

(No Model.)

2 Sheets—Sheet 1.

P. WESTPHAL.
CASH DRAWER AND RECORDER.

No. 450,439.

Patented Apr. 14, 1891.

Fig.1.

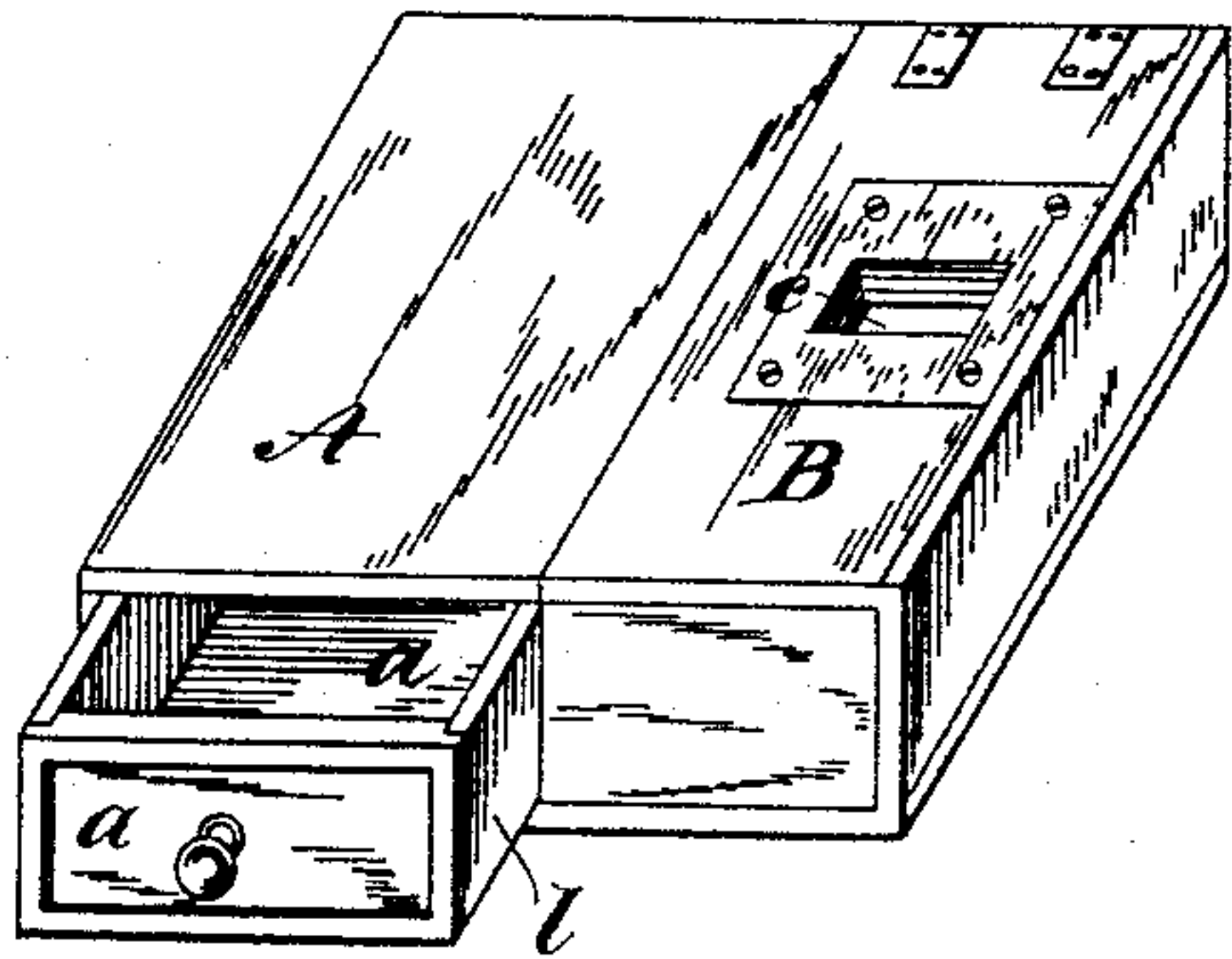
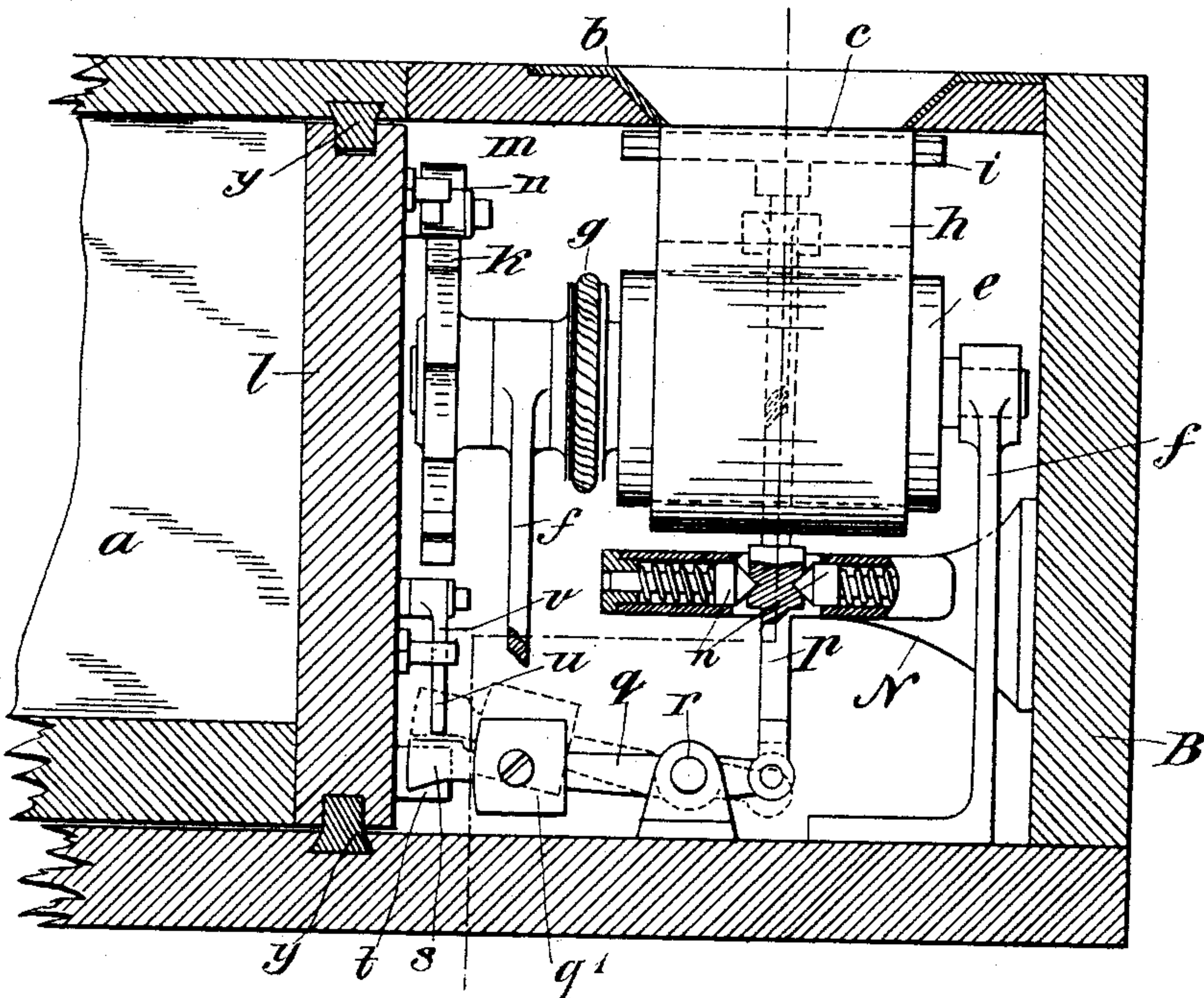


Fig. 3.



Witnesses:

J. H. Kaplinger

Er. Stuart

Inventor:

Paul Kestelholz.

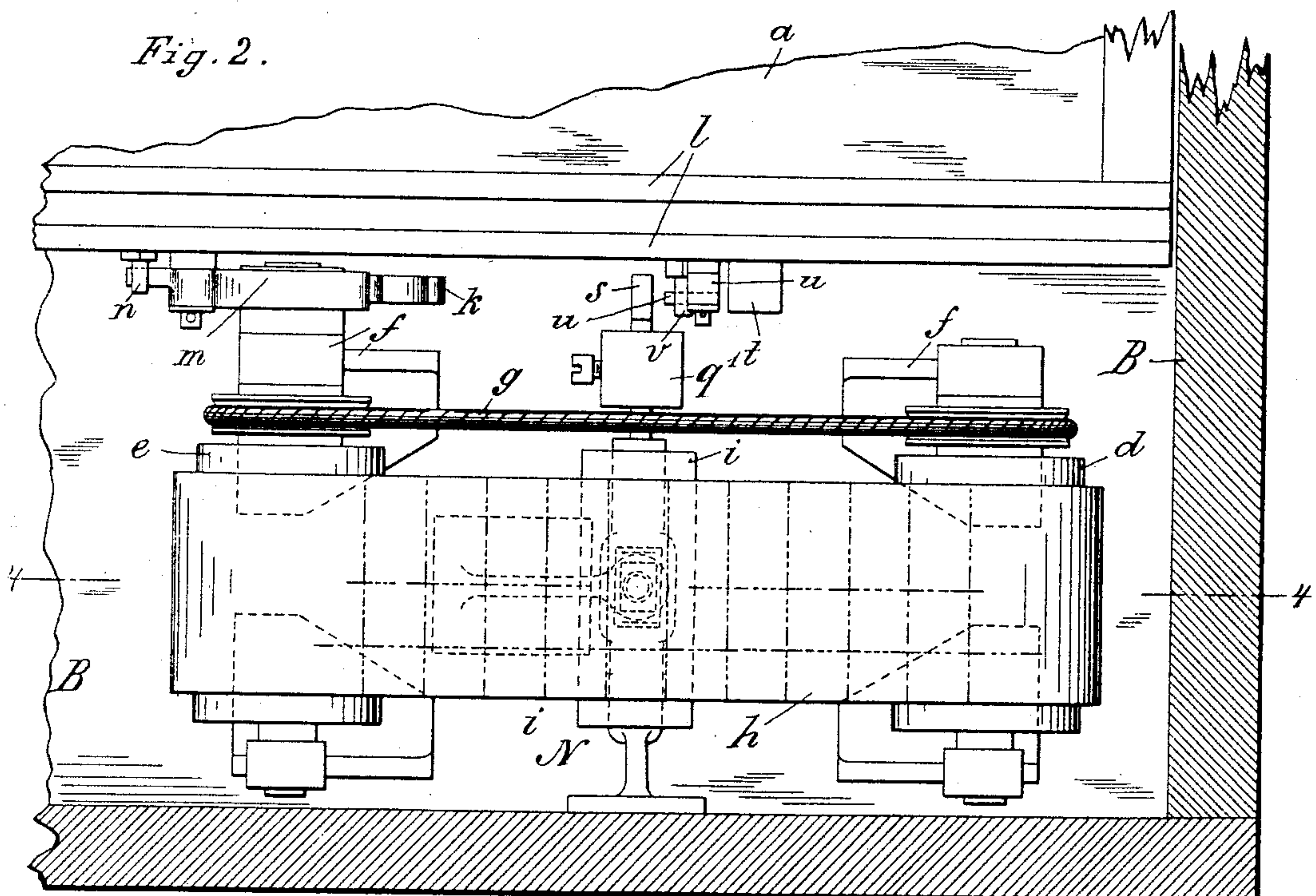
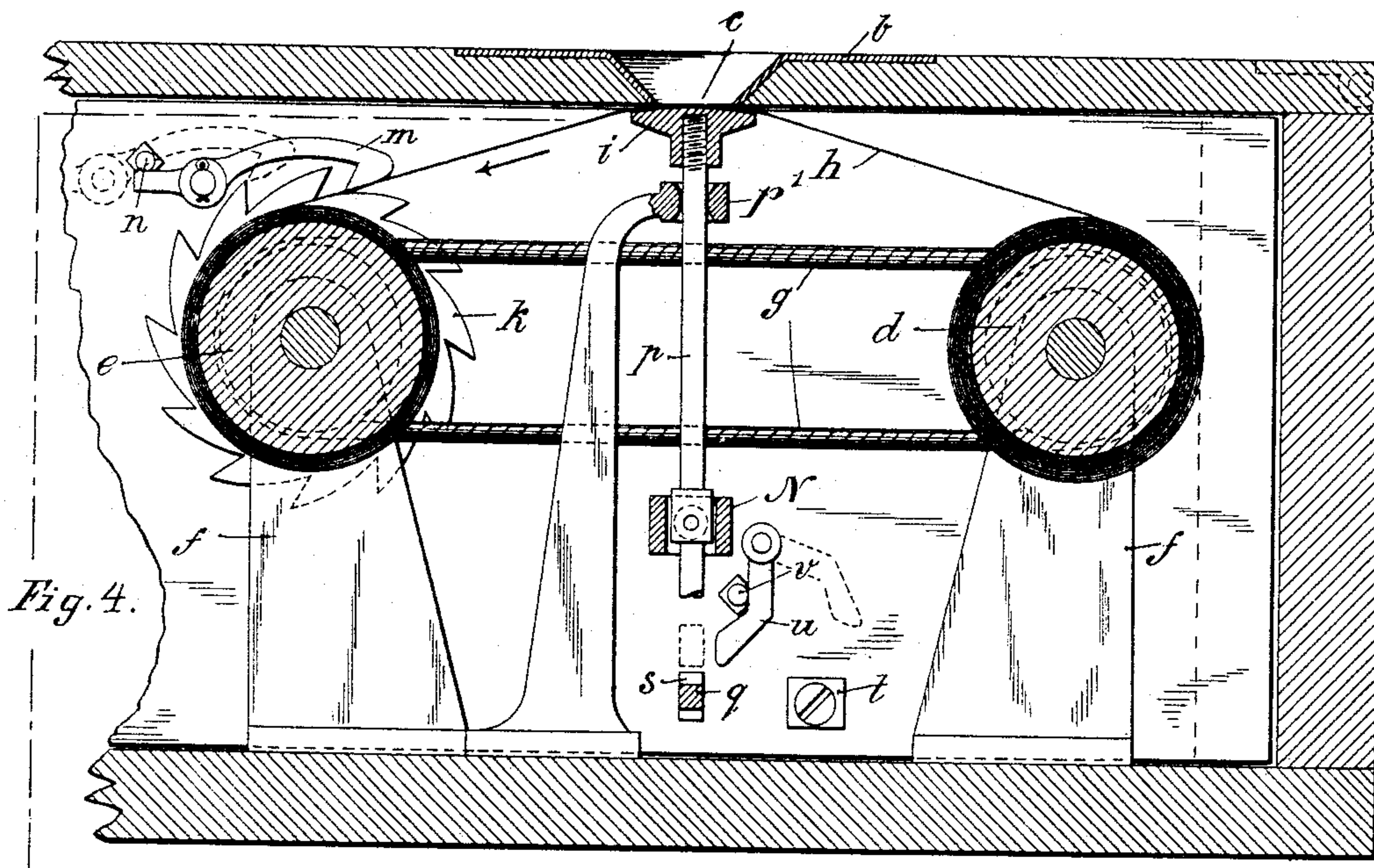
B₄ Henry Bonnets.

Att'y.

P. WESTPHAL.
CASH DRAWER AND RECORDER.

No. 450,439.

Patented Apr. 14, 1891.



Witnesses:
J. H. Langman
E. W. Stuart

Inventor:
Paul Westphal.
By *Henry Bonnett*
Att'y

UNITED STATES PATENT OFFICE.

PAUL WESTPHAL, OF POTSDAM, NEAR BERLIN, GERMANY.

CASH DRAWER AND RECORDER.

SPECIFICATION forming part of Letters Patent No. 450,439, dated April 14, 1891.

Application filed September 25, 1890. Serial No. 366,046. (No model.)

To all whom it may concern:

Be it known that I, PAUL WESTPHAL, a subject of the Emperor of Germany, residing at Potsdam, near Berlin, in the German Empire, have invented certain Improvements in Cash Drawers and Recorders, of which the following is a specification.

My invention relates to an improved safety cash drawer or till for shop and other counters; and the object of my invention is to provide a cash-drawer of this general character wherein means are provided for guarding against the omission of entries of goods sold, and at the same time providing a check on the employé or salesman receiving the cash and depositing the same in the till.

My invention will be hereinafter fully described, and its novel features carefully defined in the claims.

In the accompanying drawings, illustrative of my invention, Figure 1 is a perspective view on a small scale, illustrating the general outward appearance of my improved till. Fig. 2 is a plan view on a much larger scale, illustrating the recording mechanism for the cash received, the casing being partly removed for the sake of clearness and economy of space. Fig. 3 is an end elevation of the recording mechanism seen in Fig. 2 and drawn to the same scale as this latter figure; and Fig. 4 is a longitudinal vertical mid-section of the recording mechanism, the plane of the section being indicated by line 4 4 in Fig. 2.

In the drawings, A B represent, as a whole, a casing, which may be of any material and of any desired proportions, into one side A of which slides an ordinary cash drawer or till *a*. As it is desirable to have no obstruction in the form of a partition between the two halves or compartments of the casing, I prefer to provide guides *y y*, engaging grooves in the cash-drawer, at bottom and top, thereby leaving the middle portion of the side wall of the cash-drawer free for the application and operation of the mechanisms to be hereinafter described for recording the sales.

In the other half B of the casing is mounted the recording mechanism, which I will now describe. A pair of rollers *d* and *e*, mounted in bearings *f* and geared or connected together by a cord or band *g*, passing over grooved sheaves at their ends, carry a strip or ribbon

of paper *h*, of suitable width and ruled at suitable intervals for the various entries of sales, which strip winds upon one drum from off the other. In the drawings I have shown the strip *h* of paper as wound about the rear drum *d* primarily and secured at its free end to the drum *e* in any suitable or desirable manner. The drum *e* is actuated once for each outward pull of the cash-drawer by means of a pawl-and-ratchet device. (Seen clearly in Fig. 4.) On the axis of drum *e* at that end nearest the cash-drawer is secured a ratchet-wheel *k*, with the teeth of which engages a pawl or dog *m* on the side wall *l* of the drawer, which pawl is estopped against falling to a vertical position by a stud or pin *n* in said side wall *l*. It will of course be understood that each time the pawl *m* acts upon the ratchet-wheel *k* the drum is rotated to such an extent as to move the paper *h* the distance between two of the lines ruled thereon, thereby presenting a new surface of the ribbon for the next entry. In the crown or roof of the casing B is provided an aperture *c*, of limited dimensions, into which is set a countersunk slotted metal plate *b*, and beneath the said slot *c* is mounted a spring or gravity table *i*, between which and the roof of the casing passes the ribbon or strip *h* of paper on its way from one drum to the other, the aperture *c* allowing free space for the entries of sales to be made on the ribbon by the salesman.

In order that the salesman may not forget to make the necessary entries on the strip *h*, either willfully or innocently, and thereby occasion a difference between the amount of cash in the drawer at the end of the day and the sum of the entries on the ribbon, as often happens, I provide means whereby the drawer may not be opened for depositing the cash or making change before the entry of the sale has been made, and these means I will now describe. The table *i* is mounted on the upper end of a vertical shaft *p*, guided in bearings at *p'* and N, to the lower end of which is coupled the end of a lever *q*, pivotally mounted at *r* and provided on its free end with an adjustable sliding weight *q'*, which serves as a counterbalance for the table *i*. The end of this lever *q* is in the form of a square toe or ear *s*, and when the table is elevated to the position seen in full lines in Figs. 3 and 4

this ear *s* projects out into the path of a stud or projection *t* on the side wall *l* of the cash-drawer, whereby the drawer may not be pulled out. This is the normal position of the parts.

5 When a sale has been made and it is necessary to open the cash-drawer for the purpose of making change or depositing the money therein, the salesman must first with his pencil make the necessary entry of the
10 sale on the ribbon *h*, the pressure of the pencil in writing being sufficient to depress the table *i* and raise the weighted end or arm of lever *q* to the position seen in dotted lines in Fig. 3, when it will be seen that the ear *s* is
15 raised above and out of the path of the stud *t* on the drawer. It will be seen that the drawer may now be pulled out, there being no other obstruction to its withdrawal.

In order to insure the stability of the table
20 *i* in its elevated and depressed positions until it is desired to change such position, I prefer to provide the said table-support *p* with a spring-bearing, as seen at *N* in Fig. 3. This bearing comprises a casing *N*, fixed to the
25 casing *B* and hollowed out to receive two pointed spring-plungers *n*, which take into recesses formed in the sides of the support *p*, as seen in Fig. 3, when the table is in its elevated position. When the table is depressed by the
30 pressure of the pencil in writing, the plungers will be forced out of their recesses and will then bear against the plain sides of the support, holding the same, together with table *i*, securely in a depressed position.

35 In order to return the table and its support to their normal elevated position, I employ means operated by the pushing in or return of the drawer, and these means I will now describe. On the side wall *l* of the cash-drawer,
40 just behind the stop *t*, is pivotally mounted a gravity latch or finger *u*, which is free to move in a backward or rear direction, but is estopped against forward movement by a pin or stud *v*, secured to the side wall *l* of the
45 drawer. Supposing that the salesman has entered a sale upon the ribbon *h*, and, pulling out the cash-drawer thus freed, has deposited the cash received therein. In drawing out the drawer the gravity-latch *u* rides over the
50 ear *s* on the lever *q*, and, passing the same, drops in front thereof, not having sufficient weight to overcome the resistance of the spring-bearing *N*; but on returning the drawer into the casing *A* the stud *t* first passes under the ear *s*, which is then engaged by the gravity-latch *u*, which swings forward until it is
55 stopped by the pin *v* against further forward movement, when it will present a beveled or inclined face to the ear *s*, pressing the latter
60 down forcibly into the position seen in full lines in Fig. 3, when the table *i* will assume its elevated normal position and be locked against further accidental movement by the spring-bearing *N*.

65 In brief, the mechanism operates as follows: If the salesman has deposited the cash received in the till and closed the same, the

drawer will remain shut. In order to again unlock the drawer *a*, the salesman must write the amount of the next sale on the strip of
70 paper through the open slot in the crown of the casing. Through the pressure exerted on the table in writing the nose of the lever *q* is raised and the drawer unlocked. If, however, the salesman omits to enter the
75 amount received, the drawer will remain shut and cannot be opened for depositing a second payment until the foregoing payment has been entered. In this manner the omission of entries of receipts, which so often occurs
80 in shops and gives rise to many irregularities in the cash, is entirely avoided.

The increased protection against the dishonesty of the salesman consists in the fact that if he has been dishonest he cannot make
85 use of the customary excuse of forgetfulness, as the fact of the drawer remaining shut will at once call attention to the missing entry and also that the use of my improved cash-drawer makes it more difficult for him to con-
90 ceal his dishonesty. If, for instance, the salesman were simply to pocket the amount received and not open the drawer at all, this would very soon be discovered by the other salesmen or the proprietor of the shop; but if
95 he were to draw the drawer out as a blind he would have to make a false entry on the strip, and, the cash not agreeing with the register, the falsification would soon be discovered.

In order to prevent a salesman leaving the
100 drawer or till open, a small stop may be so applied to the same that a bell or gong will be sounded each time the drawer is opened. If the bell does not ring, it will signify at once that the drawer was not closed after the in-
105 sertion of the previous payment. If, however, the assistant were to depress the table with a pencil or the like without making any entry, the space on the paper would be moved from under the slot and remain blank, so that
110 in both cases the proprietor or manager of the store would have his attention directed to the fact that an irregularity had occurred. The only possibility now remaining would be for the salesman to retain a part of the receipts
115 and enter the balance on the paper and put the curtailed amount into the till; but this would also be readily detected in the event of the purchaser bringing back the goods purchased to exchange same or the like, as the
120 entry would have to be referred to and the falsification would accordingly be made evident. In order to ascertain which of the salesmen is guilty, each salesman should be provided with a pencil of a different color.
125 The strips for the various days may have characteristic features—as, for instance, they may be dated, or bear different numbers, or be of different proportions.

My improved safety cash-drawer is of great
130 importance, and is more especially adapted for shops where no special cashier is employed, the cash being received by salesmen, although it will be evident that the same can

be used to great advantage even in the largest and most extensive business, as it would prove a great saving of time if each salesman had his own till. It will also be evident that the construction of the parts may be modified in various ways without departing materially from the principles of my invention. If desired, the drawer may be made to close automatically by applying suitable springs. Having thus described my invention, I claim—

1. In an apparatus for checking the receipt of moneys, the combination, with the slotted casing, of the cash-drawer normally locked therein, the paper strip within said casing arranged to move in a path beneath the slot in the casing, means operated by the opening of said cash-drawer for feeding said strip along at each operation of said drawer, the depressible table arranged within the casing beneath the slot therein, over which table the strip passes, whereby the pressure of the pencil in writing depresses said table, and means, substantially as described, for communicating the movement of said table to the locking mechanism of the drawer, whereby said drawer is released and may be withdrawn after the entry of each receipt.

2. In an apparatus for checking the receipt of moneys, the combination, with the slotted casing, of the cash-drawer arranged to slide therein, the paper strip within said casing arranged to move in a path beneath the

slot therein, means for feeding said strip along at each operation of the cash-drawer, the depressible table over which the paper strip passes, arranged beneath said slot in the casing, and the lever-support for said table, provided at its free end with ears arranged in the path of a projection on the cash-drawer, whereby when said table is depressed by the pencil in writing said ears are withdrawn from the path of the projection and the drawer released, as and for the purposes set forth.

3. In an apparatus for checking the receipt of money, the combination, with the slotted casing, of the cash-drawer arranged to slide therein, the paper strip mounted on rollers and arranged to move in a path beneath said slot, the feed mechanism for communicating longitudinal movement to said strip each time the drawer is operated, the table *i*, supported on one of the arms of the lever *q* and arranged beneath the slot in the casing, the free end of said lever *q* arranged in the path of a projection on the drawer, the gravity latch or finger *u*, and its stop *v*, all arranged to operate as and for the purposes set forth.

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

PAUL WESTPHAL.

Witnesses:

FRED J. DOWNING,
H. DUKES.