

(No Model.)

4 Sheets—Sheet 1.

E. H. MINNIGH.
CASH DRAWER AND MANUAL RECORDER.

No. 518,264.

Patented Apr. 17, 1894.

Fig. 1.

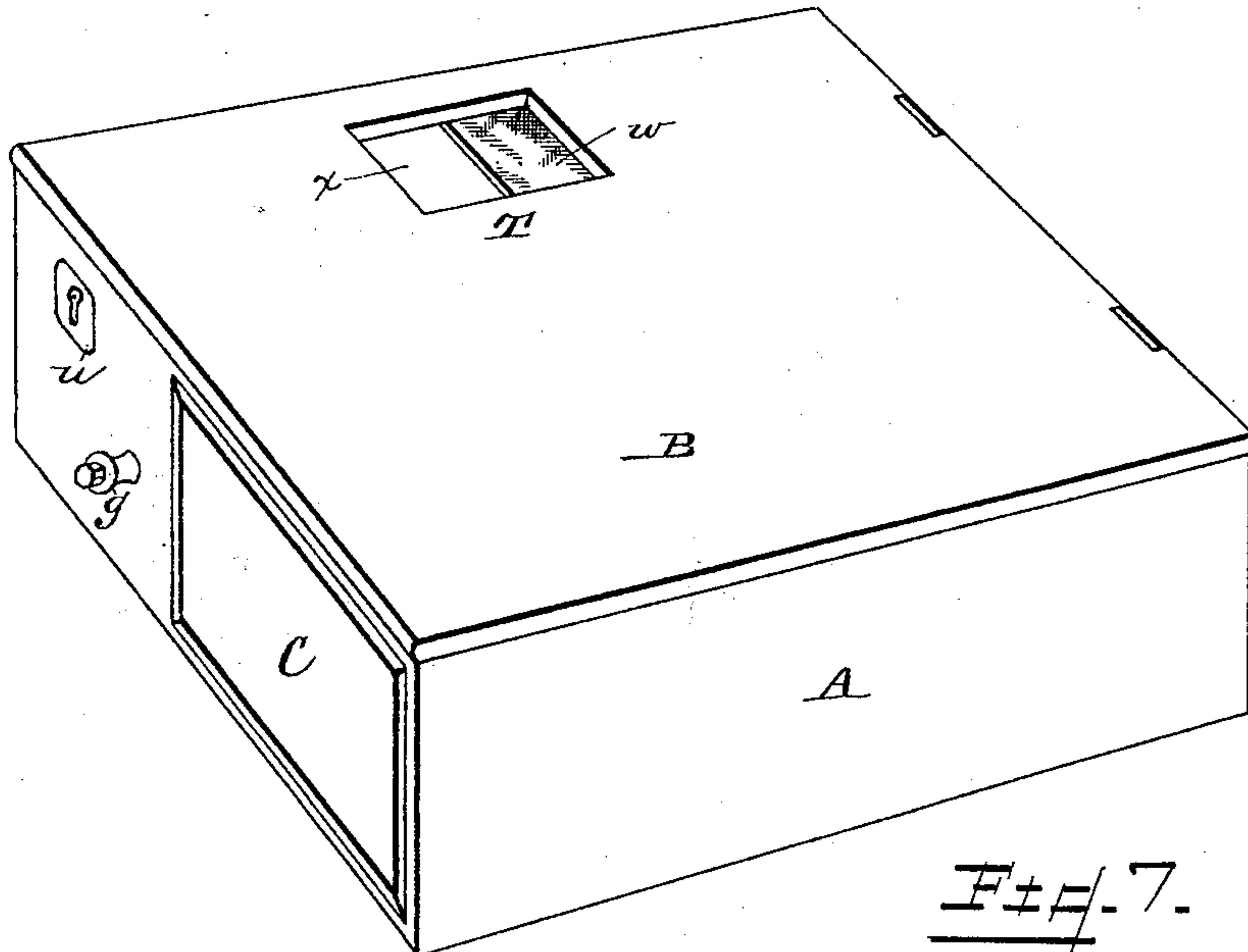


Fig. 7.

NAMES AND ARTICLES.	REC'D CASH.	PAID OUT.	ON ACC'T.	AM'T. CHARGED.
B				
W				
K				

Witnesses

A. B. Blackwood
J. B. Blackwood

Inventor
Ephraim H. Minnigh,
by J. H. Soule & Co.,
his Attorneys

(No Model.)

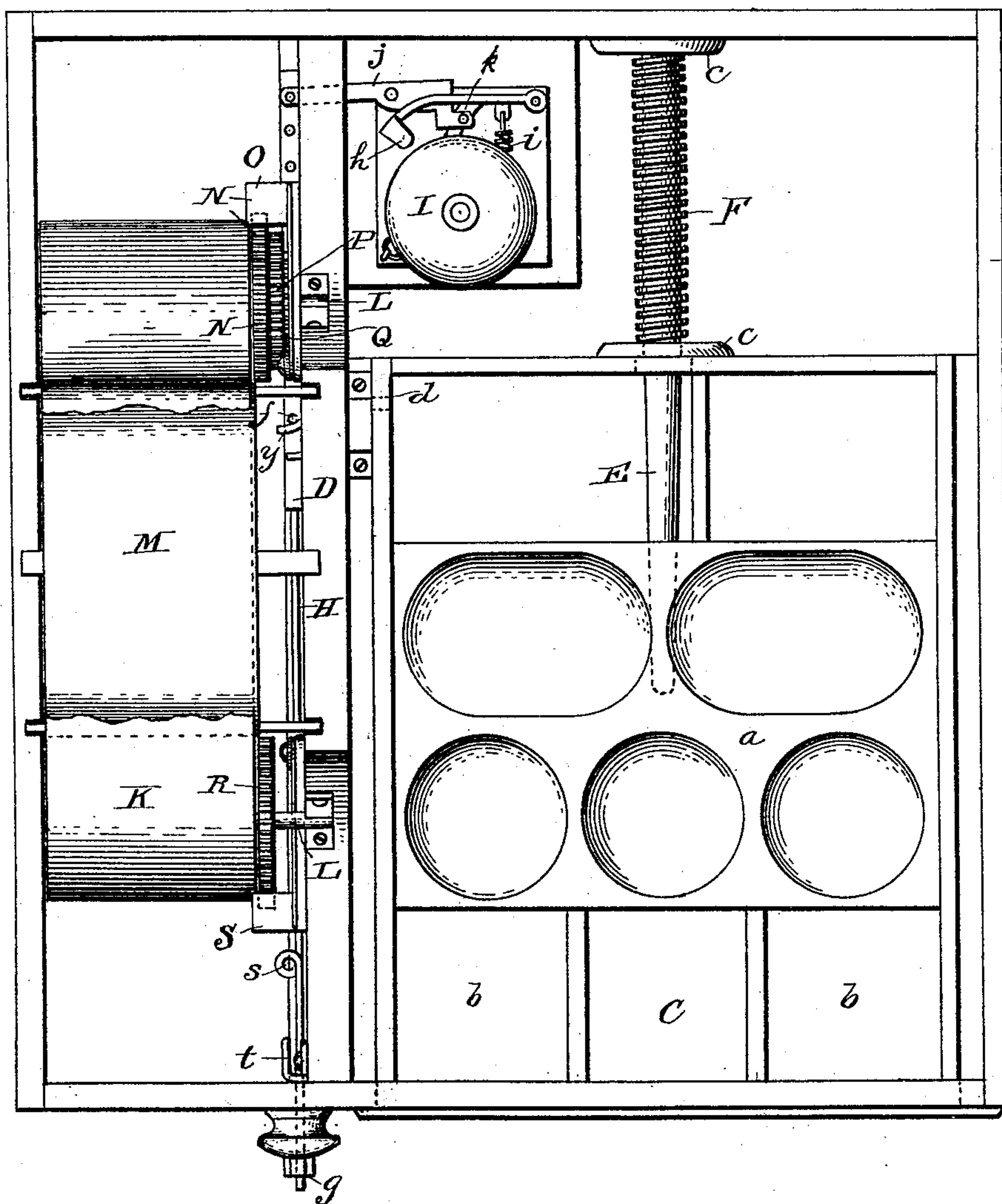
4 Sheets—Sheet 2.

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~~Fig. 1~~ - ~~Fig. 2~~ -



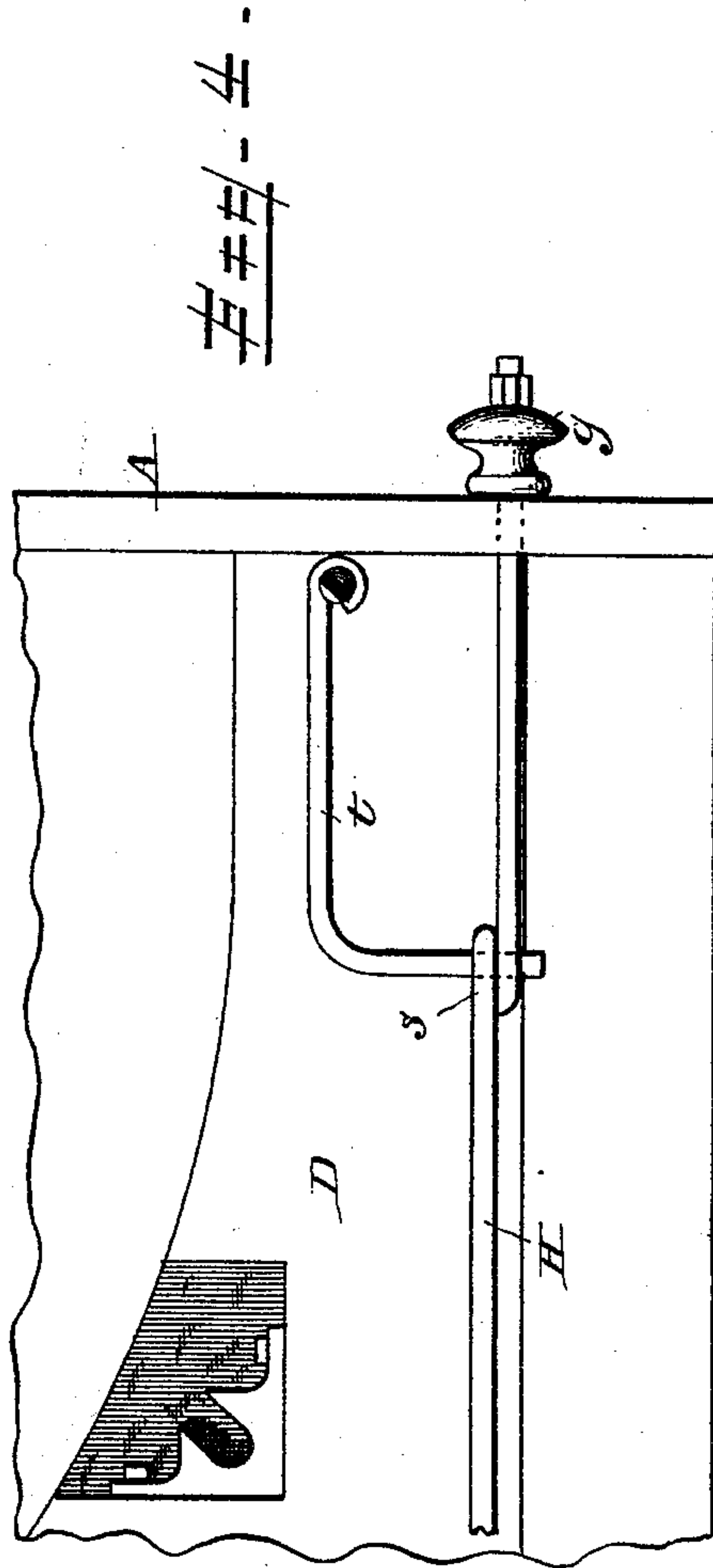
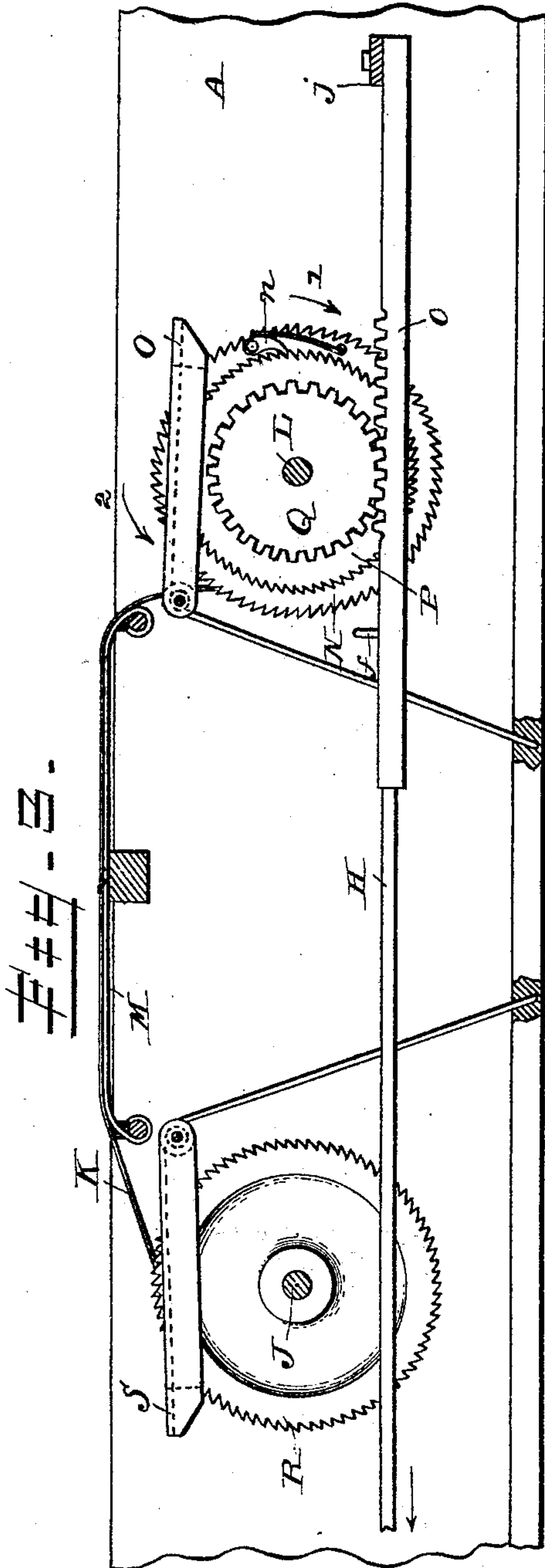
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(No Model.)

4 Sheets—Sheet 4.

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Fig. 5.

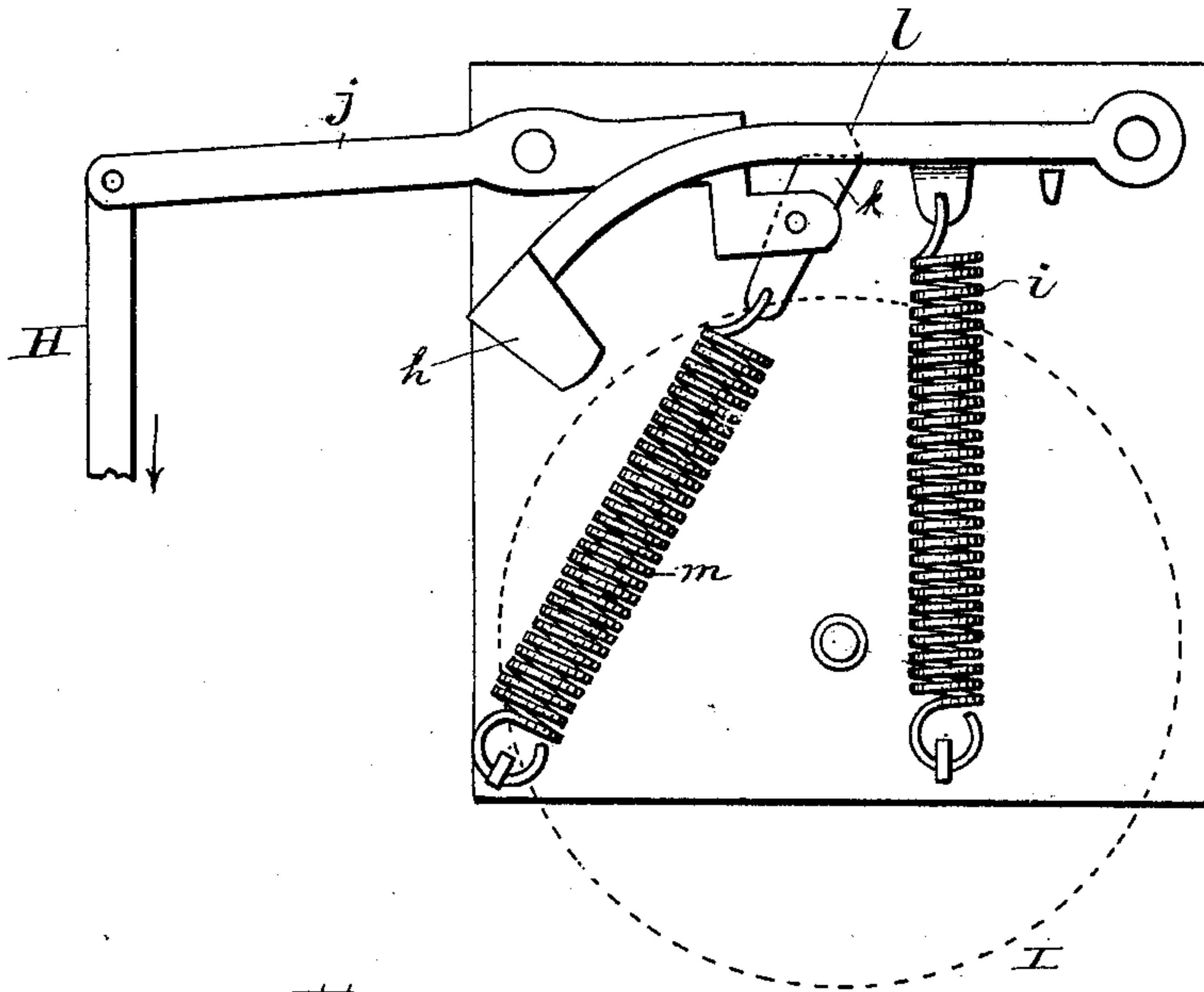


Fig. 6.

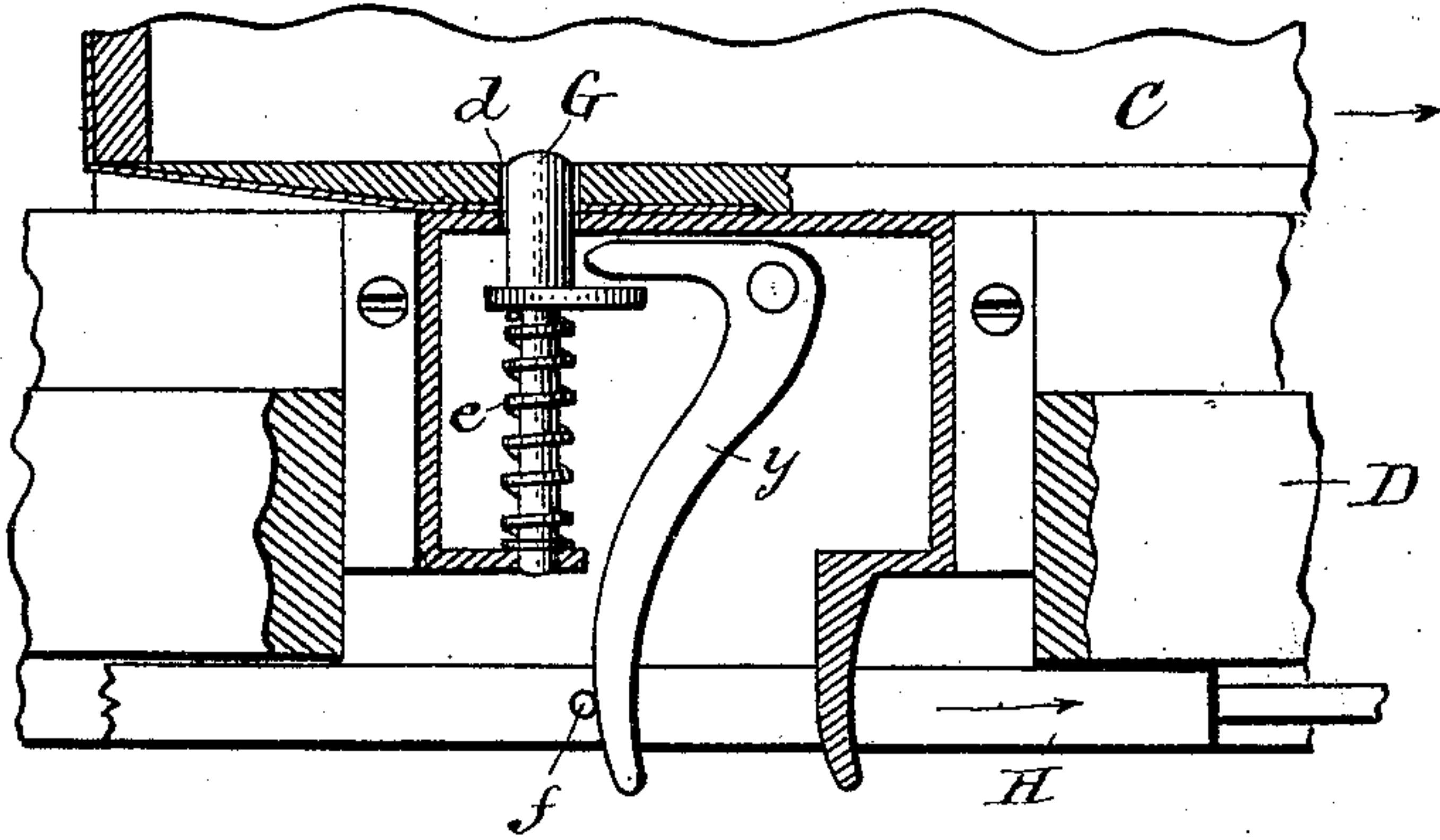
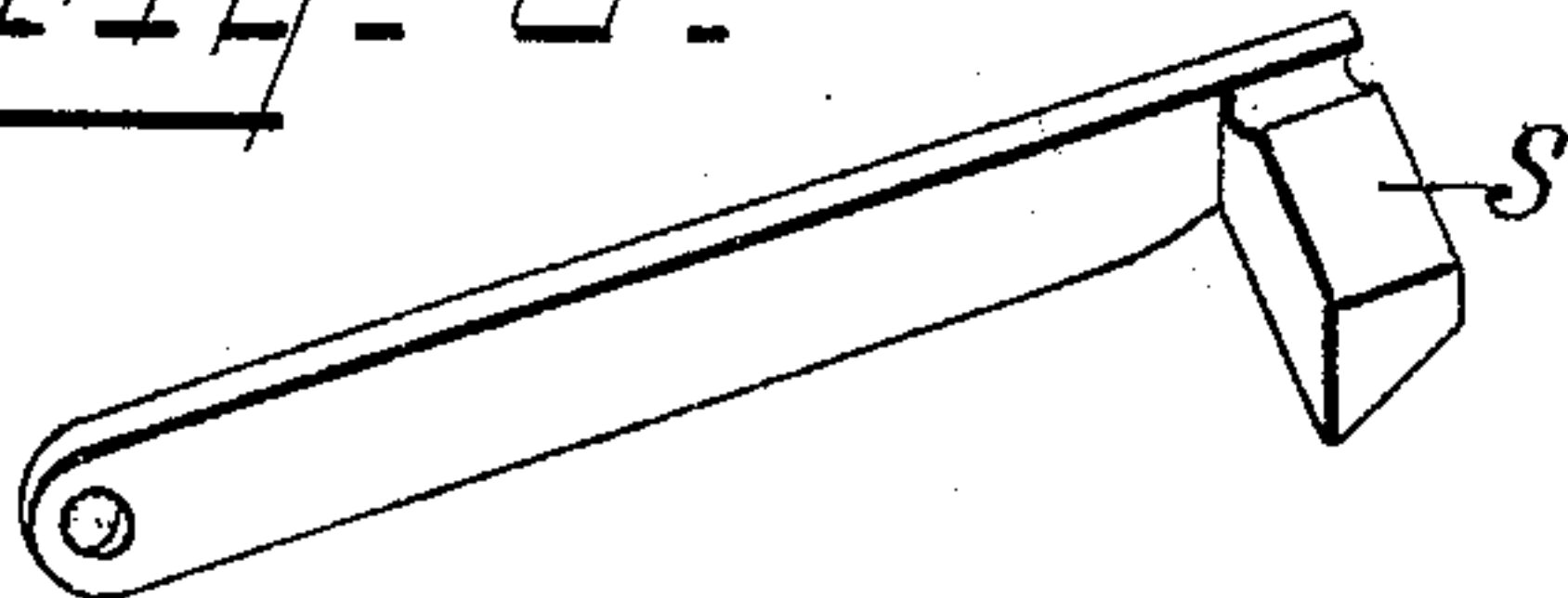


Fig. 7.



Witnesses

W. B. Blackwood
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UNITED STATES PATENT OFFICE.

EPHRAIM H. MINNIGH, OF GETTYSBURG, PENNSYLVANIA.

CASH-DRAWER AND MANUAL RECORDER.

SPECIFICATION forming part of Letters Patent No. 518,264, dated April 17, 1894.

Application filed July 28, 1891. Serial No. 400,979. (No model.)

To all whom it may concern:

Be it known that I, EPHRAIM H. MINNIGH, of Gettysburg, in the county of Adams and State of Pennsylvania, have invented certain new and useful Improvements in Cash-Recorders and Locking Mechanism for Money-Drawers, of which the following is a specification.

The present improvements consist in the improved and novel features of a money drawer having the following characteristics.

First. The money drawer is mounted in an inclosing casing, which may be a portion of a counter in a store or shop, or which may be a separate casing adapted to be placed upon and secured to such a counter.

Second. The money drawer is normally held in a closed position by a latch, and when said latch is withdrawn the money drawer is automatically moved to an open position by the action of a spring or equivalent instrumentality.

Third. At the same time that the latch is released, the operating mechanism of the latch acts upon an oral annunciator, such as a bell or gong, so that attention is called to the opening of the drawer, thereby guarding against the unauthorized opening of the drawer.

Fourth. Alongside of the drawer within the casing, are journaled two winding rollers or drums, to which are connected the opposite ends of a recording strip or band of paper, which, in passing from the delivery roller or drum to the winding roller or drum passes over a smooth plate or tablet. This tablet is immediately beneath an opening in the top or cover of the casing, so that the recording band of paper can be written upon. A portion of this opening in the cover is covered by a transparent medium, such as glass, beneath which the band of paper passes, so that the entries of the paper can be seen after they have been made. This enables the proprietor of the establishment to note the entries which have been made by an employé, and also enables corrections to be made.

Fifth. The band of paper is ruled, so that entries of various kinds, such as cash received, cash paid out, charges to account, and payments on account, can be entered at proper points, and the indices of these items are affixed to the cover of the casing, or to the glass,

so that similar items can be accurately entered on the proper column.

Sixth. The band of paper is wound from the delivery drum onto the winding-on drum by a step-by-step movement, and a definite distance at each movement.

Seventh. The intermittent or step-by-step movement of the band of paper is effected by the same operating instrumentality which effects the releasing of the money drawer and which sounds the gong, so that a single manipulation of the operating device accomplishes the several results.

Eighth. A lock is provided within the casing for securing the operating mechanism, so that it can only be operated by authorized persons.

Ninth. The lid or cover of the casing can be opened so as to expose the money drawer, the band of paper and the actuating mechanism, so that access can be had to all of the parts for the purpose of repair, and for removing and replacing the paper. This cover is provided with a lock so that only authorized persons can lift the same. A single key suffices for locking the cover and for locking the operating mechanism, since the lock for the operating mechanism is only accessible when the lid or cover is lifted.

By the use of the money drawer having these features all of the financial transactions are noted and no other day-book is required. At the close of the day, the band of paper is removed, the credit transactions are transferred to the appropriate ledgers, and the cash shown by the entries on the band of paper should correspond with the cash in the drawer.

I am aware that not all of the results and features as just enumerated are new with me.

The features and combinations of features claimed as new will be hereinafter set out in the claims.

The money drawer provided with the improvements is illustrated in the accompanying drawings, wherein—

Figure 1, is a perspective view of the casing containing the improved devices. Fig. 2, is a plan view with the cover removed. Fig. 3, is a vertical longitudinal section. Figs. 4, 5, 6, 7, and 8, are view of parts in detail.

A, is the casing, B, the cover or lid thereof,

and C, the money drawer which slides in and out of the casing, being guided by suitable guides. This drawer is located between one of the sides of the casing and a partition D therein. The money drawer is provided with the usual sliding coin-holder *a*, having compartments for different coins, and the usual compartments *b*, for bills, &c.

Secured to the rear of the casing on its interior, is the fastening plate *c*, of a projecting rod E, extending parallel with the path of the money drawer and extending through an aperture in the rear of the drawer. Surrounding rod E, is a coiled spring F, which bears against plate *c*, and against the rear of the drawer. When the drawer is closed this spring is compressed, and when the drawer is released the spring automatically throws the drawer open.

The drawer is locked in its closed position by a horizontally-movable latch G, one end of which engages an aperture or lip *d*, at one side of the drawer. This latch is moved in the direction to engage and lock the drawer by a spring *e*, and is moved in the opposite direction by a pin *f*, which is carried by the operating device.

The operating device consists of a reciprocating rod H, which moves parallel with the path of the money drawer, is mounted in suitable guides within the casing, and extends outwardly through the front thereof where it is provided with an operating knob *g*. When the knob is pulled outwardly, the pin *f*, encounters the operating lever *y* of the latch G, thereby swinging said latch and releasing the drawer.

I, is the oral annunciator, consisting of a gong mounted in the casing behind the money drawer. The gong I, is sounded by a pivoted clapper *h*, which strikes the gong under the influence of a spring *i*. The clapper is moved away from the gong (thus placing spring *i*, in tension) by a centrally-pivoted lever *j*, to one end of which is pivoted a trip *k*, which coacts with a cam *l* on the clapper, and is held in coaction therewith by a spring *m*. The tail end of the trip lever *j*, is pivoted to the rear end of the operating rod H. Consequently, when the rod H, is pulled out, the trip lever swings the clapper away from the gong until the trip *k*, passes beyond the cam *l*, when the clapper *h* is released and (under the influence of spring *i*) strikes and sounds the gong.

J, is the shaft of the delivery roller or drum on which the band of paper K, is wound.

L is the shaft of the winding-on roller or drum, and M, is the tablet over which the band of paper passes.

Both of the shafts, J and L, are journaled between the partition D, and the adjacent side of the casing, so that the path in which the paper travels is parallel with the movement of the money drawer and of the operating rod H.

The shaft L of the winding-on drum or

roller has fixed thereto a ratchet wheel N, with which co-operates detent O, which permits the ratchet wheel N, to rotate in the direction to wind the paper on the drum or roller, but which prevents rotation in the opposite direction.

Loosely mounted on the shaft L, are a ratchet wheel P, and a pinion Q, which are connected so as to move together. The teeth of ratchet wheel P, are opposite to those of ratchet wheel N. A spring pawl *n*, pivoted to the outer face of fixed ratchet wheel N, co-operates with loose ratchet wheel P. The pinion Q, gears with a rack *o*, carried by and movable with the operating rod H. When rod H, is pulled out, pinion Q, and loose ratchet P, are turned in the direction of arrow 1, and the fixed ratchet N, is not rotated, being prevented by detent O, while pawl *n*, rides over the teeth on loose ratchet P. When, however, operating rod H, is moved back, pinion Q, and loose ratchet P, turn in the opposite direction (in the direction of arrow 2), and the loose ratchet P, acting upon pawl *n*, moves the fixed ratchet N, in the same direction, thereby winding the paper upon the winding drum. It will be noted that it is not necessary to push the rod H, in, since it will be moved automatically in by the springs *e*, and *m*, which are made strong enough for this purpose. This additional function of the springs *e* and *m* renders unnecessary any special spring for returning the rod to its operative position.

In order to prevent the delivery roller moving backward, its shaft J, carries a fixed ratchet wheel R, with which co-operates a detent S. The delivery roller is moved forward by the movement of the paper. The extent of the movement of the paper is limited by the extent of movement of the rod H.

Fig. 8, illustrates in detail the form of the detents O, and S, both of which are alike.

The rod H, within the casing is provided with an eye *s*, (preferably formed by a bend in the rod itself) with which co-operates a swinging catch *t*, pivoted within the casing. When the catch *t*, engages the eye *s*, the operating rod H, cannot be moved, and consequently the drawer C, cannot be opened. The cover B, of the casing is hinged, so as to render all the parts within the casing accessible, and is locked when closed, a lock *u* being provided for this purpose. When the catch *t*, engages the eye *s*, of the operating rod H, and the cover B, is closed and locked, it is evident that the money drawer cannot be opened nor can the band of paper be moved so as to allow of inspection. When cover or lid B, is closed, an aperture T, therein registers with the tablet M, over which the band of paper passes. This aperture is partly covered at its outer part by a glass plate *w*, but an opening *x*, is left so that entries may be made upon the paper. As the paper is moved, the entries pass beneath the glass plate *w*, where they can be viewed but not tampered with.

Upon the glass plate, or upon the outer or inner margins of the aperture T, are inscribed legends, such as "Names and articles," "Rec'd cash," "Paid out," "On acct.," "Amt. charged," and the like, corresponding with the longitudinal rulings of the band of paper K, these legends indicating the various financial transactions which are usual and common in retail business.

The lid or cover is shown flat and horizontal. It is evident that it might be inclined if desired.

I claim as my invention—

1. The box or casing A and means for locking the same, the drawer C mounted within said casing, and mechanism for locking and releasing said drawer adapted to be operated from outside of the casing, in combination with provisions within said casing and inaccessible when said casing is locked for rendering said mechanism inoperative to release the drawer, substantially as set forth.

2. The box or casing A inclosing the money drawer and cash-recording mechanism for use in connection therewith, a lock for said casing, and a single operating rod for both drawer and cash-recorder adapted to be operated from outside of the casing and an annunciator sounded when said drawer is released, in com-

bination with means within the casing adapted to secure said operating rod and prevent the opening of the drawer or the further operation of the cash-recorder, said securing means being inaccessible when the casing is locked, substantially as set forth.

3. A money-drawer and a spring tending to throw the drawer open, a latch for securing said drawer against the action of said spring, an annunciator-gong, and a lever *j k* co-operating with the gong-clapper, in combination with an operating-rod which when moved in one direction simultaneously draws said latch to release the drawer and swings said lever *j k* to operate the gong-clapper, and springs *e m* which when said drawer is closed operate respectively to return the latch G and lever *j k* to their normal positions and at the same time co-operate to return said operating lever into position to be again operated, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

EPHRAIM H. MINNIGH.

Witnesses:

CHAS. H. RUFF,
DAVID TROXEL.