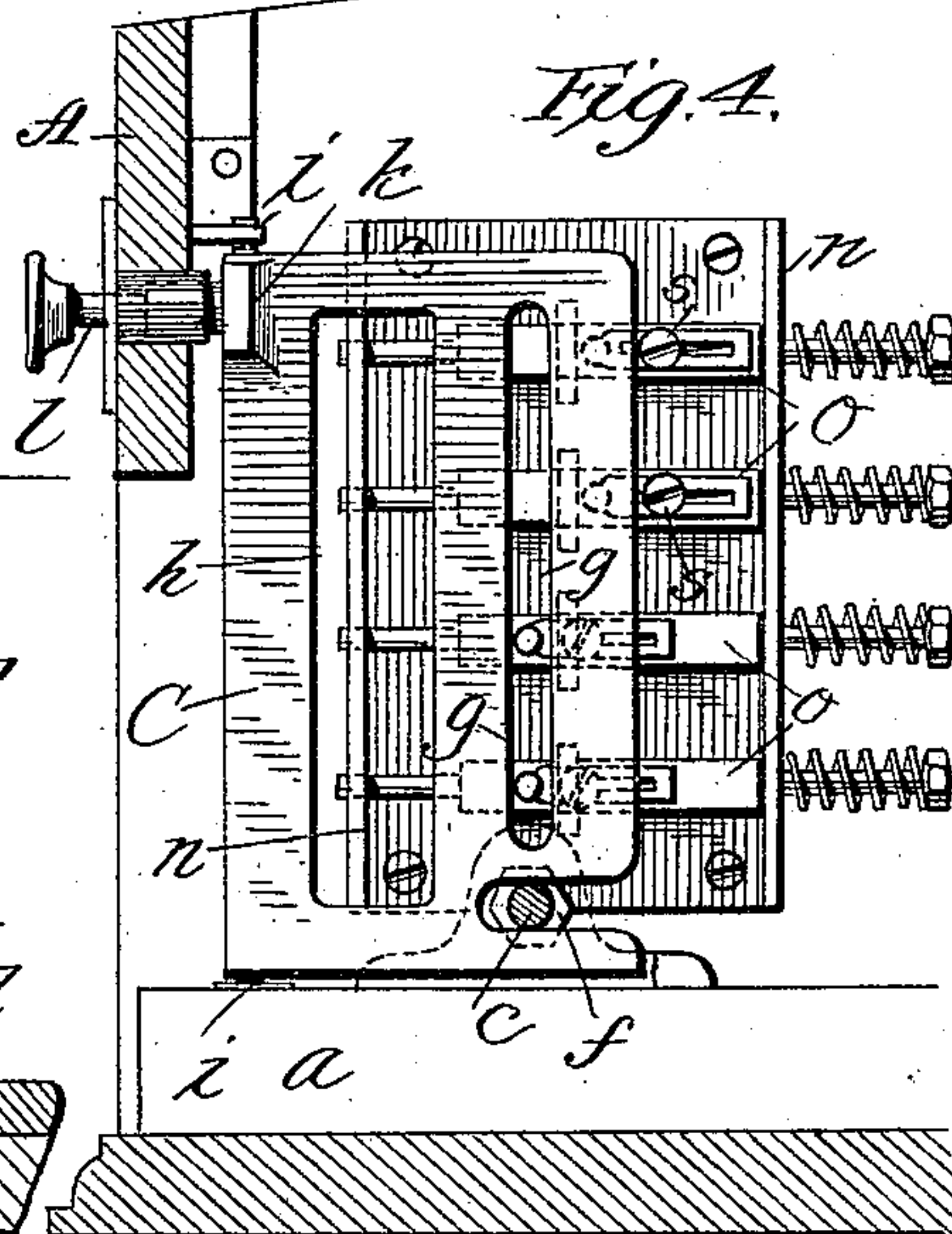
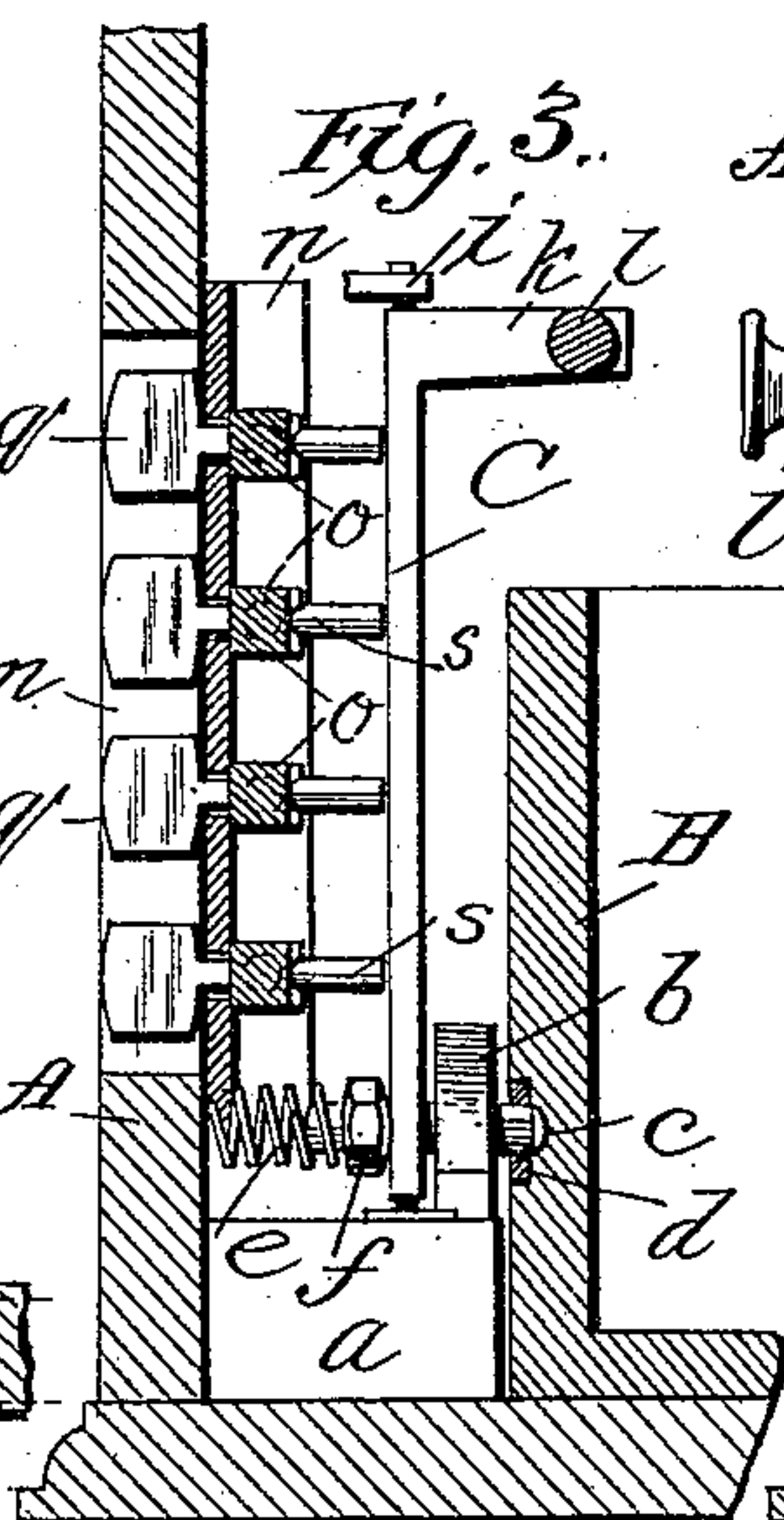
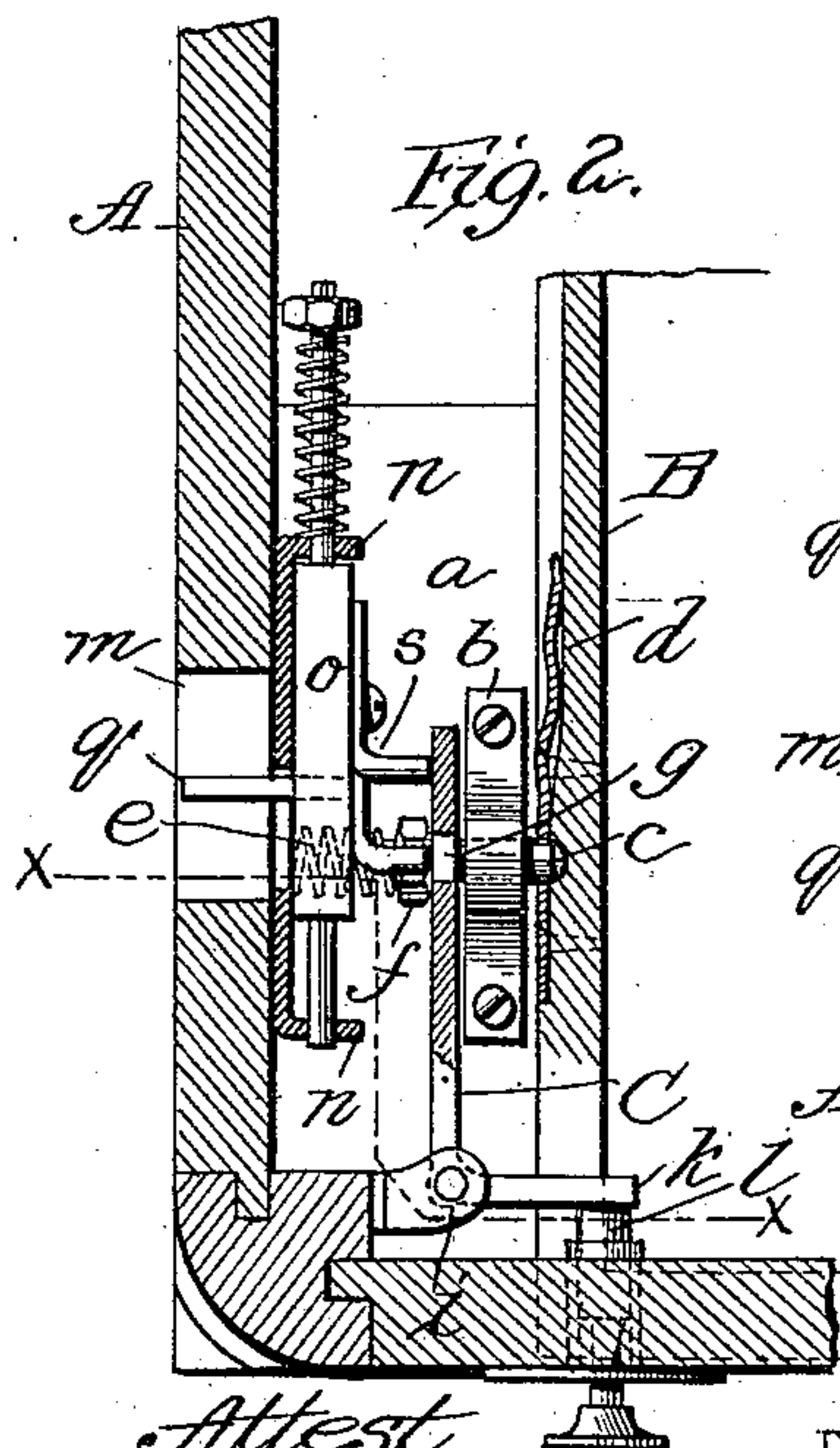
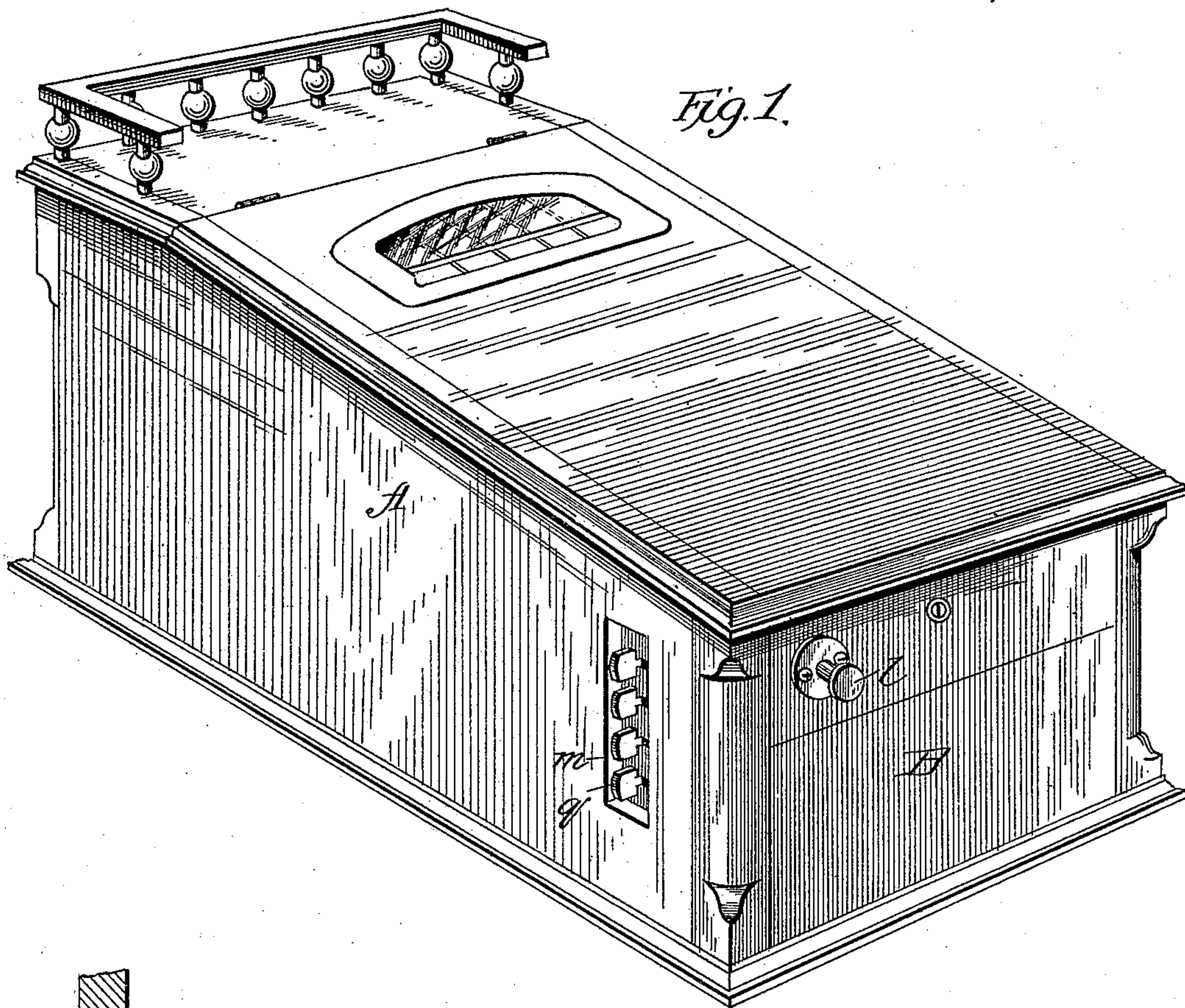


(No Model.)

W. H. THOMPSON.
COMBINATION LOCK.

No. 470,720.

Patented Mar. 15, 1892.



Attest
Margaret C. Cooper
Margaret C. Cooper.

Inventor
Wm H. Thompson
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Attys

UNITED STATES PATENT OFFICE.

WILLIAM H. THOMPSON, OF EAST STROUDSBURG, PENNSYLVANIA.

COMBINATION-LOCK.

SPECIFICATION forming part of Letters Patent No. 470,720, dated March 15, 1892.

Application filed September 25, 1891. Serial No. 406,815. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. THOMPSON, a citizen of the United States, residing at East Stroudsburg, in the county of Monroe and State of Pennsylvania, have invented certain new and useful Improvements in Combination-Locks; and I do declare the following to be a full, clear, and exact description of the invention, such as 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.

My invention relates to cash-registers, and is designed especially for use in connection with the money-drawer of that class of registers in which the amount of sales which are paid for are recorded by the operator upon a strip of paper which is exposed for this purpose through an opening in the top of the cabinet, the paper being carried upon rolls and provided with mechanism for winding it intermittently, so as to present successively a fresh space after each sale for the record of the next sale.

While I have shown my invention in connection with such a register, I do not limit myself in this respect, as the attachment relates particularly to means for controlling the operation of the money-drawer, and hence may be found useful in connection with any drawer where security is desired, whether a register be used or not.

In the accompanying drawings, Figure 1 represents a perspective view of a cash-register with my improvement shown as attached thereto. Fig. 2 is a sectional plan view of one end or corner of the casing, showing some of the parts in plan and some in section, and one of the side pieces of the drawer. Fig. 3 is a vertical section through the same corner of the casing on the line *xx* of Fig. 2. Fig. 4 is a section through the front end of the casing with the operating parts of my attachment in side elevation.

The register shown in Fig. 1, being substantially the same as that illustrated in Letters Patent of the United States issued to me on the 16th of June, 1891, need not be particularly described, especially as it is simply a representative of any other form of register

or situation where a money-drawer is used, and where it is desired to prevent the opening of the drawer by an unauthorized person. 35

The casing of the register is shown at A and the money-drawer at B. It is very essential that means be provided for such drawers which will prevent them from being opened by persons having no authority, and thus secure the contents thereof; but at the same time it is equally desirable that the means which control the operation of the drawer shall be capable of ready operation, because of the great number of times that the drawer is required to be opened during a day's business. It has been the aim of the present invention to secure these two great objects. 60 65

On a ledge *a* within the casing, and to one side thereof, near the front, a bearing *b* is provided, through an opening in which slides a bolt *c*, which engages a locking-recess in the side of the drawer when this drawer is shoved in to its full extent. A strip of metal *d*, having its inner end bent inward within a groove in the side of the drawer, is arranged in line with the locking-bolt *c*, and this acts to protect the side of the drawer from abrasion, receiving the contact of the bolt end and directing it into the locking-recess. This bolt has a spring *e* in rear of it, which keeps it constantly pressed inward, one end of said spring bearing against the casing and the other against a head or flange *f* on the bolt. Thus when the drawer is pushed in this bolt snaps into place and the drawer will be held in a locked position until the spring-bolt is withdrawn from the recess in the side of the drawer. The bolt is retracted by means of a frame C, which, as shown in Fig. 4, is a flat plate, with an elongated slot *g* extending vertically for the purpose hereinafter described, and with a larger opening in rear of the elongated slot, as at *h*, made simply to reduce the weight of the plate and its cost. This plate or frame is provided at top and bottom on its front side with small journals, which have their bearings in suitable brackets, as at *i*. From the upper front end of the plate a projecting arm extends, (shown at *k* in Fig. 3,) this arm being at right angles to the body of the plate. The arm *k* is directly in line with the end of a push-button *l*, the spindle of which extends through the front wall of the 70 75 80 85 90 95 100

casing and is adapted to bear upon the arm to swing the plate C on its pivots, when this pivotal movement is permitted. This movement is for the purpose of retracting the bolt.

5 The plate C is slotted at its lower end, and is thus adapted to embrace the bolt between the bearing *b* and the head *f* of the bolt, the diameter of the slot being less than the diameter of the head *f*. It will thus be seen that

10 when the plate C is moved laterally on its pivot the swinging movement of the inner end will carry with it the locking-bolt and allow the drawer to be opened. I prefer to use a spring-actuated drawer, so that as soon as the

15 bolt is withdrawn the drawer will be forced open.

The pivotal movement of the plate C is not permitted freely, or else the drawer could be opened at will by pressing upon the push-button; but this movement is controlled and only permitted under certain conditions, which will now be described. An opening is formed in the side of the case extending entirely through, (shown at *m*, Fig. 1,) this opening being closed

25 by a metal plate, preferably on the inside, with its vertical edges turned up at right angles to the side of the casing, and these turned-up edges (shown at *n*, Fig. 2) have openings through them in line with each other, forming guides for the spindles of a series of slides

30 *o*. The ends of the slides which work in the openings in the upturned edges of the metallic plate are preferably reduced to cylindrical form, while the central portions of the

35 slide are rectangular. The inner ends of the slides are provided with springs located between nuts on the ends of the slide-spindles and one of the turned-up edges *n*, and thus the slides are constantly under spring-tension, which tend to keep them at the limit of

40 their movement toward the rear of the case. Finger-plates *q* are secured to each slide, these plates being located in the opening *m*, made in the casing, where they are protected from

45 accidental operation. While I have shown four of these slides, I do not limit myself as to the number, as this may be varied according to circumstances. Each slide carries upon its inner face a pin, which is adjustably secured by means of a slotted base portion and screw passing through the slot to said slides,

50 as shown at *s*, Figs. 2 and 4, and by means of the adjustment of these pins the combination of the lock may be varied. It will be seen from

55 Figs. 2 and 4 that in order to permit the pivotal movement of the plate C the pins *s* must all be in line with the elongated slot *g*, and if not in line the movement of the plate will be prevented, as it will come in contact with one

60 or more of the said pins. In the combination shown in the figures mentioned the pins of the two lower slides are normally in line with the slot *g*, while the pins of the two upper slides are shown as forward of the slot and in line

65 with the imperforate part of the plate. By withdrawing, however, the two upper slides

by pressure on the finger-pieces the pins of these slides are brought into line with the slot *g*, and while held in this position by the first and second fingers of the hand pressure of the thumb upon the push-button *l* will shift the inner end of the plate C and thus retract the locking-bolt. Particular attention is called to the relative arrangement of the finger-pieces of the slides and the push-button, which enables me to provide means for the operation of the locking devices with one hand. The combination described may be varied in many ways by the adjustment of the pins *s*.

I claim as my invention—

1. In combination, the locking-bolt, the movable plate connected with the bolt, the push-button for operating the plate, the series of slides carrying stops, one or more of which are arranged to engage the plate directly, and the finger-pieces projecting through the casing for moving the slides to withdraw the stops from the path of the plate, substantially as described.

2. In combination, the locking-bolt, the movable plate connected with the bolt, the push-button for operating the plate, the series of slides carrying stops to control the movement of the plate, the finger-pieces projecting from the slides through the casing, the said slides and push-button being arranged to move horizontally toward each other, and the springs for returning each slide to normal position, substantially as described.

3. In combination with a locking-bolt, a movable plate for retracting the same, and the series of slides having adjustable pins, said pins preventing the movement of the said plate in one position and allowing movement thereof in another position, substantially as described.

4. In combination with a locking-bolt, a movable plate for retracting the bolt, a series of slides under spring-tension, said slides having bearings in the upturned edges of a metallic plate, an opening through the casing covered by said metallic plate, finger-pieces in the recess thus formed connected with the slide, and pins carried by the slides for preventing or permitting the movement of the plate C, substantially as described.

5. In combination with a spring locking-bolt, a plate for retracting the same, an angular extension on said plate in line with the push-button, said plate being pivoted, a series of slides each having pins adapted to register with an elongated slot in the movable plate, said slides being under spring-tension, and finger-pieces for moving said slides, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. THOMPSON.

Witnesses:

JAMES P. ELINGER,
CLARA RHODES.