

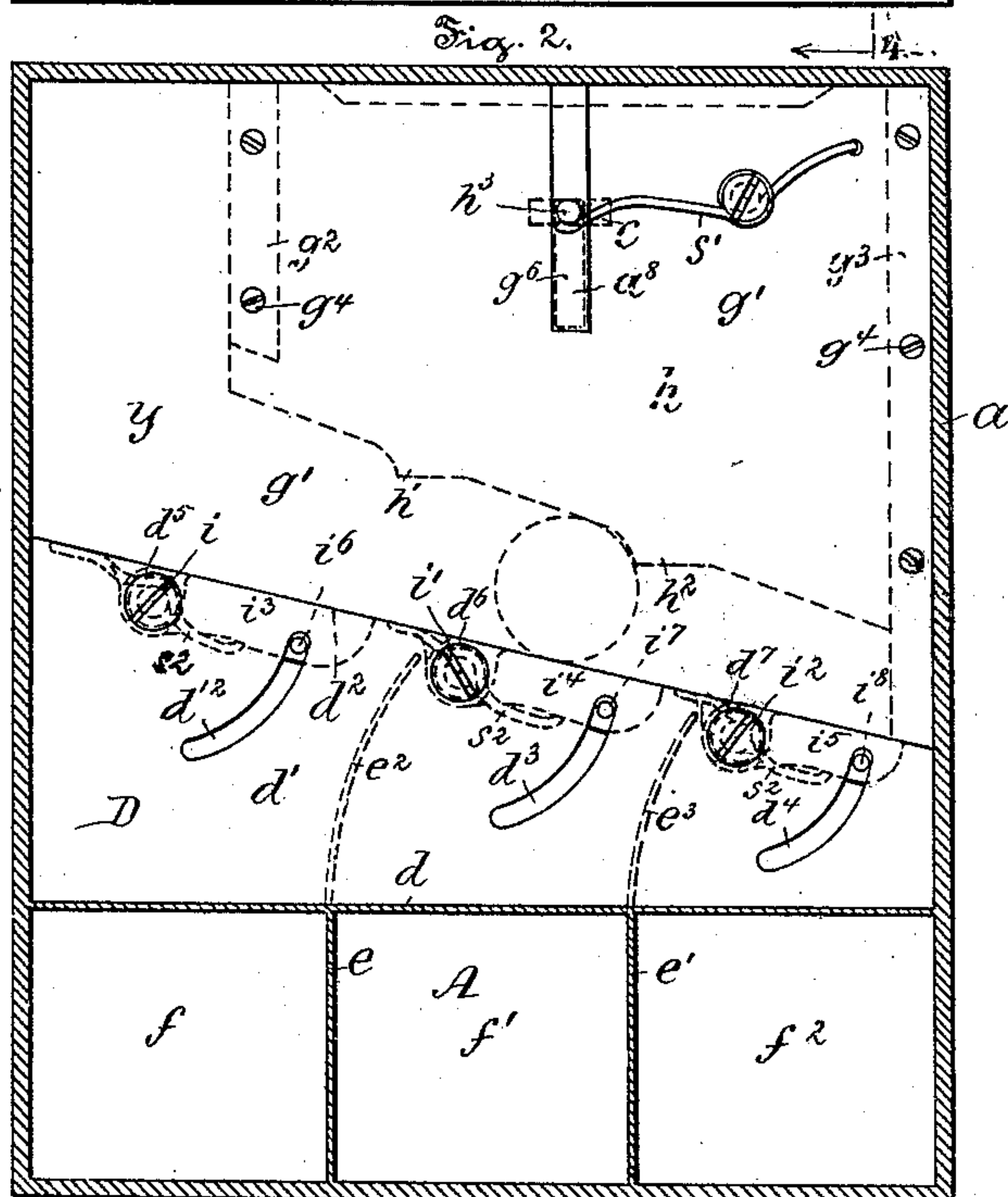
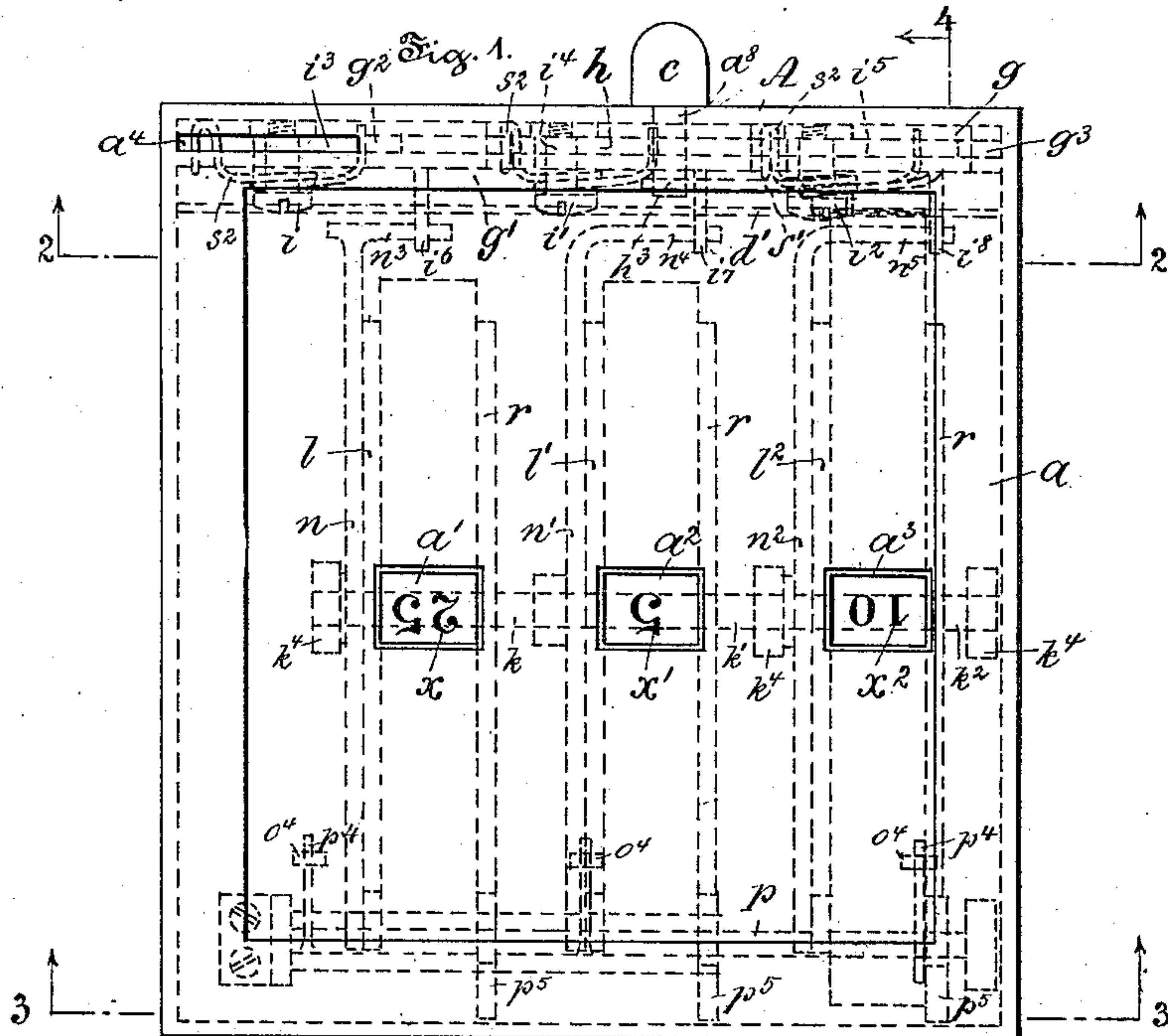
(No Model.)

3 Sheets—Sheet 1.

H. M. HAMRICK.
TOY REGISTERING SAVINGS BANK.

No. 441,301.

Patented Nov. 25, 1890.



Witnesses:
Hermann Bormann
Chas. C. Collier.

Inventor:
Harry M. Hamrick,
by Chas. B. Collier,
att'y.

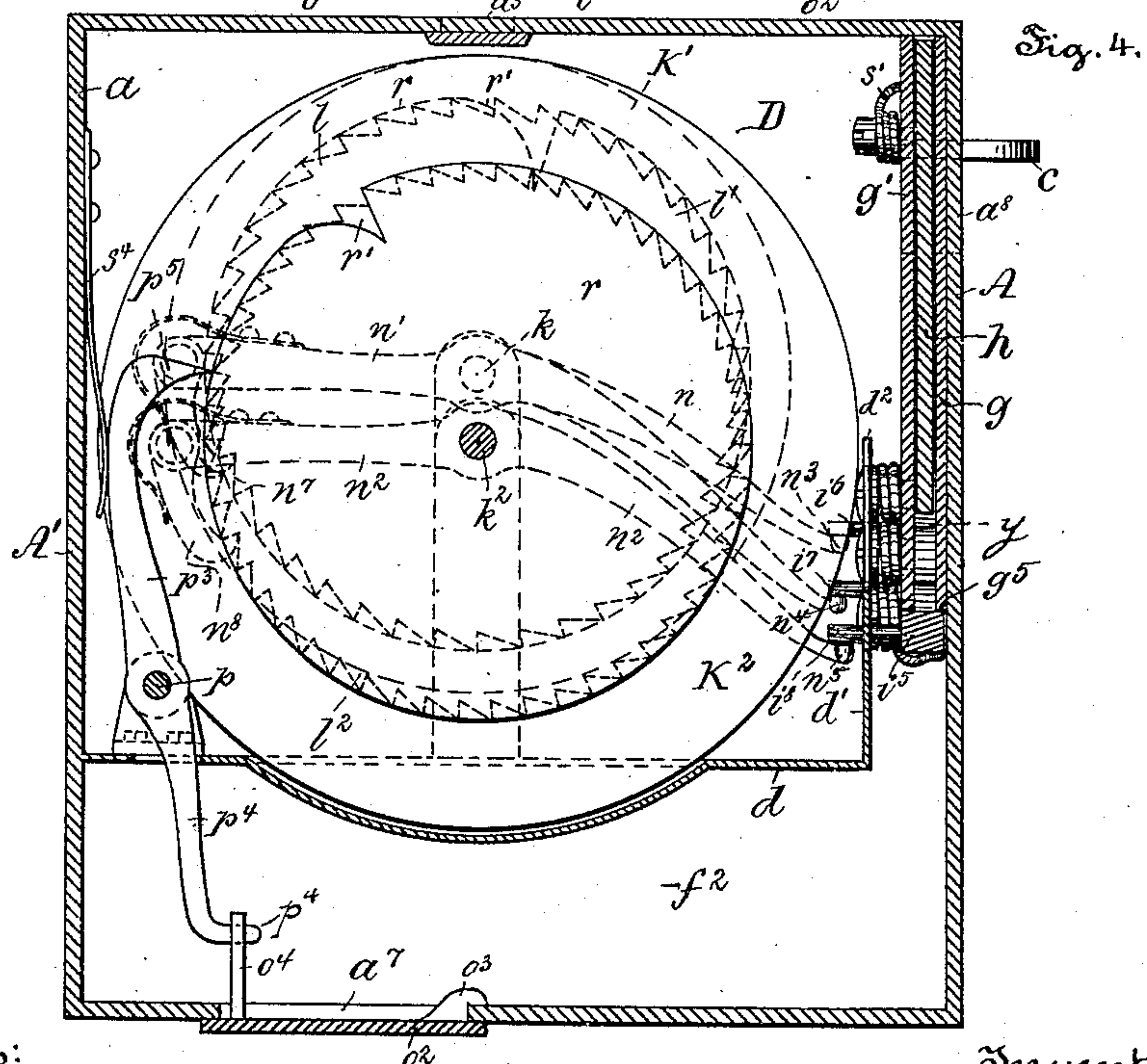
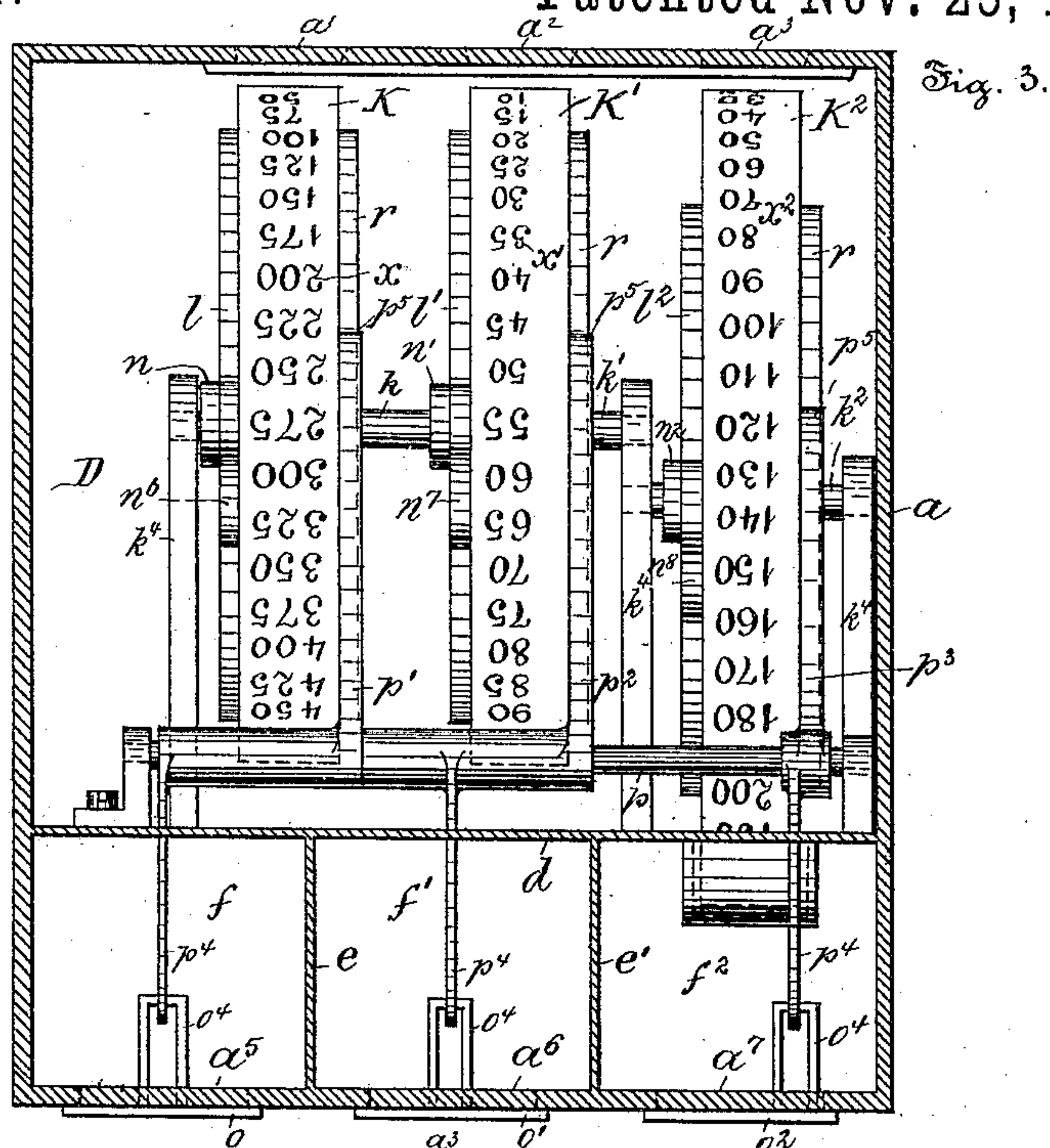
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3 Sheets—Sheet 2.

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Witnesses:
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(No Model.)

3 Sheets—Sheet 3.

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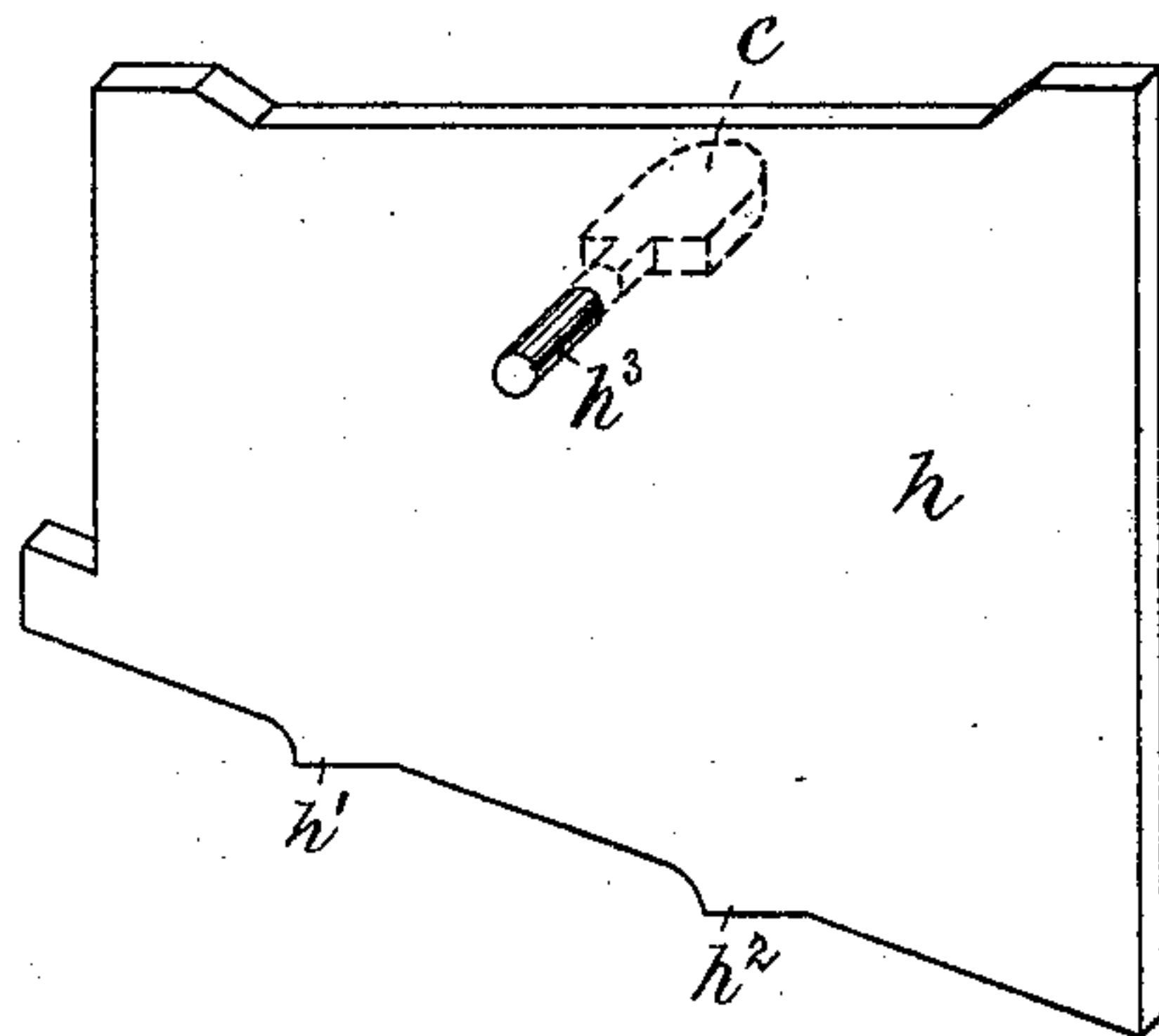
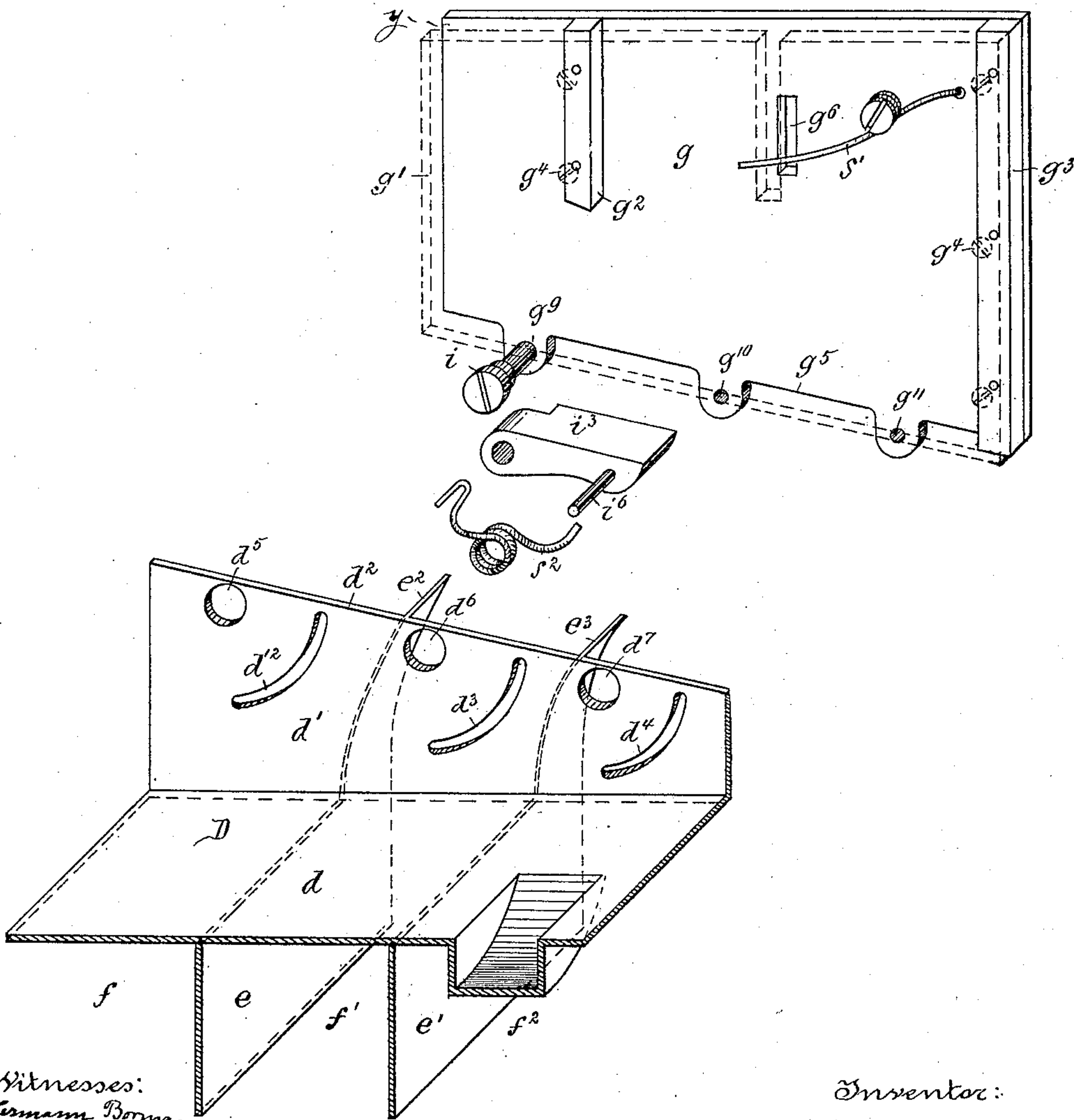


Fig. 5.



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UNITED STATES PATENT OFFICE.

HARRY M. HAMRICK, OF PHILADELPHIA, PENNSYLVANIA.

TOY REGISTERING SAVINGS-BANK.

SPECIFICATION forming part of Letters Patent No. 441,301, dated November 25, 1890.

Application filed February 28, 1890. Serial No. 342,059. (No model.)

To all whom it may concern:

Be it known that I, HARRY M. HAMRICK, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Toy Registering Savings-Banks, of which the following is a specification.

The principal objects of my present invention are, first, to provide an inexpensive, compact, and durable registering savings-bank having only one opening for the reception of coins of various denominations and having efficient means for separating the coins of different denominations and depositing those of like denomination in a suitable receptacle, and, second, to provide a toy registering savings-bank which is adapted to register the money value of the coins of each denomination deposited therein and to automatically lock and unlock each of the coin-receptacles after a certain predetermined or fixed money value of like coins has been placed in the bank.

My invention consists of the construction and arrangement of the parts of a toy savings-bank, as hereinafter described, and particularly pointed out in the claims.

The nature and characteristic features of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, and in which—

Figure 1 is a top or plan view of a toy registering savings-bank embodying the features of my invention and showing the single opening for the reception of the coins, and also the knob for actuating the means for separating and registering coins of different denominations. Fig. 2 is a vertical section on the line 2 2 of Fig. 1, showing the mechanism in dotted lines for separating the coins of different denominations. Fig. 3 is a vertical section on the line 3 3 of Fig. 1, showing the registering-disks and mechanism for actuating the same, and also the receptacles for the coins of like denominations. Fig. 4 is a vertical section on the line 4 4 of Fig. 1, showing the mechanism for automatically locking and unlocking the coin-receptacles when the latter contain a certain money value of coins of

that denomination, and also the pawl for actuating the registering-wheels; and Fig. 5 is a detached view of the mechanism for separating coins of different denominations, showing two plates, one in dotted lines attached in use to the interior of the housing of the bank and separated by guide-strips and forming between them a passage for coins of different denominations, and also ways adapted for the reception of a movable plate provided with depending lugs for detaining the coins and with a knob protruding beyond the housing of the bank for actuating said plate, also showing spring-actuated coin-holders, which with said depending lugs detain the coins until they are forced by depressing said movable plate by means of the knob past said coin-holders into one of the coin-receptacles.

In the drawings, *a* is the main housing of the bank, which is shown rectangular in form, but which may be of any preferred configuration. The top of the housing is provided with apertures *a'*, *a''*, and *a'''*, through which the dial-numbers *x*, *x'*, and *x''* are seen, and with a slot *a⁴* for the reception of the money to be placed in the bank.

The side *A* of the bank is provided with a vertical slot *a⁸*, through which protrudes a handle or knob *c*, projecting from a plate *h*.

The bottom of the bank is provided with three openings *a⁵*, *a⁶*, and *a⁷* for permitting of the removal of the coins therefrom.

d is a horizontal partition secured to the housing of the bank and extending from the side *A'* of the bank nearly to the side *A* thereof. This partition *d* is turned up or flanged near the side *A* of the bank and sheared or otherwise shaped to form a vertical trapezoidal partition *d'*, having an oblique edge *d²*, as illustrated in Fig. 5 and in full lines in Fig. 2, in order to prevent the coins from falling into the chamber containing the registering mechanism. This partition *d'* is provided with curved slots *d¹²*, *d³*, and *d⁴*, with apertures *d⁵*, *d⁶*, and *d⁷*, for a purpose to be presently described.

e and *e'* are vertical partitions extending upward from the bottom and from one side to the other of the bank. These partitions are provided at or near the side *A* of the bank with projections *e²* and *e³*, extending upward

between the side A and the partition d' , as shown in Figs. 2 and 5, for guiding the coins, after they have been separated, into the particular receptacles adapted for their reception.

The partitions d , e , and e' and the sides of the bank form the receptacles f , f' , and f'' , Figs. 2, 3, and 5, for the reception of the coins of the different denominations.

g , Figs. 4 and 5, is a re-enforce plate having a lower oblique edge g^5 and a slot g^6 , secured to the interior of the side A of the bank, and having apertures g^9 , g^{10} , and g^{11} formed therein. g' is a similarly-shaped plate extending across the bank parallel with and near to the side A thereof and forming one side of the chute or passage y , Fig. 5, through which the coins are permitted to descend to the interior of the bank.

g^2 and g^3 are vertical guide-strips interposed between the plates g and g' and retained to place by means of the screws g^4 .

h is a plate provided with downwardly-depending lugs h' and h^2 for engaging the coin and with a horizontal lug h^3 , passing through the slots g^6 and a^8 to the exterior of the housing, and secured to or formed integral with the knob or handle c . This plate h is adapted to slide freely upward and downward in the space included by the plates g and g' and the guide-strips g^2 and g^3 , Fig. 5. However, the upward movement of the plate h is limited by the upper portions thereof contacting with the top of the bank, and the downward movement thereof is limited by the lug h^3 contacting with the bottom of the slot a^8 , formed in the side A of the bank.

s' is a spring secured to the plate g' and adapted to maintain the plate h in a normally elevated position, as shown in Fig. 2.

i , i' , and i^2 are studs or journals disposed diagonally with relation to the top of the bank and supported in the apertures d^5 , d^6 , and d^7 of the partition d' and in the apertures g^9 , g^{10} , and g^{11} of the plate g . Upon these lugs are pivotally mounted the coin-holders i^3 , i^4 , and i^5 , provided with pins i^6 , i^7 , and i^8 , extending through the slots d^{12} , d^{13} , and d^{14} and extending into the chamber containing the registering mechanism. Care must be exercised to so place the studs i , i' , and i^2 as that a coin cannot pass downward between the coin-holders i^3 , i^4 , and i^5 when the latter are in the position shown in Figs. 2 and 5.

The springs s^2 are interposed between the lugs and the coin-holders in order to maintain the latter normally in such position. The vertical plate g' , horizontal plate d , and the sides of the bank form an internal chamber D, adapted for the reception of the registering mechanism, hereinafter described.

The registering mechanism consists of wheels K, K', and K², journaled on the shafts k , k' , and k^2 . These shafts k , k' , and k^2 are located in the chamber D and are supported in the vertical standards k^4 , secured to the upper surface of the horizontal plate d . The

numerals from 0 to 975, advancing by intervals of twenty-five units, are arranged in regular order upon the peripheral surface of the wheel K for registering the monetary value in cents of the quarter-of-a-dollar coins deposited in the bank. The numerals from 0 to 195, advancing by intervals of five units, are arranged in regular order upon the peripheral surface of the wheel K' for registering the monetary value in cents of the nickels or five-cent pieces deposited in the bank. The numerals from 0 to 490, advancing by intervals of ten units, are arranged in regular order upon the peripheral surface of the wheel K² for registering the total monetary value in cents of the dimes deposited in the bank.

l is a ratchet-wheel mounted on the shaft k and adapted to turn with the wheel K. This ratchet-wheel l is provided with a number of teeth corresponding with the number of numerals x arranged upon the wheel K, so that the revolution of the wheel l through the space occupied by one tooth causes the wheel K to advance, so as to expose the next succeeding numeral to view through the opening a' in the top of the bank.

l' and l^2 are ratchet-wheels mounted on the shafts k' and k^2 and adapted to turn with the wheels K' and K², respectively. These ratchet-wheels l' and l^2 are provided with a number of teeth corresponding with the number of numerals x' and x^2 arranged upon the wheels K' and K² in a similar manner to the arrangement of the teeth of the ratchet-wheel l with reference to the numerals upon the wheel K, as above described.

n , n' , and n^2 are ratchet-arms pivotally mounted on the shafts k , k' , and k^2 and provided, respectively, with horizontal fingers n^3 , n^4 , and n^5 and with spring-actuated pawls n^6 , n^7 , and n^8 for engaging with the teeth of the ratchet-wheels l , l' , and l^2 . The horizontal fingers n^3 , n^4 , and n^5 engage with the pins i^6 , i^7 , and i^8 of the coin-holders i^3 , i^4 , and i^5 .

o , o' , and o^2 are doors fitted to the openings a^5 , a^6 , and a^7 and respectively provided with lugs o^3 for engaging the side of the opening and with staples o^4 .

p' , p^2 , and p^3 are latches pivotally mounted upon the counter-shaft p and provided at the respective extremities thereof with latches p^4 for engaging the staples o^4 and with travelers p^5 . The travelers p^5 are forced into close contact with the peripheral surfaces of the cam-wheels r by means of the springs s^4 . The cam-wheels r are respectively secured to the wheels K, K', and K² and revolve with them.

r' are V-shaped radial slots cut in the cam-wheels r and adapted for the reception of the traveler p^5 .

The mode of operation of my invention is as follows: The several wheels K, K', and K² being placed so that the numeral 0 or zero will be visible through the openings a' , a^2 , and a^3 in the top of the bank, the travelers p^5 are forced by the springs s^4 into the V-shaped slots r' , and the doors o , o' , and o^2 may then be

readily opened. On depositing or dropping a dime through the opening a^4 it will descend vertically through the passage y until it contacts with the coin-holder i^3 , where-
 5 upon it will roll by its own weight past the lugs h' and h^2 and the coin-holders i^3 and i^4 and finally come to rest in contact with the strip g^3 , attached between the plates g and g' , and directly over the coin-holder i^5 and be-
 10 neath the plate h . The knob or handle c is then depressed, and with it the plate h . The downward motion of the plate h pushing the dime downward, thereby overcoming the resistance of the spring s^2 and turning the coin-
 15 holder i^5 , permits the dime to drop into the coin-receptacle f^2 . The downward motion of the coin-holder i^5 causes the pin i^8 to engage with the horizontal finger n^5 and move it and the ratchet-arm n^2 downward. At the same time
 20 the pawl n^8 , engaging with the ratchet-wheel i^2 , turns the wheel K^2 so as to expose the numeral "10" through the aperture a^3 . When the dime has fallen into the receptacle f^2 , the spring s^2 returns the coin-holder i^5 to its nor-
 25 mal position, thus permitting the ratchet-arm n^2 to return to its normal position. While the ratchet-arm n^2 is returning to its normal position, the pawl n^8 slides freely over the teeth of the ratchet-wheel i^2 without turning
 30 the wheel K^2 , as will be readily understood by reference to Fig. 4. During the above operation the cam-wheel r , turning with the wheel K^2 , forces the traveler p^5 out of the slot r' , and thus automatically locks the door o^2 to place.
 35 Each time a dime is deposited in the bank the cam-wheel r is slightly rotated, and after a predetermined number of dimes (fifty in the present instance) have been deposited the V-shaped slot r' again comes opposite the
 40 traveler p^5 , and the latter is then forced into the slot r' by the spring s^4 , thus withdrawing the latch p^4 from the staple o^4 and permitting the door o^2 to be again opened and the dimes removed.
 45 For the sake of a further description of my invention it will be assumed that a "nickel" or "five-cent piece" is deposited or dropped into the opening a^4 . The nickel will descend vertically through the passage y until it con-
 50 tacts with the coin-holder i^3 , and it will then roll past the lug h' , as before; but it will contact with lug h^2 and come to rest over the coin-holder i^4 and beneath the plate h , as shown in dotted lines in Fig. 2. The handle
 55 c is then depressed and the nickel forced into the receptacle f' , while at the same time the wheel K' is advanced in the manner above described. When a certain predetermined
 60 number of nickels (forty in the present instance) have been deposited, the door o' is automatically unlocked and may be readily opened and the coins removed. If a twenty-five-cent piece be dropped or deposited in the
 65 opening a^4 , it will descend vertically through the passage y and roll until it contacts with the lug h' and comes to rest directly over the coin-holder i^3 and beneath the plate h . The

handle c is then depressed and the quarter deposited in the receptacle f in the manner above set forth, while at the same time the
 70 wheel K is advanced so as to expose the numeral "25." It will be readily understood that when a certain predetermined number of quarters (forty in the present instance) have
 75 been deposited the door o will be automatically unlocked for permitting of the removal of the quarters from the chamber f .

It will be seen that a coin must actually be deposited in the opening d^4 before any of the
 80 dials can be made to register, because unless a coin is deposited in the bank the handle c may be depressed without in any way affecting the coin-holders and registering mechanism. Moreover it is not possible to place a
 85 coin in the bank without registering the same, and thus a correct register of all sums deposited is kept.

Although a bank has been described which is adapted to receive and register "nickels,"
 90 "dimes," and "quarters" and to be opened only when the sum of two dollars in nickels, ten dollars in quarters, or five dollars in dimes have been placed therein, still my invention is not limited to this exact construction, as it is clearly within the spirit thereof
 95 to construct a bank in which other denominations of coins may be deposited and the value thereof in cents registered and which will permit of being opened when other predetermined sums have been deposited.
 100

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

1. The combination, in a toy savings-bank having one opening for the reception of coins
 105 of various denominations, of coin-receptacles, spring-actuated coin-holders located above the coin-receptacles, a movable plate, lugs secured thereto for separating and detaining like coins above said receptacles and beneath
 110 said movable plate, and means for actuating said movable plate, substantially as and for the purposes set forth.

2. The combination, in a toy registering savings-bank having an opening for the re-
 115 ception of coins of various denominations, of spring-actuated coin-holders, a movable plate provided with lugs for separating and detaining like coins, registering-wheels journaled to a shaft, ratchet-wheels secured to said wheels,
 120 and ratchet-arms pivoted to said shaft and provided with spring-actuated pawls for engaging the ratchet-wheels and with fingers engaging said coin-holders, substantially as and for the purposes set forth.
 125

3. The combination, in a toy registering savings-bank having an opening for the recep-
 130 tion of coins of various denominations, of spring-actuated coin-holders, two guide-plates separated to form a space over said coin-holders, and which also registers with the said opening, a plate movable between the guide-plates, and means for actuating the movable plate, substantially as specified.

4. The combination, in a toy registering
savings-bank having an opening for the recep-
tion of coins of various denominations, of
spring-actuated coin-holders, two guide-plates
5 separated to form a space over said coin-hold-
ers, and which also registers with the said
opening, a plate movable between said guide-
plates and having an oblique edge and de-
pending lugs, registering mechanism actu-
10 ated by said coin-holders, and means to actu-

ate said movable plate, substantially as and
for the purpose specified.

In witness whereof I have hereunto set my
signature in the presence of two subscribing
witnesses.

HARRY M. HAMRICK.

Witnesses:

GEO. W. REED,

CHAS. C. COLLIER.