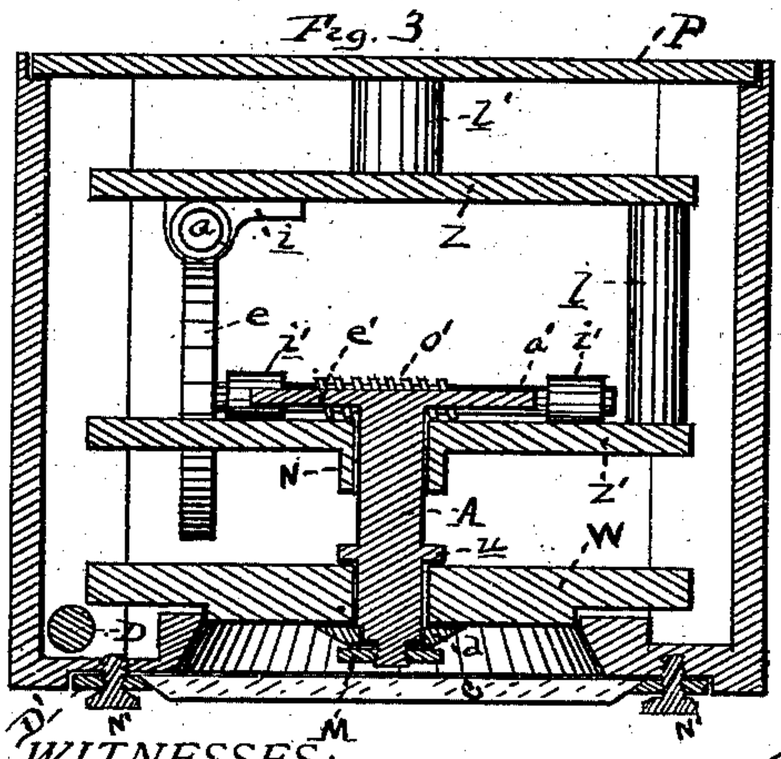
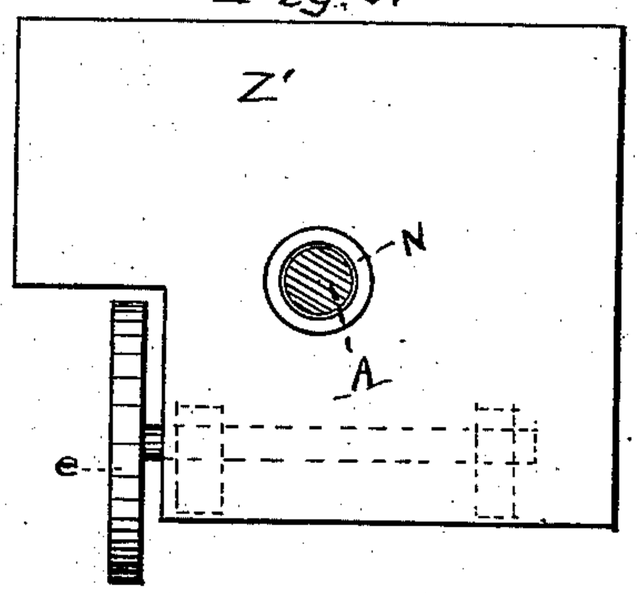


Fig. 6.



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No. 223,933. Patented Jan. 27, 1880.

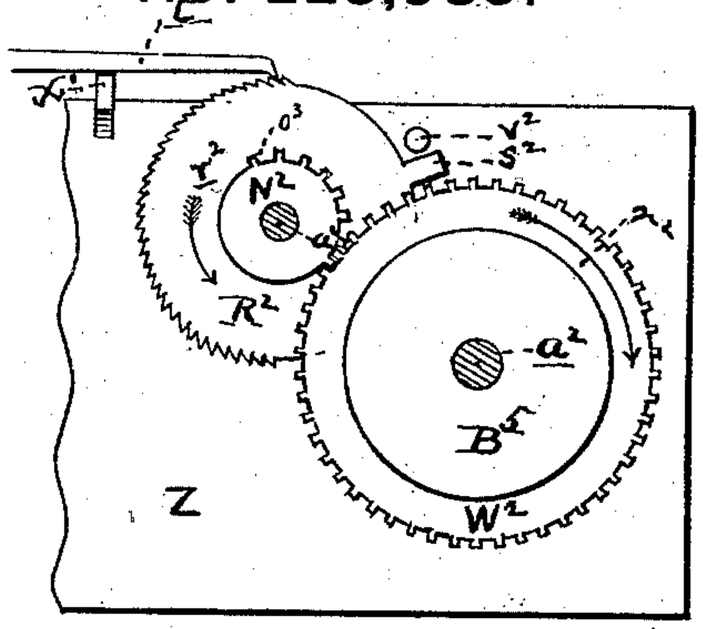

Fig. 1.

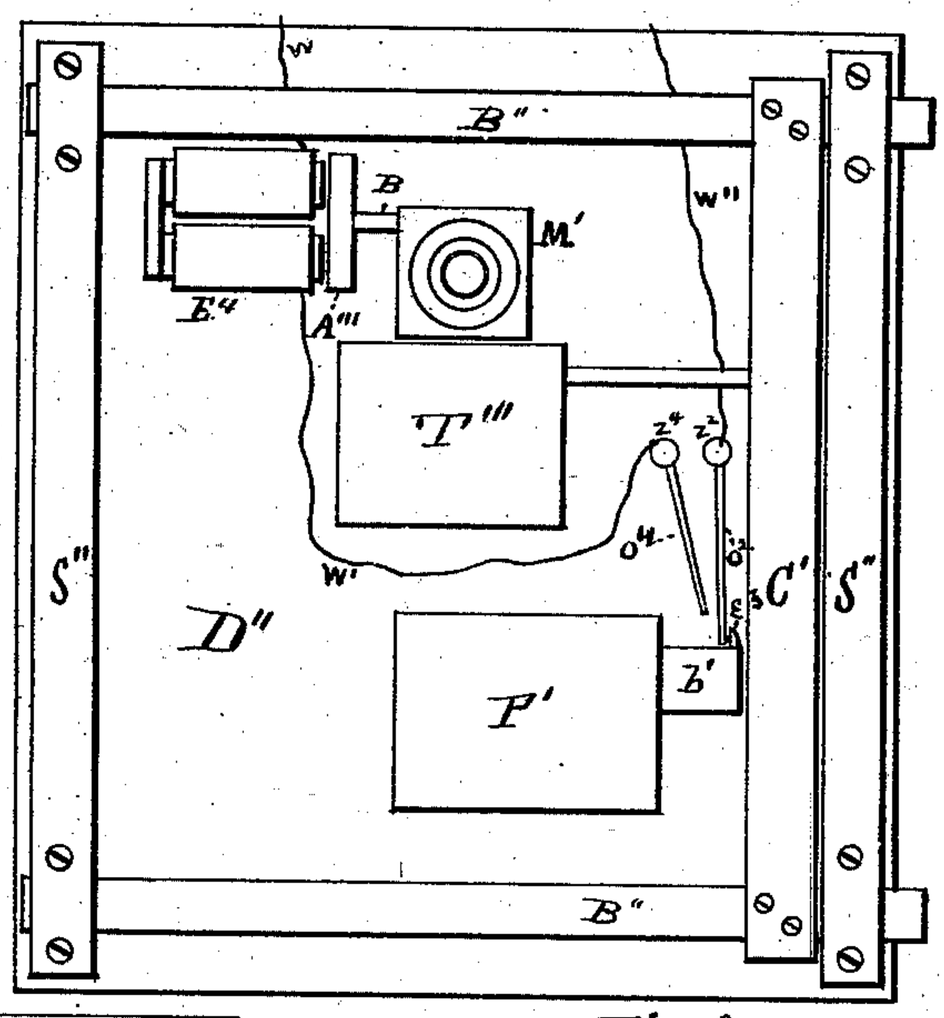

Fig. 8.

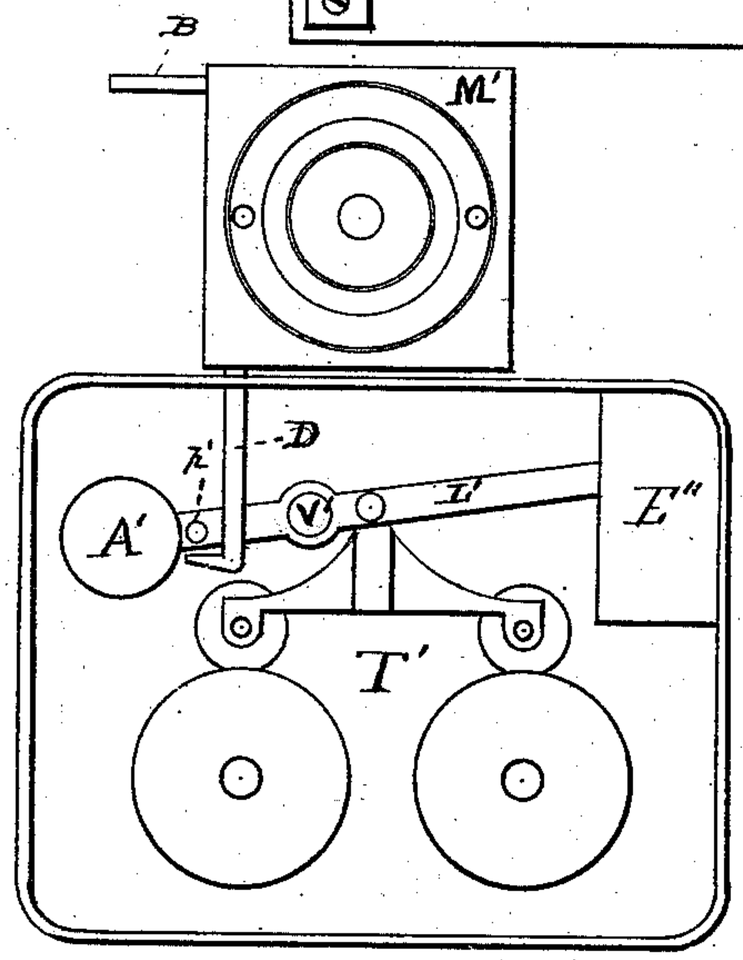

Fig. 9.

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Time-Lock Unlocking Attachment.

No. 223,933. **Patented Jan. 27, 1880.**

Fig. 10.

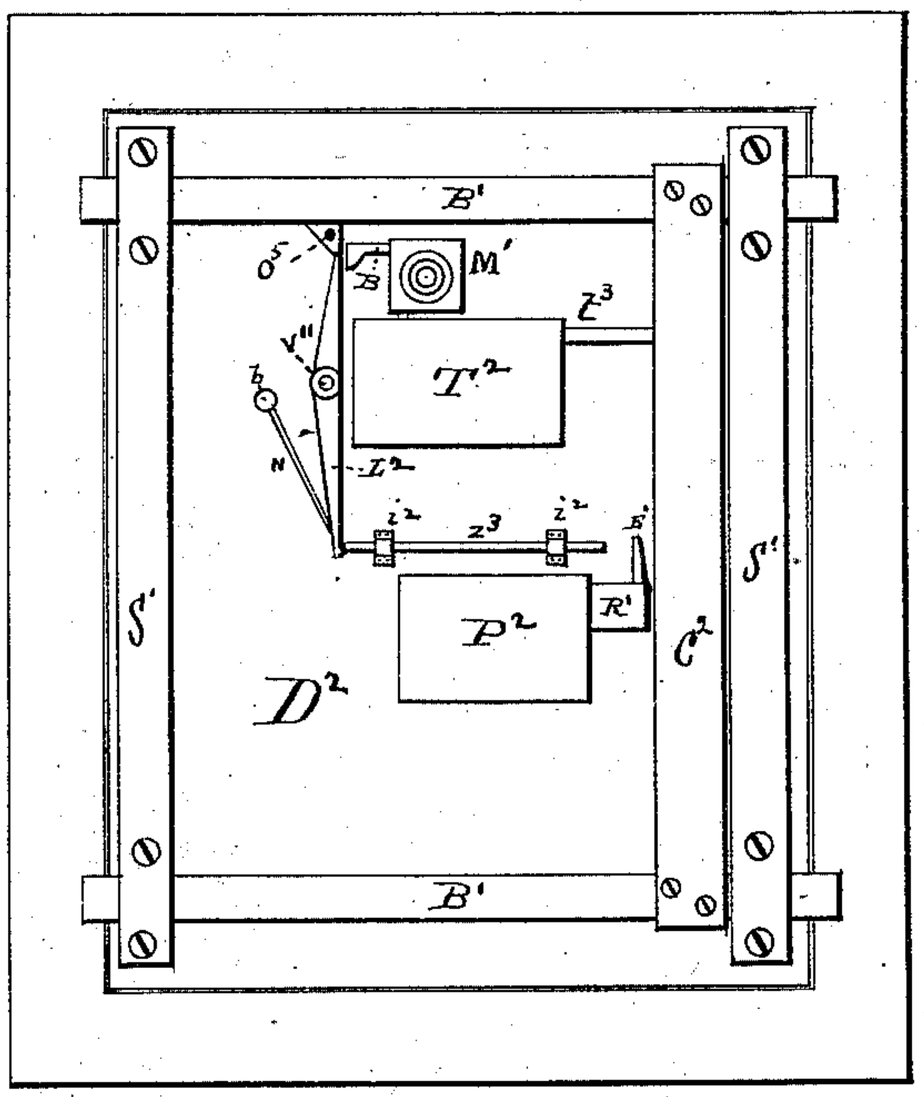
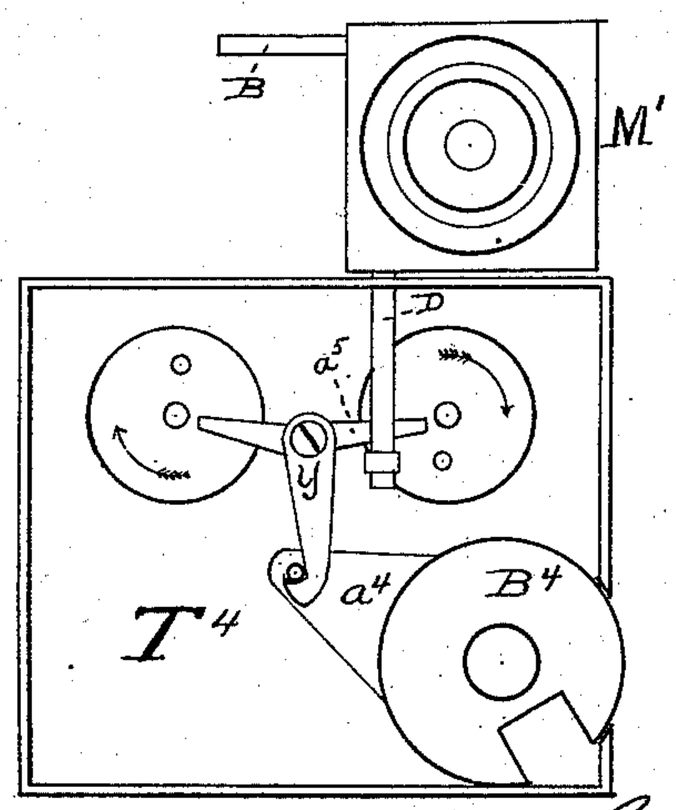


Fig. 9a



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UNITED STATES PATENT OFFICE.

S. MORRIS LILLIE, OF PHILADELPHIA, PENNSYLVANIA.

TIME-LOCK-UNLOCKING ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 223,933, dated January 27, 1880.

Application filed August 11, 1879.

To all whom it may concern:

Be it known that I, S. MORRIS LILLIE, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Unlocking Attachments for Time-Locks, of which the following is a specification, reference being had to the accompanying drawings.

In the drawings, Figures 1, 2, 3, 5, and 6 show one arrangement of my invention. Fig. 4 shows a modification of it. Fig. 7 shows a modification of my invention in which a time-movement is used to operate its mechanism. Figs. 9 and 9ª show the way of connecting the mechanism of my invention with that of time-locks of different constructions; and Figs. 8 and 10 show my invention in place on a safe-door, and methods of operating it.

Fig. 1 is a view of my mechanism with the top of its case removed to expose the interior to view. Fig. 2 is a front view with the front of the case removed. Fig. 3 is a horizontal section of Figs. 2 and 5 along the broken line X X. Fig. 5 is a front view of the mechanism; and Fig. 6 is a detached view of one of the two frame-plates to which the parts of the mechanism are attached, and by which they are held in their relative positions.

All of the interior mechanism is attached to the back plate, P, of the case, which can be removed with the mechanism from the case, after unloosening the screws which hold it in place.

Z is a frame-plate parallel to the back plate, P, of the case, and attached to the same by the pillars *l'*. Z' is a second frame-plate, supported by the pillars *l* projecting from the face of the plate Z.

H is a lug projecting from the back plate, P, into the upper left-hand corner of the interior. To the under side of the lug H is pivoted the lever L, which extends toward the front of the case, and is free to be oscillated horizontally.

B is a slide passing through the side of the case just below the top and extending over the lever L, between it and the top of the case. Beyond the lever it is reduced in size to form a tongue or rod, which has a bearing in the support *b*, and has upon it the spiral spring *s*, which bears against the shoulder on the tongue and the side of the support *b*, and tends to keep the slide B always projected.

The slide B is pivoted at V to the lever L, and if moved back and forth will cause the lever to oscillate horizontally.

The lever L bears on its under side a click, (shown in dotted lines in Fig. 1,) which engages with the teeth of the horizontal ratchet-wheel R, which is on the upper extremity of a vertical arbor, *a*, supported on the frame-plate Z by the bearings *i i*, (see Fig. 4,) which is a detached view of the frame-plate Z. The oscillations of the lever L cause the wheel R to revolve, as indicated by the arrow.

On the arbor *a* is a worm, *o*, which engages with the teeth of the cog-wheel *e* on the end of the horizontal arbor *a'*, which is supported in the bearings *i' i'* attached to the back of the frame-plate Z'. The arbor extends parallel to the plate Z', and is located some distance below the middle line or plane of the case, extending from front to back.

The horizontal arbor *a'* also bears a worm, *o'*, which gears with a vertical cog-wheel, *e'*, which is attached to the rear extremity of a horizontal arbor, A, which passes through the plate Z', in which it has a broad bearing, N. The axis of the arbor A is also the axis of the case, extending from the front to the back plates, and if prolonged would pass through the center of the circular opening in the front of the case, which is closed by the door D', containing the crystal C.

The ratchet-wheel R and the cog-wheels *e e'* each have sixty teeth, and the motion of the slide B is so limited in extent that the oscillations of the lever L caused by it will revolve the wheel R one tooth for each oscillation of the lever L, and hence it follows that if the slide B is pressed in and allowed to spring out again once in a second the wheel R will revolve once a minute, the cog-wheel *e* once an hour, and the cog-wheel *e'*, and consequently the arbor A, once in sixty hours. In what follows the rate of oscillation of the lever L is supposed to be once a second.

In front of the bearing N the arbor A has a shoulder, *u*, on it, and in front of the shoulder a large wheel, W, rests loosely on the arbor until bound to it, as hereinafter described. In front of the wheel W the arbor is flattened for a short section, and bears the washer *d*, which fits on this flattened section, and so can only

turn with the arbor. In front of the washer the arbor is of a smaller diameter, is threaded, and bears the nut M. By tightening the nut M the washer *d* will be pressed against the wheel W, and the latter against the shoulder, thus binding the wheel W to the arbor A, so that it will revolve with the arbor, and can only be revolved on it with difficulty.

One-quarter of the periphery of the wheel W is cut into ratchet teeth, the remaining three quarters being smooth. On the periphery of the wheel W rests a click, *h*, attached to the end of the lever L, which is oscillated by the slide B. When the geared arc of the wheel W is underneath the click *h* every oscillation of the lever L will revolve the wheel one cog until the limit of the geared portion is reached. When the smooth arc is beneath the click *h* the wheel can only be revolved by the slide B by means of the mechanism hereinbefore described, and at a rate of one revolution in sixty hours. At this rate the smooth arc, three-quarters of the circumference, would correspond to forty-five hours motion of the wheel.

D, Figs. 2 and 3, is a vertical rod passing through the bottom of the case to the extreme left, just back of the front plate of the case, and between it and the face of the wheel W. The upper extremity of the rod D bears an ear, *r*, projecting from it horizontally toward the right, and parallel to the face of the wheel W. From the face of the wheel projects a pin, *p*, Fig. 2, which, as the wheel is revolved, will engage the ear *r* and lift the rod.

When the mechanism is attached to a time-lock on a safe-door the rod D is so connected with the mechanism of the lock that the raising of the rod will effect the unlocking of the time-lock.

The pin *p* is so situated on the face of the wheel W that when the wheel is in such a position that the click *h* will engage the first spur of the geared arc the pin will just have reached the ear *r* on the rod D, and will raise the same on a further revolution of the wheel. The length of the ear *r* is such that the pin *p* on the wheel W will either have passed clear of the ear, having raised the rod, or nearly so, when the click *h* has pushed the last spur on the wheel W. Pressing back the slide B once a second, the time required for raising the rod D will be but a few seconds, as the wheel W will be revolved one spur by each oscillation of the slide B and lever L. As the rod D is not raised until the wheel W is revolved so that the click *h* engages the first spur, it follows that when the smooth arc of the wheel is beneath the click *h* the wheel must be revolved until the click can engage the first spur before the rod D can be raised, and to do this by means of the slide B and the intervening mechanism will require a time depending upon how much of the smooth arc intervenes between the click *h* and the first spur of the wheel.

The central portion of the wheel W is raised, forming a circular disk, E, which is of the same diameter as the circular opening in the front of the case into which it projects. Three-quarters of the circumference of this raised disk is divided into forty-five equal parts, and the divisions numbered 0 to 45.

The beveled face of the opening in the front of the case has an indicating-mark at the top, by which the disk or dial E may be set, and the divisions on the dial are so placed that when the zero (0) corresponds to the indicating-mark the click *h* will be in engagement with the first spur of the wheel W, and when the 45 mark or division corresponds with the indicating-mark the click *h* will have pushed the last spur on the wheel W, and can have no further moving action on the wheel, and at the rate of one oscillation of the slide B per second forty-five hours would be required to revolve the wheel so that the zero would correspond to the indicating-mark, and so each of the forty-five divisions corresponds to one hour's motion of the wheel W. If the division numbered 30 is brought to coincide with the mark, it would take thirty hours to bring the zero to the mark, and thus reach the unlocking-point, and so, generally, the number of hours required to reach the unlocking-point will be indicated by the number of that division of the dial which corresponds with the indicating-mark.

On the face of the dial E is a pin, *x*, to assist in turning the dial for setting it, and consequently the wheel W. When desired, the wheel W need not be made adjustable, but may be fixedly set on its arbor when the mechanism is made so that the time required to unlock the lock by it may be that wished by its purchaser. This would render impossible the setting of the mechanism so that it could be operated to unlock the time-lock in a few seconds, and thus make void the security offered by the time-lock.

Fig. 9 shows the method of connecting my unlocking mechanism with a Yale lock so that it may be unlocked by it by pressing the slide B in and allowing it to spring out a sufficient number of times.

T′ is a view of the interior of a Yale time-lock in which are shown, in outline, those parts through which the movements effect the unlocking and locking of the lock. Of these parts, L′ is a lever, pivoted at V′, bearing a counterpoise, A′, at its extremity toward the left, and a block at its extremity on the right, inside the chamber in E″. It is sufficient for the purpose to state that when the lever L′ is in the position shown the lock is locked, and that the raising of the arm of the lever on the left of the pivot V′, and the consequent lowering of the arm on the right unlocks the lock. The unlocking mechanism is placed directly over the lock, with the rod D passing through the top of the lock-case into the interior down in front of and a little below the lever L′. The lower extremity of the rod D has an ear on it projecting to the left under a pin, *p′*, projecting from the face of the lever.

It is plain that the raising of the rod D by means of the mechanism M′ will effect the raising of the arm of the lever on the left of the pivot, and thus the unlocking of the time-lock.

Fig. 9ª shows my invention connected with a Sargent time-lock. In it T^4 represents a Sargent time-lock with the principal parts shown in outline. B^4 is the revolving bolt of the lock, held in the locked position by the yoke Y, as shown. The tripping of the yoke so that it is disengaged from the pin on the arm a^4 of the bolt B^4 allows the latter to revolve into the unlocked position. M′ is my unlocking attachment, placed just above the time-lock, and with its rod D passing through the top of the lock-case and extending down to a point a little below the arm a^5 of the yoke Y. From the lower extremity of the rod D a step projects underneath the arm a^5 of the yoke Y, so that as the rod D is raised by the operating of the attachment M′ it will lift the arm a^5, and thus trip the yoke and allow the bolt B^4 to revolve into the unlocked position.

My invention can be as readily used in connection with other time-locks as with the Yale and Sargent locks, and I have only used them as examples.

When, for any reason, the mechanism M′ cannot be placed above the lock, as shown, it may be placed in any position, with suitable mechism connecting it with the time-lock, so that the desired effect will be produced.

In Fig. 8 I show my invention in position on a safe-door in connection with a time-lock, and arranged to be operated from the exterior by means of electricity. D″ is the door, having two bolts, B″ B″, united by the tie-bar C′ and held to the door by the staple-bars S″ S″. P′ is the combination-lock; T‴, the time-lock; M′, my unlocking mechanism, which is connected with the time-lock. The bolts B″ B″ are shown projected and the combination-lock as locked, its bolt b' being projected. Attached to the extremity of the slide B of the mechanism M′ is a bar of soft iron, A‴, which acts as an armature for an electro-magnet, E M, attached to the door, with its poles facing the armature A‴.

When the mechanism M′ is to be operated by electricity and an electro-magnet, as in the case now being considered, the spring on the tongue of the slide B in the interior of the case is arranged so as to tend to keep the slide B drawn in, and it is consequently the reaction of the spring that is the power that revolves the ratchet-wheel R, Fig. 1. The distance between the poles of the electro-magnet and the face of the armature A‴, when the slide B is drawn in by the spring, is equal to the throw of the slide B required for working the mechanism, which is a little more than one thirty-second of an inch. If a suitably-powerful current of electricity be passed through the coils of the electro-magnet, the armature A‴ and the slide B will be drawn toward it, and the stopping of the current will allow the reaction of the spring on the tongue of the slide B to pull or throw back the slide and armature. Thus the closing and breaking once of the circuit which conducts the electricity to the magnet will cause one oscillation of the slide B and the lever L, Fig. 1, and by repetitions of the same the mechanism will be worked to unlock the time-lock.

W W″, Fig. 8, are wires passing from the interior of the safe to the exterior around the jamb of the door, which, when the unlocking mechanism is to be worked, are connected, respectively, with the poles of some source of electricity and with means for alternately breaking and closing the circuit. The wire W″ in the interior connects with an insulated metal stub, Z^2, attached to the face of the door. The wire W connects with one end of the coil of wire of the electro-magnet, the other end, W′, of which is connected with a second insulated metal stub, Z^4, attached to the face of the door. Extending downward toward the bolt b' of the combination-lock from the two insulated studs, Z^4 Z^2, respectively, are the two spring-like pieces of metal, o^4 and o^2, the lower end of the latter of which bears against the rear of the ear e^3, projecting from the upper surface of the bolt b' of the combination-lock P′, and is moved back and forth as the bolt b' is retracted and projected in the unlocking and locking of the combination-lock. The end of the strip of metal o^2 is insulated from the ear e^3 and bolt b', and both o^4 and o^2 are insulated from the face of the door. While the bolt b' is projected there is no contact between the two strips of metal o^4 o^2, and only when the lock P′ is unlocked and the bolt b' retracted is there any contact between the strips of metal.

The contact between the two strips o^2 o^4 forms a connection between the wire W″ and the wire W′, and it is only when there are such a contact and connection that a closed circuit can be formed, and the electro-magnet and mechanism M′ operated by electricity. Thus it is only after the combination-lock has been unlocked that the mechanism M can be operated by electricity to unlock the time-lock T‴. Should it be wanted to unlock the time-lock by means of the mechanism M′ and electricity, the mode of procedure would be to get a suitable galvanic battery and connect its poles with the extremities of the wires W and W″ on the outside of the safe, and then to alternately break and close the circuit until the mechanism should unlock the time-lock. Having made the connection between the wires and the poles of the battery, the circuit could be alternately broken and closed by throwing the lock-bolt in and out by means of the lock-spindle. Again, the circuit could be alternately broken and closed on the outside of the safe by means of the swinging of a clock-pendulum, or by one of many devices operated by time-movements, such expedients for breaking and closing circuits being common, and then, having made the proper connections, no trouble or care would be required for the operating of the mechanism.

Fig. 10 shows my mechanism M′ attached to a safe-door, D^2, in connection with a time-lock, T^2, and arranged so that it can be operated to unlock the time-lock by either the spindle of the train-bolts or the spindle of the combination-lock. B′ B′ are two bolts joined by the tie-bar C^2, and held to the door by the staple-bars S′ S′. The bolts are thrown back and forth in the ordinary manner by a spindle passing through the door. P^2 is the combination-lock, which is also operated by a spindle passing through the door. The bolts are represented as projected and the combination-lock as locked, with its bolt R′ bearing against the tie-bar C^2, so that no motion can be given to the bolts by the bolt-spindle. The time-lock T^2 clogs the bolts through the tongue t^3, attached to the bar C^2 and extending back to the time-lock. The tongue t^3 is of such a length that, the combination-lock P^2 being unlocked and the time-lock T^2 locked, the bolts of the door may have a slight play given them by their spindle—say a little over one thirty-second of an inch.

The unlocking mechanism M′ is placed on top of the time-lock T^2, and is connected with it in the manner hereinbefore indicated. A lug, o^5, projects from the bolt B′ and bears against the end of the slide B of the mechanism M′ in such a manner that when the bolts are entirely projected the slide B will be pressed into the mechanism-case, and when the bolts are retracted sufficiently the slide B will be free to be thrown out to the extent of its throw—a little over one thirty-second of an inch—by its spring *s*. (See Fig. 1.) Thus, after the combination-lock has been unlocked, by throwing the bolts back and forth by their spindle to the extent permitted by the time-lock while locked, the oscillations will be given to the slide B of the mechanism, which, if continued long enough, will unlock the time-lock. The upper extremity of the lever L^2, which is pivoted to the door at v'', bears against the end of the slide B of the unlocking mechanism. The lower end bears against the end of the horizontal rod Z^3, supported in the bearings i^2 i^2, and in which it is free to slide horizontally. The rod Z^3 extends to the left to a point a little beyond the end of the case of the combination-lock P^2. On the upper surface of the lock-bolt R′ is a vertical projection, E′, extending above the level of the rod Z^3. The length of the rod is such that when the lock-bolt R′ is retracted by the lock-spindle the projection E′ will move the rod Z^3 a short distance to the right, which will, in turn, oscillate the lever L^2 on its pivot, and the upper arm of the lever will press the slide B of the mechanism back. The projection of the bolt R′ by the lock-spindle allows the spring N to move the lever L^2 and rod Z^3 into their former positions, which permits the slide B of the unlocking mechanism to be thrown out again by its spring. Thus, by throwing the combination-lock bolt in and out by the lock-spindle, the reciprocating motion may be given to the slide B of the mechanism M′, which, if continued long enough, will unlock the time-lock independently of its time-movements. In a similar manner the mechanism M′ could be connected with any spindle passing through the door.

Fig. 5 shows a device which, in some cases, it would be advantageous to embody in the unlocking mechanism, its object being to prevent the slide B being reciprocated more rapidly than at a given rate.

Z is the back frame-plate of the mechanism. 1 is a balance-wheel supported on a stub, A″, projecting from the plate Z. This wheel is connected with the tongue of the slide B by the series of levers 2 and 3, which swing on the pillars *l l* between the two frame-plates, and operate to impart oscillations to the wheel 1 corresponding to the reciprocations of the slide B. The slight motion of the slide B causes a very considerable motion in the wheel 1. With the dimensions given in the drawings a motion of one thirty-second of an inch of the slide would cause an oscillation of about one hundred and forty-four degrees in the wheel 1.

The wheel 1 will act as a governor to the rate of the projection of the slide B by its spring S, and by properly proportioning the weight of the wheel and the strength of the spring S the time required by the spring to project the slide B may be made to be anything desired. With this provision, or one answering the same purpose, embodied in the unlocking mechanism, it would be impossible to work it faster than at a certain rate, and without such a regulator there would be scarcely any limit to the speed at which the mechanism could be operated when worked by electricity, as shown in Fig. 8.

In Fig. 7 is shown a part of a second arrangement of my invention, in which the mechanism shown in Figs. 1, 2, and 3 is supplemented by a time-movement placed in the same case, and so geared with a second cog-wheel on the arbor A that the latter will be revolved by the time-movement when running at the same rate at which it would be revolved by the other mechanism, supposing the slide B to be reciprocated once a second—viz., one revolution in sixty hours. The two cog-wheels on the arbor A, with which the movement and the mechanism are respectively geared, each revolve the arbor A by means of a ratchet-wheel on the arbor and a click on itself, so that the arbor may be revolved either by the time-movement or by the other mechanism. The movement is so arranged with respect to the slide B that, having been wound, it will be held so that it cannot run and revolve the wheel W until after the slide B has been pressed in and allowed to spring out rapidly a number of times, which having been done, the movement will be thereby freed, and will run and revolve the wheel W at the rate of once in sixty hours.

The gearing of the movement with the arbor A so that it will revolve the latter once in sixty

hours, and the gearing of both the movement and the mechanism, Figs. 1 to 6, with the arbor A by means of ratchet-wheels and clicks, so that each may revolve the arbor independently of the other, needs only to be stated to be fully understood by those versed in such matters, and therefore, in illustrating this second arrangement of my invention, I have only shown the manner in which the movement, having been wound, is prevented from running until freed by the pressing in and out of the slide B.

In Fig. 7, Z is the rear frame-plate of my mechanism, between which and the plate Z′ the movement is arranged to the right of the mechanism shown in Figs. 1 to 6, the case of the mechanism and the frame-plates Z Z′ being enlarged and extended toward the right to allow room for the movement. The plate Z′ is not shown in Fig. 7.

W^2, Fig. 7, is a gear-wheel on the mainspring-arbor a^2 of the movement. B^2 is the barrel on the same, containing the mainspring. R^2 is a ratchet-wheel containing teeth on a portion of its circumference. t^2 is a click attached to the lever L, Fig. 1, and extending from it to and working with the ratchet-wheel R^2, so that each vibration of the lever L by the slide B will revolve the ratchet-wheel R^2 one cog so long as the geared portion of the wheel is beneath the click. The click t^2 rests upon a support, X′, which prevents its resting on the ratchet-wheel while it is in its extreme position toward the left—that is, when the slide B, Fig. 1, is projected. When in this position the click t^2 offers no impediment to the revolution of the ratchet-wheel R^2.

N^2 is a small wheel on the same arbor as the ratchet-wheel R^2, and gears with the wheel W^2 on the mainspring-arbor. But about one-half of the circumference of this wheel N^2 bears teeth, the remainder being smooth.

A pin, V^2, projecting from the face of the plate Z, and an arm, S^2, extending from the edge of the ratchet-wheel R^2, limit the revolution of the ratchet-wheel and of the cog-wheel N^2 in the direction of the arrow r^2. While the arm S^2 is in contact with the pin V^2, as shown, the first spur of the ratchet-wheel is in position to be engaged by the click t^2 and the first cog of the wheel N^2—that is, the first cog on the right—is in gear with the wheel W^2.

The wheel W^2 revolves in the direction of its arrow when the movement is running, and is revolved by the winding of the movement in the contrary direction.

It is evident that as long as the wheel W^2 is in gear with the small wheel N^2 the movement can only run until the arm S^2 on the ratchet-wheel is brought into contact with the pin V^2, and also that when the smooth arc of the wheel N^2 faces the wheel W^2 the movement is free to run and revolve the wheel W, Figs. 1, 3.

To put this arrangement in order for use the movement is fully wound, or nearly so, the ratchet-wheel R^2 and wheel N^2 are turned so that the last tooth, o^3, on the latter is engaged with the teeth of the wheel W^2, and the movement is allowed to run, which it will do until the arm S^2 is brought into contact with the pin V^2 and things are in the position shown in Fig. 7.

We will suppose that the mechanism is placed on a door in connection with a time-lock, and that it is to be operated by the train-bolts and spindle, as in Fig. 10. To start the movement of the unlocking mechanism so that it will operate the same and unlock the time-lock, it is only necessary to unlock the combination-lock P^2, Fig. 10, so that a motion may be given to the train-bolts, and then to vibrate the latter rapidly thirty to forty times by means of their spindle, which will produce corresponding vibrations of the slide B, lever L, Fig. 1, and tongue t^2, Fig. 7, which will cause the revolution of the ratchet-wheel R^2 and cog-wheel N^2, Fig. 7, until the smooth arc of the latter is brought to face the wheel W^2, and thus frees the movement and allows it to run and operate the unlocking mechanism, as hereinbefore described. As long as the wheels N^2 and W^2, Fig. 7, are in gear the revolution of the ratchet-wheel by the click t^2 will revolve the wheel W^2 in the winding direction. The occasional retraction and projection of the train-bolts, as in the ordinary use of the safe, will not effect the starting of the movement, for the reason that unless the retractions and projections of the bolts follow each other rapidly the wheel W^2 will, in the interims, revolve the ratchet-wheel R^2 back into the position shown in Fig. 7.

The object of the time-movement is to do away with the labor of working the train-bolts back and forth by means of their spindle.

I have thus shown and described one arrangement of my unlocking mechanism, two modifications of the same, and three ways of operating it from the exterior of the safe when attached to the door of the same in connection with a time-lock—viz., by means of electricity, and by the combination-lock spindle and the train-bolt spindle.

I do not wish to be understood as claiming as my invention an unlocking device when embodied in a time-lock and forming a portion of the same, but only an unlocking device when forming a distinct mechanism adapted to be attached to time-locks which contain no such device.

The distinction between the devices shown in my present application and those shown in my previous patent, No. 212,101, February 11, 1879, is that in the former the devices operate to unlock the time-lock, while in the latter the devices shown operate to disconnect the bolt-work from the time-lock, the latter remaining locked.

I claim—

1. The combination, on a safe or vault door, of a time-lock, an unlocking attachment for the same, consisting of the slide B, lever L and ratchet, ratchet-wheel R, arbor a, worm o, cog-wheel e, arbor a', worm o', cog-wheel e',

arbor A, wheel W, and connecting-rod D, intermediate mechanism connecting the rod D with the mechanism of the time-lock, and intermediate mechanism connecting the slide B with the exterior of the safe or vault, and operating the mechanism of the attachment to unlock the time-lock independently of its movements, substantially as and for the purpose specified.

2. In an unlocking attachment for time-locks, an adjustable mechanism for varying the time required to operate the attachment to unlock the time-lock, in combination with a graduated device for setting the same, substantially as and for the purpose specified.

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