

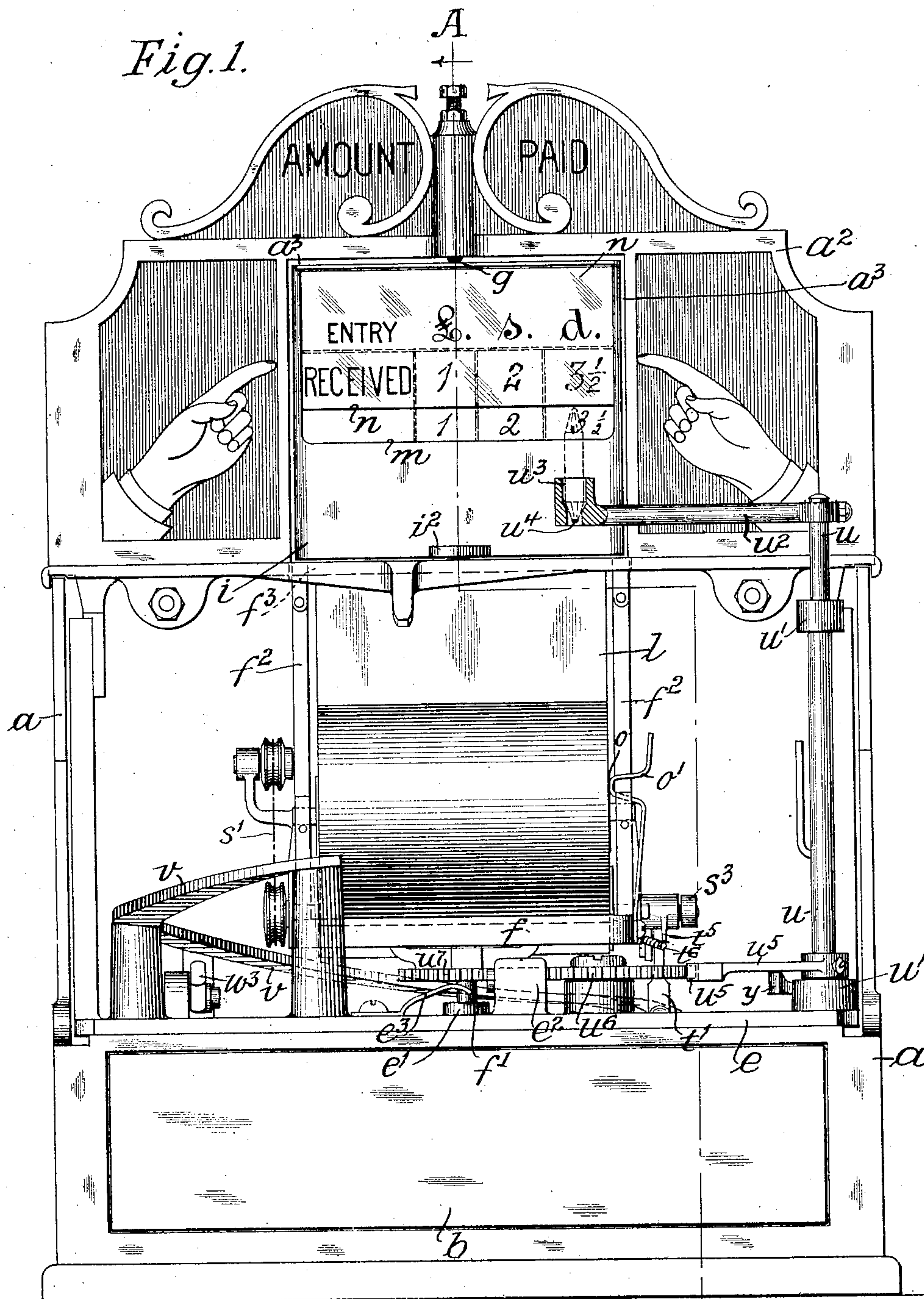
No. 845,342.

PATENTED FEB. 26, 1907.

R. FIELD.  
CASH CHECK TILL.  
APPLICATION FILED MAR. 31, 1906.

4 SHEETS—SHEET 1.

Fig. 1.



Witnesses  
Wm H Bates  
L. B. Middleton

B Inventor  
Robert Field  
by Robert W. Jenner  
Attorney.

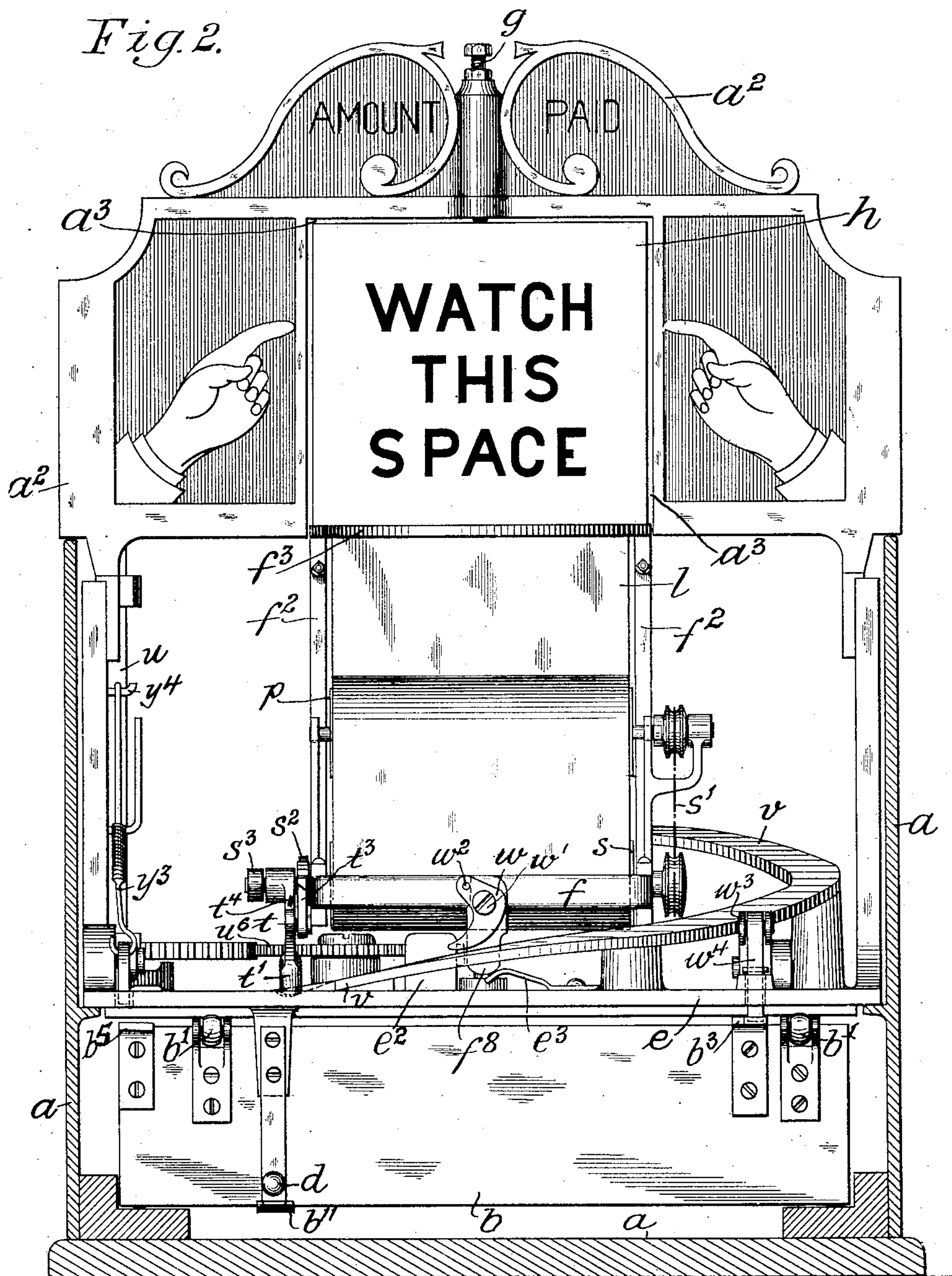
No. 845,342.

PATENTED FEB. 26, 1907.

R. FIELD.  
CASH CHECK TILL.

APPLICATION FILED MAR. 31, 1906.

4 SHEETS—SHEET 2.



Witnesses.  
*Wm H Bates*  
*L. B. Middleton*

Inventor.  
*Robert Field.*  
by *Herbert H. Jenner.*  
Attorney



No. 845,342.

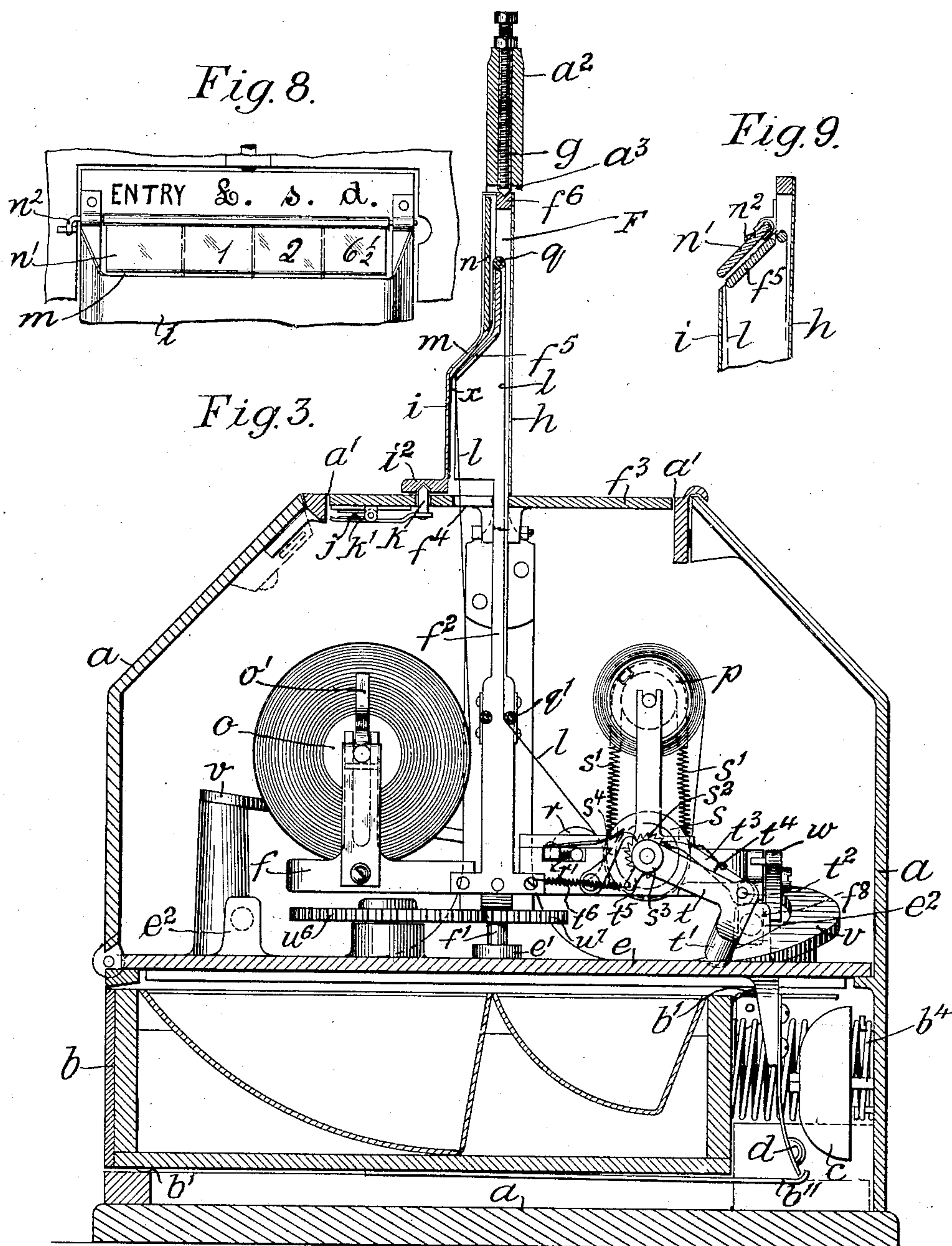
PATENTED FEB. 26, 1907.

R. FIELD.

CASH CHECK TILL.

APPLICATION FILED MAR. 31, 1906.,

4 SHEETS—SHEET 3.



Witnesses.

Wm H Bates  
L. B. Middleton

Inventor  
Robert Field.  
by Herbert W. Fernald.  
Attorney.

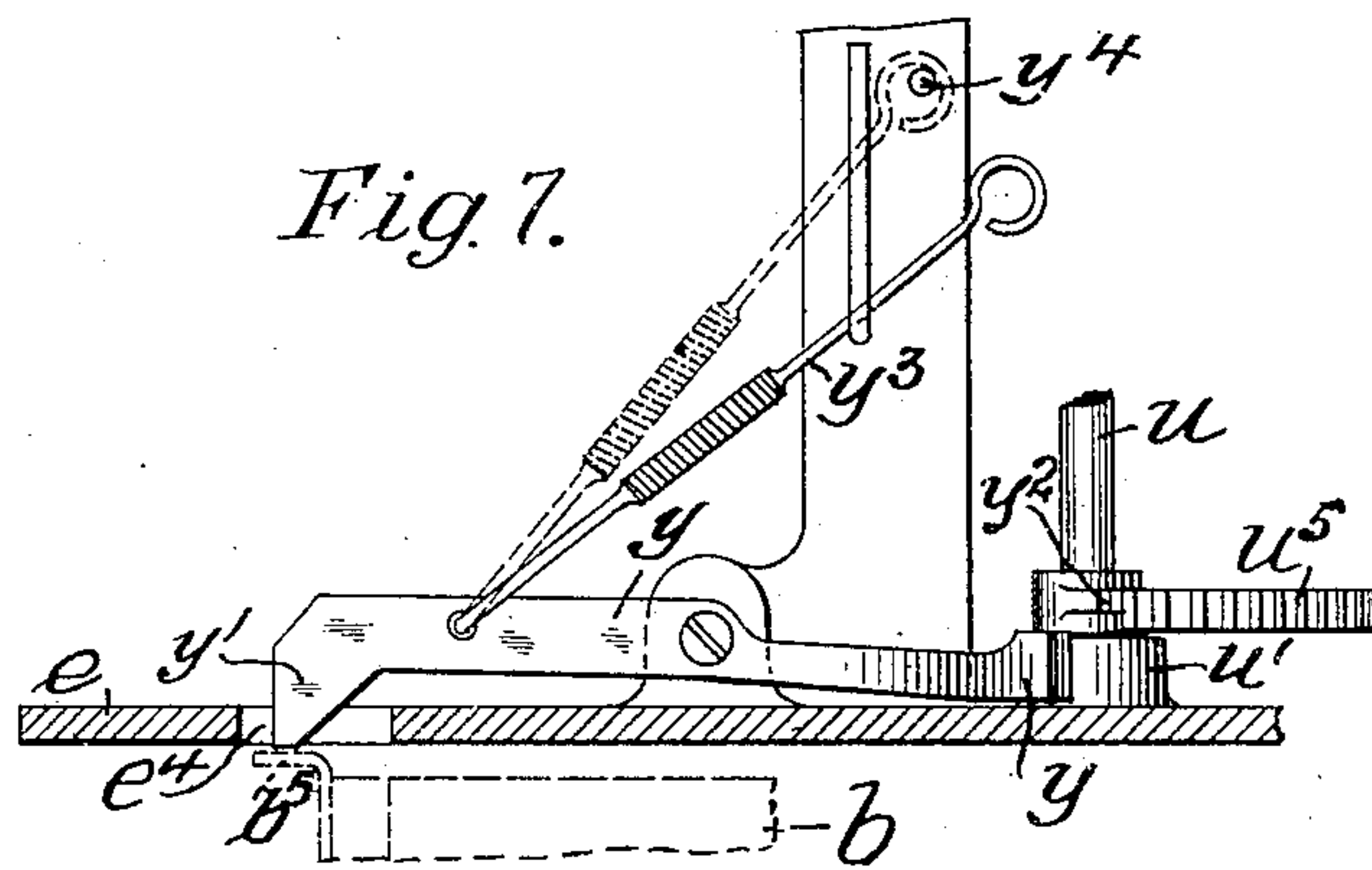
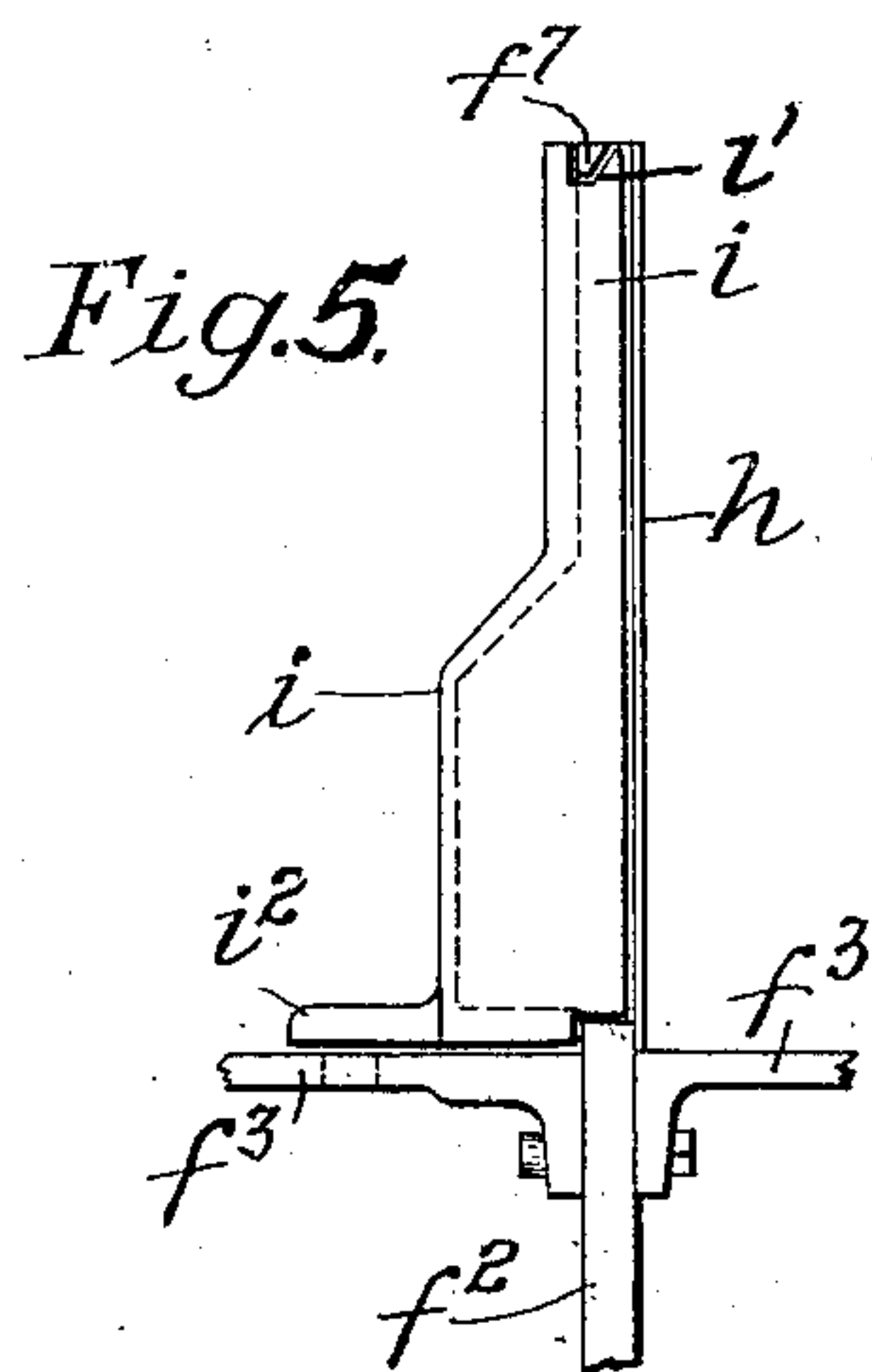
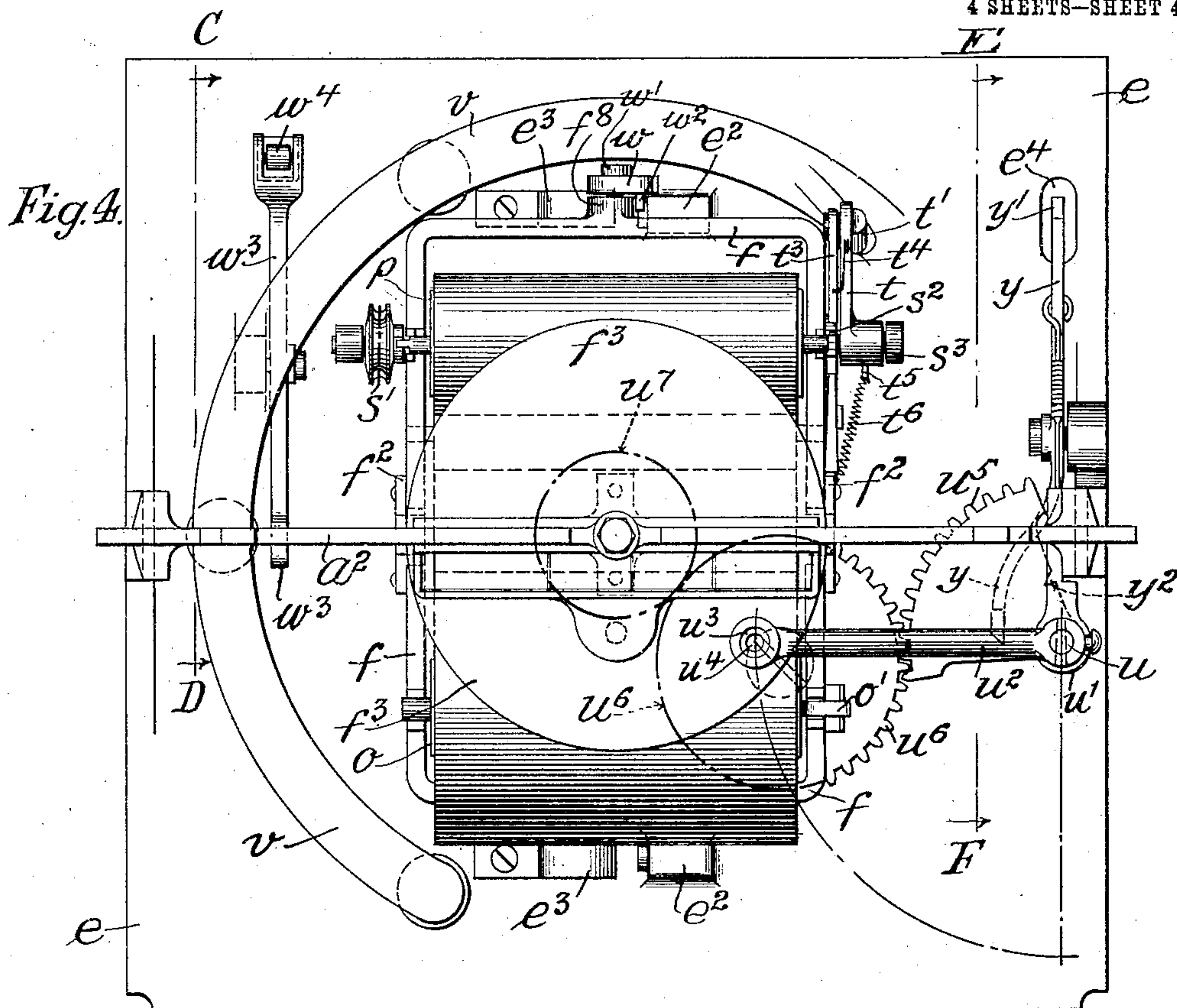
No. 845,342.

PATENTED FEB. 26, 1907.

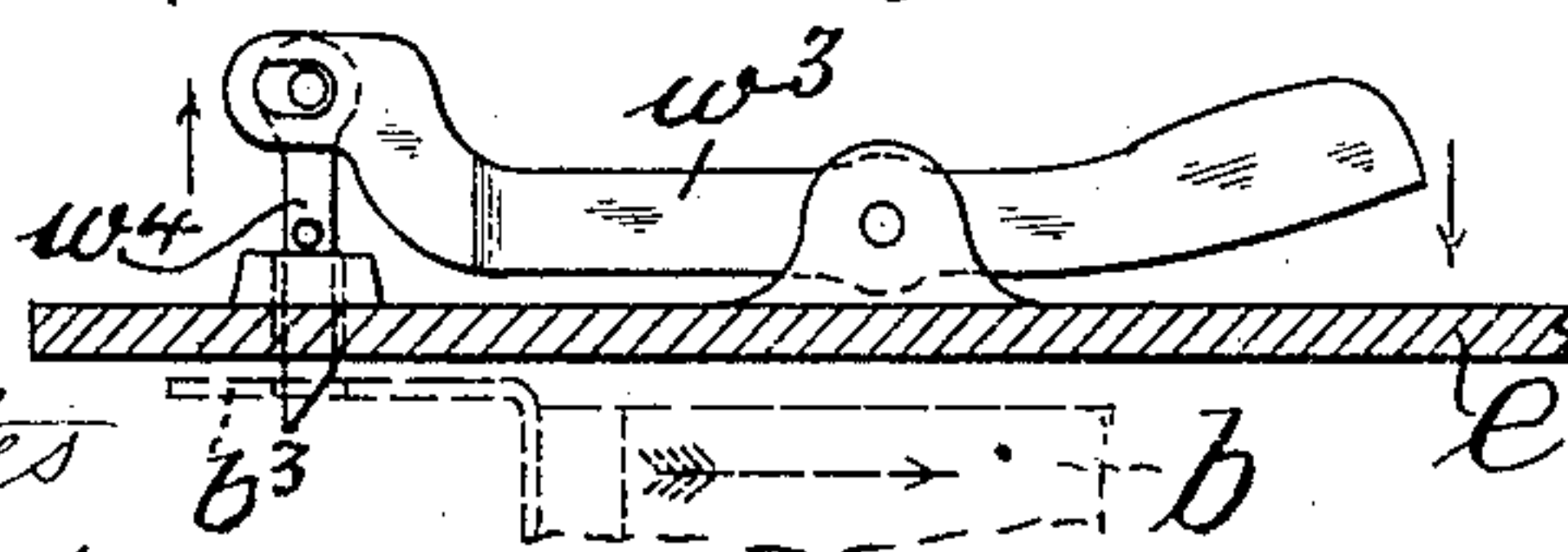
R. FIELD.  
CASH CHECK TILL.

APPLICATION FILED MAR. 31, 1906.

4 SHEETS—SHEET 4.



*Fig. 6.*



Witnesses.

*Wm H Bates*  
*L. B. Middleton*

Inventor  
*Robert Field.*  
by *Herbert M. Jenner.*  
Attorney.



# UNITED STATES PATENT OFFICE.

ROBERT FIELD, OF HUDDERSFIELD, ENGLAND.

## CASH-CHECK TILL.

No. 845,342.

Specification of Letters Patent.

Patented Feb. 26, 1907.

Application filed March 31, 1906. Serial No. 309,074.

*To all whom it may concern:*

Be it known that I, ROBERT FIELD, a subject of King Edward VII of Great Britain, residing at Huddersfield, in the county of York, England, have invented certain new and useful Improvements in Cash-Check Tills, of which the following is a specification.

This invention relates to cash-tills for checking and recording the various amounts received over the counter for cash transactions or in payment of accounts.

The object of my invention is to provide a simple and inexpensive machine or apparatus in which is a recording strip of paper whereon all sales or receipts of cash must be recorded by the salesman, such records being brought into full view of the purchaser or customer before the cash-drawer is released.

In the accompanying drawings, illustrating my invention, Figures 1 and 2 are elevations of my improved cash-check till as viewed from behind or salesman's side and from the front or customer's side of the counter, respectively, a portion of the inclosing casing being removed to show the operative parts. Fig. 3 is transverse sectional elevation taken on line A B, Fig. 1. Fig. 4 is plan view of the apparatus, the inclosing casing being omitted. Fig. 5 is side elevation of the upper or outwardly-projecting end of the revoluble frame. Fig. 6 is transverse section taken on line C D, Fig. 4, of a portion of the base-plate, showing the lever pivotally mounted thereon for locking and releasing the cash-drawer, part of the cash-drawer being shown in dotted line. Fig. 7 is a transverse section taken as on line E F, Fig. 4, showing the device for preventing withdrawal of the record from the customer's view until the cash-drawer is closed; and Figs. 8 and 9 are front elevation and cross-section, respectively, of the upper part of the revoluble frame, showing a modification.

Referring to the drawings, letter *a* represents the outer inclosing casing, which may be composed of metal, wood, or other suitable material, *b* the cash-drawer slidable longitudinally in ways in the lower part of the casing, small rolls *b'*, journaled in bearings secured to the drawer and adapted to run over the prepared tracks, being preferably provided, and *c* the bell or gong, which is adapted to be sounded by the striker *d* when the latter is actuated on the opening of the drawer by a finger *b''*, secured thereto, the

said parts being somewhat as usual in cash-check tills.

Above the drawer *b* is a fixed base-plate or partition *e*, having centrally thereof a socket or boss *e'* to form a foot-step or bearing for a pivot-pin *f'*, formed integral with or secured to a turn-table or revoluble frame *f*, having attached thereto side upright members *f''*, to which is secured at a height thereon coinciding with the top of the casing *a* a circular platform *f'''*, having an opening *f''''* therein. The platform *f'''* fits loosely within a concentric opening *a'*, formed in the casing, and is free to rotate therein.

Above the platform *f'''* the upright arms *f''* are extended at right angles at one side and have secured on or formed integral therewith at a suitable height above the platform *f'''* an inclined cross bar or plate *f<sup>5</sup>* and at the extreme upper ends of same a cross-head *f<sup>6</sup>*, into a central recess in which enters a screwed pivot-pin *g*, screwed through the arch of a central plate *a<sup>2</sup>*, forming a part of the casing or secured thereto and having an opening *a<sup>3</sup>* therein to receive and admit of the rotation of the upper end of the revoluble frame, the said frame thus being pivoted at top and bottom.

The space between the two uprights *f''* above the platform *f'''* is inclosed at one side by a plate or thin wall *h* and on the opposite side by a removable plate *i*, which is notched at *i'*, Fig. 5, at its upper end on both sides to take under and engage angular lugs or projections *f<sup>7</sup>* on the upper ends of the side arms *f''*. Projecting from the foot of the plate *i* is a lug *i<sup>2</sup>*, having a socket or recess in its under side, into which when the plate is forced home enters under the tension of a spring *j* the upper end of a pin *k*, extending through an opening or bearing in the platform *f'''* and carried by a plate or arm *k'*, pivotally mounted on the under side of the said platform *f'''*. The removable plate *i* is provided in order that access can be had to the space or chamber *F* within the upper end of the revoluble frame when applying the record-strip of paper *l*, as afterward explained, the plate when secured or locked in position, as shown, preventing any tampering with the record-strip and only being removable when the inclosing casing is unlocked.

The upper portion of the plate *i* is cut away from about the level of the lower end of the inclined plate or table *f<sup>5</sup>* and is left open



opposite said table, as at  $m$ , to admit of a pencil or other marking instrument being inserted to write the amounts of cash received on the portion of the record-strip resting on the table, the remaining portion of the opening being closed up by a glass or other transparent plate  $n$ , having vertical lines painted thereon to form columns for pounds, shillings, and pence or other cash denominations and coinciding with lines marked on the table  $f^5$ , which show through the thin paper  $l$  used in the machine. The remaining surface of the glass plate  $n$  is painted over at the back to render it opaque and has suitable matter printed thereon to denote that the figures appearing in the columns behind the transparent portion of the glass plate  $n$  is the entry of the cash received.

In bearings in the frame  $f$  are loosely mounted a roll  $o$ , carrying a supply of paper, and a winding-on roller  $p$ , the ribbon of paper  $l$  from the roll  $o$  being carried up vertically at one side of the uprights  $f^2$ , over the inclined table  $f^5$ , and over a roller or rod  $q$ , journaled in bearings in the side uprights  $f^2$  above said table, whence it passes downwardly behind the table and is guided by a roller or rod  $q'$ , also journaled in bearings in the side uprights  $f^2$  to a roller  $r$ , then under an intermittently-driven roller  $s$ , and is finally secured to and wound upon the winding-on roller  $p$ , which is driven by the flexible or extensible strap  $s'$  from the roller  $s$ . The rollers  $r$  and  $s$  are mounted in bearings on the frame  $f$ , the former being held in engagement with the roller  $s$  by confined springs  $r'$ .

On one end of the axis of the roller  $s$  is fast a ratchet-wheel  $s^2$ , and on the outer side thereof is loosely mounted and held in position thereon by a boss or collar  $s^3$  the boss of an arm or lever  $t$ , which at its forward end extends downwardly at right angles to form a foot or toe  $t'$ , which is rounded at its extremity. Pivoted at  $t^2$  to the arm or lever  $t$  is a pawl  $t^3$ , which is adapted to engage a tooth of the ratchet and is held in engagement therewith by a light spring  $t^4$ , secured at one end to the arm  $t$  and extending upward and over the pawl  $t^3$ . The boss of the arm or lever  $t$  also has a short arm or lug  $t^5$ , to which is connected one end of a spring  $t^6$ , secured at its opposite end to a screw or stud on the frame  $f$ .

$u$  is a vertical shaft supported in bearings  $u'$  in the casing, the upper end of the said shaft extending through to the outside of the casing and having secured thereto a lever  $u^2$ , which in this instance is provided at its free end with a socket  $u^3$ , having a shoulder at its lower end and a contracted opening  $u^4$ , said socket being adapted to receive a pencil or similar marking instrument which rests against the shoulder with the point entering the contracted opening at the lower end, this construction preventing the point of the pencil being broken when inserted into the socket.

The pencil when inserted into the socket serves as a handle to the lever and is conveniently located for use by the operator in writing the amounts of the purchases on the record-strip  $l$ .

At the lower end of the vertical shaft  $u$  is secured a toothed segment  $u^5$ , which meshes with a carrier or intermediate spur-wheel  $u^6$ , loosely mounted on a stud secured to the base-plate  $e$ , the intermediate wheel  $u^6$  gearing into a pinion  $u^7$ , fast on the pivot-pin  $f'$  of the revoluble frame  $f$ .

The movement of the hand-lever  $u^2$  to the extent of a quarter of a revolution imparts, through the segment  $u^5$  and spur-gears  $u^6$   $u^7$ , a half-turn to the revoluble frame  $f$  and parts carried thereby to present the side which has been facing the salesman to the customer, and vice versa.

As the frame  $f$  turns on its pivot-centers in one direction a partial rotation is given to the winding-on roller by the toe-piece  $t'$  of the arm  $t$ , riding over an inclined or cam-surface  $v$ , secured to and supported on the base-plate  $e$ , the said arm thus being elevated and, by means of the pawl  $t^3$  engaging a tooth of the ratchet  $s^2$ , imparting a partial rotation to the roller  $s$  to draw a given length of paper off the roll  $o$  and through the strap  $s'$  conveying motion to the roller  $p$  to wind on the length of paper thus drawn forward. A detent  $s^4$  prevents backward movement of the ratchet  $s^2$  and roller  $s$ .

At each extremity of movement of the revoluble frame  $f$  and parts a projection  $f^8$  on the said frame engages with one of the stop-pieces  $e^2$  on the base-plate  $e$ , the said projection riding over a leaf-spring  $e^3$ , adjacent each stop-piece, which tends to retain the frame at each extent of its motion and prevent accidental return movement. The stop-pieces are preferably provided with buffers of india-rubber.

On the completion of a sale the salesman writes the given amount of the purchase on the portion of paper lying upon the inclined table  $f^5$  and opposite the opening  $m$ , the frame and parts then being in the positions shown in Figs. 1 to 4. Having written down the amount—say one pound, two shillings, and three pence halfpenny—the salesman replaces the pencil in the socket in the lever  $u^2$  and moves said lever through quarter of a revolution, as indicated by the broken center line in Fig. 4, this movement giving a half-turn to the frame  $f$  and parts to present the side which was facing the salesman to the opposite side and facing the customer. The plate  $h$  on what may be called the “blind” side of the exposed upper end of the revoluble frame has in bold lettering on its face some indication to draw the attention of the purchaser to the record made of the purchase, as shown at Fig. 2, and therefore, the attention of the purchaser having been at-



tracted, the half-turn of the frame brings to the purchaser's view the amount paid on the transaction. During the above half-turn of the frame  $f$  and parts a length of paper is drawn off the roll  $o$  by the lever  $t$  riding over the inclined or cam surface  $v$  and an equivalent length wound upon the roller  $p$ , the paper strip  $l$  thus being advanced a short distance and carrying the record made by the salesman from the position shown in full line to that shown in dotted line in Fig. 1, so that when the half circular movement is completed the record has been moved behind the glass plate  $n$ , through which it plainly shows, but cannot be tampered with either by the purchaser or the salesman.

As the frame  $f$  is being turned to exhibit the record to the purchaser, as above described, a lever  $w$ , (see Figs. 2, 3, and 4,) loosely pivoted on a stud  $w'$ , secured to the projection  $f^s$  on the frame  $f$  and locked in position in one direction of movement by a pin  $w^2$ , carried thereby engaging the edge of the projection  $f^s$ , is caused to ride over the end of a centrally-pivoted lever  $w^3$  on the base-plate  $e$ , (see Figs. 4 and 6,) thereby depressing said end of the lever and elevating the opposite end, which carries a pin or bolt  $w^4$ , passing through an opening in the base-plate  $e$ , this oscillation of the lever  $w^3$  withdrawing the end of the bolt  $w^4$  clear of an opening in a plate  $b^3$ , secured to the rear of the drawer, and releasing the drawer, which is immediately forced outward by a spiral spring  $b^4$ , confined between the casing and the rear of the drawer, as shown at Fig. 3. Thus the drawer is not released and cannot be opened by the salesman until the record made on the paper-strip is practically in full view of the purchaser. On the return movement of the frame the lever  $w$  rides harmlessly over the lever  $w^3$ , which reinstates itself in position by gravity, the bolt reëntering the opening in the plate  $b^3$  on the drawer being closed and locking said drawer.

In order to prevent the frame  $f$  being turned back to bring the record side from the purchaser's to the salesman's side before the drawer  $b$  has been closed, a compound lever  $y$  is pivoted on a stud on the base-plate  $e$ , (see Figs. 4 and 7,) the extremity of one arm of said lever being extended downwardly at  $y'$  and passing through an opening  $e^4$  in the base-plate and normally resting on a plate  $b^5$ , secured to the drawer  $b$ . The extremity of the other arm of the lever  $y$  is tapered or beveled on one side, as shown at Fig. 4. When the drawer  $b$  is opened, the end  $y'$  of the lever loses its support and being the heavier end falls until the main portion of the lever adjacent to the end  $y'$  rests on the base-plate  $e$ , the opposite end or arm of the said lever thus being elevated into the path of the segment  $u^5$ , which, of course, is at this time in the contrary position to that shown at Fig. 4. Any

attempt, therefore, by the salesman to bring the record from the purchaser's to the salesman's side before closing the drawer is prevented by reason of the lever  $y$  engaging a recess  $y^2$  in the edge of the segment. When the drawer is closed, the plate  $b^5$  engages the inclined face on the end  $y'$  and places the lever in its normal position.

In busy times the lever  $y$  can be hung up out of action by hooking the link  $y^3$  on a stud  $y^4$ . It is shown thus suspended in full line in Fig. 2 and in dotted line in Fig. 7.

The winding-on roller has flats formed on its axis at one end to engage a corresponding socket in the hub of the driven pulley, which in this instance is supported in a separate bearing, thus enabling the roller to be removed and replaced in position again without disturbing any of the parts.

The paper-roll has a brake tension placed thereon to prevent overrunning and to keep the paper in tension by a leaf-spring  $o'$ , secured to the frame  $f$  and bearing at its free end against the roll  $o$ .

A light leaf-spring  $x$ , secured to the inner face of the plate  $i$ , rests with its free end on the paper at the lower edge of the table  $f^5$  to place a slight tension thereon.

In Figs. 8 and 9 I show a modified construction of the upper part of the revoluble frame  $f$ . A hinged glass plate  $n'$  is adapted to cover the opening  $m$  over the table  $f^5$  when turned to the front of the counter. One end of the plate  $n'$  is provided with an arm  $n^2$ , by means of which the said plate may be raised in any approved manner.

The transactions entered on the recording-strip can be readily checked off and the totals added up at the end of the day or other period of time.

The inclosing case is provided with any approved fastening devices, (not shown in the drawings,) so that no unauthorized person can obtain access to the record-strip, the cash-drawer fitting in a compartment separate and distinct from that in which the revoluble frame and parts are located.

Particulars as to entries or names of purchasers can be written upon the left-hand portion of the record-strip, such particulars being hidden from view of the purchasers by the blank or painted-over portion of the glass plate  $n$ .

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a case, and a frame projecting centrally at the top of the case and provided with an opening; of a frame pivotally supported by the said case and frame and provided with a chamber arranged on its axis and in the said opening and having a sight-opening on one side, a desk for supporting a record-strip secured in the said chamber opposite the said sight-



opening, and means for traversing the record-strip over the said desk.

2. The combination, with a case, and a frame projecting centrally at the top of the case and provided with an opening; of a frame pivotally supported by the said case and frame and provided with a chamber arranged upon its axis and in the said opening, said chamber having a removable plate on one side which is provided with a sight-opening, a locking device normally securing the said removable plate in position, a desk for supporting a record-strip secured in the said chamber opposite the said sight-opening, and means for traversing the record-strip over the said desk.

3. The combination, with a case, of a frame pivoted vertically in the said case and provided at its upper part with a chamber having a sight-opening on one side, a desk for supporting a record-strip secured in the said chamber opposite the said opening, rolls journaled in the lower part of the said frame within the said case and having the end portions of the said strip wound upon them, means for moving the said frame pivotally to display the said sight-opening and strip first at one side and then at the other side of the said case, a cam-surface secured in the said case, and ratchet mechanism for revolving the said rolls provided with an operating-arm which engages with the said cam-surface.

4. The combination, with a case, of a frame pivoted vertically in the said case and provided at its upper part with a chamber having a sight-opening on one side, a desk for supporting a record-strip secured in the said chamber opposite the said opening, means for traversing the said strip, means for moving the said frame pivotally, stops for arresting the pivotal movement of the said frame when the said sight-opening and strip are displayed first at one side and then at the other side of the said case, and springs for preventing the free pivotal movement of the said frame when engaging with the said stops.

5. The combination, with a case having an opening in its top, and a stationary frame provided with an opening and projecting centrally at the top of the said case; of a pivoted frame supported by the said case and stationary frame and provided with a chamber arranged on its axis and in the opening of the said stationary frame and having a sight-opening at one side, a cover-plate for the opening in the top of the said case secured to the said pivoted frame below the said sight-opening, a desk for supporting a record-strip secured in the said chamber opposite the said sight-opening, and means for traversing the record-strip over the said desk.

6. The combination, with a case, and a drawer slidable in the lower part of the said

case; of a frame pivoted vertically in the upper part of the said case and provided at its upper part with a chamber having a sight-opening on one side, a desk for supporting a record-strip secured in the said chamber opposite the said opening, means for supporting and traversing the said strip, a tappet on the said frame, a locking-lever pivoted to the said case and arranged in the path of the said tappet and normally preventing the said drawer from sliding outward, and means for moving the said frame pivotally to display the said sight-opening and strip first at one side and then at the other side of the said case and to release the said drawer from the said locking-lever.

7. The combination, with a case, and a drawer slidable in the lower part of the said case; of a frame pivoted vertically in the upper part of the said case and provided at its upper part with a chamber having a sight-opening on one side, a desk for supporting a record-strip secured in the said chamber opposite the said opening, means for supporting and traversing the said strip, a locking-lever pivoted to the said case and preventing the pivotal movement of the said frame in one direction when the said drawer is slid out, the said locking-lever being engaged by the said drawer when slid in so that the said frame is released, and means for moving the said frame pivotally to display the said sight-opening and strip first at one side and then at the other side of the said case.

8. The combination, with a case, and a drawer slidable in the lower part of the said case; of a frame pivoted vertically in the upper part of the said case and provided at its upper part with a chamber having a sight-opening on one side, a desk for supporting a record-strip secured in the said chamber opposite the said opening, means for supporting and traversing the said strip, a toothed pinion secured to the said frame, a vertical operating-shaft pivoted to the said case and provided with an operating-handle, toothed driving mechanism between the said shaft and pinion, a locking-lever pivoted to the said case and engaging with the said driving mechanism so that the said frame cannot move pivotally in one direction when the said drawer is slid out, the said locking-lever being engaged by the said drawer when slid in so that the said frame is released, and means for moving the said frame pivotally to display the said sight-opening and strip first at one side and then at the other side of the said case.

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

ROBERT FIELD.

Witnesses:

THOMAS A. BARRON,  
ERNEST HUSTWICK.