

No. 770,423.

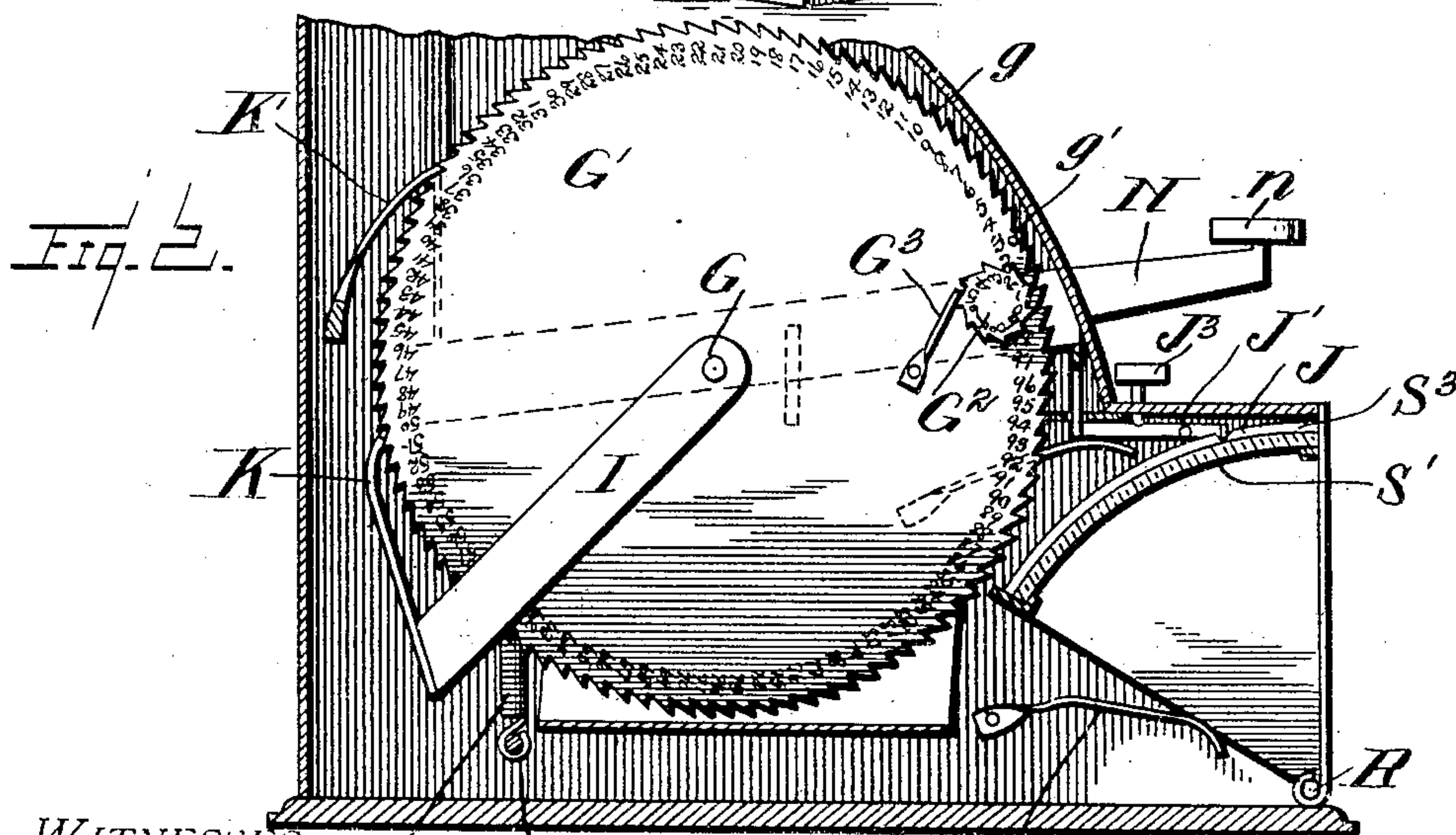
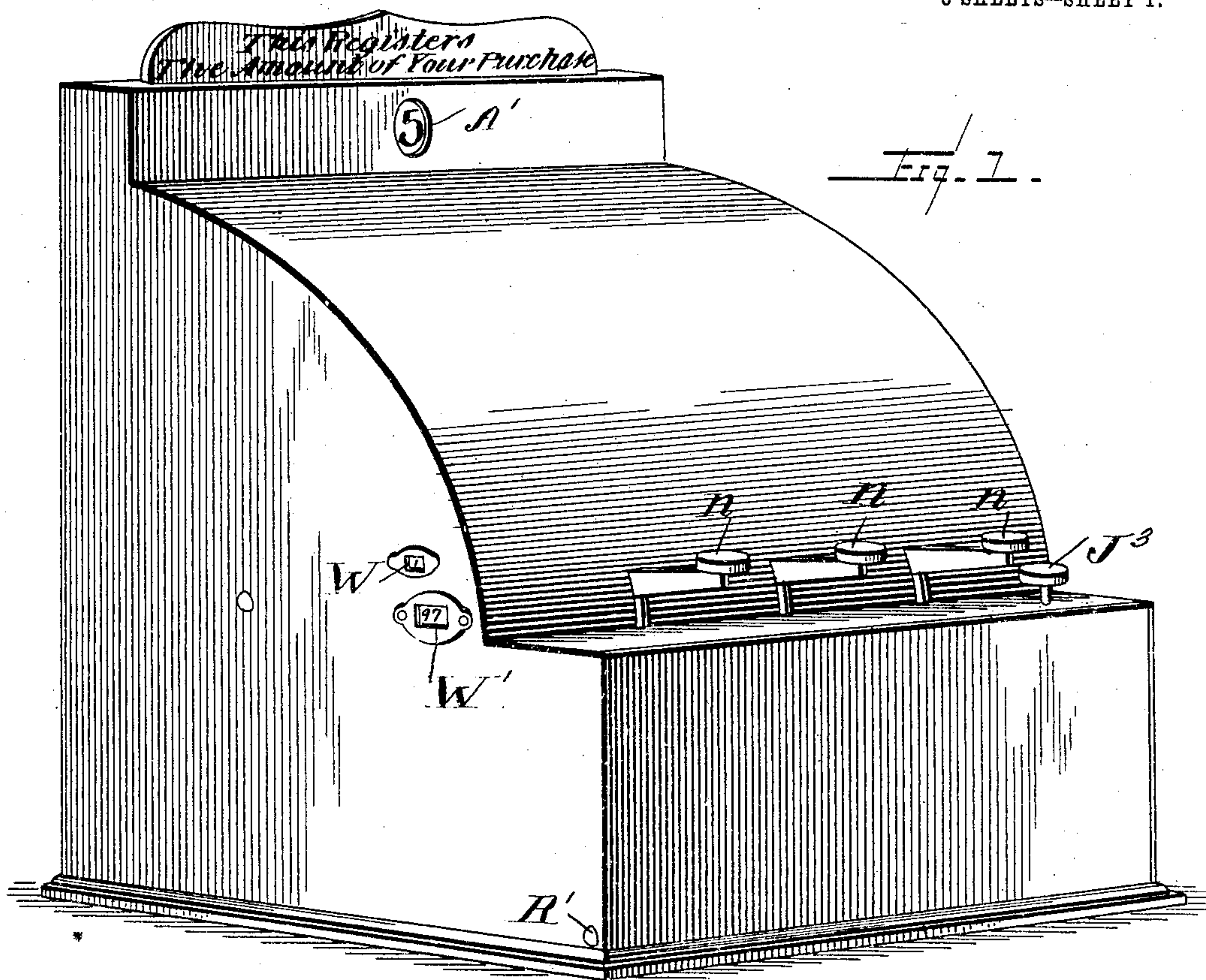
PATENTED SEPT. 20, 1904.

W. L. DUNHAM.
TOY CASH REGISTER.

APPLICATION FILED FEB. 12, 1904.

NO MODEL.

3 SHEETS—SHEET 1.



WITNESSES:

Wm F. Doyle.

A. L. Hong

INVENTOR

William L. Dunham,

By

BY
Francis A. Douglass

Attorney

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3 SHEETS—SHEET 2.

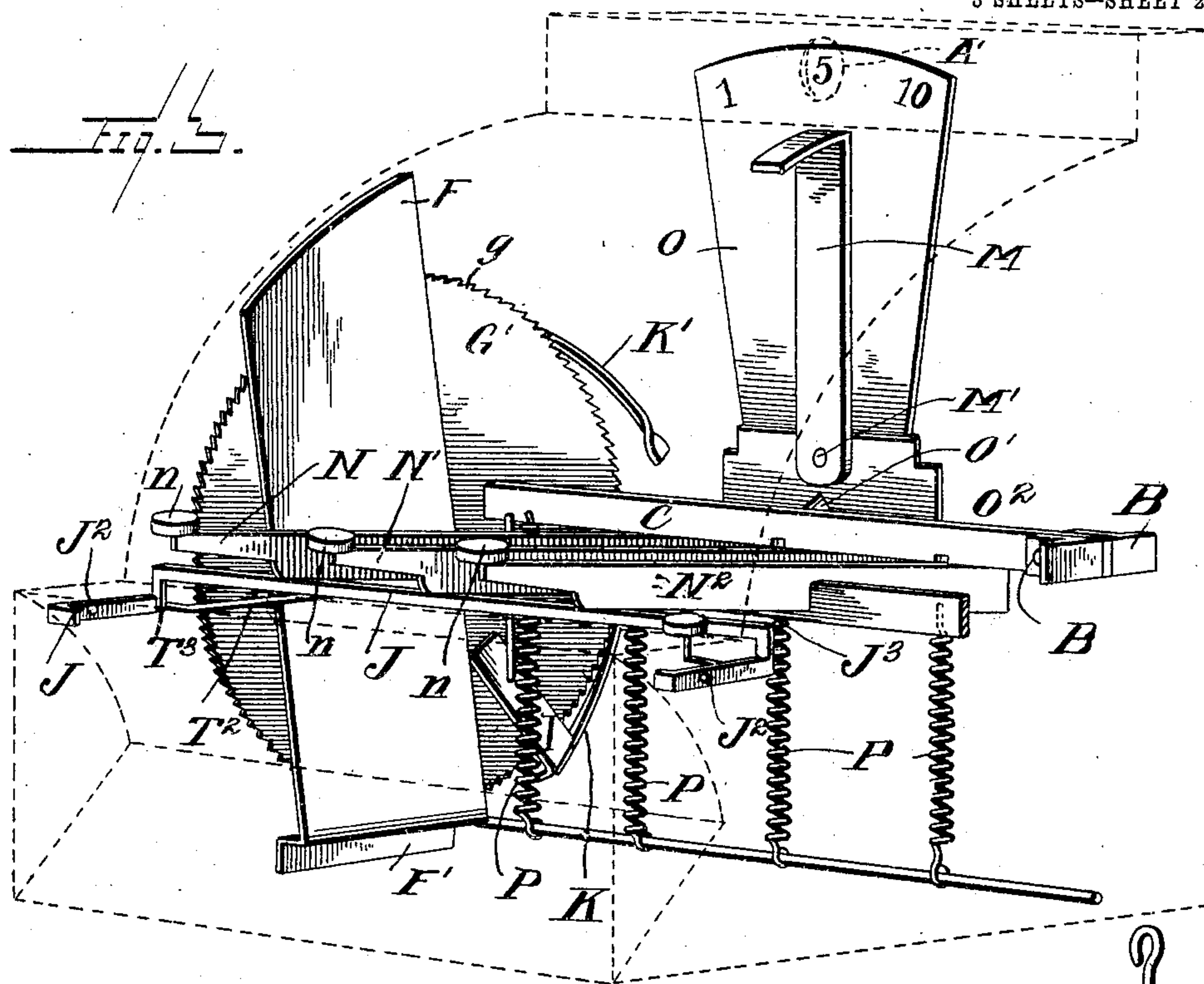


Fig. 6a

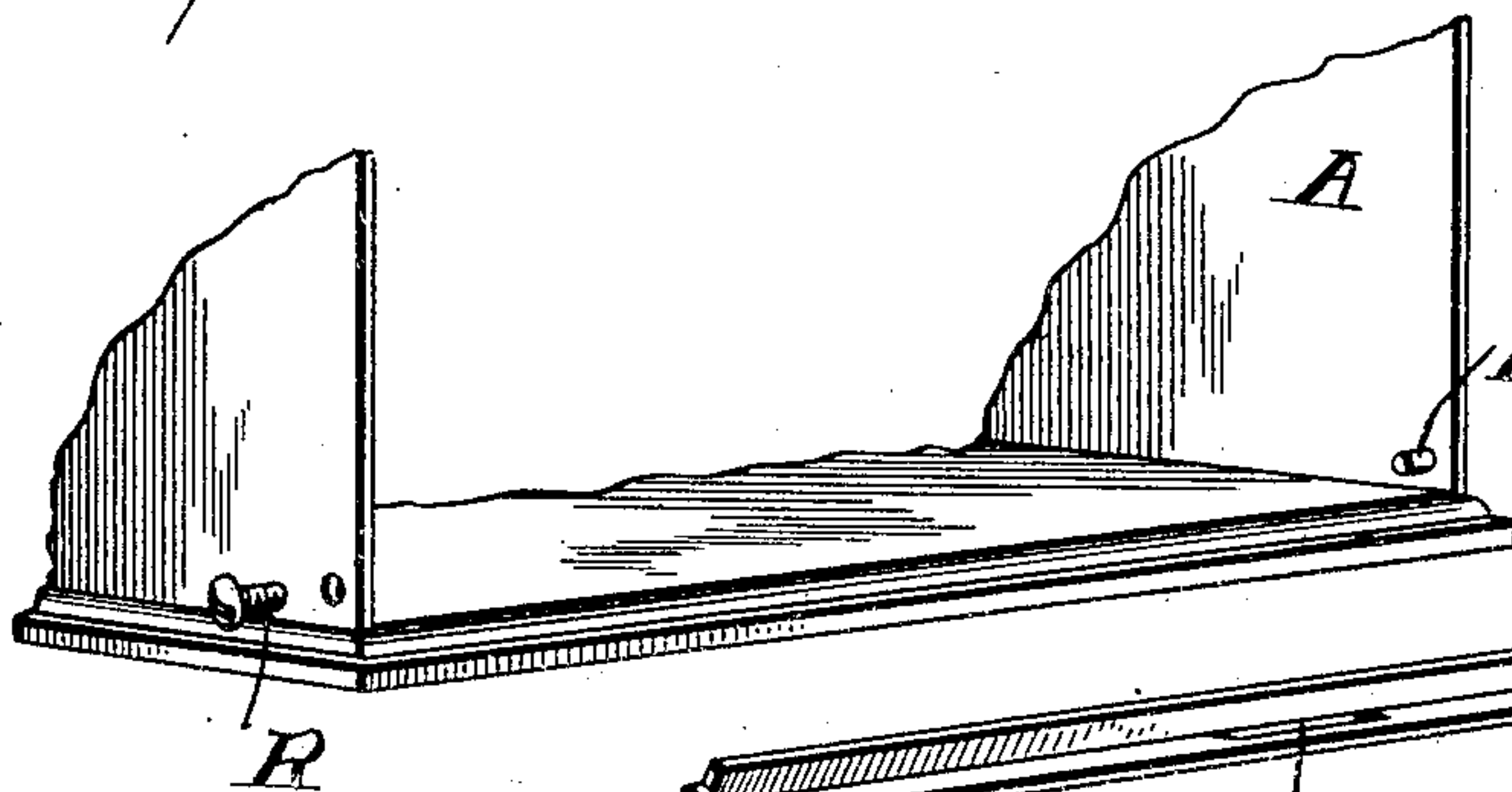


Fig. 7

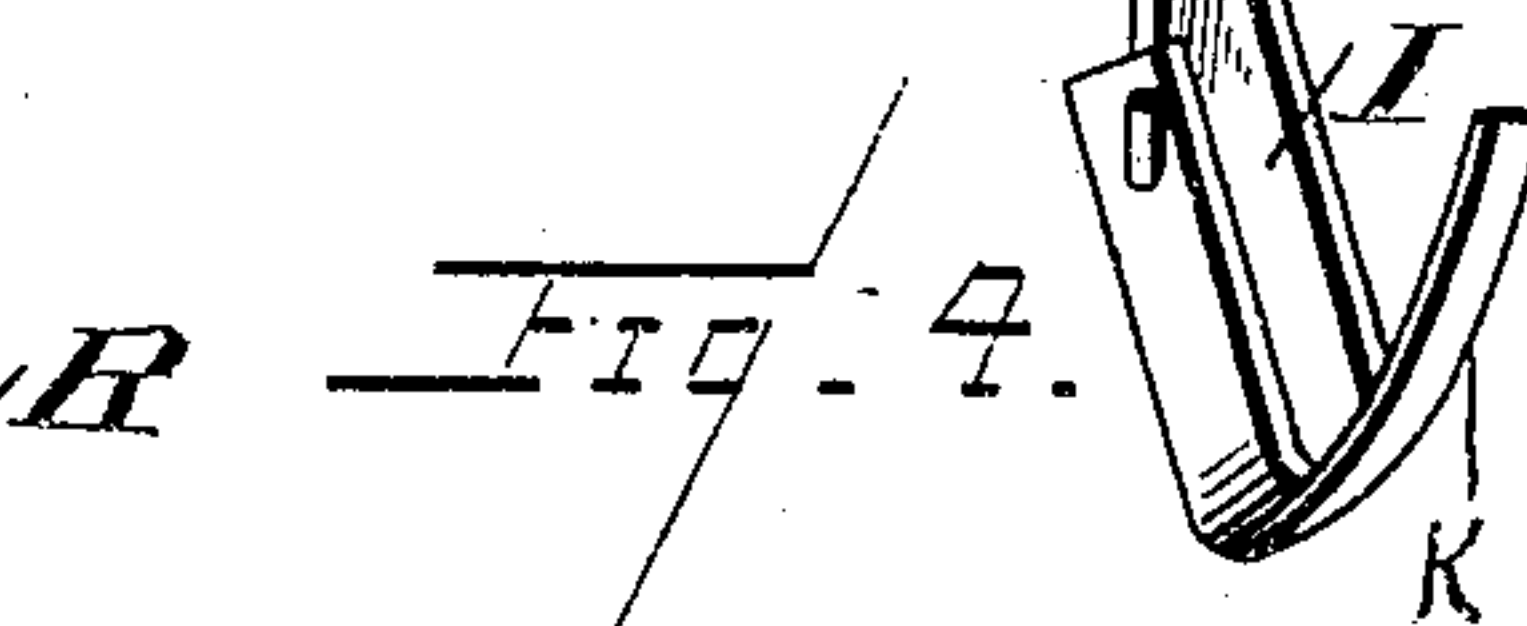
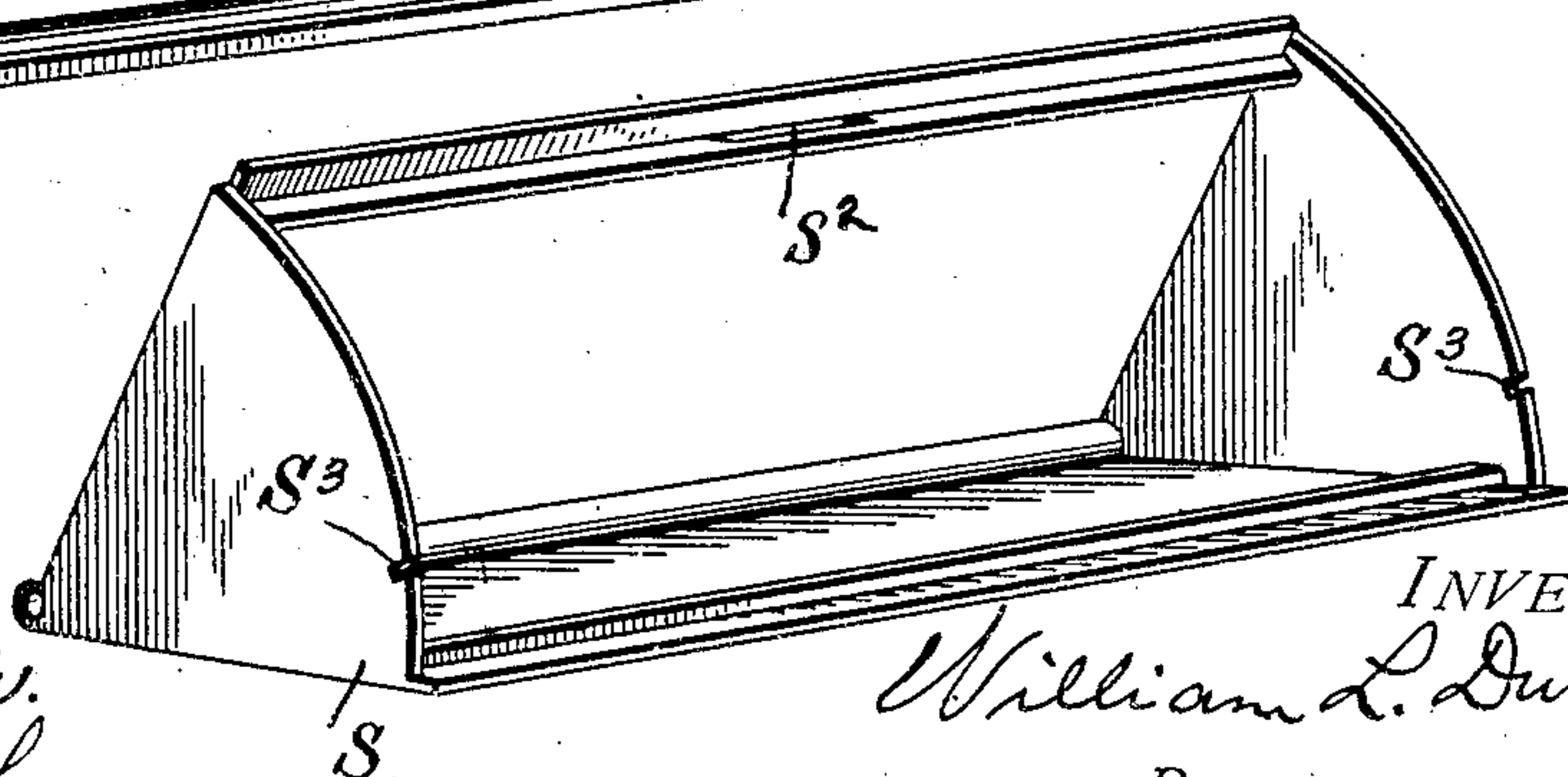


Fig. 4



WITNESSES:

H. F. Doyle
a. L. Hough

INVENTOR

William L. Dunham

BY

Franklin H. Hough
Attorney

No. 770,423.

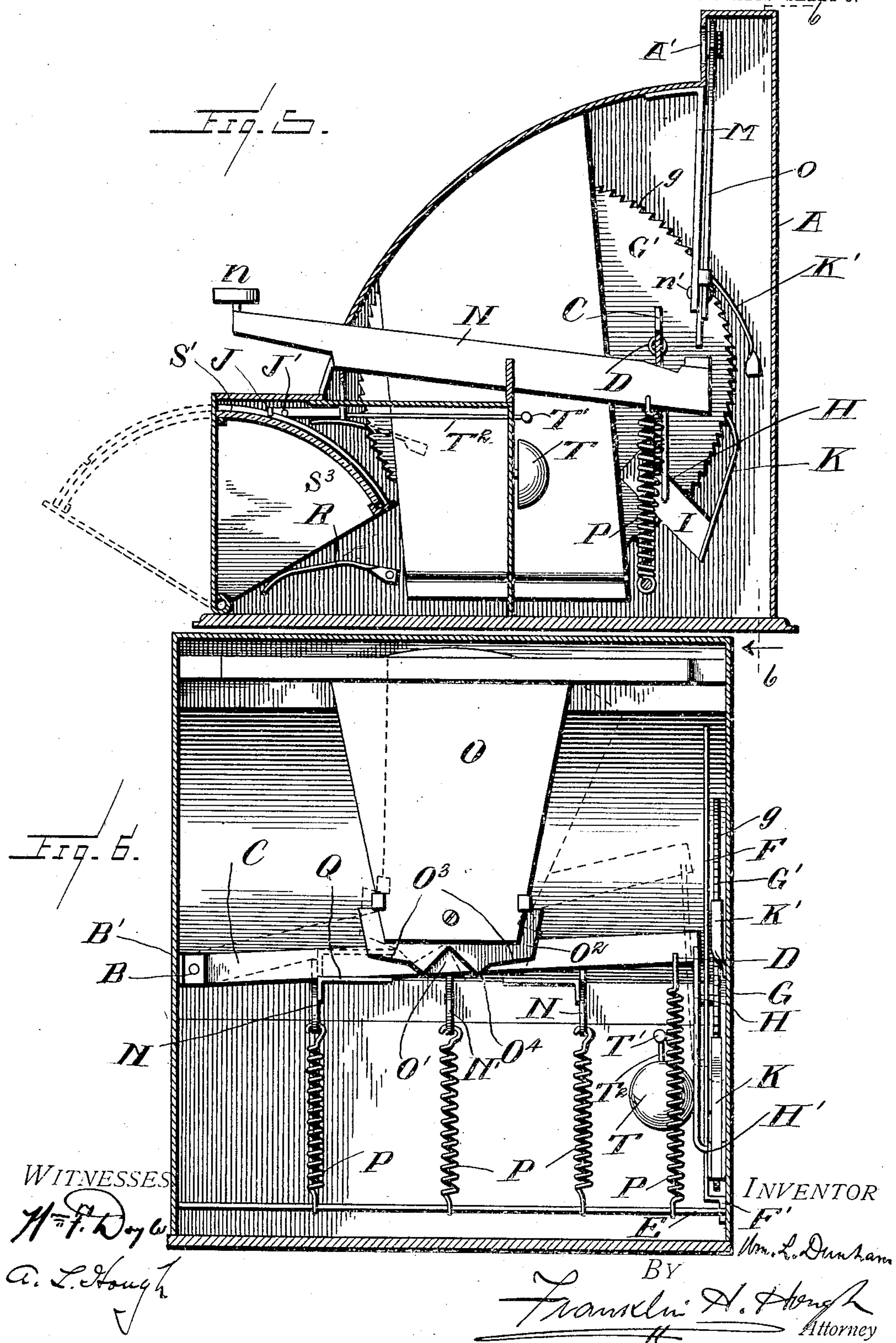
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APPLICATION FILED FEB. 12, 1904.

NO MODEL.

3 SHEETS—SHEET 3.



UNITED STATES PATENT OFFICE.

WILLIAM L. DUNHAM, OF WASHINGTON, DISTRICT OF COLUMBIA.

TOY CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 770,423, dated September 20, 1904.

Application filed February 12, 1904. Serial No. 193,248. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. DUNHAM, a citizen of the United States, residing at Washington, District of Columbia, have invented certain new and useful Improvements in Toy Cash-Registers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in cash-registers; and the object of the invention is to produce an apparatus of this character in which a record of money deposited in the casing may be registered and indicated at a sight-aperture as a key is depressed and in the provision of means for automatically releasing a door whereby coin may be inserted through a slot in the interior of the register.

My invention consists, further, in various details of construction and in combinations and arrangements of parts, which will be hereinafter fully described and then specifically defined in the appended claims.

I illustrate my invention in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this application, and in which drawings similar letters of reference indicate like parts in the different views, in which—

Figure 1 is a perspective view of my improved cash-register. Fig. 2 is a vertical sectional view through one end of the register, showing parts of the invention in elevation. Fig. 3 is a perspective view of the operative mechanism of the register, showing the casing in dotted outline. Fig. 4 is a detail view in perspective of the swinging door. Fig. 4^a is a perspective view of a portion of the casing, showing the opening in which the door illustrated in Fig. 4 is mounted. Fig. 5 is a central vertical section through the register, showing parts of the invention in elevation. Fig. 6 is a sectional view on line 6 6 of Fig. 5. Fig. 7 is a detail view of a portion of the invention.

Reference now being had to the details of the drawings by letter, A designates the casing of the register, which may be made of any suitable material and is made, preferably, of the ordinary shape of cash-register casings and contains a sight-aperture A', at which a numeral or numerals indicating the amount of money placed in the register when a key in the register is depressed is indicated. Pivotally mounted on a pin B, carried by a bracket or extension B' on the end wall of the register-casing upon its inner face is a bar C, to which a spring D is fastened adjacent to its free end, (clearly illustrated in Fig. 6 of the drawings,) the other end of said spring being fastened to a rod E, which is mounted in the opposite end walls of the casing. The office of said spring D is to normally hold the rod C at its lowest throw or in the position shown in full lines in Fig. 6 of the drawings.

F designates a partition, which is fastened at its lower end F' to the inner face of one end of the casing, and pivotally mounted in an aperture in said partition and the adjacent end wall of the casing is a stub-shaft G, to which a ratchet-wheel G' is fixed.

A rod H is fastened at one end to the swinging end of the bar C and has pivotal connection at H' with the hooked end of the bar I, one end of which is pivotally mounted upon the stub-shaft G, Fig. 2 of the drawings. A flexible pawl K is fastened to the outer swinging end of the hooked bar I and is adapted to normally engage the teeth *g* of the ratchet-wheel G', and each time the bar C is raised said bar I is raised through its connections with the bar C, and consequently the pawl K causes a partial rotary movement to be imparted to the wheel G'. In order to prevent the wheel G', bearing a circular series of numerals upon its face, from moving in but one direction is a pawl K', one end of which is fixed to the casing, while its free end normally engages the teeth *g* of said wheel.

Pivotaly mounted so as to have tilting movement within the casing are the levers N, N', and N². In the drawings I have shown but three of these levers, although I do not limit myself to any number, as a greater or less number may be employed when it is de-

sired to adapt the register for various uses. Each of said levers is provided with a key n , and in the drawings I have shown the levers arranged to cause registrations to be made
 5 through suitable mechanism for indicating, respectively, the numerals "1," "5," and "10."

Fixed to the under surface of the top wall of the register is an angled bar M , fastened at its upper angled end to the casing, and M'
 10 is a pin held to the lower end of said bar M and upon which the lower portion of the tilting dial O is mounted. Said dial has the numerals "1," "5," and "10" arranged along one face thereof adjacent to its upper swing-
 15 ing end, as shown clearly in Fig. 3 of the drawings, and the lower end of the dial is notched, as at O' , while laterally-projecting portions O^2 extend in opposite directions at the bottom of the dial, which detail is shown
 20 clearly in Fig. 6 of the drawings. Portions of the lower edge of the tilting dial are shown at O^3 as inclined toward the projecting points O^4 , and against said inclined portions O^3 the bracket members Q are adapted to contact as
 25 one or the other of the levers N or N^2 is depressed, causing said dial to tilt in one direction or the other. When the dial has been tilted to one side or the other accordingly as the lever N or N^2 has been depressed, said
 30 dial is returned to the position shown in solid lines in Fig. 6 of the drawings by the depression of the middle lever N' by the upper edge of the inner end of the lever N' coming in contact with one or the other of the inclined
 35 edges of the V-shaped notch in the lower end of the tilting dial. As the bar C is thrown up by one or the other of the levers N , N' , and N^2 coming in contact with the lower edge thereof a partial rotary movement is impart-
 40 ed to the ratchet-wheel G' , and the extent of the rotary movement which is imparted to said wheel depends upon the distance the bar C is thrown upward. For instance, if the lever N , which is nearest to the swinging end
 45 of the lever C , is depressed, the rotary movement of the ratchet-wheel will be less than if the lever N' is depressed, which comes substantially underneath the middle or central portion of the lever C , while if the lever N^2
 50 is depressed the free swinging end of the bar C will assume the position shown in dotted lines in Fig. 6 of the drawings, which will cause the greatest rotary movement to be imparted to the registering-wheel, as in the act
 55 of recording a purchase indicated by the numeral "10" upon the dial. A spring P is connected to each of the levers N , N' , and N^2 and is fixed at its lower end to the bar E , and said springs are provided for the purpose of
 60 normally holding the bar C at its lowest throw, as shown in Fig. 6 of the drawings.

Pivotally mounted upon the pin R and the screw R' in the side walls of the casing of the register is a swinging door S , which is sub-
 65 stantially V-shaped in cross-section, a detail

view of the same being illustrated in Fig. 4 of the drawings, and a curved glass S' is fitted over the flaring end of the door, whereby the contents of the register may be seen. The frame of said swinging door has a slot S^2 ,
 70 Fig. 4 of the drawings, through which coins may be deposited in the register. The convexed edges of the ends of said door are notched, as at S^3 , which notches are adapted to receive the latches J , comprising the angled
 75 ends of the bar J' . Said bar J' has pins J^2 projecting therefrom, as shown in Fig. 3 of the drawings, which pins J^2 are pivotally mounted in the end walls of the casing, providing means whereby the bar may be tilted.
 80 A key J^3 is fastened to said bar and is provided for the purpose of depressing the bar when it is desired to release the latches from the notches in said door to allow the latter to
 85 open by gravity or by means of a spring R^2 , if desired, as shown in Fig. 2 of the drawings, whereby the slot S^2 is made accessible for the reception of the coin. Said bar J is so positioned with relation to the levers N , N' , and
 90 N^2 that when one or the other of the same is depressed the latch will be thrown out of the notches S^3 to allow the door to open, or said door may be opened independent of the action of the levers by the depression of the button J^3 .

In order to sound an alarm when one or the
 95 other of the levers is depressed, I provide a bell T , which is fixed upon a standard or portion of the frame of the register, and a hammer T' is provided which is mounted upon or formed integral with the end of the flexible
 100 rod T^2 , which rod is fastened at T^3 , Fig. 3 of the drawings, to the bar J , whereby each time the latches are thrown out of the door the hammer will strike the bell.

Referring to Fig. 1 of the drawings, sight-
 105 apertures W and W' are illustrated and shown as being in one end of the wall of the casing, the former of said sight-apertures, W , disclosing the numeral "1," indicating a dollar, while the numeral "97," disclosed in the aper-
 110 ture W' , indicates ninety-seven cents. These numerals disclosed at the sight-apertures W and W' are shown upon the outer face of the two wheels G' and G^2 , respectively, in Fig. 2 of the drawings. The ratchet-wheel G^2 is
 115 suitably journaled within the casing and has a dog G^3 , which is fixed at one end to press yieldingly against the teeth on the circumference of the wheel G^2 to prevent the latter from rotating backward. A pin g' projects
 120 from the outer face of the wheel G' (shown in Fig. 2 of the drawings) and is adapted at each rotary movement of the wheel G' to contact with one of the teeth of the dollar registering-wheel G^2 and cause the same to make
 125 a partial rotary movement. This mechanism comprises the means for transferring the registration from the cent to the dollar wheel.

The operation of my invention is as follows:
 When a penny is to be dropped into the regis-
 130

ter, the key upon the lever N is depressed and the bracket-arm at the rear end thereof will contact with an inclined edge O³ upon the lower end of the tilting dial adjacent to said bracket and cause the dial to tilt so as to disclose the numeral "1" at the sight-aperture A', Fig. 1 of the drawings. Simultaneously with the tilting of the dial the upper edge of the lever N will contact with the lower edge of the bar C and cause the same to be raised a slight distance. As the bar C rises the cent registering-wheel G' will be given a one-hundredth part of a rotary movement through the medium of the pawl K and its connections with said bar C. After the lever N is depressed it will return to its normal position by means of a spring P, which is connected to its rear end, and the bar C is also returned to its normal position by means of the spring D. (Shown in Fig. 6 of the drawings.) The numeral last registered appears at the sight-aperture until a second registration is made. If, for instance, the next amount to be registered is five, the operator depresses the lever N' by pressing on the key carried thereby. The depression of the lever N' will cause the upper edge of the lever N' to contact with one edge of the V-shaped recess in the bottom of the tilting dial and will throw the dial so as to disclose the numeral "5" at the sight-aperture A', and as the rear end of the lever N' tilts up its upper edge will contact with the lower edge of the bar C and cause the same to be raised, and through connections between said bar C and pawl K a movement five times as great will be imparted to the cent registering-wheel than when the lever N is depressed. When it is desired to register a "ten" at the sight-aperture, the lever N² is depressed to cause the bracket-arm carried at the rear end thereof to contact with an adjacent inclined edge O³ at the bottom of the tilting dial, which will cause the dial to tilt so as to disclose the numeral "10" at the sight-aperture A', and in the depressing of the lever N² the bar C will be raised so as to give the cent registering-wheel G' a one-tenth rotary movement, which will disclose numerals ten greater than last registered at the sight-aperture at the end of the casing. Each time a lever is depressed the latches holding the door are released, allowing the same to open for the reception of a coin at the slot therein. When it is desired to remove the contents of the register, the screw R' may be withdrawn and the door taken off, which will give access to the interior of the register.

While I have shown a detailed construction of apparatus embodying my invention, it will be understood that I may make alterations in various details in the construction of the register, if desired, to adapt the same for various uses without in any way departing from the spirit of the invention.

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

1. A cash-register comprising in combination with a casing, a series of levers pivotally mounted therein, a plate pivoted at a point adjacent to one of its ends and carrying upon its opposite end a series of indicators, said plate being adapted to be tilted as the levers are depressed, to disclose a numeral at an aperture in the casing, and registering mechanism actuated simultaneously with the tilting of the plate, as set forth.

2. A cash-register comprising in combination with a casing, a plate pivoted at one of its ends and provided at its opposite end with indicators, said plate being mounted within the casing, a registering-wheel, a pivotal bar and connections intermediate the same and said wheel, said pivoted plate and bar adapted to be actuated simultaneously by the depressing of one of said levers, whereby a numeral is disclosed at a sight-aperture and the registering-wheel given a partial rotary movement, as set forth.

3. A cash-register comprising in combination with a casing, a series of tilting levers mounted therein, a pivoted plate, bracket-arms carried by said levers adapted as one or the other of the levers is depressed, to tilt said plate in one direction or the other to cause the numerals to be disclosed at the sight-aperture in the casing, as set forth.

4. A cash-register comprising in combination with a casing, a series of tilting levers mounted therein, a pivoted plate, bracket-arms carried by said levers adapted as one or the other of the levers is depressed, to tilt said pivoted plate in one direction or the other to cause the numerals to be disclosed at the sight-aperture in the casing, and registering mechanism actuated simultaneously with the tilting of the pivoted plate, as set forth.

5. A cash-register comprising in combination with a casing, a series of tilting levers mounted therein, a pivoted plate bearing numerals, bracket-arms projecting from said levers, the lower end of said dial having inclined portions against which said bracket-arms are adapted to contact as the levers are depressed, whereby said pivoted plate may be tilted to its limit in opposite directions, as set forth.

6. A cash-register comprising in combination with a casing, a series of tilting levers mounted therein, a pivoted plate bearing numerals, bracket-arms projecting from said levers, the lower end of said plate having inclined portions against which said bracket-arms are adapted to contact as the levers are depressed, whereby said plate may be tilted to its limit in oppositedirections, and registering mechanism and means for actuating the same simultaneously with the tilting of the plate as a lever is depressed, as set forth.

7. A cash-register comprising in combina-

tion with a casing, a series of tilting levers mounted therein, a pivoted plate mounted within the casing, the lower end of said plate being notched, bracket-arms mounted upon
5 two of said levers adapted to contact with the inclined portions of the lower end of the plate to tilt the same in opposite directions, the intermediate lever designed to contact with one of the edges of said notch to return the plate
10 to its vertical position, as set forth.

8. A cash-register comprising in combination with a casing, a series of tilting levers mounted within the casing, a swinging door pivotally mounted upon the casing and hav-
15 ing a coin-slot, a tilting latch-bar adapted to engage and lock said door, said latch-bar being positioned in the path of said levers as they are depressed, whereby the door may be released, as set forth.

20 9. A cash-register comprising in combination with a casing, tilting levers mounted therein, a swinging door hinged to the casing, a spring bearing against said door, an angled lever, the ends of which form latches adapted
25 to engage notches in the door, pins projecting from said lever and pivotally mounted in the end wall of the casing, said angled bar being positioned underneath the levers against which

said levers are adapted to bear to depress the same, whereby the latches are raised from en- 30
gagement with the door, and a signal which is sounded as the angled bar is tilted, as set forth.

10. A cash-register comprising in combination with a casing, tilting levers mounted therein, a swinging door substantially V- 35
shaped in cross-section and hinged at its apex to the side walls of the register, and provided with a coin-slot, a pivotal latch-bar having ends engaging notches in the edges of the ends of said door, said latch-bar adapted to be 40
tilted as a lever is depressed, as set forth.

11. In combination with the casing of a cash-register, tilting, spring-actuated levers mounted therein, an angled bar fastened at its upper end to the under surface on the top of the 45
casing, a pin carried near the lower end of said bar, a tilting dial pivotally mounted upon said pin, and means for tilting the dial as one or the other of said levers is depressed, as set forth. 50

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

WILLIAM L. DUNHAM.

Witnesses:

A. L. HOUGH,

FRANKLIN H. HOUGH.