

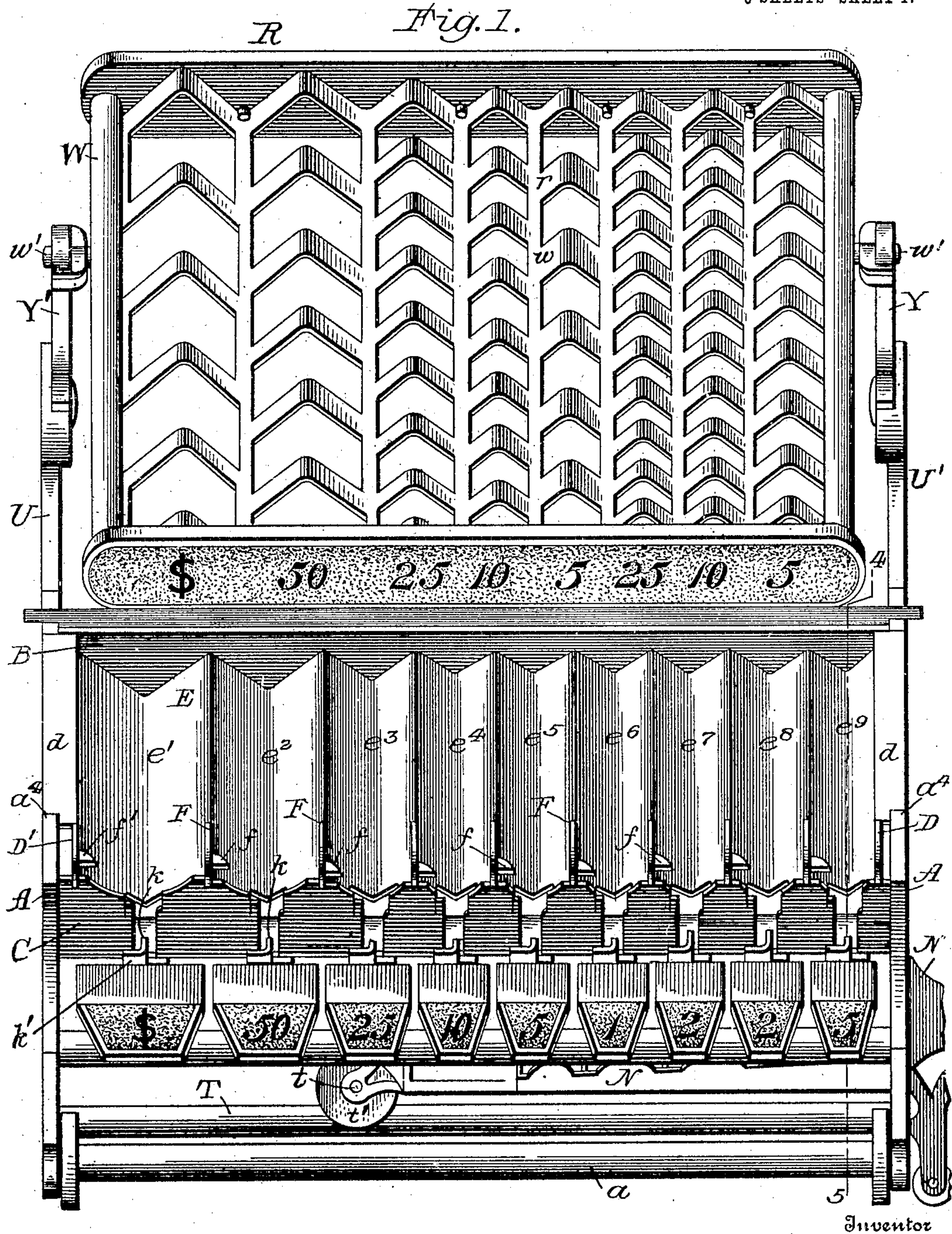
No. 843,224.

PATENTED FEB. 5, 1907.

J. W. MEAKER.
COIN HOLDING AND DELIVERING MACHINE.

APPLICATION FILED OCT. 12, 1905.

6 SHEETS—SHEET 1.



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Witnesses

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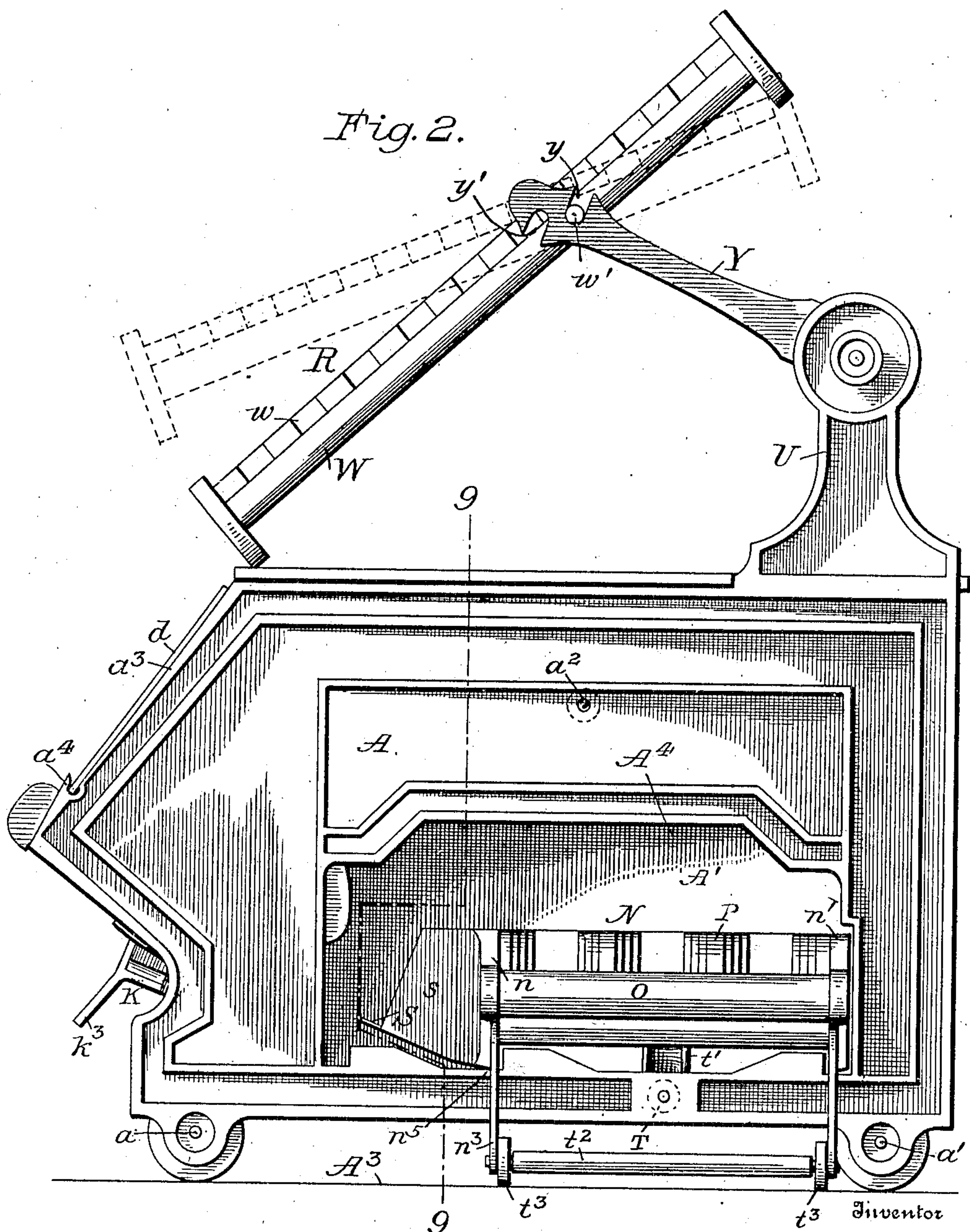
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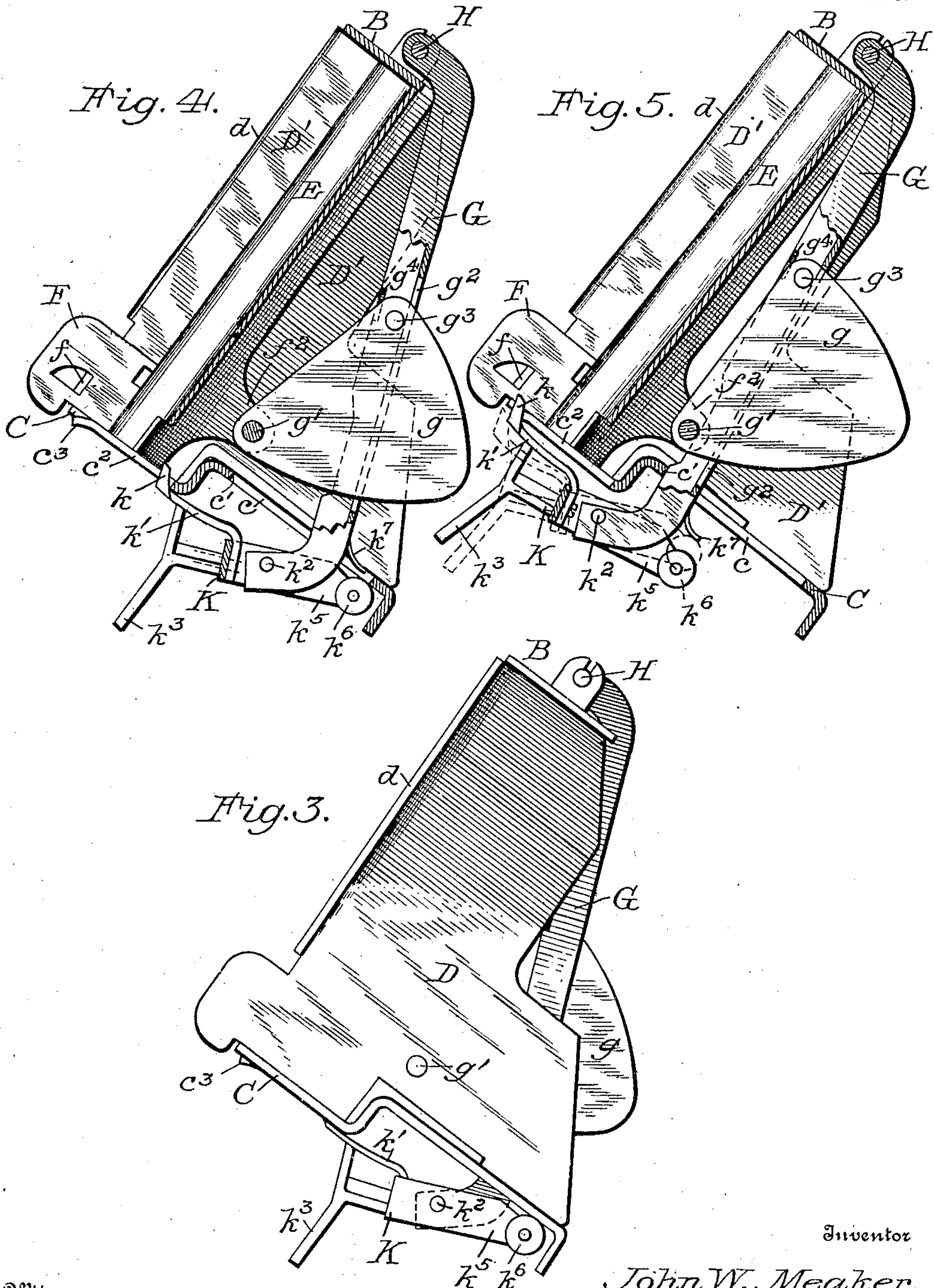
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6 SHEETS—SHEET 4.

Fig. 6.

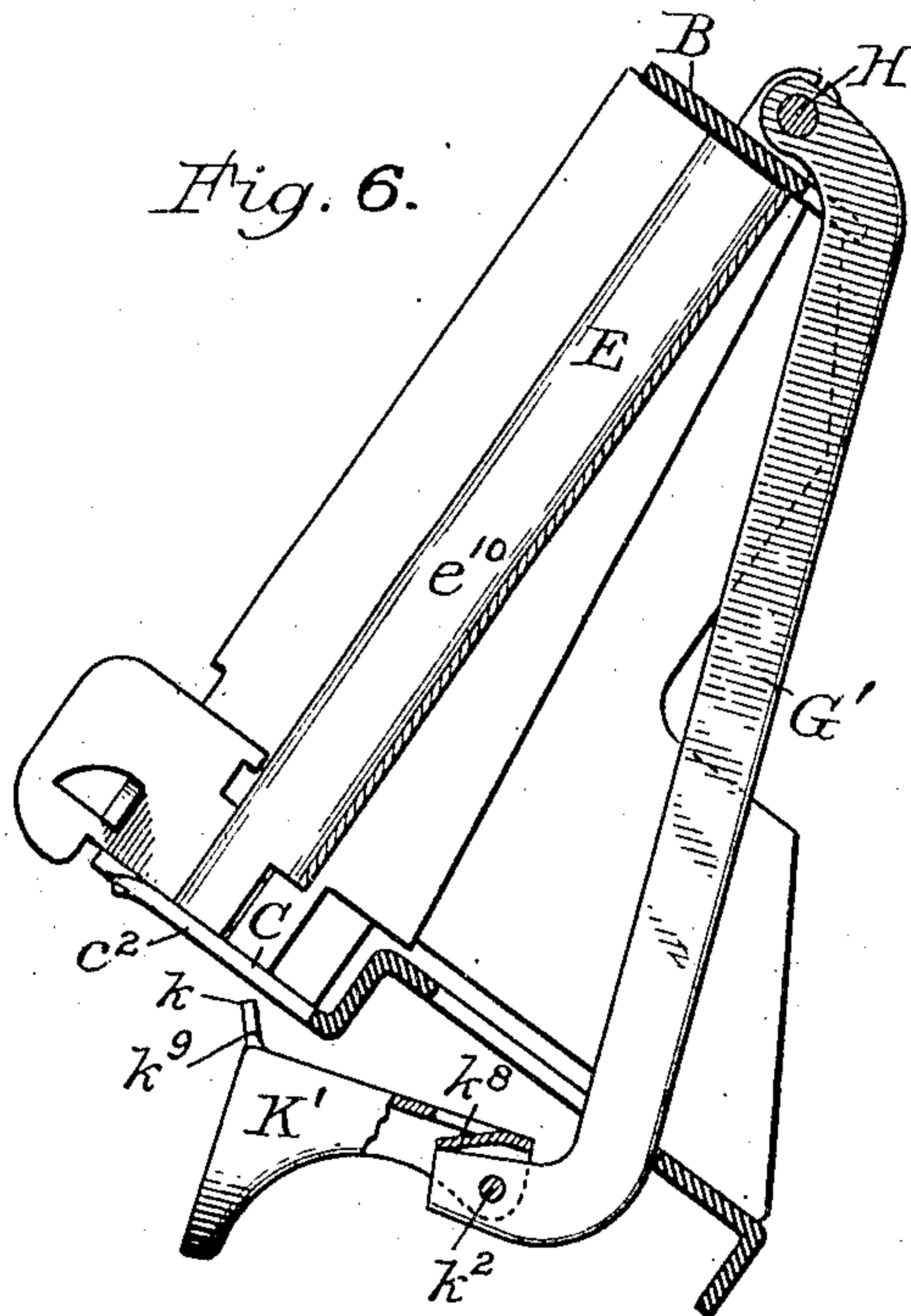
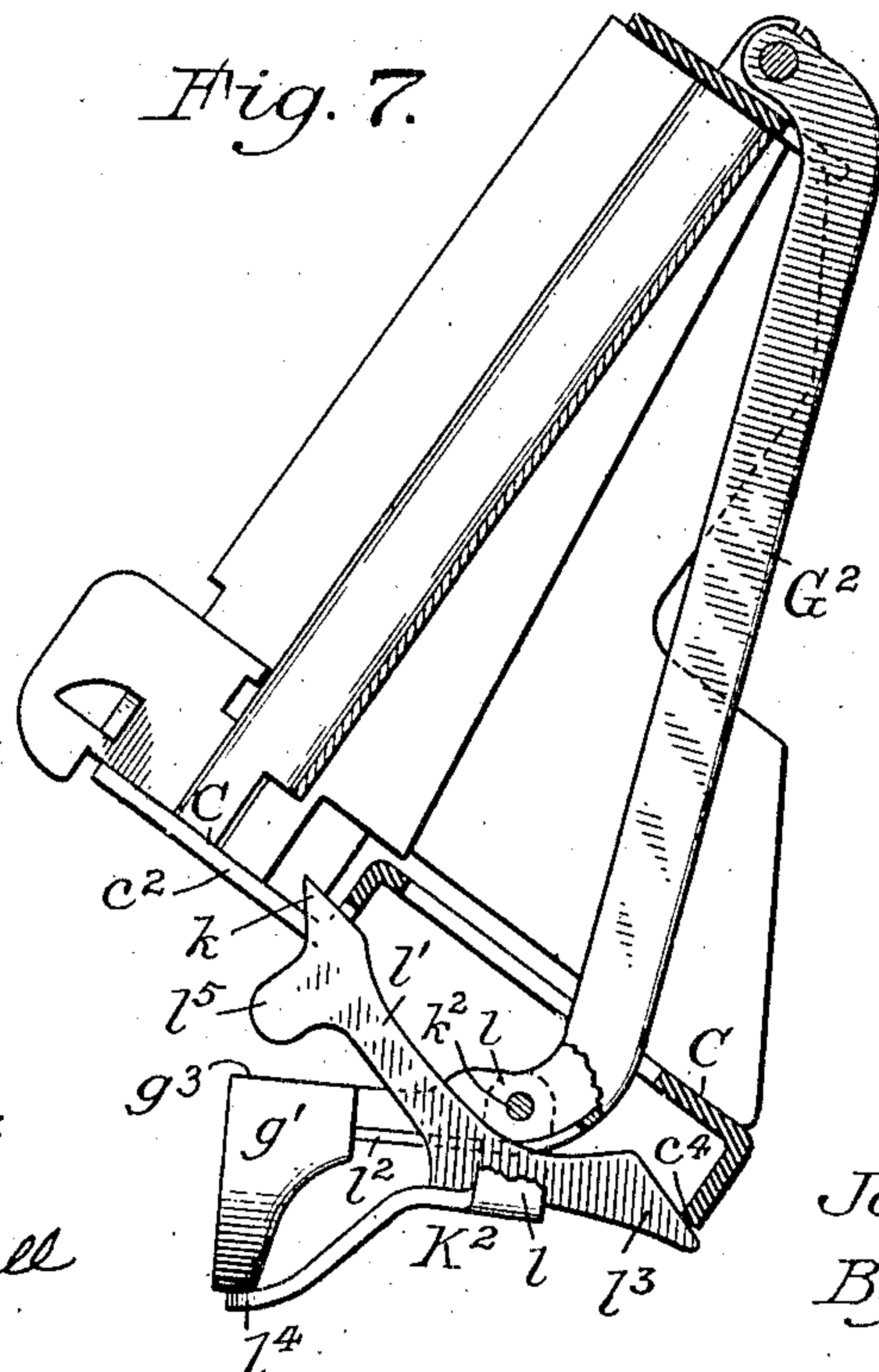


Fig. 7.



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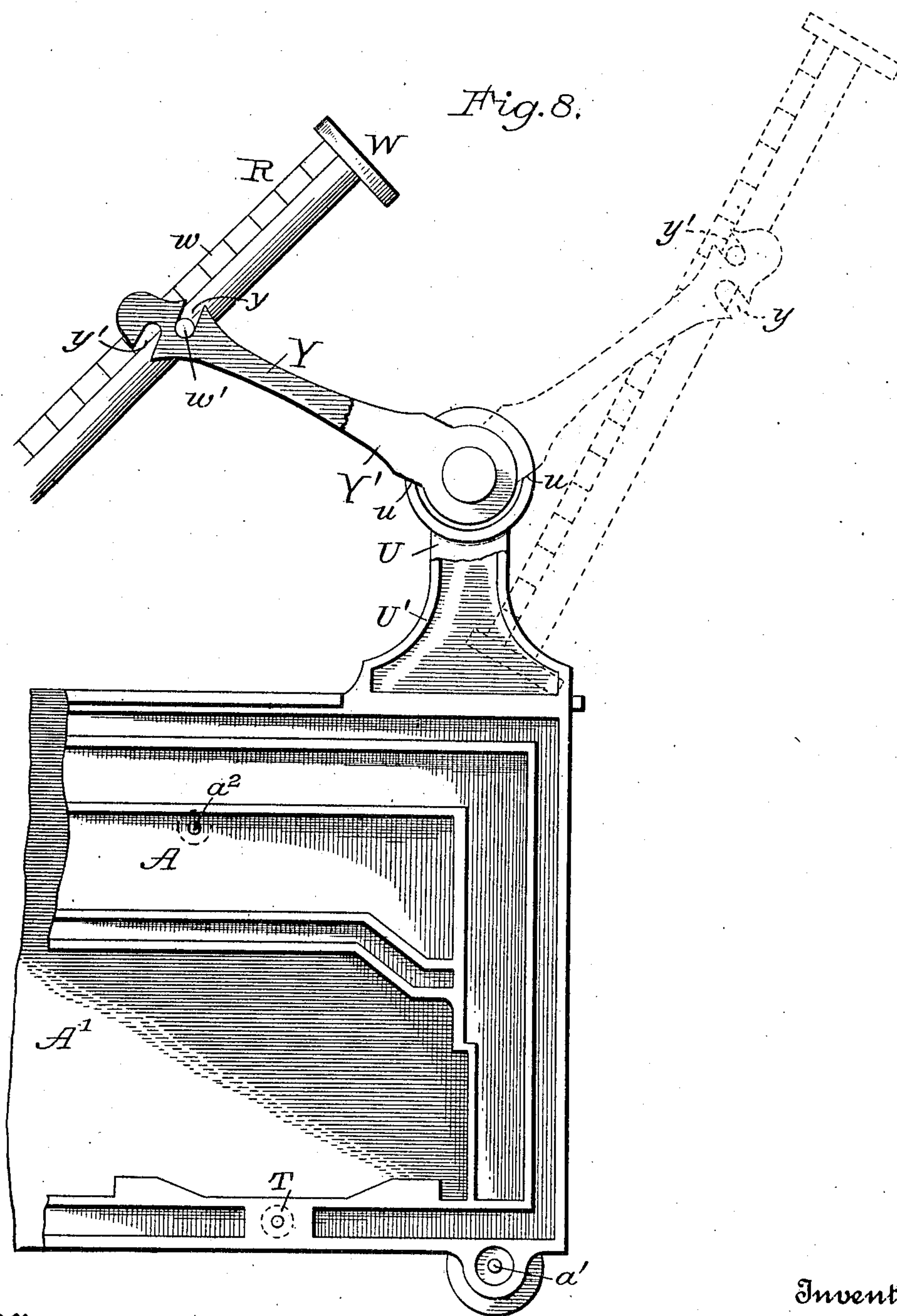
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6 SHEETS—SHEET 5.



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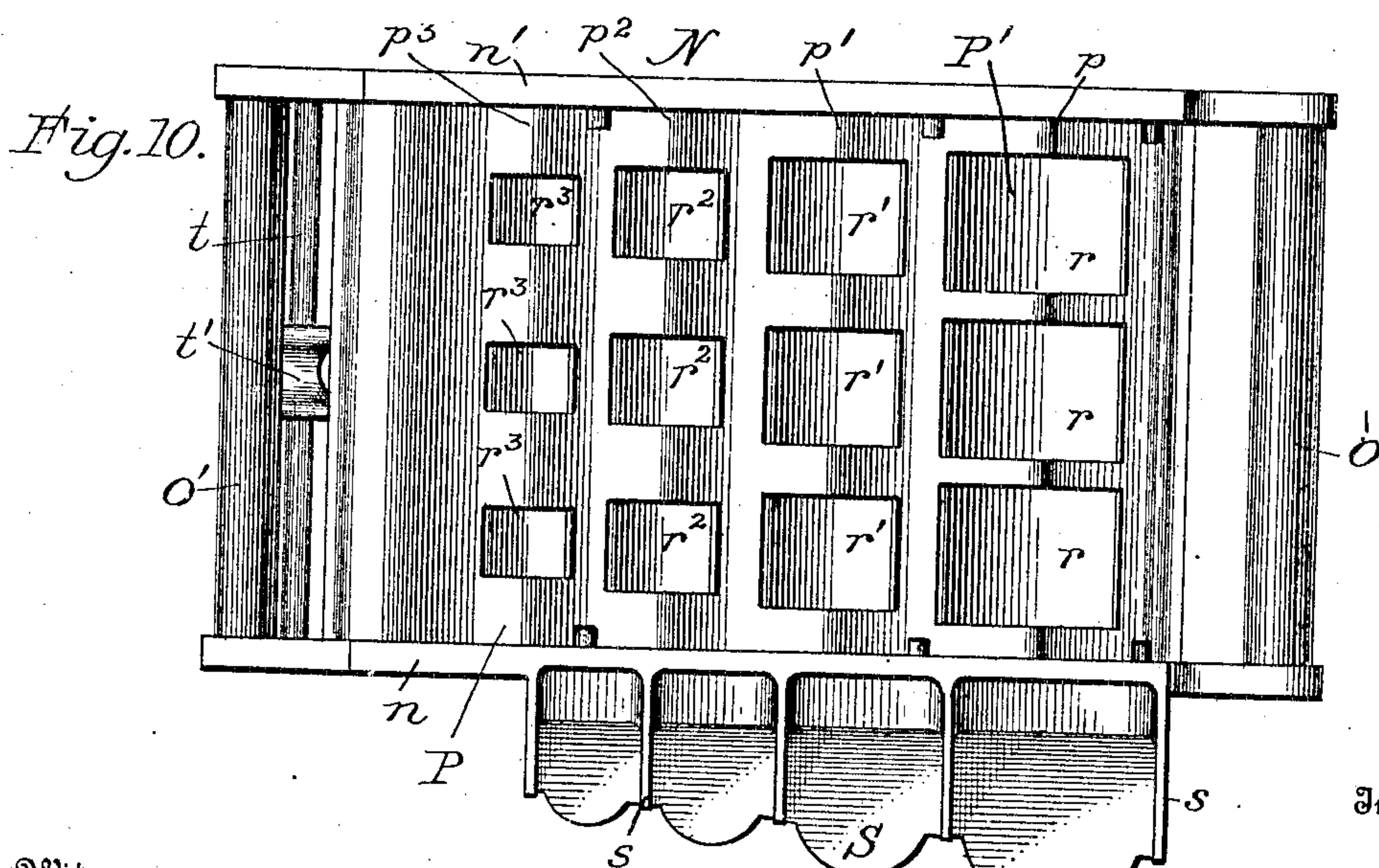
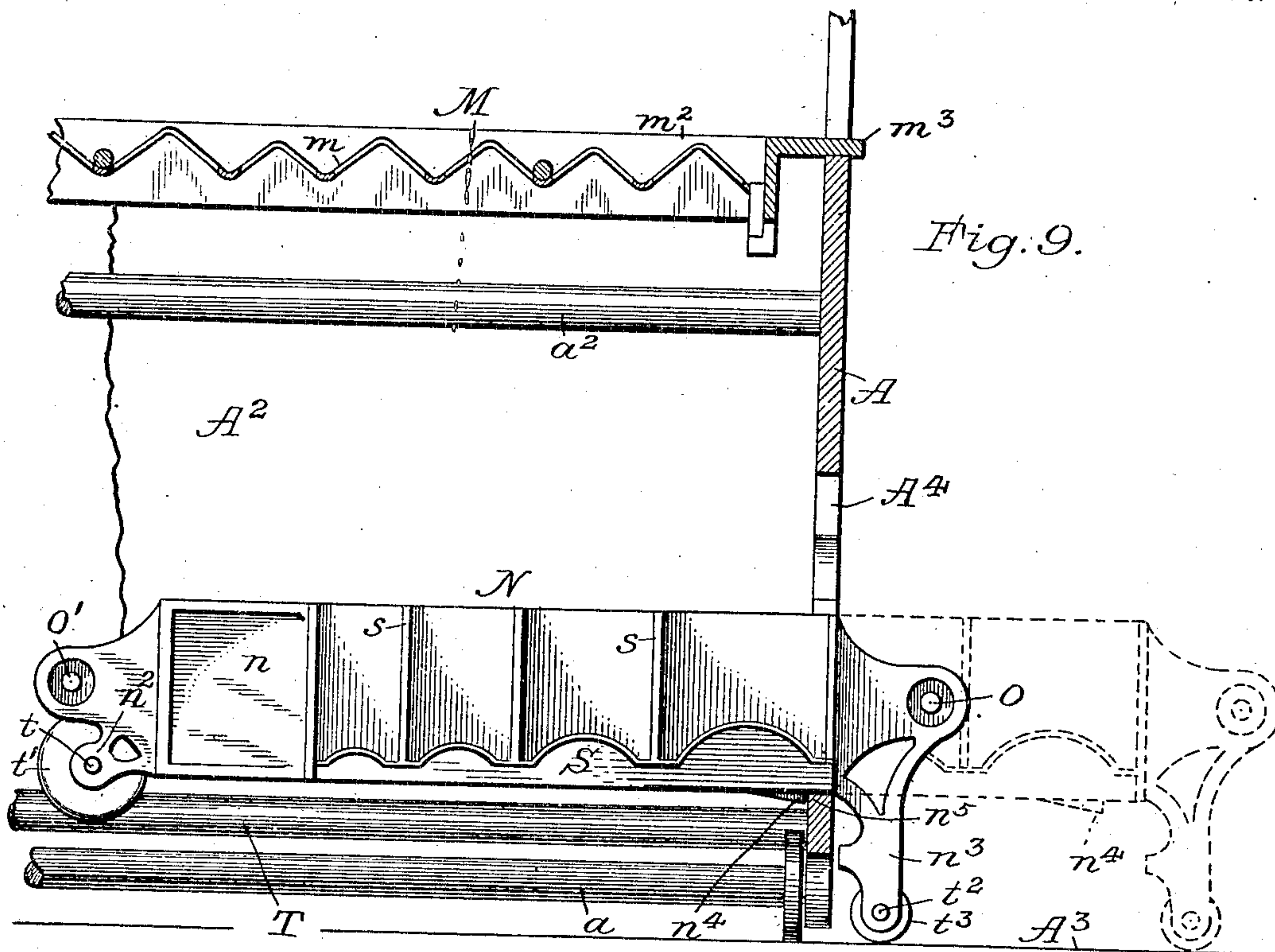
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COIN HOLDING AND DELIVERING MACHINE.

APPLICATION FILED OCT. 12, 1905.

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UNITED STATES PATENT OFFICE.

JOHN W. MEAKER, OF DETROIT, MICHIGAN, ASSIGNOR TO MEAKER SALES COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

COIN HOLDING AND DELIVERING MACHINE.

No. 843,224.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed October 12, 1905. Serial No. 282,426.

To all whom it may concern:

Be it known that I, JOHN W. MEAKER, a citizen of the United States, formerly of Chicago, Illinois, and now residing at Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Coin Holding and Delivering Machines, of which the following is a specification.

10 This invention relates to a coin holding and delivering or change-making machine of the general character illustrated and described in United States Letters Patent No. 790,218, granted to me May 16, 1905, the same having a plurality of coin-receiving receptacles or grooves adapted to hold stacks or piles of coins, together with a series of keys, one for each of said receptacles, which keys are adapted to actuate a series of coin-ejectors to eject from the receptacles the lowermost coins of the piles of coins therein. The receptacles are shown upwardly and rearwardly inclined, but are nearly enough vertical to insure the descent of the pile of coins by gravity whenever a bottom coin is ejected.

25 The object of my present invention is to improve the construction and operation of such machines in various particulars, as will hereinafter appear.

30 The invention consists in the matters hereinafter described, and pointed out in the appended claims.

Referring to the accompanying drawings, Figure 1 is a front elevation, and Fig. 2 an end view of a machine embodying my invention. Fig. 3 is an end view of the secondary frame of the machine, detached from the main frame. Figs. 4 and 5 are sectional views of the secondary frame, taken on line 4 5 of Fig. 1, illustrating different positions of the coin-ejecting key. Figs. 6 and 7 illustrate modifications of the coin-ejecting key. Fig. 8 is an end view of a portion of the machine, illustrating different positions of the inclined coin-tray mounted thereon. Fig. 9 is a sectional view through the main frame on line 9 9 of Fig. 2, and Fig. 10 is a top or plan view of the supplemental sliding coin-tray.

Describing the particular machine shown in Figs. 1 to 5, inclusive, and in Figs. 8, 9, and 10, which illustrate one embodiment of my invention, A and A' indicate two vertical parallel end frame-plates connected together by cross-rods a , a' , and a^2 and by a rear or

back plate A^2 , these parts constituting the main frame of the machine, which affords a support for a detachable secondary frame in which the coin grooves or receptacles are located and in which the coin-ejecting mechanisms are mounted. Said secondary frame comprises a longitudinal top plate B, a longitudinal bottom plate C, end plates D and D', and a vertically-corrugated plate E. The top and bottom plates B and C extend across the front of the machine between the end plates A and A' of the main frame with their front margins horizontal and parallel with each other. Both plates B and C are inclined from their front margins downwardly and rearwardly, the front margin of the top plate being located rearwardly of the front margin of the bottom plate. The vertically-corrugated plate E is secured between the top and bottom plates B and C and inclines downwardly and forwardly from its upper to its lower edge. The outwardly-facing grooves in said plate E constitute the coin-holding grooves or receptacles of the machine, the bottoms of which are supported the columns or piles of coins placed in said grooves being formed by the front marginal part of the bottom plate C. The end plates D and D' of the secondary frame are secured to the top and bottom plates B and C and the front margins of said end plates are bent outwardly at right angles to the plates to form flanges d on the plates, which flanges rest against the inclined front edges a^3 of the end plates A and A' of the main frame, said plates A and A' being provided with shoulders a^4 , one on each, for engaging the lower end of the flanges d and supporting the secondary frame, as clearly illustrated in Figs. 1 and 2. In the machine as illustrated in the patent hereinbefore referred to the supporting-flanges d are formed on the corrugated plate E. As this corrugated plate is made of comparatively thin sheet metal said flanges were liable to be bent by rough handling of the machine, and for this reason I now form said flanges on the end plates D and D', as above described, said end plates being made of sheet metal sufficiently heavy to afford the requisite strength and rigidity.

The corrugated plate E, as shown in the drawings, is shaped to form nine coin-receiving grooves or troughs, which face out-

wardly toward the front of the machine and the bottoms of which are formed by the continuous bottom plate C, extending forwardly far enough for the purpose. The several
 5 coin grooves or receptacles (lettered in the drawings from e' to e^9) are made of varying sizes to receive coins of different sizes and denominations. In the machine shown, which is intended for United States coins, the
 10 grooves marked e' to e^6 are respectively appropriated to silver dollars, half-dollars, twenty-five-cent pieces, dimes, nickel five-cent pieces, and cents. The two grooves marked e^7 and e^8 are each intended for the
 15 delivery of two one-cent pieces at once, and the groove marked e^9 is for the delivery of a single nickel five-cent piece, the arrangement being substantially as described in the patent above referred to.

20 Above the forward part of the bottom plate C, between the several coin-receiving grooves in the corrugated plate E, are located vertical partition-plates F, which project forwardly from the angles of said corrugated
 25 plate between the grooves and are provided, at or near their forward ends, with stop lugs or projections f , which project laterally from said plates F toward the center lines of the
 30 several grooves. Said lugs or projections f are intended to prevent the delivery at one time from the lower ends of the grooves (by the action of the ejecting or delivering de-
 35 vices hereinafter to be described) of more than a single coin or other desired number of coins. The stop f' , which projects toward the center of the groove e' , is formed on a
 40 projection of the end plate D'. The lower edge of the stop f' and the lower edge of such of the stops f as are opposite the grooves
 45 from which a single coin is to be ejected is located at a distance above the top surface of the bottom plate C a distance equal to the thickness of the coin which the particular
 50 groove is intended to hold and deliver, so that only a single coin can pass between said lug and the upper surface of said bottom plate. Where two, three, or more coins are
 55 to be ejected at once from a groove, said stop projection f is located a distance above the top surface of the bottom plate equal to the combined thickness of the number of coins
 60 which are to be ejected at one time from the groove.

Now referring to the devices for ejecting
 55 the coins from the several grooves or receptacles, I have devised (and believe I am the first to have devised) an automatically-retracted coin-ejecting key in which the coin-ejector is maintained in position for ejecting
 60 the coin by the hand of the operator used in operating the key and is free to fall beneath the coins remaining in the receptacle when the key is released by the operator to permit it to return to its normal or retracted position. I
 65 have devised numerous and widely-different

structures embodying this feature of my invention, some of which will form the subject of separate applications for Letters Patent. In the present application I have made an appropriate claim to the broad invention, but
 70 have confined the present drawings and description to a form of key mechanism in which the coin-ejector is carried by or upon an operating finger-piece which is pivotally
 75 connected to a main body or member of the automatically-retracted key.

It will be understood that each of the coin receptacles or grooves is provided with its own coin-ejecting key, and as all of the keys are essentially alike only one need be de-
 80 scribed in detail. The ejecting device, as a whole, is termed by me the "ejecting-key," and, as illustrated, it comprises a main automatically-retracted key member G, having a
 85 finger-piece K pivotally mounted on the lower end thereof and carrying an ejector k , which in the forward movement of the key is adapted to engage and eject the lowermost coin or
 90 coins from the receptacle, the pivotal connection between the finger-piece K and the key member G permitting the ejector to freely pass
 95 beneath the descended coins remaining in the receptacle during the rearward or return movement of the key. As illustrated in Figs. 3 and 4, the main automatically-retracted
 100 key member G is in the form of a bent bar or lever, which is pivotally supported at its upper end on a rod H, mounted over and running lengthwise of the top plate B of the sec-
 105 ondary frame, said rod H serving as a common support for the levers of all the keys of the machine. Each of said levers G inclines
 110 downwardly and forwardly behind the corrugated plate E and projects through a slot c in the bottom plate C, the parallel side walls
 115 of the slot c forming lateral guides for holding the lever against sidewise movement and the front end wall c' of the slot serving as a stop for limiting the forward movement of the key.

Each of the levers G is with a desired de-
 110 gree of gravity force retracted and held in its normally retracted position by means of a weight g , which is shown as of flat or plate form, and is pivotally mounted at its lower
 115 front corner on a rod g' , the latter serving as the support for the weights of all of the keys in the machine. Said rod g' is mounted at
 120 its ends in the end plates D and D' of the secondary frame and also passes through rearward extensions f^2 of the division-plates F, before referred to. Each weight g extends
 125 rearwardly and upwardly from its pivotal point and projects through a slot g^2 in the lever G, and at its upper end it is provided with a pin g^3 , which bears against the lever G
 130 at each side of the slot g^2 . The weight is thus arranged to lean against the lever and to normally hold it in its rearward or retracted position (illustrated in Fig. 4) and also to press it toward its retracted position after the key

has been pulled forward in the ejecting operation, as illustrated in Fig. 5. For holding the weight g in permanent engagement with the lever G the latter is provided with one or more short flanges g^4 , opposite and over the pin g^3 , so that said pin will be confined between said flange or flanges and the rear wall of the lever.

Pivotaly mounted on the lower or free end of the lever G is the finger-piece K , carrying a coin-ejector k , which projects upwardly from an arm k' , that extends forwardly from the finger-piece below the coin groove or receptacle, as illustrated in Figs. 3, 4, and 5. The ejecting-finger k is adapted to project through a slot c^2 , formed in the bottom plate C and extending inwardly from the forward edge of said bottom plate to a point back of the inner edge of the coins in the coin-receptacle. The finger-piece K is secured to the lever G by the transverse horizontal pivot k^2 and is provided at its forward end with a downwardly-extending portion k^3 , adapted for engagement by the finger of the operator applied beneath and behind it for the purpose of pulling the entire key forward to eject the lowermost coin or coins of the stack or pile in the superjacent receptacle. The finger-piece K has its greatest weight forward of its pivot k^2 , so that its forward end may drop when permitted to do so and may remain depressed unless positively lifted. It must start forward from its retracted position behind the coin column at a suitable elevation to bring the ejector into engagement with the coin or coins to be delivered, and the ejector must continue in engagement with such coin or coins until they are ejected. In whatever manner the ejector may be brought to its proper elevation before engaging such coin or coins (whether by the operator's finger or by mechanical means) the finger of the operator in the construction described maintains this engagement of the ejector with such coin or coins during the ejecting operation, and when the finger-piece is released by the operator at the end of the ejecting-stroke, the ejector descends, so as to be retracted below and preferably clear of the lowermost coin left in the receptacle and fallen to the bottom of said receptacle upon removal of the ejected coins from beneath them. For giving the ejector a suitably-elevated position when the key is in its retracted position to enable it to engage and eject the desired lowermost coin or coins said finger-piece K is shown in Fig. 4 to be provided with a rear extension k^5 , having a roller k^6 mounted thereon, which engages the under surface of the bottom plate C , said surface of this bottom plate acting as a cam with which the roller engages in the rearward movement of the key for depressing the rear end of the finger-piece, and thus elevating the ejector. The ejector is prevented from ascending and projecting through the slot c^2 beyond the dis-

tance required for engaging the lowermost coin or the desired number of coins by the upper surface of the arm k' , which, as shown in Fig. 1, engages with the under surface of the bottom plate C and slides thereon during the forward movement of the key.

It will now be understood that should the projection k^3 of the finger-piece be engaged by the finger of the upwardly open hand of the operator and the key pulled forward from its position of rest (shown in Fig. 4) to the limit of its forward movement, (shown in Fig. 5,) the ejector k will be maintained in its elevated position by the pressure of the operator's finger on the finger-piece and will force forward the lowermost coin or coins of the pile in the coin-receptacle and push it or them from beneath the stack into the open hand of the operator, the coins above the coin or coins engaged by the ejector being retained in the receptacle by the adjacent projection or stop f and being let drop after the ejection of the previously lowermost coin or coins. When the key is released by the operator, the forward end of the finger-piece K will fall to the position indicated in dotted lines in Fig. 5, so that in the automatic return movement of the key the ejector k will pass beneath the lowermost coin of the descended pile remaining in the receptacle. The downward movement of the front end of the finger-piece is limited by a suitable stop, as in this instance a projection k^7 on the lever G , which is engaged by the roller k^6 , as indicated in said Fig. 5. The lower end of the lever G being forward of its pivotal support H and being pressed rearwardly by the weight g falls back to its initial position, and during this rearward movement the roller k^6 strikes the under surface of the bottom plate C and is depressed thereby, with the effect of elevating the ejector k back of and in position to engage the lowermost coin or coins remaining in the receptacle when the key is again pulled forward.

The extent to which the ejector k projects through the slot c^2 in the bottom plate C is predeterminedly sufficient for it to engage and eject always the same number of coins—that is, a single coin or a plurality of coins, as the case may be—the retaining-stop f being properly located with reference to the bottom plate C to prevent more than the desired number of coins leaving the receptacle, as before explained. As the stack or pile drops down the moment the lowermost coin is removed, it is desirable that the ejector as it approaches the limit of its forward movement should be given a downward movement, so as not to strike and drag against the lowermost coin of the descending or descended stack, and for this purpose a portion of the metal of the bottom plate at one side of the groove c^2 is bent downwardly, as shown at c^3 in Figs. 3, 4, and 5. The upper

surface of the arm k' having, as before explained, sliding bearing against the under surface of the bottom plate C to limit the upward movement of the ejector as the key is pulled forward, the arm k' is held against the plate C by the finger of the operator, and as the key approaches the limit of its forward movement the arm k' is deflected downwardly by the bent projection c^3 , thus moving the ejecting-finger away from the descending pile of coins.

In Fig. 6 I have illustrated a coin-ejecting key embodying my invention in a modified form. In this instance the lower end of the lever G' is provided with a forwardly-projecting finger-piece K' , pivotally secured thereto by a pin k^2 , and provided with an integral ejector k . The outer or free end of the finger-piece K' has its downward movement limited by a stop k^3 , which contacts with the upper surface of the lower end of the lever G' and the upward movement limited by the engagement of shoulders k^9 , formed at each side of the ejecting-finger k , these shoulders engaging the under surface of the bottom plate C. The finger-piece K' normally hangs in its lowest position, the ejector k being normally below the upper surface of the bottom plate C even when retracted and in position to be raised through the slot c^2 behind the coin or coins to be ejected. To eject a coin, the operator places his fingers beneath the finger-piece and pulls or draws the key forward. The initial pulling movement raises the finger-piece, so that the ejector will be projected through the slot c^2 behind the coin or coins to be ejected, and as the key is pulled forward the coin or coins will be carried by said ejector from beneath the coin-stack into the hand of the operator. When the key is released, the finger-piece drops down to permit the ejector in the rearward movement of the key to pass freely beneath the coin or coins remaining in the stack.

In Fig. 7 I have illustrated another form of key, which in mode of operation more closely resembles the key first described in that the ejector is normally held in an elevated position behind the coin or coins to be ejected. In this instance the key member G^2 is in the form of a lever, pivotally mounted, as before described, and carrying a weight g' at its lower end for normally holding it in its retracted position. The finger-piece K^2 is provided with a pair of lugs or ears l , which embrace said lever behind the weight g' , a pin k^2 passing through said lever, and said ears serving to pivotally connect the finger-piece to the lever. Said finger-piece K^2 is provided with an arm l' , which projects upwardly through a slot l^2 in the bottom of the lever G^2 , the upper end k of said arm constituting the coin-ejector. Said finger-piece is also provided with a rear extension l^3 , which

is engaged by the rear edge c^4 of the bottom plate C for depressing said extension and correspondingly raising the forward end of the finger-piece for bringing the ejector in proper position for engaging the coin or coins to be ejected. The ejector k projects through the slot c^2 in the bottom plate C, and its upward movement is limited by the engagement of the forward end l^4 of the finger-piece K^2 with the bottom edge of the weight g' . The downward movement of the ejector is limited by the engagement of the projection l^5 on the arm l' with the upper surface g^3 of the weight g' . When this key is pulled forward by means of the finger-piece K^2 , the lowermost coin or coins of the stack or pile will be ejected into the hand of the operator, as before described, and when the key is released the forward end of the finger-piece will drop of its own weight to permit the ejector to pass beneath the remaining coins in the coin-grooves, and when the key reaches the limit of its rearward movement the rear extension l^3 of the finger-piece will be depressed by the edge c^4 of the plate C for correspondingly elevating the ejector into proper position to engage the next coin or coins.

Now, referring to Figs. 1, 2, and 9, it will be noted that the top of the main frame of the machine is closed by a coin-tray M, Fig. 9, and that space is afforded beneath said tray between the secondary frame of the machine and the back plate A^2 for a sliding tray or carriage N, which in the machine illustrated is designed for holding gold coin, the upper tray M and the coin grooves or receptacles e' to e^{10} being designed for silver, nickel, and copper coins. The tray or coin-carriage N is best illustrated in Figs. 2, 9, and 10. It consists of two side plates n and n' , connected at opposite ends by rods O O', which serve as convenient handles for carrying the tray when removed from the machine or for sliding it back and forth in the main frame, as will be hereinafter described. Mounted between the side plates n and n' is a transversely-corrugated plate P, having rectangular perforations formed therein transversely of the upwardly-projecting ridges or corrugations, said perforations forming coin-receiving pockets or recesses, as clearly illustrated in Fig. 10. The three perforations r r r in the ridge or corrugation p are each adapted to receive five twenty-dollar gold pieces placed therein in an upright position transversely of said ridge or corrugation. The perforations or recesses r' r' r' in the next adjacent ridge or corrugation p' are each adapted to receive five ten-dollar gold pieces, while the perforations r^2 r^2 r^2 and r^3 r^3 r^3 in the next two ridges p^2 and p^3 are respectively adapted to receive five five-dollar gold pieces and four two-and-a-half-dollar gold pieces. The coins are supported on the side marginal

edges of the perforations or recesses, and to prevent them from falling through the perforations while being placed therein a second corrugated plate P' is placed beneath the perforated corrugated plate, as clearly shown in Fig. 10. The side plate n is provided with a ledge or shelf S for supporting columns or stacks of coins of the various denominations, upright walls s serving to form grooves for receiving and holding the several stacks, as clearly illustrated. The side plates n and n' are each provided at one end with a downwardly-projecting lug or ear n^2 , which afford supports for the ends of a shaft t , upon which is mounted a grooved roller t' . Said roller is mounted midway between the side plates of the carriage and is adapted to ride upon a bar or rod T , which extends horizontally from one end plate to the other of the main frame of the machine near the bottom thereof. Said bar T serves as the support for the rear end of the carriage, as illustrated in Fig. 2. The front end of the carriage is adapted to normally rest on the horizontal surface A^3 , upon which the machine rests, and is moved in and out of the main frame through an opening A^4 in the end plate A , the bar or rod O forming a convenient handle for this purpose. For affording a roller-bearing for the front end of the carriage the side plates n and n' are provided with lugs or ears n^3 , in which is mounted a shaft t^2 , carrying the rollers t^3 and t^3 , said rollers normally resting on the horizontal surface A^3 , upon which the machine rests, and serving to maintain the carriage in a practically horizontal position. When it is desired to place coins in the carriage or remove them therefrom, the carriage is pulled out of the main frame, as indicated in dotted lines in Fig. 9, the front end of the carriage rolling upon the horizontal surface A^3 , while the rear end rests and rolls upon the rod or bar T , the latter, together with the roller t' , serving to guide the carriage in its outward and inward movements. When the carriage is pushed back into the main frame, as shown in full lines in Fig. 9, it is held therein by lugs or shoulders n^4 , formed on the bottom edge of the side plates n and n' of the carriage. These shoulders engage the end plate A of the main frame at the lower marginal edge n^5 of the opening A^4 and so lock the carriage in the machine that the latter may be raised or lifted from its support without liability of the carriage falling therefrom, the front end of the carriage being then supported upon the marginal edge n^5 of the opening A^4 . The locking-lugs n^4 make it necessary to slightly lift the front end of the carriage in sliding it from the machine; but in the rearward movement thereof the lugs n^4 will ride over the lower marginal edge of the opening A^4 . The coin-tray M is composed of a corrugated plate m , mounted in a substantially rectan-

gular frame m^2 , provided with a projecting flange m^3 , which rests upon the top edge of the side and back plates A , A' , and A^2 of the main frame of the machine. The corrugated plate m is perforated to form coin-receiving recesses and is in all essential respects similar to the corrugated plate P of the coin-carriage N , the only difference being that the corrugated plate m is very much larger and is provided with a larger number of perforations or recesses designed to receive silver, nickel, and copper coins.

For increasing the coin-holding capacity of the machine I have provided an additional coin-holding tray R , which is so mounted above the coin-tray M that it may be moved to the front of the machine to be within convenient reach of the operator or moved to the rear of the machine for giving access also to the tray M . Said tray R is preferably composed of a corrugated plate w , mounted in a suitable frame W , the two ends of said frame being provided with trunnions $w' w'$, which rest in slots or bearings in arms $Y Y'$, pivotally mounted on standards $U U'$, projecting upwardly from the end plates A and A' of the main frame of the machine. Said arms $Y Y'$ are secured to the upper ends of the standards $U U'$, so that they may be moved from the position shown in full lines to the position indicated in dotted lines in Fig. 8, stops $u u$ being provided on the standards $U U'$ for supporting said arms in either of the positions indicated, as clearly shown in said figure. When the arms $Y Y'$ are in their forward position, (illustrated in full lines,) the trunnions $w' w'$ of the tray R rest in the slots y in said arms, the trunnions $w' w'$ being so located that the tray will be supported thereby in an inclined position with its lower edge resting on the front edge of the frame of the tray M . In this position the tray R will be in convenient reach of the operator, and should it be necessary to remove coins from the tray M while the tray is in its forward position the lower end of the tray R may be raised sufficiently to give access to the tray M , as indicated in dotted lines in Fig. 2.

Whenever it is desirable to have convenient access to both trays R and M , the tray R is moved to the position indicated in dotted lines in Fig. 8, the supporting-arms $Y Y'$ being swung backwardly, and the trunnions $w' w'$ of the tray-frame being shifted from the slots y to slots y' , formed on the opposite side of said arms, so that the tray will be supported in an inclined position behind the tray M , as clearly illustrated.

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

1. The combination, with a receptacle for a pile of coins constructed to permit the discharge of one or more coins from the lower

end thereof, of an automatically-retracted coin-ejecting key having a finger-piece for engagement by the finger of the operator in operating the key, a coin-ejector which is
 5 freely movable into and out of the plane of the coin or coins to be ejected, said ejector being sustained in the plane of the coin or coins being ejected by pressure applied by the operator to said finger-piece in operating
 10 the key and constructed to drop below said plane only when said finger-piece is released by the operator to permit the key to return to its retracted position.

2. The combination, with a receptacle for
 15 an automatically-descending pile of coins constructed to permit the forward discharge of one or more coins from the lower end thereof, of an automatically-retracted, forwardly and backwardly movable coin-ejecting key, a coin-ejector carried by said key
 20 and freely movable into and out of the plane of the coin or coins to be ejected during the forward movement of the key, and a finger-piece adapted to be engaged by the finger of
 25 the operator's hand for drawing the key forward and through which finger-piece the operator sustains the ejector in the plane of the coin or coins being ejected, said ejector being constructed to drop below said plane
 30 only when said finger-piece is released by the operator to permit the key to return to its retracted position.

3. The combination, with a receptacle for an automatically-descending pile of coins
 35 adapted for the forward discharge of one or more coins from the lower end thereof, of a coin-ejecting key comprising an automatically-retracted member having a finger-piece pivotally mounted thereon, said finger-piece
 40 being below the coin-receptacle and being adapted to be engaged by a finger of the operator's upwardly open hand for drawing the key forward, and a coin-ejector moved by said finger-piece to engage and eject the
 45 lowermost coin or coins from the receptacle.

4. The combination, with a receptacle for an automatically-descending pile of coins adapted for the forward discharge of one or more coins from the lower end thereof, of a
 50 coin-ejecting key comprising an automatically-retracted member and a finger-piece pivotally mounted thereon, said finger-piece being below the coin-receptacle and having its greatest weight in front of its pivotal support, and a coin-ejector carried by said finger-piece and adapted in the forward movement
 55 of the key to engage and eject the lowermost coin or coins from the receptacle.

5. The combination, with a receptacle for
 60 an automatically-descending pile of coins adapted for the forward discharge of one or more coins from the lower end thereof, of a coin-ejecting key comprising an automatically-retracted finger-piece so movably

mounted below the coin-receptacle as to be
 65 adapted to be moved toward and from the plane occupied by the lowermost coin in the receptacle and having a normal tendency to move away from said plane, a coin-ejector controlled by said finger-piece and adapted,
 70 in the forward movement of the key, to engage and eject the lowermost coin or coins in the receptacle, and means for automatically raising the ejector during the rearward movement of the key, whereby said ejector will be
 75 put in position to engage the lowermost coin or coins of the pile left in the receptacle, upon the next forward movement of the key.

6. The combination, with a receptacle for an automatically-descending pile of coins
 80 adapted for the forward discharge of one or more coins from the lower end thereof, of a coin-ejecting key comprising an automatically-retracted lever pivotally supported at its upper end above the bottom of the recep-
 85 tacle and a finger-piece pivotally mounted on the lower end of said lever, said finger-piece being situated below the coin-receptacle and adapted to be engaged by a finger of the operator's hand for drawing the key forward, a
 90 stop for limiting the downward movement of said finger-piece and a coin-ejector carried by said finger-piece adapted to engage and eject the lowermost coin or coins from the receptacle in the forward movement of the
 95 key.

7. The combination, with a receptacle for an automatically-descending pile of coins adapted for the forward discharge of one or more coins from the lower end thereof, of a
 100 coin-ejecting key comprising an automatically-retracted lever pivotally supported above the bottom of the receptacle, a finger-piece pivotally mounted on said lever and situated below said receptacle where it is adapt-
 105 ed to be engaged by a finger of the operator's hand for drawing the key forward, said finger-piece having a part which engages with said lever for limiting the downward movement of the finger-piece, and a coin-ejector
 110 carried by said finger-piece and adapted in the forward movement of the key to engage and eject the lowermost coin or coins from the receptacle.

8. The combination, with a receptacle for
 115 an automatically-descending pile of coins adapted for the forward discharge of one or more coins from the lower end thereof, of a coin-ejecting key comprising a lever pivotally supported at its upper end above the
 120 bottom of the receptacle and projecting downwardly behind the receptacle, a finger-piece pivotally mounted on the lower end of said lever and extending forwardly therefrom below the bottom of the receptacle, the
 125 forward end of said finger-piece having a limited vertical movement, and an ejector carried by the finger-piece adapted, in the for-

ward movement of the key, to engage and eject the lowermost coin or coins in said receptacle.

9. The combination, with a receptacle for an automatically-descending pile of coins adapted for the forward discharge of one or more coins from the lower end thereof, of a coin-ejecting key comprising a lever pivotally supported at its upper end above the receptacle and extending downwardly behind the receptacle and forwardly of its pivotal support, a finger-piece pivotally mounted on the lower end of said lever and projecting forwardly therefrom below the receptacle, and a coin-ejector projecting from said finger-piece and adapted, in the forward movement of the key, to engage and eject the lowermost coin or coins in the receptacle and, in the rearward movement of the key, to be carried by the finger-piece below the coins remaining in the receptacle.

10. The combination, with a receptacle for an automatically-descending pile of coins adapted for the forward discharge of one or more coins from the lower end thereof, of a coin-ejecting key comprising a lever pivotally supported at its upper end above the bottom of the receptacle, a finger-piece pivotally mounted on the lower end of said lever and projecting forwardly therefrom below the receptacle and also extending rearwardly of its pivotal support, but having its greatest weight in front of said support, said finger-piece being adapted to be engaged at its forward end by a finger of the operator for drawing the key forward, a coin-ejector carried by the forward end of said finger-piece and adapted, in the forward movement of the key, to engage and eject the lowermost coin or coins from the receptacle, and means for depressing the rear end of said finger-piece, during the rearward movement of the key for elevating said ejector.

11. In a change-making machine, the combination of a receptacle for an automatically-descending pile of coins adapted for the discharge of one or more coins from the lower end thereof, said receptacle having its bottom wall formed by a plate which is slotted to receive a coin-ejector and which extends rearwardly from said receptacle, a coin-ejecting key comprising a lever pivotally supported above the coin-receptacle and extending downwardly through a slot in the rearward extension of said plate, a finger-piece pivotally mounted on the lower end of said lever and extending forwardly and rearwardly of its pivotal support, said finger-piece having its greatest weight forward of said support and having its rear extension arranged to engage and to be depressed by the under surface of said plate, and a coin-ejector carried on the forward end of said finger-piece, adapted, in the forward movement of the key, to

engage the lowermost coin or coins in the receptacle through the slot in its bottom wall.

12. The combination with a receptacle for an automatically-descending pile of coins constructed to permit the forward discharge of one or more coins from the lower end thereof, said receptacle having a slot in its bottom wall for receiving a coin-ejector, an automatically-retracted coin-ejecting key the forward end of which is freely movable vertically toward and from the bottom wall of the receptacle and carrying a coin-ejector adapted to enter said slot to engage and eject the lowermost coin or coins from the receptacle, a finger-piece to be engaged by the finger of the operator for drawing the key forward and by means of which the ejector is sustained in the plane of the coin or coins while being ejected, and a projection on the bottom wall of the receptacle arranged to deflect the key downward at the end of its forward movement.

13. In combination with the main frame of a change-making machine, of a stationary coin-tray mounted thereon, and a second coin-tray pivotally supported at its ends in an inclined position above the first-mentioned tray, said pivotally-mounted tray having its forward edge substantially in line with the front edge of the fixed tray and being movable on its pivotal supports for giving access to said fixed tray.

14. In combination with the main frame of a change-making machine, of a stationary coin-tray mounted thereon, a second coin-tray, supported for holding said second tray in an inclined position over the first-mentioned tray, said supports being movable for shifting the position of said tray with reference to the fixed tray.

15. In combination with the main frame of a change-making machine, of a stationary coin-tray mounted thereon, a second coin-tray, supports for holding said second tray in an inclined position, said supports being pivotally secured to said main frame whereby the position of said second tray may be shifted with respect to the said stationary tray.

16. In combination with the main frame of a change-making machine, of upwardly-projecting arms at the ends of the frame, adapted to support a coin-tray thereon in an inclined position, said arms being movable for shifting the position of the tray.

17. In a change-making machine, the combination of end plates forming parts of the main frame, said plates having inclined front edges and a shoulder for supporting a secondary frame, a secondary frame affording a support for stacks or piles of coins and for coin-ejecting mechanism, said secondary frame comprising a corrugated plate forming a series of coin-holding receptacles, a bottom plate, and end plates secured thereto, said

end plates being provided with integral out-
wardly-projecting flanges which rest upon
the shoulders on the side plates of the main
frame and against said inclined edges, said
5 outwardly-projecting flanges being formed
by bending a portion of the metal of said
plates, substantially as described.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit-
nesses.

JOHN W. MEAKER.

Witnesses:

WM. P. LANE,

CHRIS J. SANNER.