

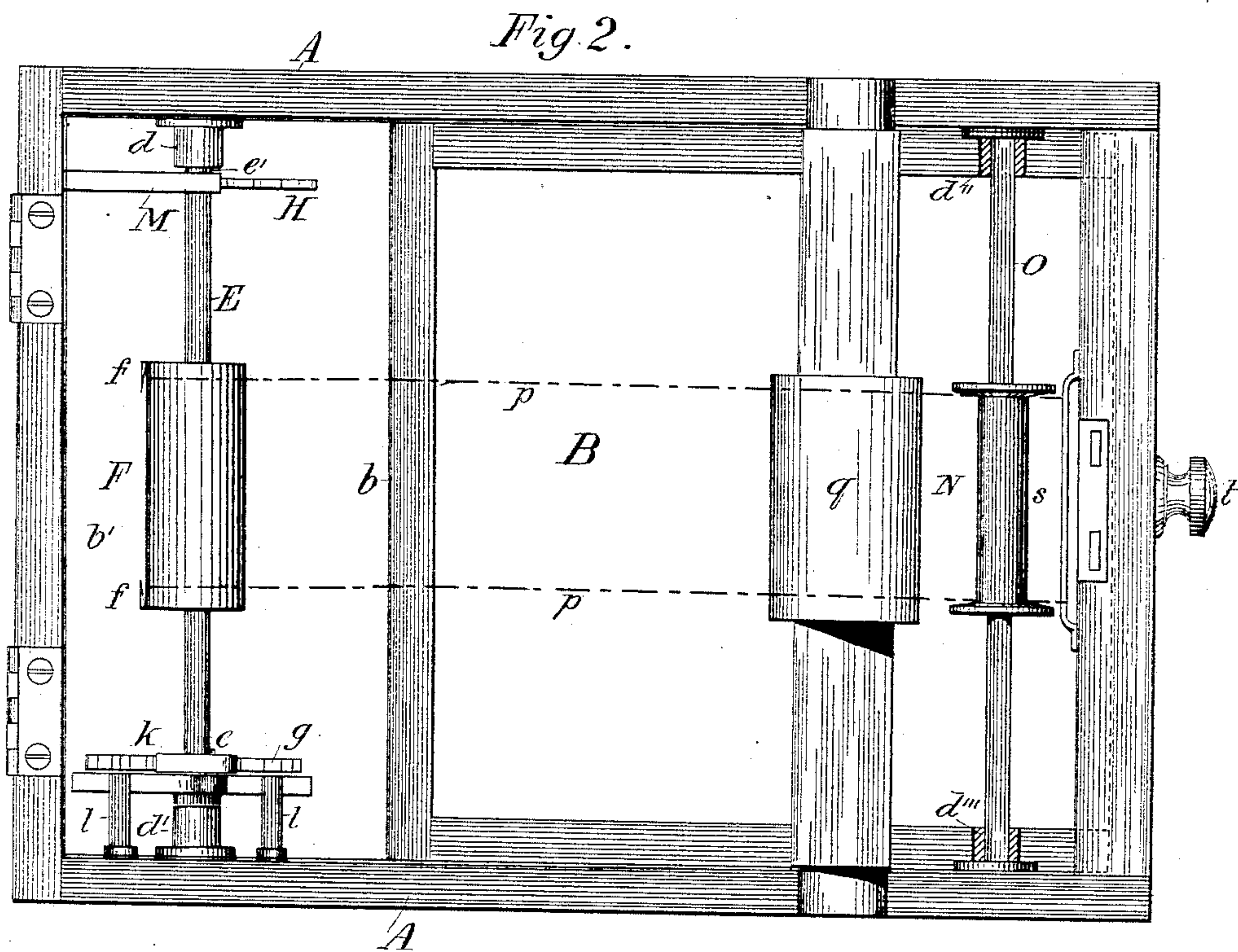
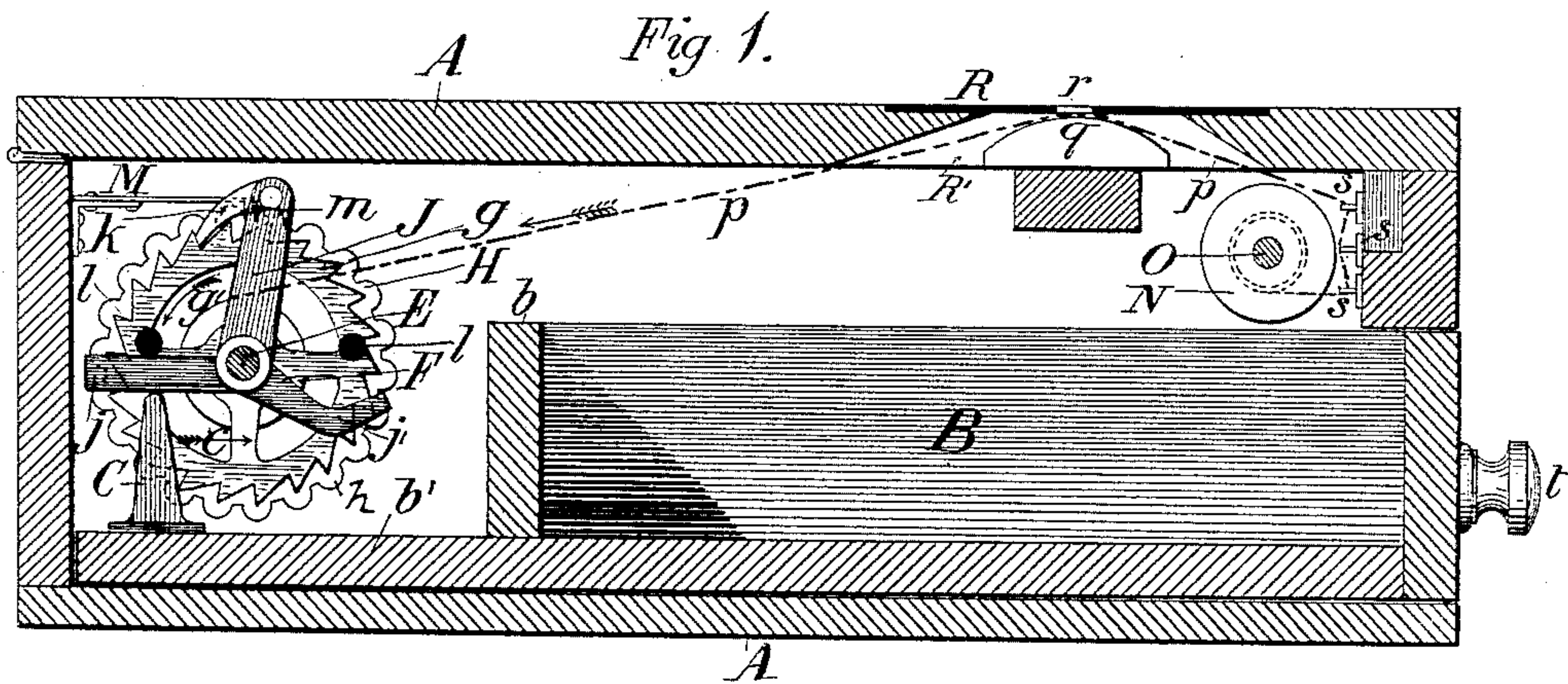
(No Model.)

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RECORDER FOR CASH TILLS.

No. 384,337.

Patented June 12, 1888.



Witnesses.

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UNITED STATES PATENT OFFICE.

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RECORDER FOR CASH-TILLS.

SPECIFICATION forming part of Letters Patent No. 384,337, dated June 12, 1888.

Application filed August 10, 1887. Serial No. 246,641. (No model.)

To all whom it may concern:

Be it known that we, GEORGE RODENHURST STOKES and WILLIAM LONEY, of Hanley, and THOMAS MILNES FAVELL, of Etruria, all in the county of Stafford, England, subjects of the Queen of Great Britain, have invented certain new and useful Improvements in Cash-Tills, of which the following is a specification.

Our invention has reference to improvements in what are generally known as "check-tills," and is devised with a view to more efficiently checking the amounts of money taken and placed in the till.

In order that our invention may be the better understood, we have appended the accompanying sheet of drawings, in which the same letters of reference are employed to denote like or corresponding parts throughout the different views.

Figure 1 is a sectional elevation of the device, and Fig. 2 is a plan of the same with the lid or cover removed.

The device, in accordance with our invention, comprises a box or till, A, of any suitable dimensions, provided with a hinged lid or cover, and also a lock. In the front of the box or till A is formed an opening for the reception of a drawer, B, of suitable depth, the bottom of which is extended, as at *b'*, to the end of the box or till A. The end of the drawer proper terminates, however, at a predetermined position, as at *b*, the space between the end *b* of the drawer B and the end of the box or till A being occupied by the mechanism hereinafter described. The drawer B of the device may be fitted in any desired manner for the reception of coins of different denominations. At the back of the box or till A aforesaid is fitted a rod or spindle, E, free to move in suitable bearings, *d d'*, Fig. 2, secured to the inner sides of the box or till A. To one end, *e*, of said spindle E is fitted a ratchet-wheel, *g*, Figs. 1 and 2, into which takes a pawl, *k*, pivoted at the end of a cam-lever, J, having at its base a lateral straight arm, *j*, on one side, and on the opposite side the curved lateral arm or cam-piece *j'*, said device J *j j'* being mounted loosely upon the rod or spindle E aforesaid. To the other end, *e'*, of the rod or spindle E is fixed a brake-wheel, H, pro-

vided around its circumference with semicircular projections *h*, into the intervening spaces between which engages the stud *m* of the horizontal spring M, which latter is secured to the end of the box or till A. There is also fixed centrally upon the rod or spindle E a drum or cylinder, F, of wood or other suitable material, provided with spring-clips *f f*, or other equivalent means, for securing the end of a paper strip or band to said drum or cylinder F. At the front end of the box or till A aforesaid, and above the drawer, is fitted a second rod or spindle, O, working in suitable bearings, *d'' d'''*, fitted to the inner sides of the box or till A, and upon which spindle O is placed a reel or bobbin, N, upon which is wound a continuous band or strip of paper. Said strip of paper passes from the reel or bobbin N, in the direction shown by the arrow and dotted lines *p p*, over a curved block of wood, *q*, or other suitable material, to the cylinder F, said block *q* being fixed in such a position in the box or till A as to be in close proximity to—without touching—a plate, R, which is fixed to the top of the cover over an opening, R', made therein. Said plate R has a slot or perforation, *r*, formed therein, the position of which is immediately over the highest part of the curved block *q*, and through which slot *r* the paper strip or band *p p* can be written upon.

s s s are three wire brackets, through which the paper strip or band is interlaced. Said brackets are devised for the purpose of increasing the friction, and thereby insuring a constant tension on the said paper strip or band when passing over the before-mentioned block *q*.

The *modus operandi* is as follows—that is to say: The box or till A being closed and locked, the various parts of the device will be in the position shown in the drawings. On the drawer B being pulled out by the knob or handle *t* the stud or striker C will move, as shown by the arrow *c*, along the inner end of the under side of the horizontal arm *j* toward the cam-piece *j'*, and will cause the latter to rise and the arm *j* to fall. This action imparts a thrusting movement to the upper arm or cam-lever, J, and thus pushes forward the pawl *k* a distance limited by the depth of the curved

part of the cam-piece j' below a line parallel with the bottom of the drawer B. The pawl k , which engages with the ratchet-wheel g , causes the latter to rotate in the direction of the arrow g' , and is so arranged as to advance it to the extent of one tooth; and in order to prevent it moving farther two small studs, l l , fixed at suitable points to the inside of the box or till A, are provided, which project above and beyond the horizontal arm j and curved arm j' and limit the motion of the cam-lever J. These studs l l , however, while limiting the movement of the lever, and consequently that of the ratchet-wheel, are no check upon the otherwise free motion of said ratchet-wheel, which by a sudden jerk might rotate a greater distance than is provided for by the aforesaid studs l l ; but, inasmuch as the projections and recesses upon the brake-wheel H correspond with the number of teeth on the ratchet-wheel, any movement beyond the distance of one tooth is prevented by the spring M and stud m , which latter at each operation of opening the drawer is raised by and rides over one of the semicircular projections on the brake-wheel H, dropping into the next recess, thus effectually preventing any further movement of the mechanism until the drawer B is again opened after being closed. In the act of closing the drawer the stud or striker C in its travel slides under the horizontal arm j of the cam-lever J, pushing it up, in which action the pawl k is brought back to its normal position and is ready for the next operation of opening the drawer B.

It will be seen by the arrangement described above that the motion imparted to the mechanism is constant, and the paper band p being secured to the drum or cylinder F, it follows that said paper is moved forward beneath the slot r a given distance each time the drawer is opened, said distance being dependent upon the diameter of the drum or cylinder F and the amount of motion imparted to it by the mechanism above described.

The slot r in the plate R is made of a width corresponding to the distance traveled by the strip or band of paper each time the drawer is opened; or, if preferred, the paper band p may be made to advance a distance somewhat greater than that represented by the width of said slot r .

In order to check the amounts received, each time a payment is made the amount of such payment is written through the slot r upon the paper p . The drawer is then opened and the amount corresponding to that written on the paper band is placed therein. In the action of opening the drawer the paper band will have advanced a given distance, and the written entry moves or passes out of sight and cannot again be seen until the lid of the till is opened. At the end of the day the sum total of the various entries is obtained, with which the amount of cash in the till should correspond. In the event of the drawer being opened without an entry having been pre-

viously made, a blank space on the paper band will indicate either carelessness, that there has been an attempt to tamper with the device, or that it has been used improperly.

The mechanism may, if desired, be arranged so as to be actuated when the drawer is being closed instead of when it is being opened. This is effected by turning round the rod or spindle E, upon which are fixed the wheels g and H and cam-lever J, so that the direction of thrust of the pawl k and rotation of the wheels shall be opposite to that shown by the arrow g' in the accompanying drawings, Fig. 1.

If desired, a bell or gong may be added, which would be caused to sound on the opening of the drawer.

Having now particularly described the nature of our invention and the manner of carrying it into effect, we claim—

1. A cash-till consisting of a box or case, A, provided with hinged and locked top and containing a smaller cash-drawer, B, a striker carried upon the extended bottom of said drawer and adapted to lift cams, a double-armed cam with lever carrying a pawl adapted to be oscillated by said striker and moving a ratchet-wheel, a ratchet-wheel and a brake-wheel secured upon a shaft carrying a winding-drum, a shaft parallel to said shaft and journaled near the front of the box A, above said drawer B, and provided with a roll of paper strip passing through a friction device, over a block, and under a perforation in the top of the box, exposing a portion thereof to view to the winding-drum, said strip adapted to be wound upon the winding-drum by measured lengths determined by the movement of the ratchet-wheel, substantially as set forth.

2. In a cash-till, the combination of the box A, having hinged lockable top, a drawer, B, lower and shorter than said box, a striker, C, secured upon an extension of the bottom of said drawer, a lever, J, carrying double cam-arms j j' and a pawl, k , a shaft, E, upon which said device J j j' is journaled, a ratchet-wheel, g , fast upon said shaft and adapted to be engaged by said pawl k , a notched brake-wheel, H, fast upon said shaft and adapted to be engaged by the spring-detent M m , a winding-drum, F, fast upon said shaft, pins l l , adapted to restrict the movement of the cams j j' , a shaft, O, journaled at the front end of the box, a bobbin, N, fast upon said shaft O and adapted to carry a roll of paper, tension-brackets s , a guide-block, q , bearing the paper near the surface of the top of the box, a plate, R, with slit r , covering an opening in said top and placed over the guide q , and a strip of paper, p , rolled upon the bobbin N and adapted to be uncoiled therefrom and wound upon the drum F, passing through the tension device and over the guide q under the slit r , substantially as set forth.

3. In a cash-till, the combination of the drawer B, the striker C, the lever J, having double cam-arms j j' , pawl k , ratchet-wheel E,

and brake-wheel *g* with spring-detent *M m*,
substantially as set forth.

4. In a cash-till, the combination of the
striker *C*, lever *J*, having cam-arms *j j'*, and the
5 limiting-pins *ll*, substantially as set forth.

5. In a cash-till, the combination of the shaft
E, carrying drum *F*, ratchet-wheel *g*, and brake-
wheel *H*, shaft *O*, carrying drum *N*, brackets
s, guide *q*, and paper *p*, substantially as set
10 forth.

In testimony whereof we affix our signatures
in presence of two witnesses.

GEORGE RODENHURST STOKES.
WILLIAM LONEY.
THOMAS MILNES FAVELL.

Witnesses:

FREDERICK WARDLE,
SAMUEL HILL,
Both of Hanley, Writing Clerks.