

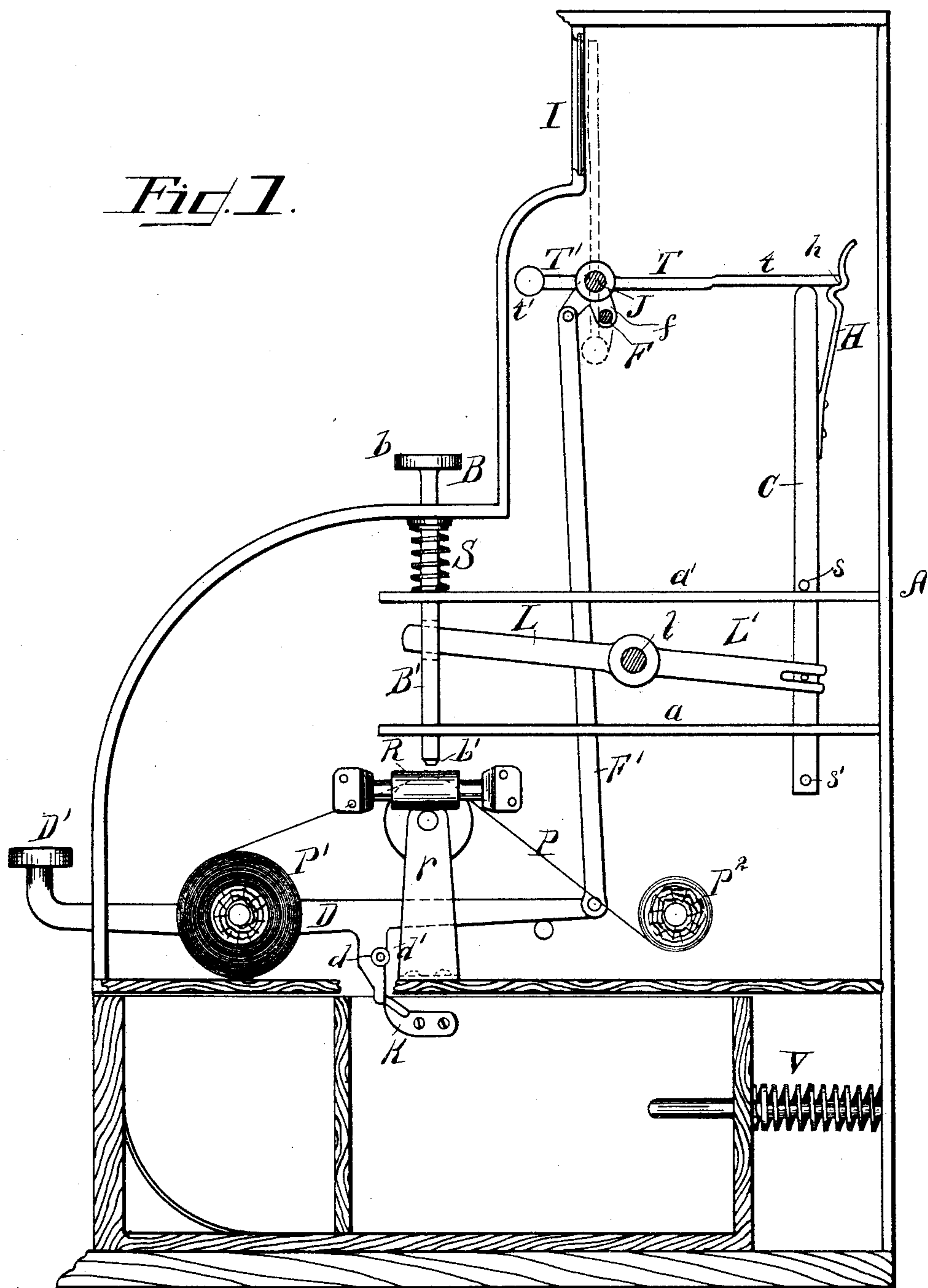
(No Model.)

2 Sheets—Sheet 1.

W. T. McGRAW.  
CASH INDICATOR AND RECORDER.

No. 482,132.

Patented Sept. 6, 1892.



WITNESSES  
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Fig. 2

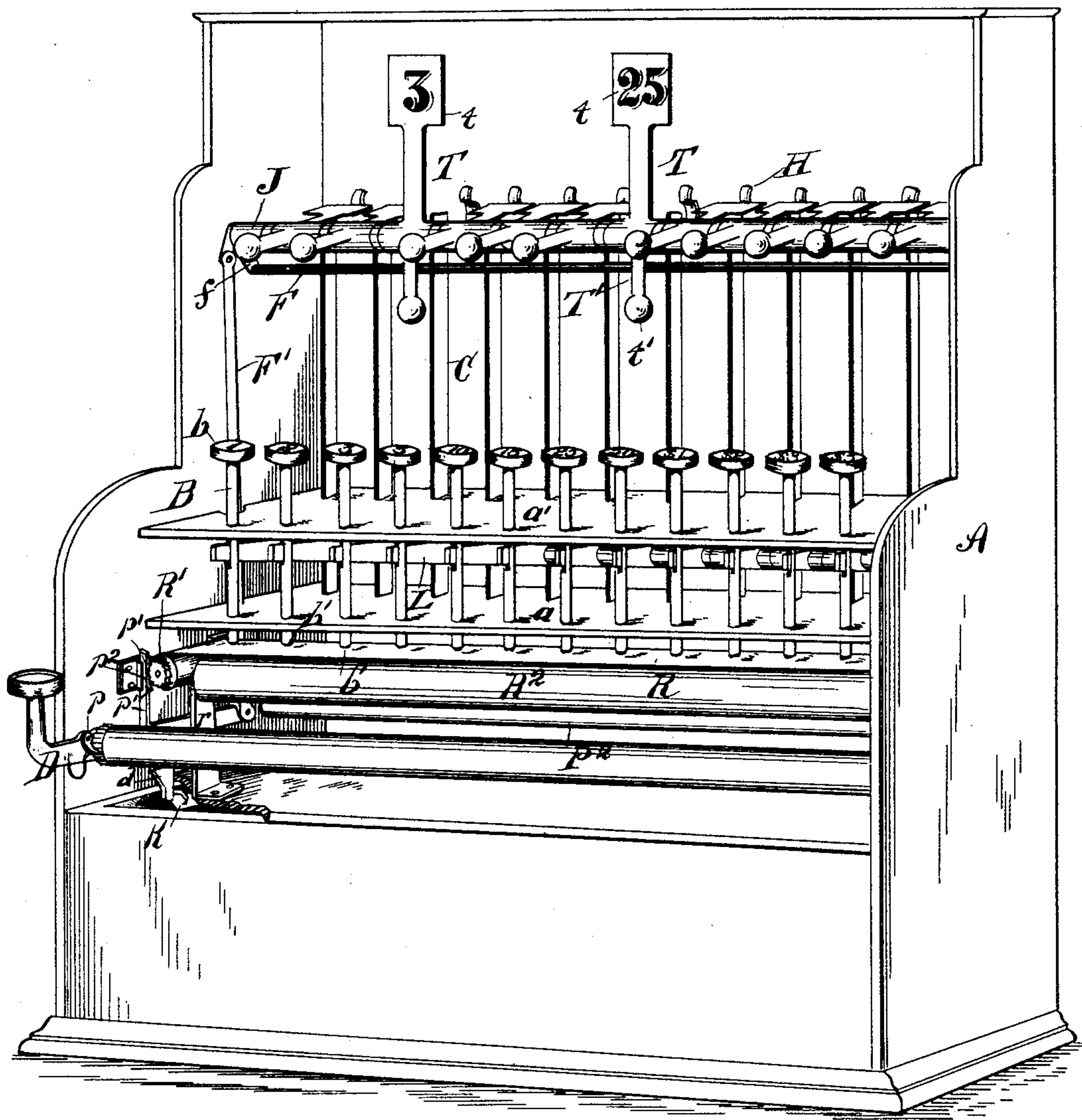
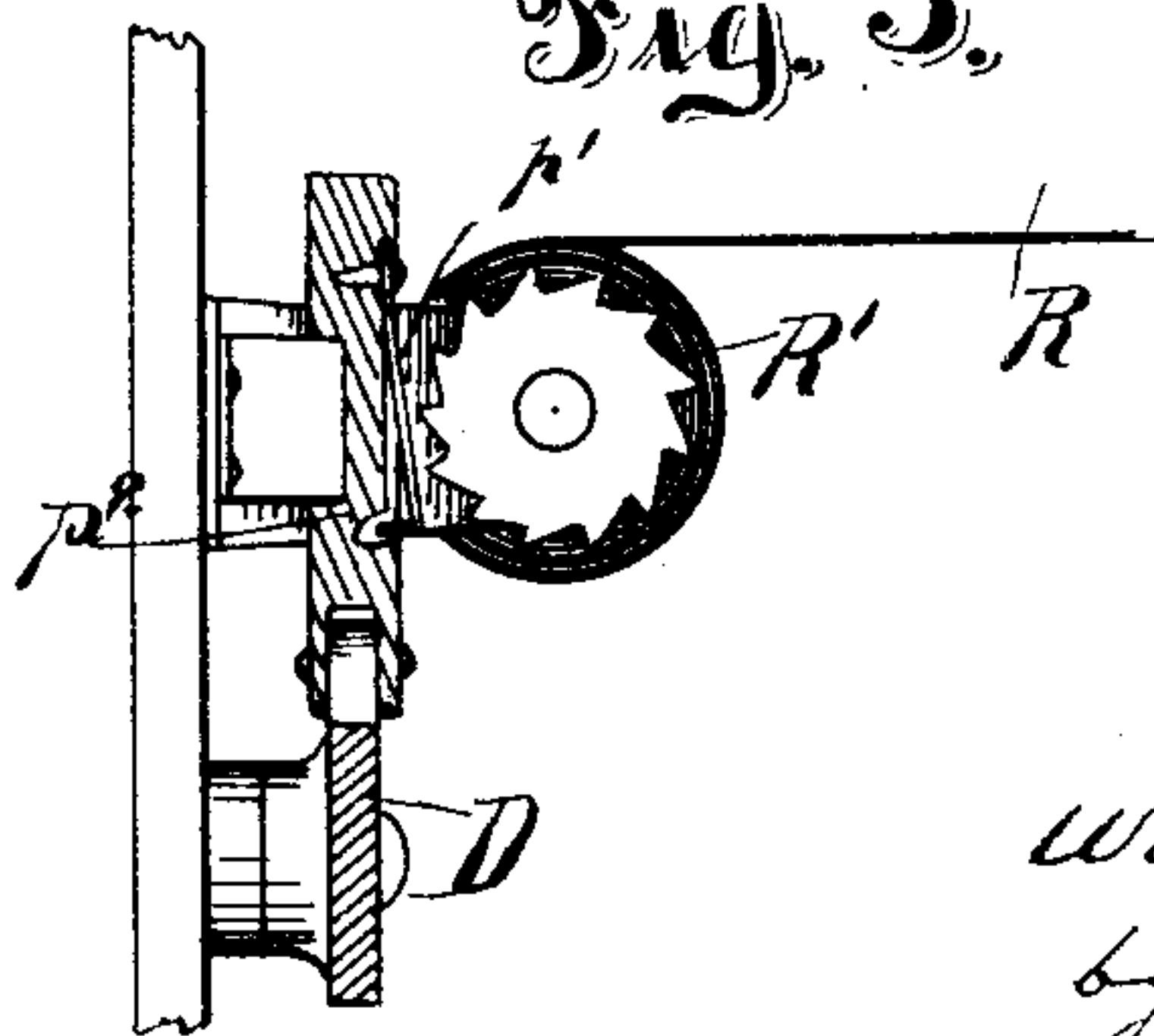


Fig. 3.



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# UNITED STATES PATENT OFFICE.

WILLIAM T. MCGRAW, OF DETROIT, MICHIGAN.

## CASH INDICATOR AND RECORDER.

SPECIFICATION forming part of Letters Patent No. 482,132, dated September 6, 1892.

Application filed May 14, 1892. Serial No. 432,992. (No model.)

### *To all whom it may concern:*

Be it known that I, WILLIAM T. MCGRAW, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Cash-Recorders; I and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to cash-recorders, and has for its object a simple and compact form of recorder, in which the amount of purchase made by a customer may be indicated by throwing into view a tablet upon which is imprinted a figure or figures representing the amount of the purchase. At the same time that the tablet is thrown into view an imprint of the amount shown by the tablet is made upon a moving strip of paper that remains permanently within the casing of the register. At a subsequent operation the tablet that has been exposed to view is thrown back out of sight, the money-drawer is opened, permitting the operator to have access to its contents, the roll of paper upon which the amount is to be printed is advanced, and the machine is ready for a second operation.

It is designed in this cash-recorder to perform the operations of throwing the tablet into view at a time when the money-drawer is open and to then close the money-drawer and leave it closed with the tablet elevated in a position to be seen until a succeeding operation is to be performed.

I employ a tablet which is hung upon a journal and adapted to swing from a horizontal to a vertical position when the tablet itself is brought from its position of concealment to a position of sight, and I employ a tablet so counterweighted that it will remain comparatively stable in its position either of concealment or of sight, the counter-weight being slightly heavier than the tablet itself, so as to tend to keep the tablet stable in its position of sight, and the balance be aided when the tablet is in its position of concealment by a slight holding-spring that overcomes the slight preponderance of weight in the counter-weight.

In the drawings, Figure 1 shows a sectional elevation from front to rear of my cash-register, showing the operative parts of a single key and single tablet and the mechanism that opens the drawer and returns the parts to position. Fig. 2 is a perspective from the front with the case removed to permit a full view of the interior working parts. Fig. 3 is an enlarged detail of the ribbon-moving mechanism employed in connection with the printing-wheels.

A represents the case; B, a vertical key provided at its upper extremity with the finger-piece *b* and at its lower extremity with an impression-type *b'*. It is supported in place by the portion of the framework through which it passes and by the horizontal frame-pieces *a* and *a'*. Normally it is held up by a spring S, against the tension of which it can be pushed down by the finger of the operator against the ribbon R and the record-paper P under the ribbon R.

A lever L L' is journaled upon the shaft *l*, that passes from side to side of the framework A. The front end L of the lever engages by a sliding joint with the stem B' of the key B. The rear end L' of the lever engages by a sliding joint with a vertically-movable rod C. The vertically-movable rod C passes through openings in the frame-pieces *a a'* and is furnished with stop-pins *s* and *s'*, which prevent it from either dropping too far down or rising too far up, limiting its throw in either direction. Above the bank of keys B the case of the register rises to an inspection-slot I, and below the inspection-slot I is a rod or journal J, passing across the casing from side to side. Upon the journal J is hung the tablet-lever T T' of which the end T is provided with a tablet *t* and the end T' with a counter-weight *t'*. The counter-weight *t'* slightly overbalances the tablet *t* and serves to lift and hold the tablet *t* to a position behind the inspection-slot I as soon as the operator has depressed the key B, lifted the rod C, and forced the tablet *t* out of holding engagement with the holding-spring H. The holding-spring H is secured to the rod C and is curved upward and backward from the rod. It is furnished with a bent part that serves as a stop to prevent the tablet *t* from dropping below the horizontal and with an-



other incurved part above the stop part that permits the tablet T to be dropped downward against the stop *h*, but holds it from returning of its own accord to a vertical position.

5 F is a rod passing across the register and supported upon arms *f*, that are journaled upon the journal J. The rod F lies below and behind the tablet-levers T T' and is connected by a link  
10 F' with the drawer-opening lever D. The link F' engages at its lower end with the inner end of the readjusting-lever D. When the end D' of the readjusting-lever D is depressed, the link F' is raised, the cross-bar F thrown forward against the stem of any of the tablet-rods that  
15 may at the time be vertical, and they are thrown to their horizontal position and caught by the spring H. At the same time a hanger *d*, joined to the readjusting-lever D by a rule-joint, is raised from in front of a catch  
20 K on the drawer and the drawer is immediately thrown open by the spring V. The depending hanger *d* forms the bolt that serves to lock the drawer in its closed position. The rule-joint *d'* permits the bolt part of the hanger to  
25 swing over the catch K as the drawer is closed, but prevents it from swinging in the opposite direction, and thus permitting the drawer to open. The readjusting-lever D is journaled or fulcrumed on the axis of the paper-roll P',  
30 and when the end D' of the lever D is depressed a pawl *p*, mounted on the readjusting-lever D and in engagement with a ratchet-wheel on the end of the paper-roll, serves to advance the paper-roll one or more teeth of  
35 the ratchet-wheel. At the same time a pawl *p'*, mounted on a standard *p*<sup>2</sup> and in engagement with a ratchet-wheel on the ribbon-roller R', serves to advance the ribbon across the machine. The ribbon itself is a long strip of  
40 ribbon that passes across the register above a platen-roller R<sup>2</sup>, which is supported on suitable hangers *r*. The paper P is fed from a spool P<sup>2</sup> in the rear of the machine.

In operation the part D' of the readjusting-  
45 lever D is depressed and the drawer opened. The tablets are by this movement all thrown down to their concealed position, if any had been at the point of inspection. The web of paper is by the same movement advanced to  
50 present a fresh surface for the imprint thereon of the amount about to be shown by the tablets. The drawer may now be left open or may be closed, as may be desired. The operator next depresses the key or keys provided with  
55 the figure or figures which he wishes to have appear at the point of inspection. The depression of the key at once throws up the rod C and the tablets, which will show the desired figures and imprints on the web of paper, the  
60 figures corresponding to the figures shown by the tablets. The parts will now remain in the position that they have now taken until the readjusting-lever is again moved, throwing open the drawer and throwing down the  
65 tablets, moving forward the paper for a new impression, and moving forward the ribbon,

so as to present a freshly-inked portion under the type end of the key.

What I claim is—

1. In a cash-register, the combination of a 70 swinging counterweighted tablet-rod, an actuating-key, and a lever actuated by said key and actuating said tablet-rod and adapted to turn said tablet-rod from a horizontal to a vertical position, substantially as and for the 75 purpose specified.

2. In a cash-register, the combination of a swinging counterweighted tablet-rod, a vertically-moving rod, and a spring secured to said vertically-moving rod and adapted to receive 80 the end of said tablet-rod in holding engagement when the tablet-rod is in a vertical position and to release said tablet-rod from engagement with said spring as the last-mentioned rod rises vertically, substantially as 85 and for the purpose described.

3. In a cash-register, the combination of a swinging counterweighted tablet-rod, a lifting-rod adapted to raise the tablet end of said tablet-rod from a horizontal position, and a 90 spring secured to said lifting-rod adapted to hold the tablet end of said tablet-rod when in a horizontal position and to move out of engagement therewith as said lifting-rod rises, substantially as and for the purpose described. 95

4. In a cash-register, the combination of a swinging counterweighted tablet-rod, a readjusting-bar swinging from the journal upon which said tablet-rod turns, and an actuating-key adapted to turn said readjusting-rod, and 100 thereby throw said tablet-rod from a vertical to a horizontal position, substantially as and for the purpose described.

5. In a cash-register, the combination of a swinging counterweighted tablet-rod, a lift- 105 ing-bar provided with a holding-spring, a readjusting-bar, an actuating-key adapted to operate said lifting-bar, and an actuating-lever adapted to operate said readjusting-bar, substantially as and for the purpose de- 110 scribed.

6. In a cash-register, the combination of a swinging counterweighted tablet-rod, a lifting-bar, and an actuating-key, and an impres- 115 sion-type formed integral with the stem of said key adapted to produce an impression upon a web of paper beneath it, substantially as and for the purpose described.

7. In a cash-register, the combination of an inclosing case, a drawer adapted to move in 120 and out of said case, a swinging counterweighted tablet-rod, a key, and intermediate mechanism adapted to swing said tablet-rod, a readjusting-lever, also adapted to swing 125 said tablet-rod, a pair of paper-rolls, mechanism connected with said readjusting-lever adapted to move forward the paper from one of said rolls to the other, and a printing-type formed integral with the stem of the tablet-actuating keys and adapted to print charac- 130 ters upon the web of paper, substantially as and for the purpose described.



8. In a cash-register, the combination of a  
swinging counterweighted tablet-rod, an act-  
uating-key adapted to lift the said counter-  
weighted tablet-rod to a position of inspec-  
5 tion, a readjusting-lever adapted to return  
said tablet-rod from a position of inspection  
to a position of concealment, and a locking-bolt  
actuated by said readjusting-lever and adapt-  
ed to be lifted out of locking engagement with  
10 a catch on the drawer of said cash-register

cotemporaneously with its readjusting move-  
ment, substantially as and for the purposes  
described.

In testimony whereof I sign this specifica-  
tion in the presence of two witnesses.

WILLIAM T. MCGRAW.

Witnesses:

CHARLES F. BURTON,  
MARION A. REEVE.