



**No. 697,396.**

**Patented Apr. 8, 1902.**

**J. M. BUTCHER.**  
**COIN DELIVERY DEVICE.**

(Application filed June 6, 1901.)

(No Model.)

**5 Sheets—Sheet 2.**

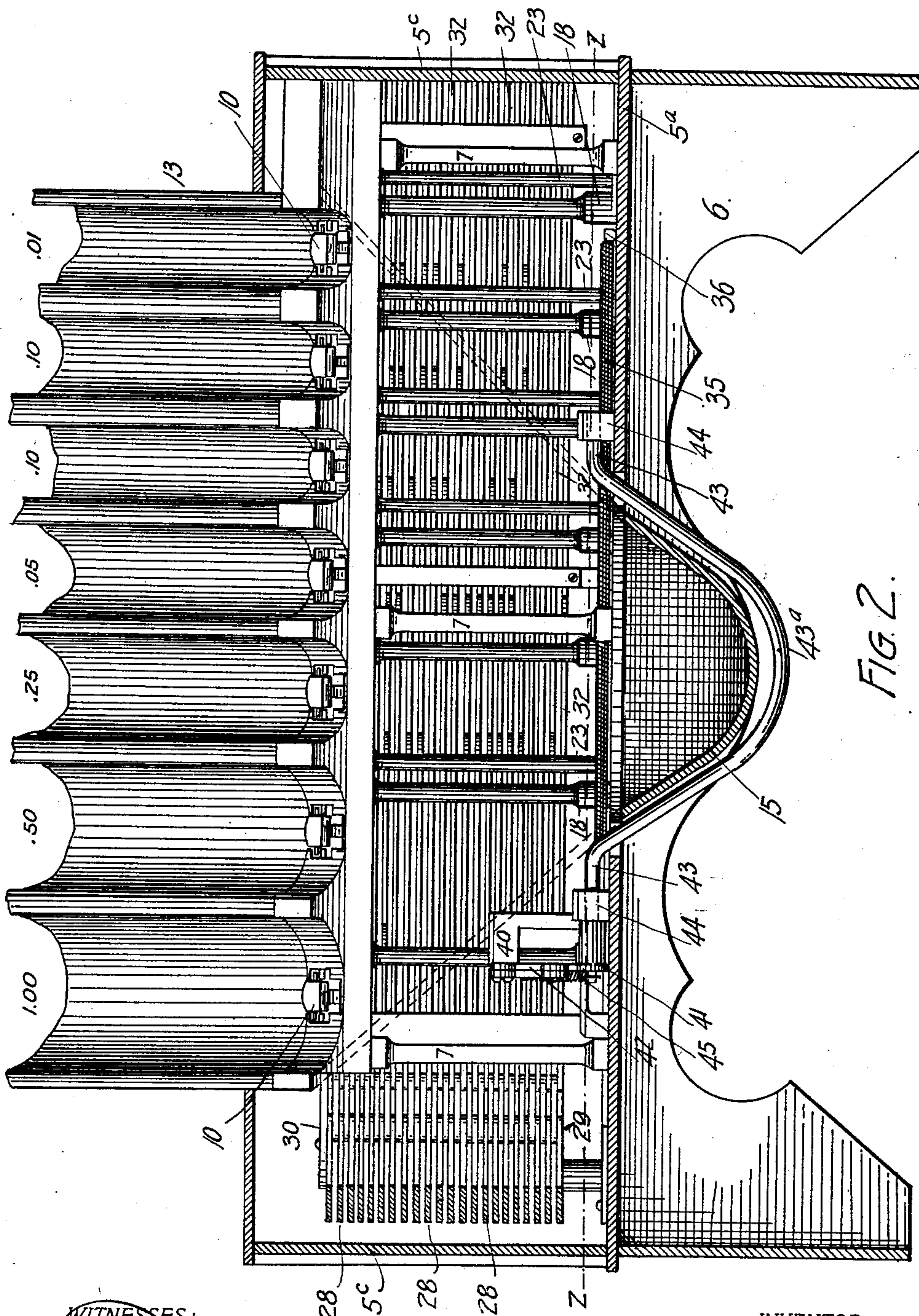


FIG. 2.

~~WITNESSES:~~

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**No. 697,396.**

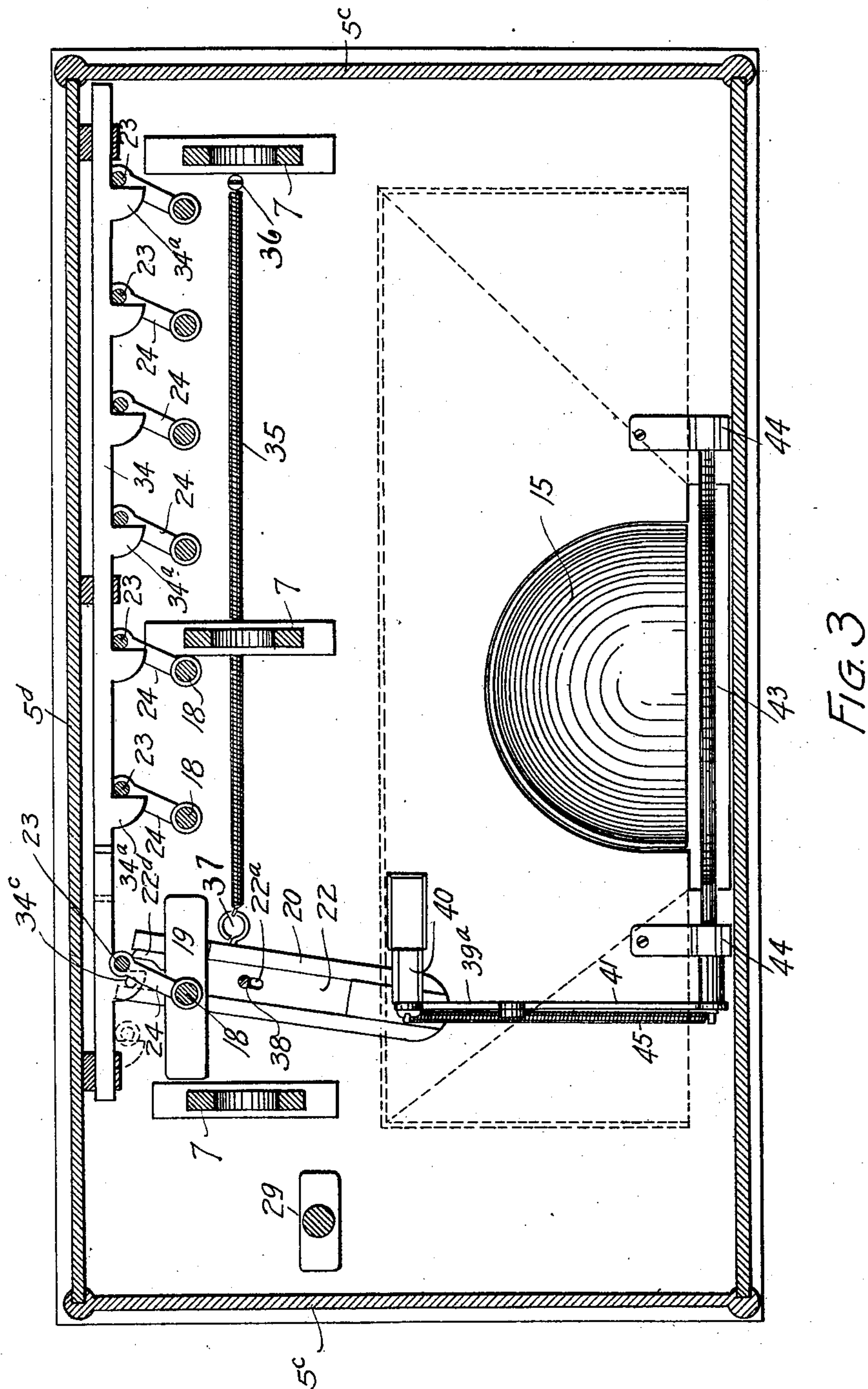
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**COIN DELIVERY DEVICE.**

(Application filed June 6, 1901.)

(No Model.)

**5 Sheets—Sheet 3.**



WITNESSES

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5 Sheets—Sheet 4.

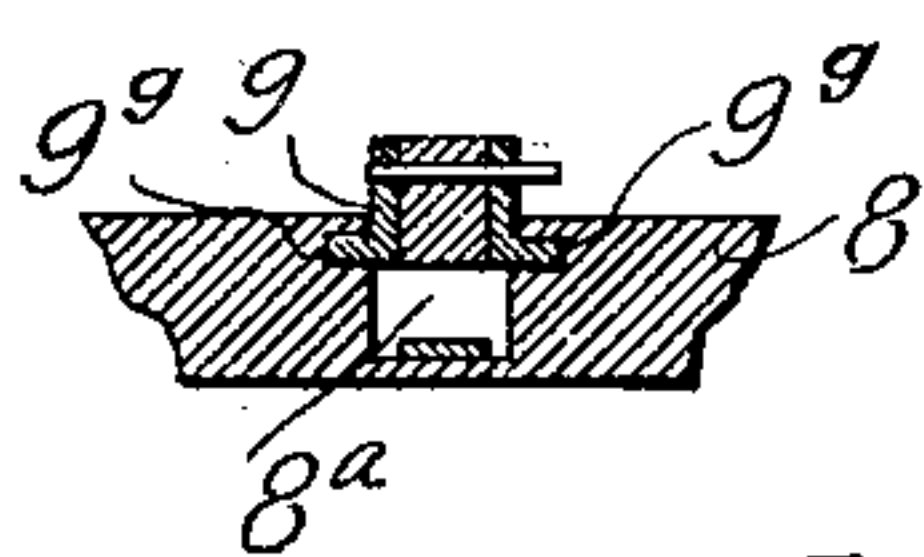
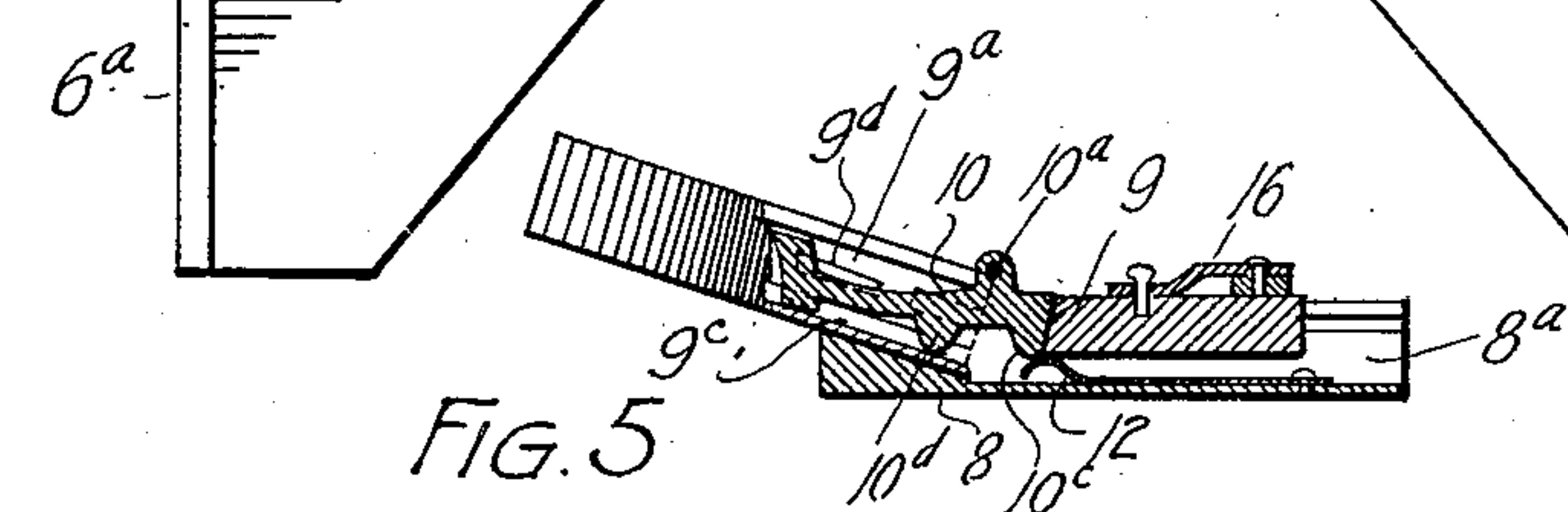
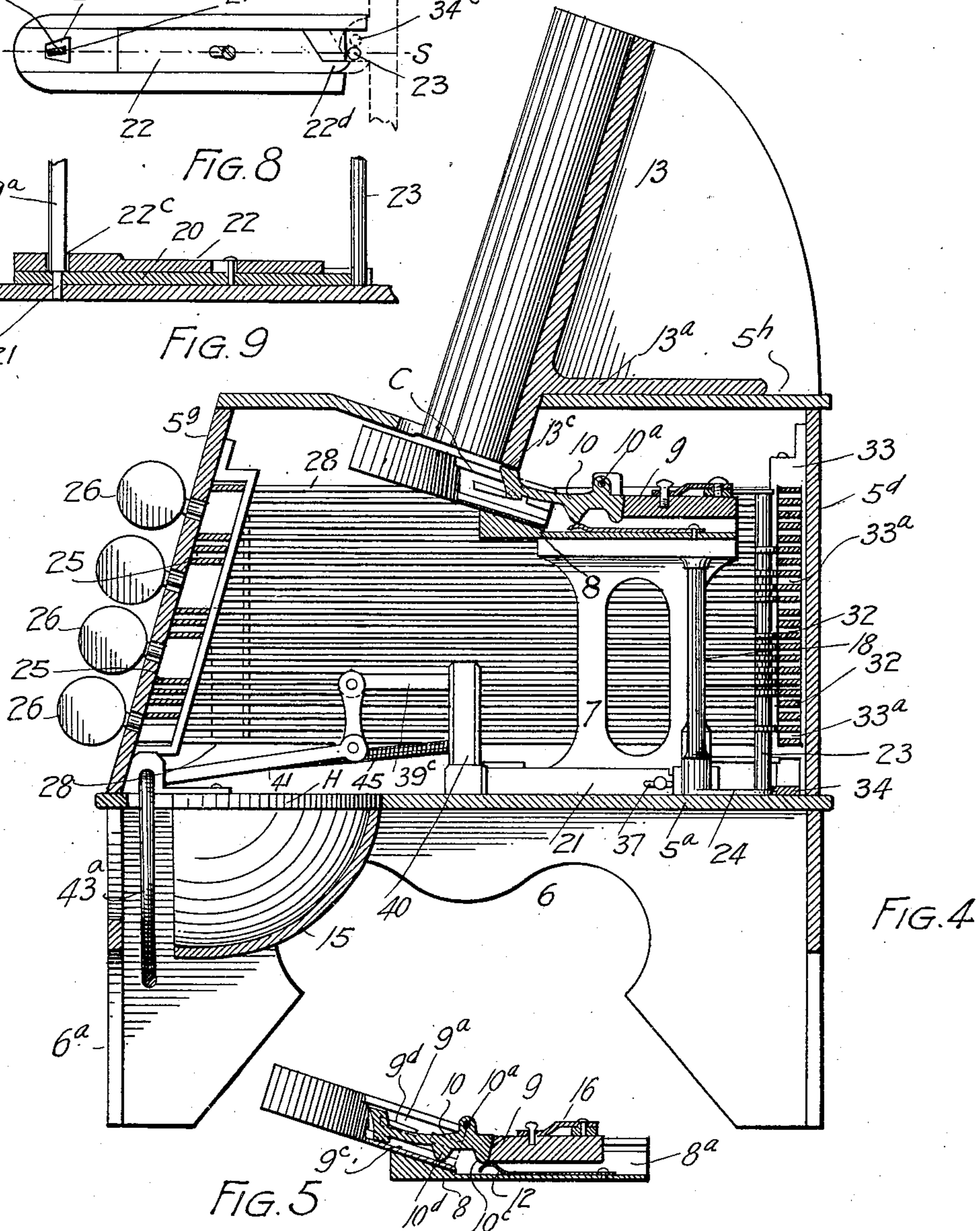
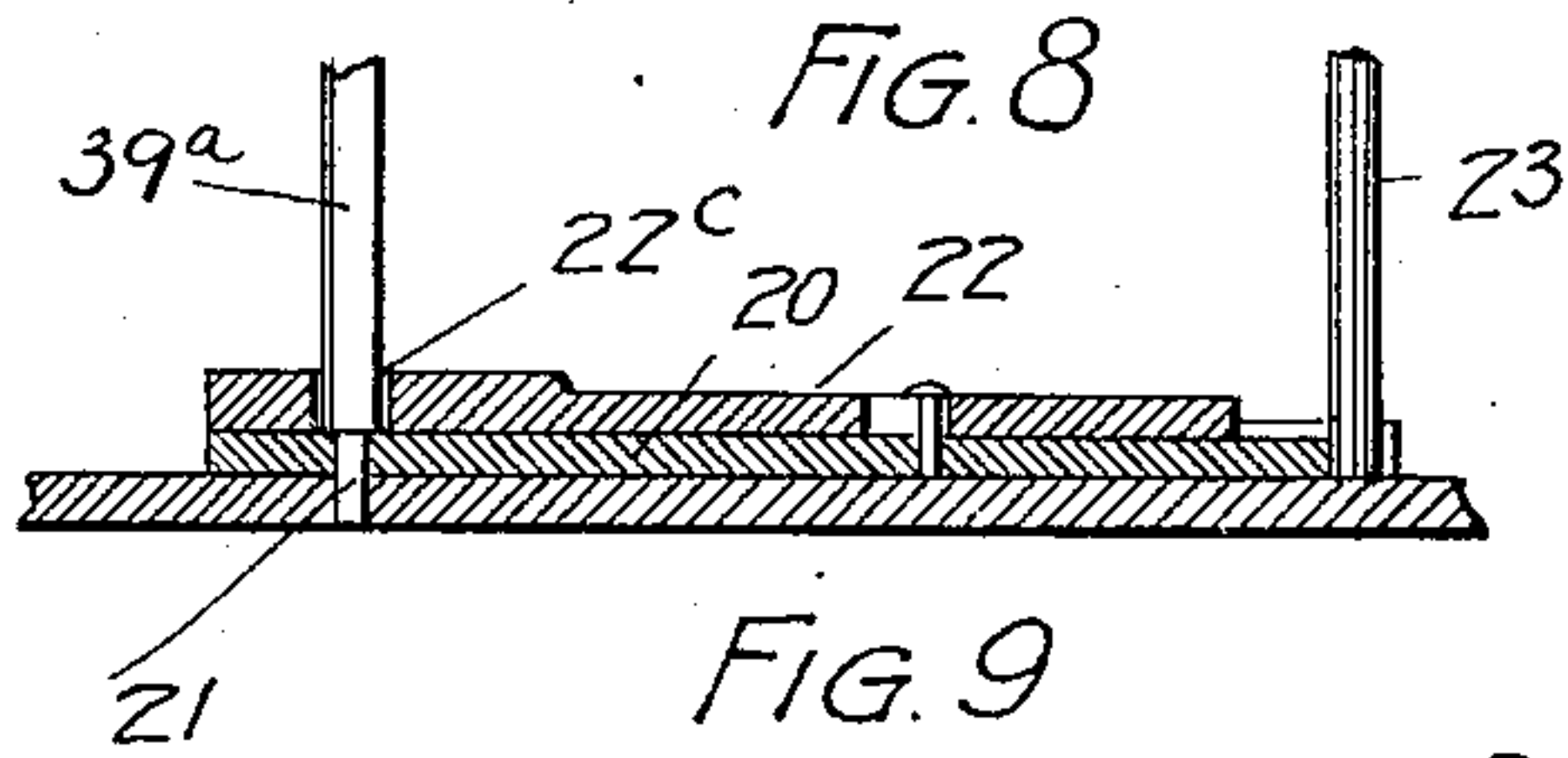
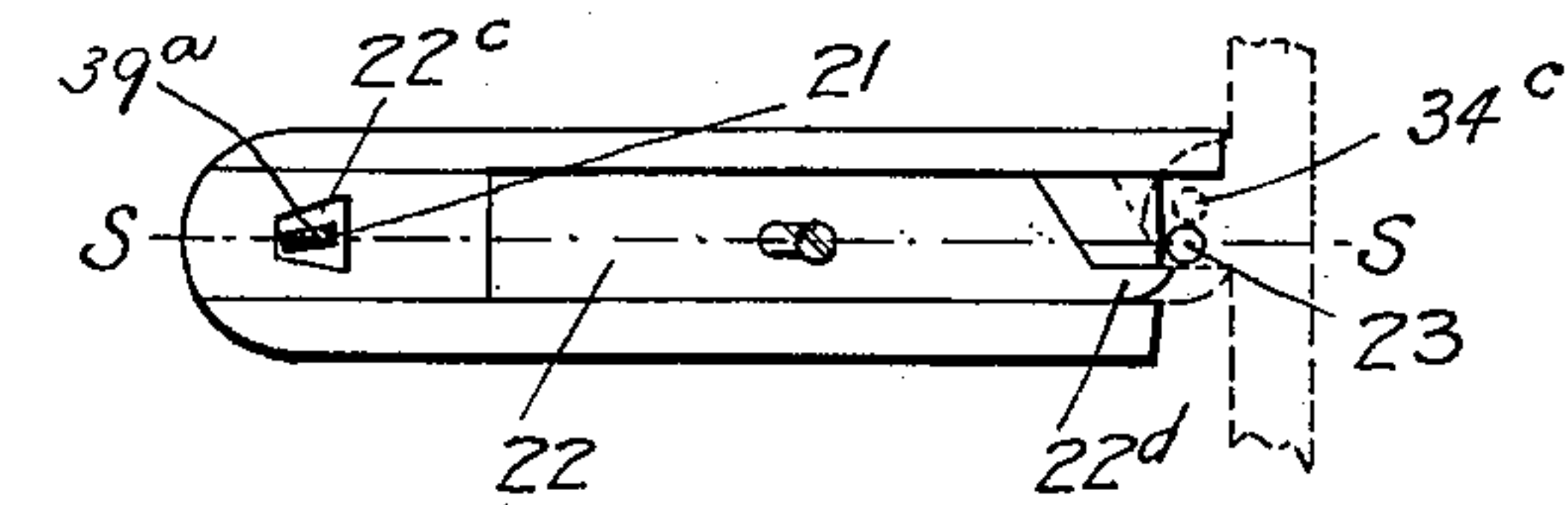


FIG. 7

FIG. 6

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5 Sheets—Sheet 5.

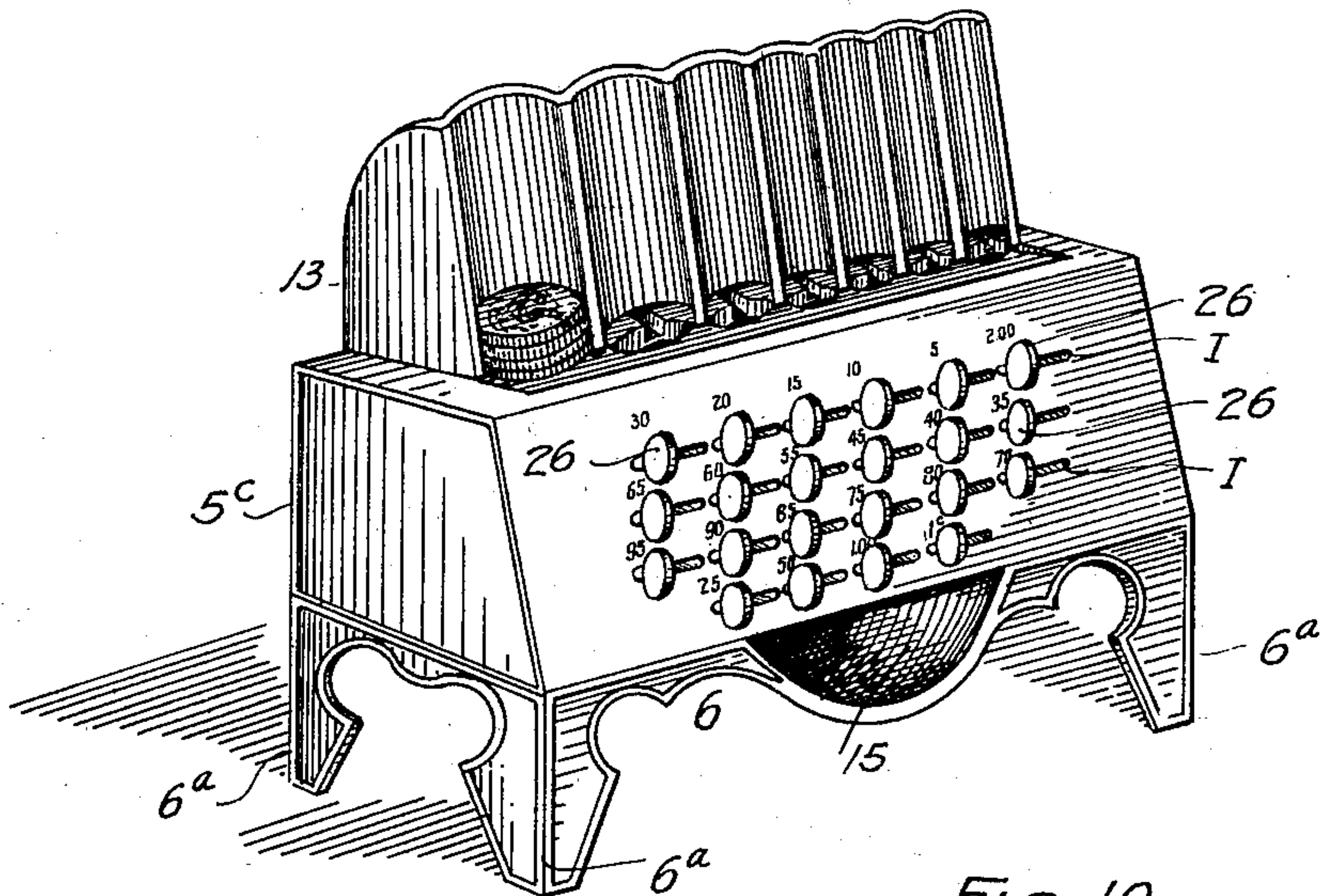


FIG. 10

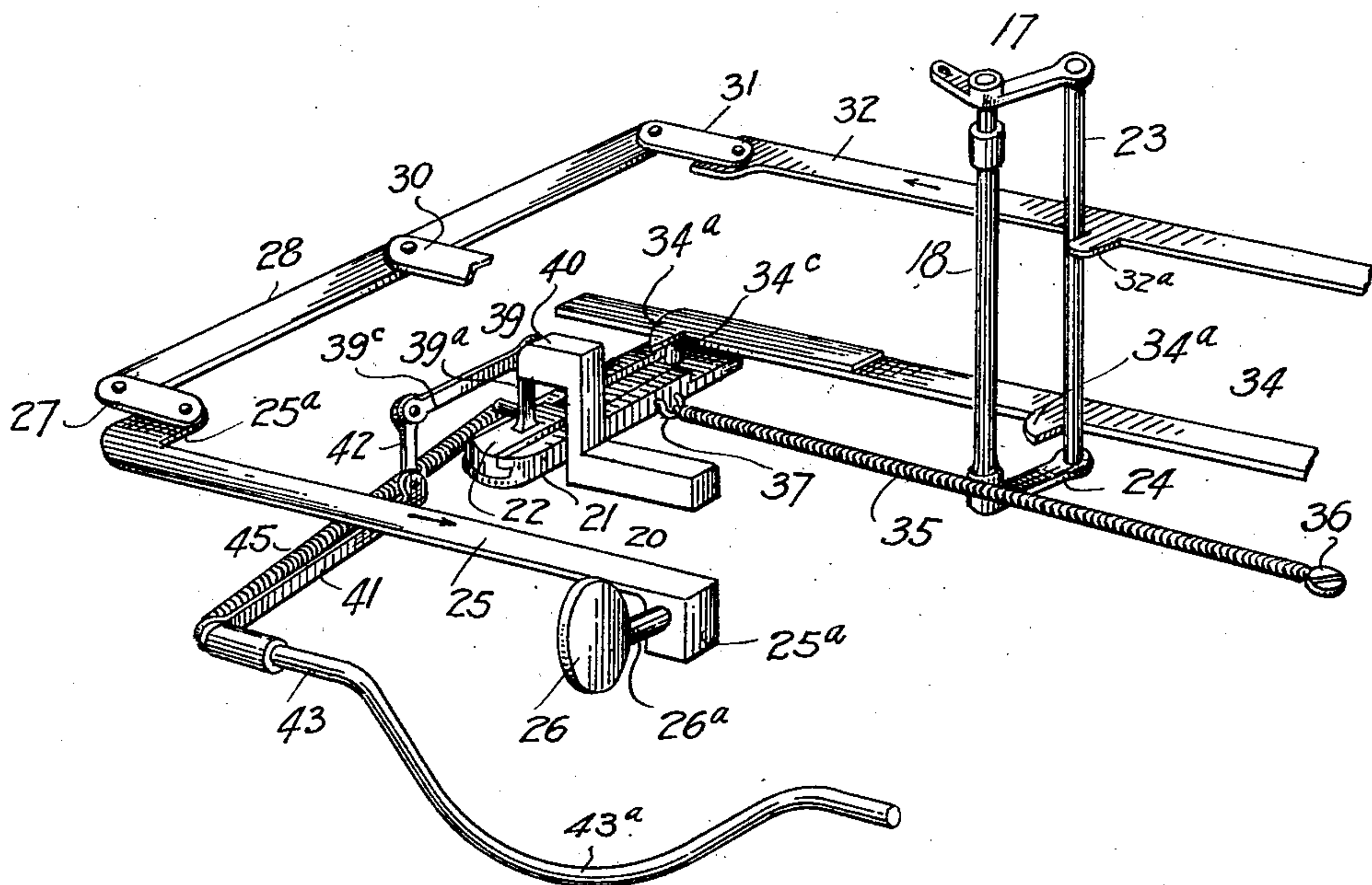


FIG. 11

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# UNITED STATES PATENT OFFICE.

JAMES M. BUTCHER, OF DENVER, COLORADO, ASSIGNOR OF ONE-HALF TO GARRETT BROWN, OF DENVER, COLORADO.

## COIN-DELIVERY DEVICE.

SPECIFICATION forming part of Letters Patent No. 697,396, dated April 8, 1902.

Application filed June 6, 1901. Serial No. 63,417. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES M. BUTCHER, a citizen of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Coin-Delivery Devices; 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 and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in coin-delivery devices, my object being to provide a machine adapted for use in banks, counting-houses, and other commercial establishments where rapid making of change and handling of coins is required. My machine is intended to facilitate this work and to aid the operator so far as mechanical construction can subserve this end.

My further object is to provide a machine comparatively simple in construction, economical in cost, reliable, durable, and efficient in use; and to these ends the invention consists of the features, arrangements, and combinations hereinafter described and claimed, all of which will be fully understood by reference to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a top or plan view of the machine with the top plate and coin-tray removed. Fig. 2 is a vertical section taken on the line *xx*, Fig. 1. Fig. 3 is a horizontal section taken on the line *zz*, Fig. 2. Fig. 4 is a cross-section taken on the line *yy*, Fig. 1. The hopper 14 is omitted in this view to avoid confusion with other parts. Figs. 5, 6, and 7 are sectional details taken on the lines *vv*, *RR*, and *TT*, respectively, of Fig. 1, the parts being shown on a larger scale. Fig. 8 is a plan view of an oscillating keeper carrying a slidable device adapted to form a connection between the mechanism for actuating the dollar-coin-ejecting tongue and the mechanism for actuating any of the other coin-ejecting tongues or sets of tongues. Fig. 9 is a section taken on the line *ss*, Fig. 8. Fig. 10 is a perspective view of the com-

plete machine shown on a smaller scale. Fig. 11 is a fragmentary perspective view illustrating a portion of the operating mechanism on a larger scale.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate a casing composed of a bottom 5<sup>a</sup>, end walls 5<sup>c</sup>, a rear wall 5<sup>d</sup>, a front wall 5<sup>e</sup>, and a top wall 5<sup>h</sup>. This casing is mounted on an integral support 6, having a leg 6<sup>a</sup> at each corner. Secured to the upper surface of the bottom of the casing and inclosed by the side walls are supporting-columns 7, to whose upper extremities is rigidly secured a platform 8, whose top is provided with channels 8<sup>a</sup>, adapted to receive slides 9, having flanges 9<sup>e</sup>, engaging guide-grooves formed in the walls of the channels. To the forward extremity of each slide 9 is hinged, as shown at 10<sup>a</sup>, a coin-ejecting tongue 10, whose lower surface is provided with two downward projections 10<sup>c</sup> and 10<sup>d</sup>, one located forward of the hinge or fulcrum 10<sup>a</sup> and the other located in the rear thereof. The forward extremity of each tongue 10 is provided with short lateral projections 10<sup>h</sup>, adapted to engage upper and lower grooves 9<sup>a</sup> and 9<sup>c</sup>, formed in the walls of the channels 8<sup>a</sup>. When the tongue 10 begins its forward or coin-ejecting movement, it is held in position to enter the upper guide-groove by a spring 12, which at the instant it begins its forward movement engages the forward projection 10<sup>d</sup> of the tongue, (see Fig. 4,) while by the time the tongue has reached its forward limit of movement the spring engages the projection 10<sup>c</sup> in the rear of the fulcrum (see Fig. 5) and throws the forward extremity of the tongue downwardly, whereby its pins 10<sup>h</sup> are brought into line with the grooves 9<sup>c</sup> through, which they travel during the rearward or reverse movement, after which the projection 10<sup>d</sup> is again brought into engagement with the upwardly-projecting end of the spring 12, which acts to raise the forward extremity of the tongue and bring its pins 10<sup>h</sup> into line with the guide-grooves 9<sup>a</sup>, ready for the next forward movement. The partition 9<sup>d</sup>, separating the grooves 9<sup>a</sup> and 9<sup>c</sup>, is cut away at the extremities of the grooves to permit the action described. This



is best shown in Fig. 4. The coin-tray 13 projects above the top of the casing and is provided with semicircular receptacles open in front and adapted to receive the coins of the various denominations. This tray, as shown in the drawings, is provided with seven receptacles adapted to receive dollars, half-dollars, quarters, nickles, dimes, and cents. These receptacles are arranged in Fig. 2 from the right toward the left in the order named and are designated in this figure by "1.00," ".50," ".25," ".05," ".10," ".10," ".01," respectively. The tray 13 is provided with a rearwardly-extending flange 13<sup>a</sup>, which engages the top of the casing which forms a support for the tray, the latter being rearwardly inclined from the bottom upward, giving the coins a normal backward tendency, whereby they are held securely in place, except as they move downward, when the lowermost coins are ejected by the tongues. The top of the casing is open to receive the lower part 13<sup>c</sup> of the tray, which projects below the flange 13<sup>a</sup>. The bottom or lowermost coin of each stack of coins in a receptacle rests on a ledge at the forward part of the platform 8.

In Fig. 1 of the drawings the dotted lines indicate the position of the coin-tray bottom, which is supported immediately above the forward portion of the platform 8, upon which the coins rest in position to be ejected by the tongues 10. The ledges upon which the coins rest are respectively designated A, B, C, D, E, E', and F, in Fig. 1 the two ledges E E' being for dimes. The lowermost coin of each stack rests on its corresponding ledge immediately in front of the coin-ejecting tongue, which as it moves forward throws the coin into a hopper 14 below. This hopper is shown in Fig. 1 and by dotted lines in Figs. 2 and 3. A discharge-mouth 15 registers with the bottom opening in the hopper and with the opening H in the bottom of the casing. The coin or coins ejected at each operation of the mechanism pass from the mouth 15 into the hand of the operator. The forward coin-supporting extremity of the platform 8, containing the ledges A B C, &c., is downwardly inclined from the front toward the rear, whereby there is no tendency of the coins to leave their ledges until they are moved forwardly by the tongues sufficiently to cause them to drop through the openings or spaces in front of the ledges and between the horns projecting from the forward extremity of the platform 8.

The manner of operating the coin-ejecting tongues, whereby any amount from one cent to two dollars in United States coins may be obtained from the machine, will now be described in detail.

Pivotally connected with the top of each slide 9 is a small metal strap 16, to the free extremity of which is pivoted one arm of a bell-crank lever 17, made fast to the upper extremity of a vertical rock-shaft 18, whose upper extremity is journaled in the platform

8. The lower extremities of all the shafts 18 are journaled in the bottom of the casing, except the shaft 18 farthest to the left in Figs. 1 and 3, and this last-named shaft is journaled in a bracket 19, supported on the bottom of the casing at its extremities and having an opening underneath through which passes an oscillatory keeper 20, pivoted at its forward extremity to a stud 21, attached to the bottom of the casing. This keeper carries a slide 22, for a purpose hereinafter explained. The other arm of each bell-crank lever 17 is pivotally connected with the upper extremity of a rod 23, whose lower extremity is movable in a crank-arm 24, made fast to the lower extremity of the shaft 18.

Mounted on the front plate 5<sup>s</sup> of the casing and on the inside of said plate is a number of slides 25, each of which is provided with an enlarged extremity 25<sup>a</sup>, having a threaded opening, into which is secured the threaded stem 26<sup>a</sup> of a circular key 26. The key-stems may, however, be attached to the slides in any other suitable manner. The stem of each key passes through a slot I, formed in the front wall of the casing, the slots being of sufficient length to permit the desired movement. As shown in the drawings, there are twenty-two keys 26 and a corresponding number of slides 25, with which the keys are connected. These slides 25 are supported in operative relation by means of a guide-strap made fast to the front wall 5<sup>a</sup> on the inside. This strap is provided with slide-supporting shelves or partitions, so arranged as to leave spaces between them for the slides, the latter being separated from each other, whereby the movement of any slide is absolutely independent of the movement of any other slide, since they do not come in contact with each other. The extremity of each slide 25 remote from the key 26 is provided with an inwardly-projecting part 25<sup>a</sup>, which is connected by means of a short link 27 with one extremity of a lever 28, fulcrumed on a post 29, whose upper extremity is supported by a bracket 30, made fast to the platform 8, while its lower extremity is secured to the bottom of the casing.

The extremity of the lever 28 remote from the link 27 is connected by means of a small link 31 with a forward projection formed on one extremity of a rear slide 32. There is a slide 32 for each slide 25 and each key 26. The slides 32 are mounted one above another in the rear part of the casing and are supported in operative relation by vertical guide-bars 33, secured to the rear wall of the casing and provided with shelves 33<sup>a</sup>, which support and separate the slides. (See Fig. 4.) Each of these slides 32 is provided with one or more lugs or projections 32<sup>a</sup>, each of which is adapted to engage and actuate a rod or roller 23, which in turn operates a bell-crank lever 17 and actuates a coin-ejecting tongue 10 by virtue of the construction and arrangement of parts heretofore described. The num-



ber of lugs 32<sup>a</sup> on each slide 32 depends on the number of coins to be ejected as the slide is actuated. The amount of coin to be delivered by the operation of any key 26 is indicated by figures on the front plate of the casing and placed adjacent the key. If the two-dollar key be actuated, all the coin-ejecting tongues except that farthest to the right will be operated, and the corresponding slide 32 is provided with six lugs or projections 32<sup>a</sup>. There are six of the slides 32 provided with but a single projection 32<sup>a</sup>—that is to say, the slides 32 corresponding with the one-cent, five-cent, twenty-five cent, fifty-cent, and dollar keys. The other slides 32 have from two to six projections 32<sup>a</sup>, depending on the number of coins to be ejected by the operation of their corresponding keys.

Each slide 32 and its connections are returned to their normal position after each coin-ejecting operation by mechanism which will now be described.

Below the lowermost slide 32 is located a slide 34, provided with projections 34<sup>a</sup> for each rod 23. The lugs 34<sup>a</sup> engage the rods 23 on the left, referring to Fig. 3, or on the side opposite the lugs 32<sup>a</sup> of the slides 32. Hence every time a rod 23 is actuated the slide 34 is moved in the same direction as the slides 32. The lug 34<sup>a</sup> farthest to the left in Fig. 3 is provided with a depending pin 34<sup>c</sup>. (Indicated by dotted lines in Figs. 3 and 8.) This pin engages a shoulder in the rear of the keeper 20 and actuates said keeper every time the slide 34 is actuated. A coil-spring 35 is connected with the bottom of the casing at one extremity, as shown at 36, and with the keeper 20 at the opposite extremity, as shown at 37, the arrangement being such that every time the keeper is actuated by the slide 34 the spring 35 is distended or placed under tension. Hence as soon as the force which actuates the slide 34 ceases to act the recoil of the spring 35 will return the slide 34 and each actuated slide 32 to their normal position. The return movement of the slide 34 also returns the actuated coin-ejecting tongues to their normal position by virtue of the construction and arrangement of parts heretofore explained.

My improved construction is provided with an attachment, whereby one dollar may be added to the amount of the coin delivered at each coin-ejecting operation, except the operation which delivers two dollars. To accomplish this, it is only necessary to connect the keeper with the rod 23 farthest to the left in Figs. 1 and 3. The slide 22 is allowed a longitudinal movement in the keeper, and this movement is limited in both directions by a pin 38, fast on the keeper and passing through a slot 22<sup>a</sup>, formed in the slide. This slide is provided with tongues engaging grooves formed in the sides of the keeper, whereby the slide is maintained in its proper relative position.

One arm 39<sup>a</sup> of a bell-crank lever 39 pro-

jects into an opening 22<sup>c</sup>, formed in the slide 22, the opening 22<sup>c</sup> being of such size and so shaped as to permit the slide to oscillate with the keeper without interfering with the lever-arm. (See Figs. 8 and 9.) This bell-crank lever 39 is fulcrumed on a suitable support 40, secured to the bottom of the casing, and its opposite arm 39<sup>c</sup> is connected with a crank-arm 41 by a link 42. This crank-arm 41 is made fast at its extremity remote from the link 42 to one extremity of a rock-shaft 43, whose extremities are journaled in suitable bearings 44, attached to the bottom of the casing. This rock-shaft is bent downwardly between the bearings, as shown at 43<sup>a</sup>, and occupies a position below and adjacent the coin-discharge mouth 15, whereby it may be conveniently operated by the hand of the user when in position to catch the coins delivered by the machine. A coil-spring 45 is connected at one extremity with arm 39<sup>a</sup> of the bell-crank lever, its opposite extremity being connected with a suitable support. The arrangement is such that as the lever 39 is actuated to operate the slide 22 the spring is stretched, and when the operating force ceases to act the recoil of the spring returns the slide to its normal position. The action of the bell-crank lever resulting from the movement of the rock-shaft 43 moves the slide 22 rearwardly sufficiently to bring a projection 22<sup>a</sup> thereon into position to engage the rod 23 farthest to the left in Figs. 1 and 3 and actuates said rod every time the keeper is operated.

When the machine is in use, all the receptacles of the coin-tray contain coins arranged in stacks, each stack being composed of coins one above another, the lowermost coin resting on a ledge A B C, &c., below the plane of the top of the casing and in the path of a coin-ejecting tongue 10. If, for instance, eighty cents in change is required, the operator places his forefinger on the key next toward the right (see Fig. 1) and his thumb on the key having the number "80" adjacent it on the front plate of the casing. A key to the right forms a stop to steady the hand, and the pressure of the thumb toward the right moves the key to be actuated in the corresponding direction. This action of the key moves the slide 25 in the direction indicated by the arrow in Fig. 11, actuates the lever 28, which in turn moves the appropriate slide 32 in the opposite direction or that indicated by the arrow in the same figure. The actuated slide 32 will be one containing three projections 32<sup>a</sup>, and these projections will act on the three corresponding rods 23, which will actuate the bell-crank levers 17, the latter in turn operating the slides 9, whose forward movement imparts a corresponding movement to the tongues 10. These tongues as they move forward engage the lowermost coins of the half-dollar, quarter-dollar, and nickel stacks of coins and forces the three coins from their position on the ledges B, C, and D, causing them to drop into the hopper



14 and thence by way of the discharge-mouth 15 into the hand of the operator. As soon as a coin leaves any ledge the coin next above drops down to engagement with the ledge; but the instant the coin is ejected the tongue moves down below the ledge or to the position shown in Fig. 5, whereby the weight of the coins above cannot interfere with its retraction or backward movement. The actuated tongues are all retracted as soon as the pressure ceases to act on the operated key through the instrumentality of the slide 34, which has been moved in the same direction as the slide 32 by the roller 23 acting on the lugs 34<sup>a</sup> during the coin-ejecting operation. The reason for the roller action of the rods 23 is to reduce the friction incident to the engagement of the said parts with the projections 32<sup>a</sup> and 34<sup>a</sup> of the slides. This movement of the slide 34 operates the keeper 20 and places the spring 35 under tension. Then as soon as the key is released from pressure the recoil of the spring reverses the movement of all the actuated parts, as will be readily understood, by virtue of the construction and arrangement of the mechanism heretofore described. If instead of eighty cents a dollar and eighty cents is required in change, the operator as he places his hand below the discharge-mouth 15 presses forwardly on the bent part 43<sup>a</sup> of the rock-shaft 43 and operates the slide 22 to bring its projection 22<sup>d</sup> into a position at the right of the roller 23 located farthest to the left in Fig. 3 by virtue of the construction and arrangement of parts heretofore described. Then as the keeper is actuated by the slide 34 the additional mechanism for ejecting coin from the dollar-stack is operated. When any other amount of coin or change is required, the operation is a substantial repetition of that just described.

Having thus described my invention, what I claim is—

1. In a coin-delivery device, the combination with a suitable casing and a coin-tray mounted thereon, of a platform provided with channels in line with the coin-receptacles of the tray, coin-ejecting tongues located in said channels, means for operating said tongues to eject coins from the bottoms of the stacks in the receptacles, and means for depressing the forward extremities of the tongues to a position below the plane of the coins during the backward movement, and raising the same to the plane of the lowermost coins during the forward movement.

2. The combination with a casing and coin-receptacles, of a platform mounted on the casing, coin-ejecting tongues supported by said platform, means for reciprocating the tongues to eject coins, and means for depressing the tongues to a position below and out of contact with the coins during the backward movement, whereby said movement is unimpeded by the gravity of the coins.

3. The combination with a casing and coin-receptacles, of a platform mounted on the cas-

ing and provided with channels in line with the coin-receptacles, said channels being provided with upper and lower guide-grooves, tongues arranged to reciprocate in said channels, and provided with projections adapted to engage said guide-grooves, and means for depressing the forward extremities of the tongues as they begin their backward movement whereby the projections are made to travel in the lower grooves during the backward movement, and means for raising the tongues as they reach their rearward limit of movement, whereby their projections are in position to travel in the upper grooves during the forward movement.

4. The combination of a casing and coin-receptacles, of a platform mounted on said casing, channels formed in the platform in line with the coin-receptacles, slides located in the channels, tongues hinged to the slides, and springs located in the bottoms of the channels and arranged to throw the forward extremities of the tongues upward previous to beginning the forward movement, and downward previous to beginning the backward movement.

5. The combination with a casing and coin-receptacles, of a platform located below the plane of the coin-receptacles, and provided with ledges forming a support for the lowermost coins of the receptacles, the platform being provided with channels in line with the coin-receptacles, coin-ejecting tongues located in said channels, slides to which said tongues are pivoted, each tongue being provided with two depending, separated projections, and springs located in the bottoms of the channels and adapted to engage one projection of the tongues before they begin the forward movement and the other projection before they begin the backward movement, whereby the forward extremities of the tongues are arranged to travel in different planes while making the two movements.

6. The combination with a casing and coin-receptacles, of a platform, coin-ejecting tongues mounted on said platform, bell-crank levers, a connection between each tongue and one arm of its corresponding lever, depending rods connected with said levers, slides having projections adapted to engage said rods, levers connected with said rods at one extremity, other slides connected with the levers at the opposite extremity, and exposed keys for operating the last-named slides.

7. The combination with a casing, coin-receptacles, and coin-ejecting tongues, of bell-crank levers mounted to move in horizontal planes, a connection between one arm of each lever and its corresponding tongue, depending rods connected with the other arms of the levers, slides having lugs adapted when actuated to engage said depending rods, and a spring-held retracting-slide having projections engaging the rods from opposite sides from the projections of the first-named slides.

8. The combination with coin-receptacles,



and coin-ejecting mechanism, of means for operating said mechanism, comprising bell-crank levers suitably fulcrumed, depending rods connected with said levers, slides having projections adapted to engage said rods, levers connected with said slides at one extremity, other slides connected with the levers at the opposite extremity, and exposed keys for operating the last-named slides.

9. The combination with a casing, coin-receptacles, and means for ejecting the coins from said receptacles, of keys exposed on the casing and having stems passing through slots formed therein, slides with which the keys are connected, levers suitably fulcrumed and connected with said slides at one extremity, other slides connected with the levers at the opposite extremity and provided with projections, rods located in the path of said projections, and bell-crank levers connected with the rods and with the coin-ejecting mechanism, the arrangement being such that said mechanism is actuated by the movement of the keys.

10. The combination with coin-receptacles, and coin-ejecting mechanism, of bell-crank levers connected with said mechanism, rock-shafts upon which said levers are mounted, said shafts being provided with crank-arms at the extremities remote from the bell-crank levers, rods connecting the crank-arms of the rock-shafts and the bell-crank levers, slides provided with projections adapted to engage the rods, levers connected with the slides at one extremity, other slides connected with the opposite extremities of the levers, and operating-keys mounted on the casing and connected with the last-named slides.

11. The combination with coin-receptacles, and coin-ejecting mechanism, of bell-crank levers connected with said mechanism, rock-shafts upon which said levers are mounted, said shafts being provided with crank-arms at the extremities remote from the bell-crank levers, rods connecting the crank-arms of the rock-shafts and the bell-crank levers, slides provided with projections adapted to engage and actuate the rods, and a spring-held retracting-slide having projections engaging the rods on opposite sides from the projections of the first-named slides.

12. The combination with coin-ejecting mechanism, of bell-crank levers connected therewith, depending rods connected with the bell-crank levers, slides provided with projections adapted to actuate the rods as the slides are operated, and a spring-held retracting-slide having projections engaging the rods on opposite sides from the projections of the first-named slides.

13. The combination with a casing, coin-receptacles, and coin-ejecting mechanism, of bell-crank levers connected with said mechanism, rods connected with said levers, slides having projections arranged to engage the rods on one side, a retracting-slide having projections engaging the rods on the opposite side, and a spring-held oscillating device

with which the retracting-slide is connected, the arrangement being such that as the first-named slides are shifted, one or more of the rods are moved in one direction to operate the coin-ejecting mechanism, the retracting-slide being also operated and its spring placed under tension whereby as the operating force ceases to act, the retracting-slide returns the rods and their connections to their normal position.

14. The combination with a casing, coin-receptacles, and coin-ejecting mechanism, of bell-crank levers connected with said mechanism, rods connected with said levers, slides having projections engaging said rods, each slide having one or more projections according to the number of rods to be actuated by each slide, a retracting-slide having projections engaging the rods on opposite sides from the first-named slides, a spring-held oscillating part connected with the retracting-slide whereby the oscillating part is actuated and its spring placed under tension every time a rod is actuated by one of the other slides, and a part slidable in the oscillating device and adapted to be projected to a position to engage and operate a certain rod every time any other rod or set of rods is actuated, whereby the amount of change to be ejected at each operation may be increased by a uniform amount, and suitable means for actuating the sliding part of the oscillating device.

15. The combination with coin-ejecting mechanism, of frames, each composed of a rock-shaft and a rod extending parallel therewith, crank-arms connecting the rod and shaft, a suitable operative connection between the said frames and the coin-ejecting mechanism, slides provided with projections arranged to engage and actuate one or more of the frames, whereby the coin-ejecting mechanism is actuated, each slide being arranged to operate one or more frames, and a spring-held retracting-slide having projections engaging the rods on opposite sides from the projections of the first-named slides.

16. The combination with coin-ejecting mechanism, of frames, each composed of a rock-shaft and a rod extending parallel therewith, crank-arms connecting the rod and shaft, a suitable operative connection between the said frames and the coin-ejecting mechanism, slides provided with projections arranged to engage and actuate one or more of the frames, whereby the coin-ejecting mechanism is actuated, an auxiliary part adapted to be projected to engage one of the frames, and a connection between said auxiliary part and each of the other frames whereby the said part is actuated every time any frame is actuated, the arrangement being such that the amount of coin delivered by each coin-ejecting operation, may be increased by a predetermined amount through the instrumentality of the auxiliary device.

17. The combination with coin-ejecting mechanism, of frames, each composed of a



rock-shaft and a rod extending parallel therewith, crank-arms connecting the rod and shaft, a suitable operative connection between the said frames and the coin-ejecting mechanism, slides provided with projections arranged to engage and actuate one or more frames, whereby the coin-ejecting mechanism is actuated, each slide being arranged to operate one or more frames, a retracting-slide provided with projections engaging the rods of the frames on the opposite side from the projections of the other slides, whereby the retracting-slide is actuated every time any frame is actuated, a spring-held oscillating keeper actuated by the forward movement of the retracting-slide, and an auxiliary device slidably mounted in the keeper and arranged to be projected to engage an additional frame every time one or more of the other frames are actuated.

18. The combination with coin-ejecting mechanism, of frames composed of rock-shafts, crank-arms at its extremities, and a rod connecting said crank-arms, an operative connection between the said coin-ejecting mechanism and said frames, means for actuating the frames, an auxiliary device arranged to be projected to engage a certain frame, and a suitable connection between the auxiliary device and each of the other frames whereby as any frame is actuated, the additional frame is operated to eject an additional amount at each coin-ejecting operation.

19. The combination with coin-receptacles, coin-ejecting mechanism, rock-shafts connected therewith, depending rods connected with the rock-shafts, slides for actuating the

rods, a spring-held retracting-slide arranged to be actuated every time a rod is actuated, an oscillating keeper connected with said retracting-slide, a spring-held auxiliary part slidable in the keeper and adapted to be projected to engage a certain rod, a rock-shaft, and a suitable connection between the rock-shaft and the auxiliary part for actuating the latter when the slide is actuated.

20. The combination with a casing, coin-receptacles and coin-ejecting mechanism, of keys slidable in the casing, front slides connected with the keys, rear slides, levers connecting the front slides and the rear slides, a suitable connection between the rear slides and the coin-ejecting mechanism, comprising bell-crank levers connected with the coin-ejecting devices, rock-shafts upon which said levers are mounted, said shafts being provided with crank-arms at the extremities remote from the bell-crank levers, and rods connecting the crank-arms of the rock-shafts with the bell-crank levers, said rods being arranged to be operated by the movement of the rear slides which are provided with projections engaging the rods for the purpose, the arrangement being such that as the keys are moved the coin-ejecting devices are actuated, and a spring-held retracting-slide having projections engaging the said rods on opposite sides from the projections of the rear slides.

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

JAMES M. BUTCHER.

Witnesses:

DORA C. SHICK,  
MARY C. LAMB.