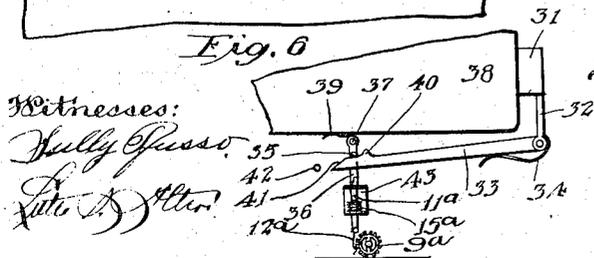
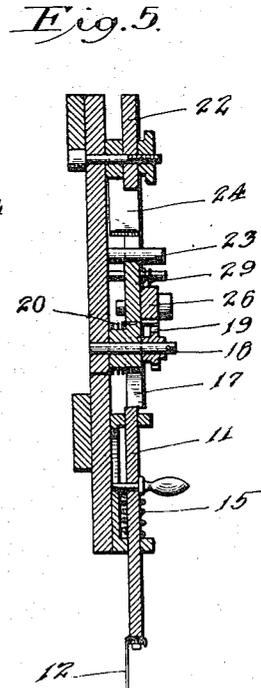
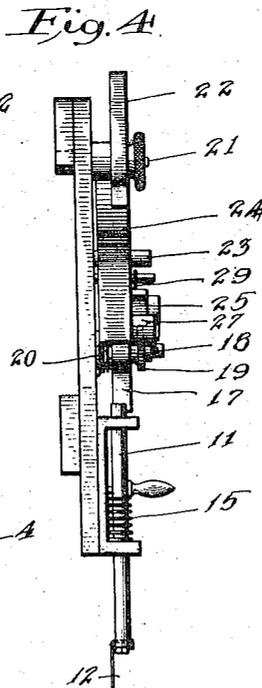
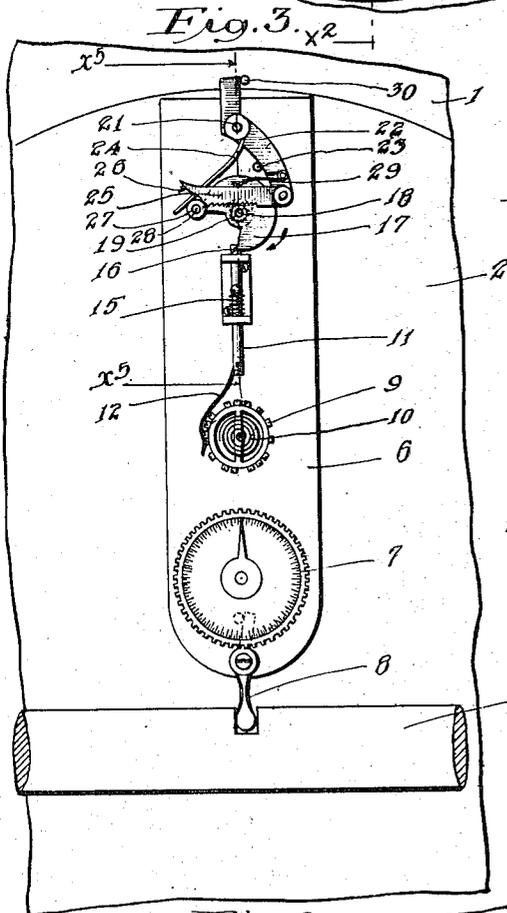
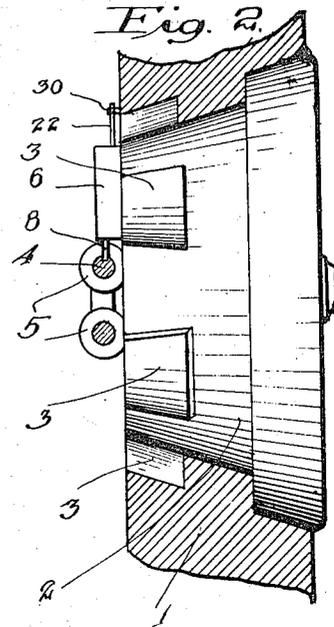
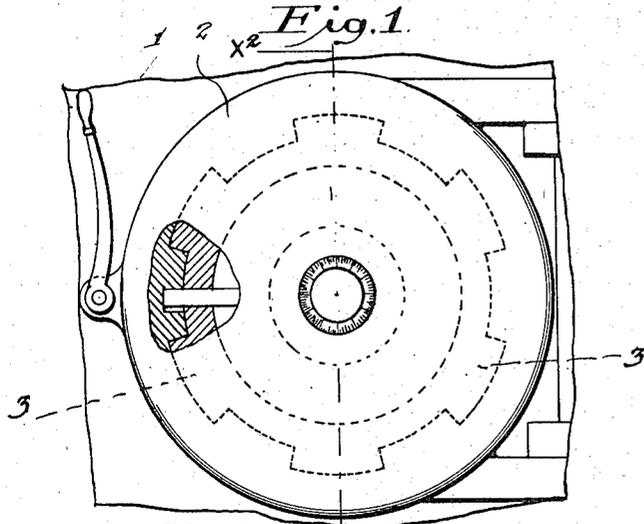


H. C. STOCKWELL.
 TIME LOCK ATTACHMENT.
 APPLICATION FILED JUNE 27, 1914.

1,147,905.

Patented July 27, 1915.



Witnesses:

Willy Opasso
John D. Allen

Inventor
 Herbert C. Stockwell
Lawrence

UNITED STATES PATENT OFFICE.

HERBERT C. STOCKWELL, OF LOS ANGELES, CALIFORNIA.

TIME-LOCK ATTACHMENT.

1,147,905.

Specification of Letters Patent.

Patented July 27, 1915.

Application filed June 27, 1914. Serial No. 847,702.

To all whom it may concern:

Be it known that I, HERBERT C. STOCKWELL, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Time-Lock Attachment, of which the following is a specification.

The object of this invention is to provide an attachment for time locks, which will act to guard banks against daylight robberies, being so constructed as to permit the safe containing reserve funds to be locked with the device and capable of being unlocked after the lapse of a predetermined interval, which interval will commence to run from the time when it is desired to open the safe to give access to the reserve funds. While any time lock, of course, is capable of being set to run for a desired interval and to then allow the safe to be unlocked, such time lock is so constructed that it commences to run from the time the safe is locked. The present device, however, while capable of running for the desired definite interval, does not commence to run at the time the safe is locked, but commences to run at the time the first step is taken toward unlocking the safe, as, for example, by the slight movement caused by the lost motion of the locking bolts. Thus, during the night or over Sunday or holidays, the safe will be guarded by the usual time locks, and in opening the bank for business, the safe will be opened in the usual manner. Such funds as are desired for the usual run of business may be removed from the safe and placed on the counter, and the reserve funds which are not ordinarily needed will remain in the safe, and instead of leaving the safe unlocked, as is customary, the safe will be shut and locked with the present device set. If at any time during the day a robber demands money from the safe, it will be impossible to comply with his request, because it will require, for example, one-half hour in which to open the safe, and this interval will frustrate the attempted robbery. When such a demand is made, the cashier or other attendant can say that he will do everything possible to get the safe open, but that it will take at least a half hour to open it, and may move the locking bolt to take up lost motion therein, which will release the attachment and cause it to commence to run, and the device will then run for one-half hour, assuming it to have been set for that interval, and at the

expiration of such time, will permit the safe to be opened. If the robber waits during this interval, he runs a risk of being caught, as people will come into the bank, and the attendant will have opportunity to summon assistance. On the other hand, if during the day's business a regular and lawful demand is made for funds, which must be taken from those stored in the safe, the attendant can explain to the person desiring such funds that they will be given him in one-half hour, which is a reasonable interval and occasions no great inconvenience. The device is primarily intended for country banks, but is, of course, adapted to be used on any safe.

Referring to the drawings, Figure 1 is a front view of a portion of a safe provided with a circular door. Fig. 2 is a cross section on line x^2-x^2 , Fig. 1. Fig. 3 is a view of the inner side of the door on an enlarged scale showing the attachment and time lock. Fig. 4 is an enlarged view in side elevation of the attachment. Fig. 5 is an enlarged section on line x^5-x^5 , Fig. 3. Fig. 6 is a side elevation of a modified form of device.

1 designates the body of the safe, and 2 designates a circular door provided with locking lugs 3, which engage in corresponding recesses in the body of the safe. 4 designates a locking dog, connected by means, well known in the safe making art and therefore not necessary to show and describe in detail herein, to the locking bolts 5. 6 designates the time lock, which may be of the usual construction with dial 7 and detent 8 for shifting the dog 4. 9 is the balance wheel of the movement and 10 is the hair spring, all of which is of the usual construction.

The dial 7 may be set in the usual manner for any desired interval, through which the time lock is to run, and the present attachment is a device which is employed to prevent the time lock from running until such time as someone desires to open the safe, and which then acts to start the time lock running.

The attachment comprises a bolt 11, which carries on its end a fine light wire 12, which bears against the balance wheel 9 in such a manner as to prevent the latter from turning, and to thereby hold the time lock movement from running while the wire is in contact. The wire is so fine that it exerts only a gentle pressure, and this does not injure the

delicate parts of the movement. When the bolt 11 is moved in a manner to be described, the wire 12 moves with it, and withdraws the same from contact, thereby permitting the movement to run. At the same time, this withdrawal movement of the wire gives an impetus to the movement by reason of the frictional contact of the wire 12 so that it insures the starting of the movement. The bolt 11 is notched at 16 at its upper end and engaged by a segmental rotary detent 17 mounted on a post 18, and rigidly secured thereon is a small ratchet 19. Beneath the rotary detent 17 is a coil spring 20, as clearly shown in Fig. 5, which acts to exert a rotative pressure tending to turn the detent 17 in the direction of the arrow, Fig. 3. Pivoted on a post 21 is a lever 22, which is yieldingly held against a stop pin 23 by a flat spring 24, and pivoted to the end of the lever 22 is a rack 25 with ratchet shaped teeth having a beveled end 26, which bears against a roller 27 mounted on a stationary pin 28, and spring 29 exerts a downward pressure on the rack 25.

30 is a stationary lug on the body 1 of the safe against which the upper end of the lever 22 is moved as the door of the safe is rotated in its closed position, and the lug 30 is so located that during the last slight movement of the door, it presses against the lever 22 and causes the lever 22 to be tilted in a direction to draw the rack 25 to the right, Fig. 3, during which movement the beveled end 26 rides down on the roller 27 and permits the teeth to come in contact with the ratchet 19 and click thereover as the rack 25 is moved, so that when the door is turned in a direction to open it, its first initial movement will move the lever 22 away from lug 30, and will turn the detent 17 in a direction opposite to the arrow, and will release the bolt 11, whereupon the spring 15 will move the bolt upwardly, and cause the wire 12 to start the balance wheel 9, and thus cause the time lock movement to commence operation. Before closing the safe the bolt 11 should be moved down to bring the wire 12 into contact with the balance wheel. This will permit the detent 17 to be moved by spring 20, so that it will engage notch 16 and prevent the bolt 11 from rising. The time lock having been wound and set for the desired interval, the safe door is then shut and locked, the closing movement swinging lever 22 to retract the rack 25 and bring it in contact with the ratchet 19. The parts remain in this condition with the time lock held from running by the wire 12. When it is desired to open the safe, the door 2 is turned slightly in a direction to open it, this slight movement being permitted by the lost motion in the locking bolts, and this movement of the door allows lever 22 to be operated by spring 24, and it pushes the rack

25 to the left, Fig. 3, swinging the detent 17 to the right in a direction opposite the arrow and releases the bolt 11, which then springs up and as wire 12 releases the balance wheel and imparts a swing thereto. The time lock then commences to run and when run down permits the bolts to be unlocked and the door opened.

Instead of operating the device by the lost motion of the circular door, it may be operated by the sliding motion of the locking bolt, used in connection with a combination lock, as indicated in Fig. 6. In this form, 31 designates the locking bolt to which is rigidly secured an arm 32, and pivoted to the arm 32 is a lever 33, a flat spring 34 being provided to hold the arm 33 yieldingly against a pin 35 carried on an arm 36 pivoted at 37 to the safe door 38. A spring 39 is provided for exerting a pressure on the arm 36 tending to move the lower end thereof to the right. The arm 33 has a lug 40 and a beveled end 41, which is adapted to slide against a stationary pin 42. 43 is a guide in which the bolt 11^a is slidably mounted, and spring 15^a tends to exert an upward pressure on the bolt as in the previous form. The bolt is provided with wire 12^a adapted to actuate the balance wheel 9^a. In this form, the parts as shown in Fig. 6 are in the position they occupy after having been set and before the device is released. When it is desired to open the safe door, the locking bolt is moved in a direction to unlock the door, and this motion moves the lever 33 to the left, thereby releasing the bolt 11^a, and the latter is then moved up by spring 15^a, and releases the balance wheel 9^a, and starts the movement to running. In moving arm 33 to the left as the inclined end 41 strikes the pin 42, it depresses the lever 33 sufficiently to allow lug 40 to release pin 35, whereupon spring 39 acts to move arm 36 back until it strikes the bolt 11^a and ready to engage the end of bolt 11^a, when the latter shall again be moved down to set the device. When the bolt 31 is again pushed to the right to lock the door, the lug 40 rides freely under the pin 35 as the lever 33 is moved to the right, and the parts then assume the position shown in Fig. 6.

What I claim is:

1. In combination, a door adapted to turn about its axis, a bolt for locking the door, time controlled mechanism for the bolt, means to hold said mechanism against operation when the bolt is in locking position, and means operative by turning of the door to release the mechanism-holding means, so that said mechanism can operate.

2. In combination, a door, a bolt for locking the door, time controlled mechanism for the bolt, means to hold said mechanism against operation when the bolt is in locking position, and means operative by movement

of the door to release the mechanism-holding means so that said mechanism can operate to release the bolt.

5 3. In combination with a time lock movement including its balance wheel, a flexible device, means supporting the flexible device in a position bearing lightly against said
10 balance wheel to normally restrain said balance wheel and movement from running, and means operated by a movable part on the safe for moving said flexible device to
15 release the balance wheel and permit the movement to run.

4. In combination with a time lock movement and its balance wheel, a spring pressed

bolt, a spring carried by said bolt and adapted to yieldingly engage said balance wheel to normally restrain the movement from running, and means operated by a movable part on the safe for normally holding said bolt from movement, and for releasing said bolt when said movable part is actuated.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 20th day of June, 1914.

HERBERT C. STOCKWELL.

In presence of—
JOSHUA B. WEBSTER,
NABEL G. BOARD.