

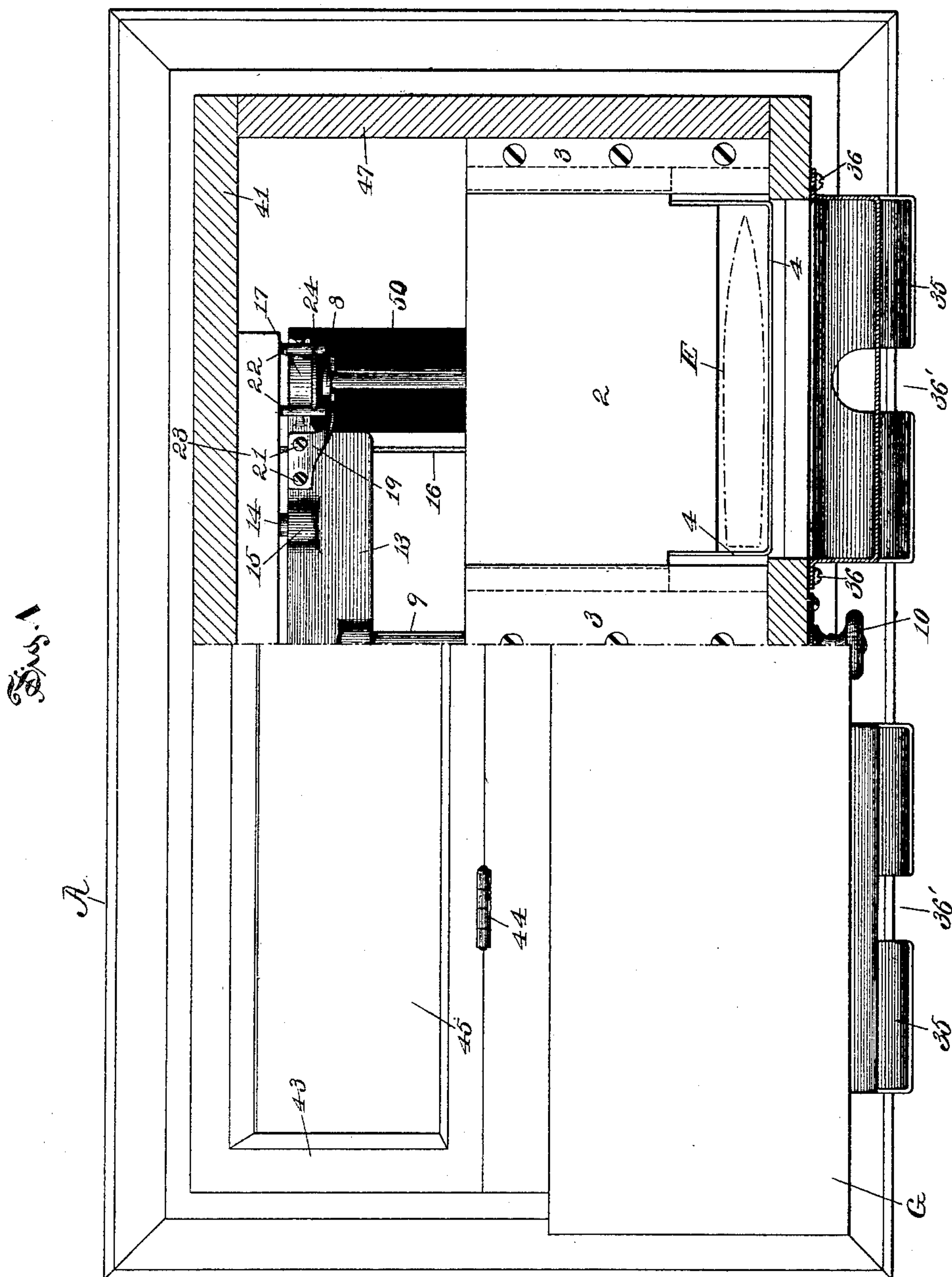
(No Model.)

4 Sheets—Sheet 1.

H. D. HINCKLEY.
AUTOMATIC SELLING MACHINE.

No. 433,004.

Patented July 29, 1890.



Witnesses:

W. M. Byorkman.
Henry L. Rickard.

Inventor:

H. D. Hinckley.
By his Attorneys J. H. Richards.

(No Model.)

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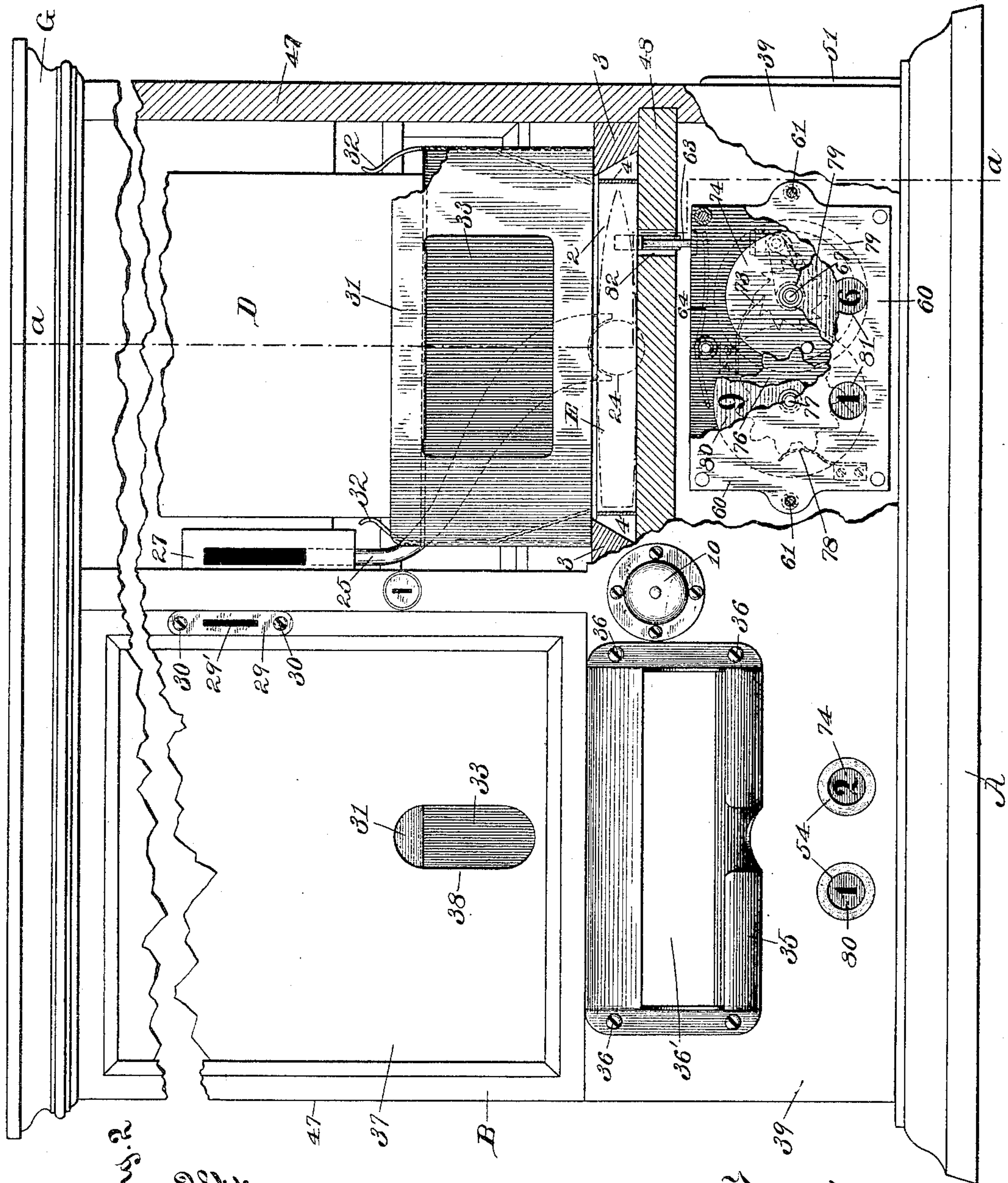


Fig. 2

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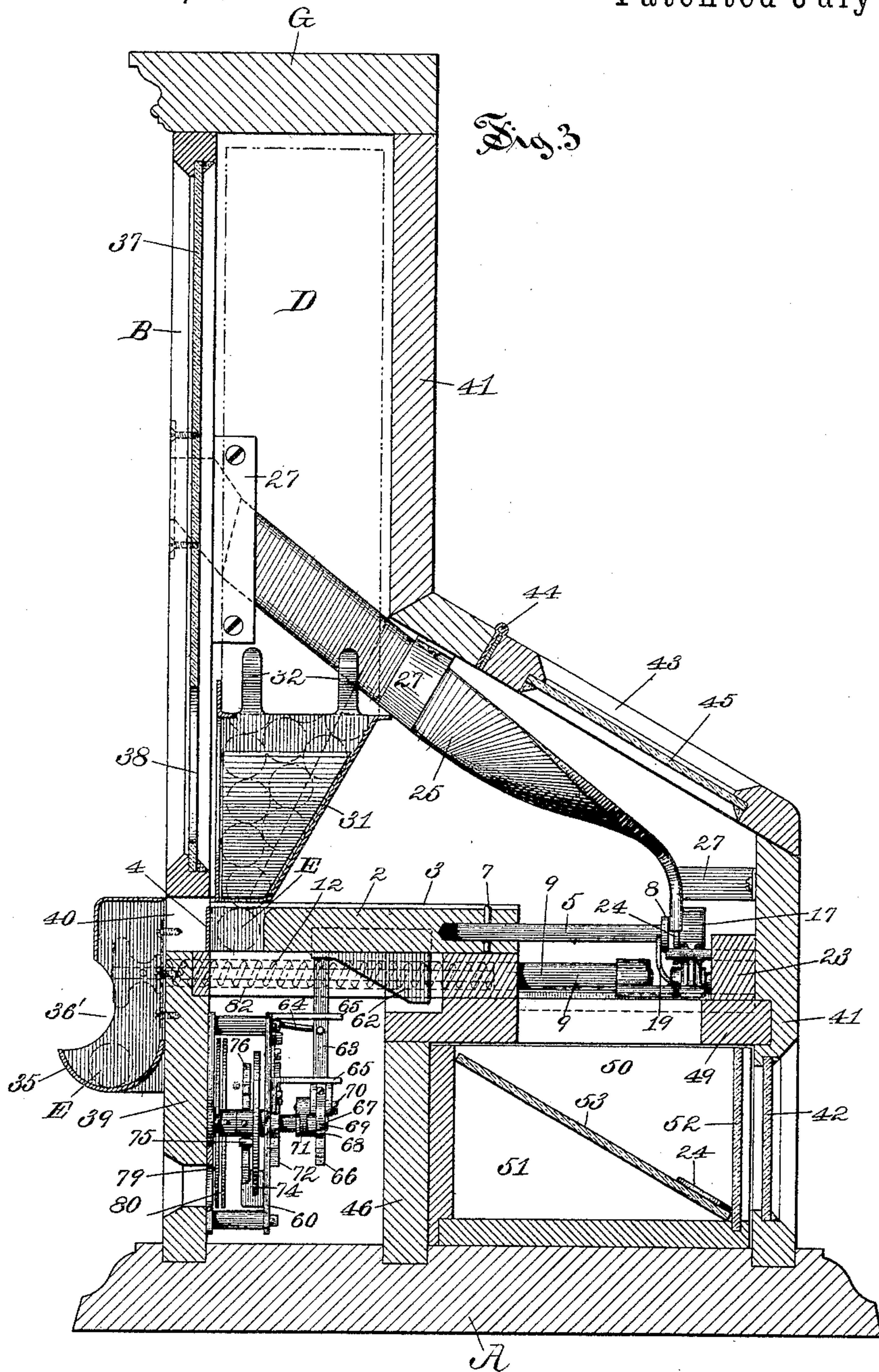
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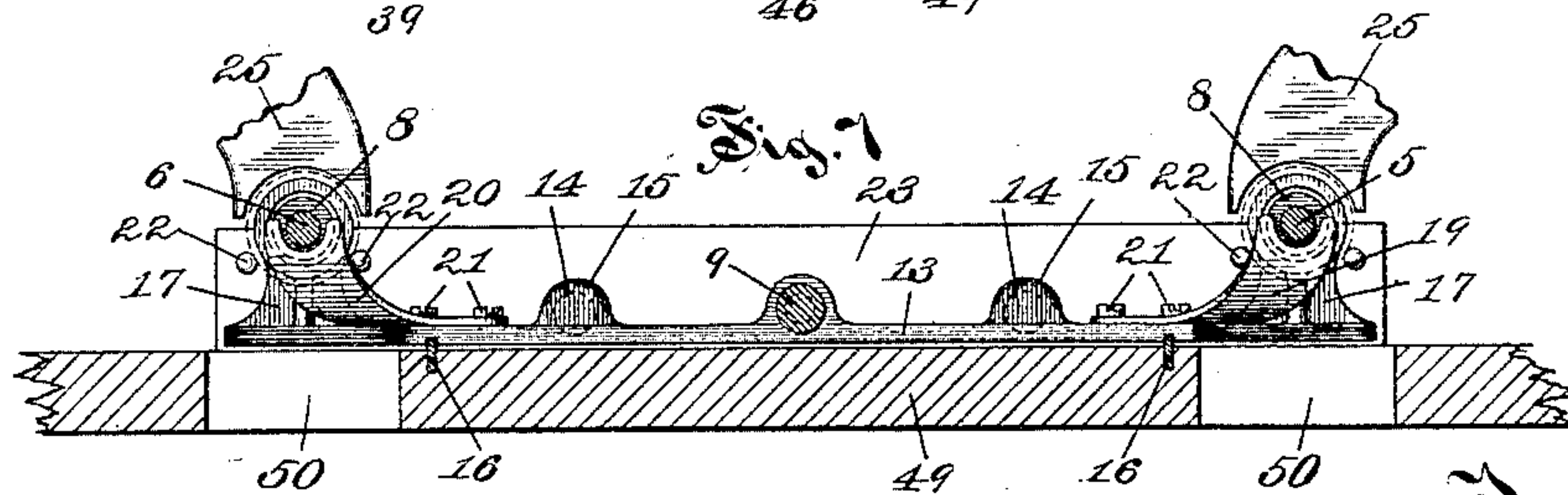
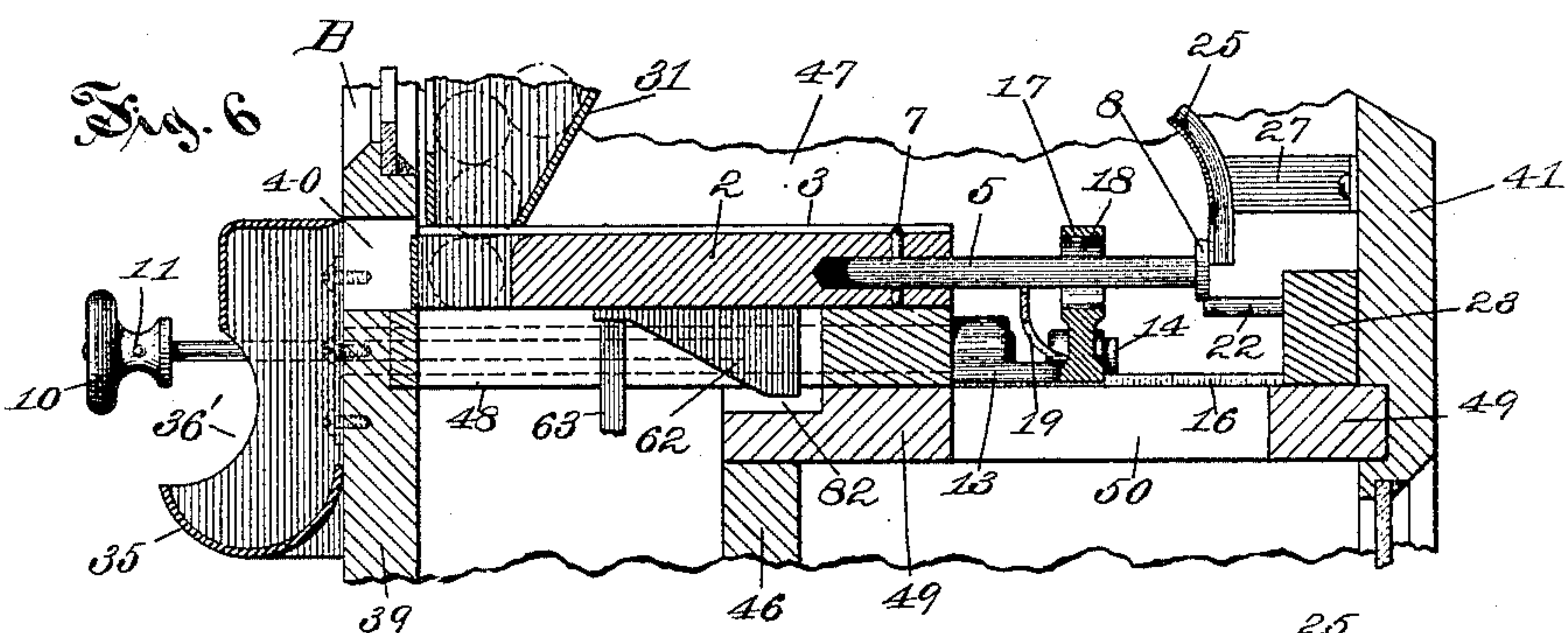
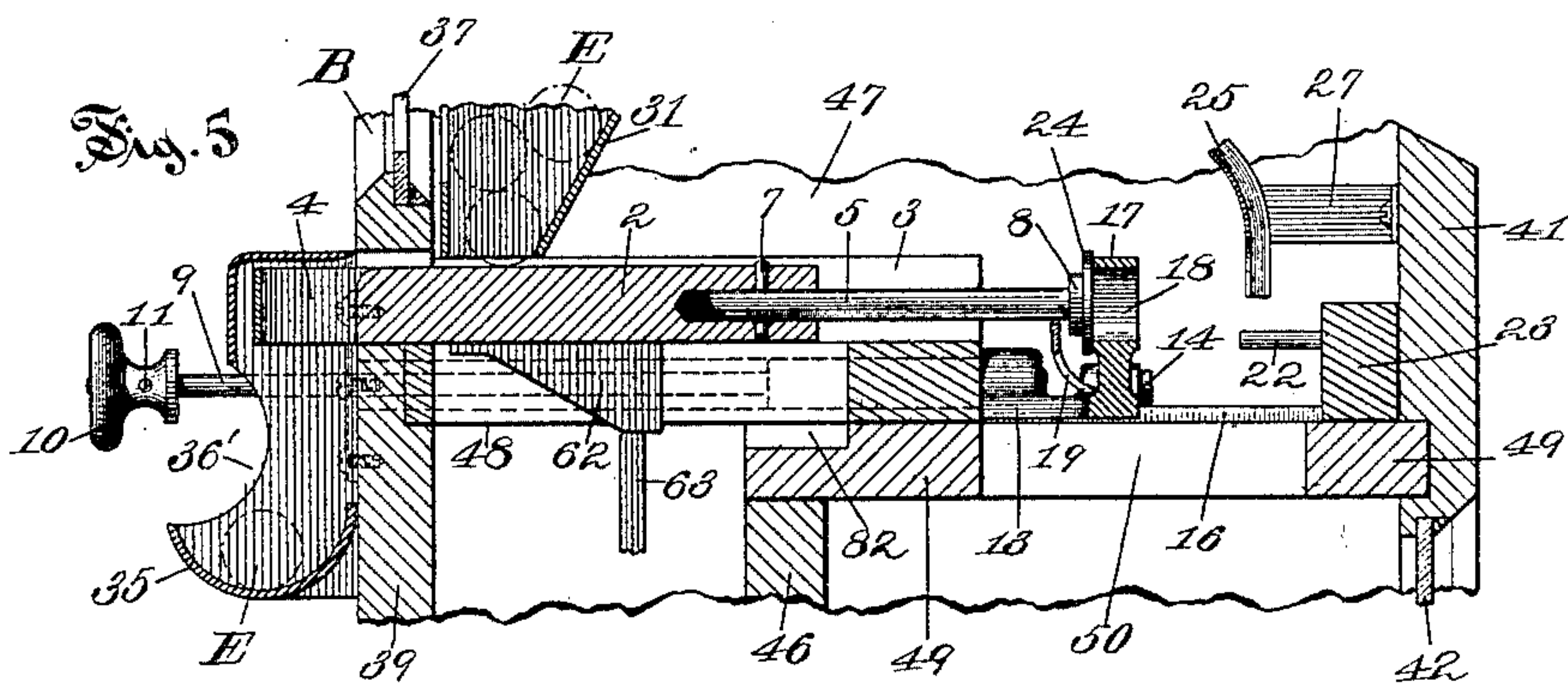
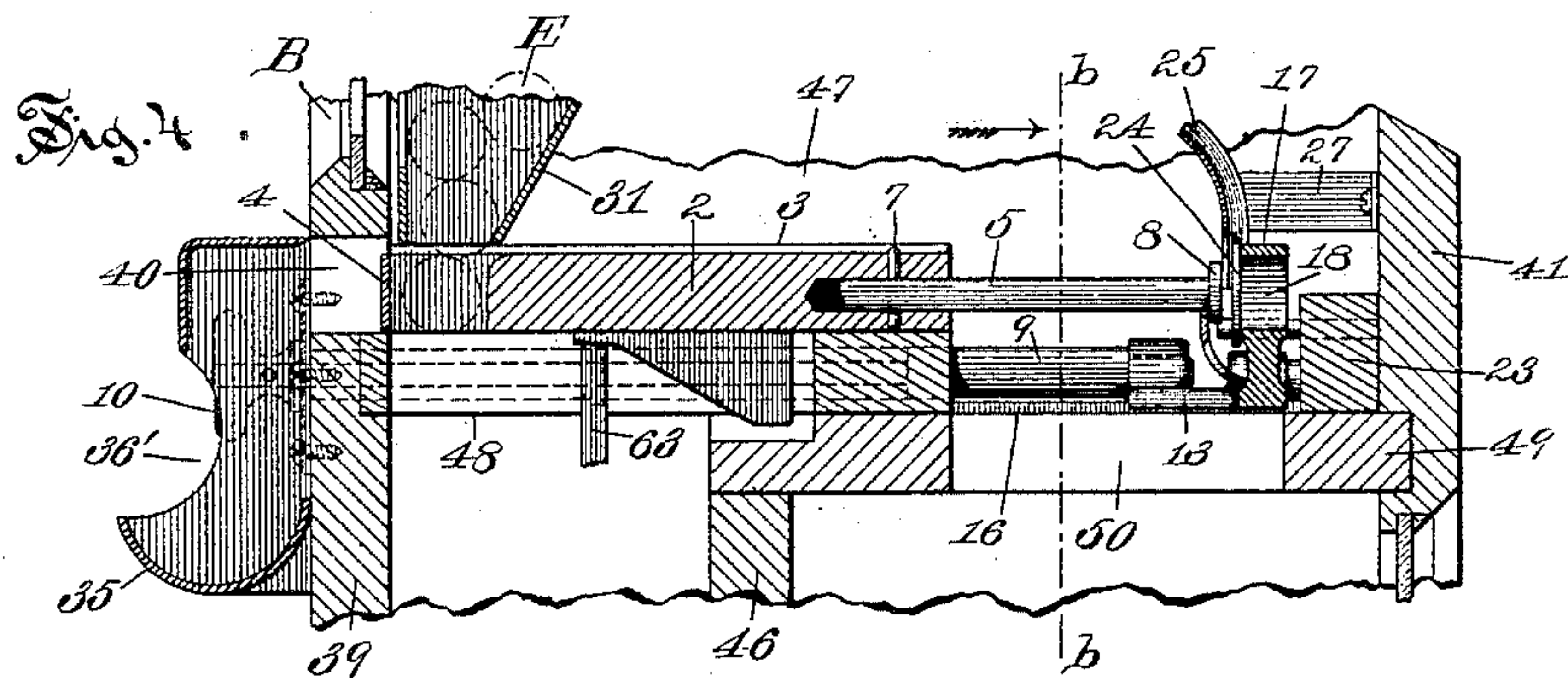
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UNITED STATES PATENT OFFICE.

HENRY D. HINCKLEY, OF HARTFORD, CONNECTICUT, ASSIGNOR OF ONE-HALF TO JOHN G. RICH, OF SAME PLACE.

AUTOMATIC SELLING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 433,004, dated July 29, 1890.

Application filed October 18, 1889. Serial No. 327,405. (No model.)

To all whom it may concern:

Be it known that I, HENRY D. HINCKLEY, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Automatic Selling-Machines, of which the following is a specification.

This invention relates to automatic selling-machines in which articles of merchandise are exchanged for coins. The object and nature of the invention are set forth in the following description.

In the drawings accompanying and forming a part of this specification, Figure 1 is a plan view, partially in section, of a coin-actuated selling-machine embodying my improvements. Fig. 2 is a front elevation, also partially in section, of said machine. Fig. 3 is a sectional side elevation taken on the line *a a*, Fig. 2. Figs. 4, 5, and 6 are views in different positions of a portion of the mechanism shown in Fig. 3. Fig. 7 is a sectional front view on the line *b b*, Fig. 4.

Similar characters designate like parts in all the figures.

The casing or cabinet, which contains the working parts of my improved machine, as the same is herein shown, consists of the base A, the front wall 39, the rear wall 41, and the side walls 47. A partition wall 46 runs longitudinally through the casing near the center thereof, forming a rest for the shelves 48 and 49. The front doors or door-frames B are furnished with the glass 37, having the holes 38 formed therein. The rear door or door-frame 43, having the glass 45 set therein, is hinged to the rear wall 41 at 44. The rear wall 41 is furnished with the glass 42, set therein near the base. The piece G forms the top or cap-piece of the casing.

The slides or delivery-carriers 2 rest on the forward shelf 48 of the casing between the guides 3, and are furnished with the protectors 4, (usually of sheet metal,) designed to protect the cigars E or other packages to be delivered. The said slides 2, which may also be referred to as "goods-carriers," are furnished with the actuating-rods 5 and 6, which rods are fixed in said slides by the pins 7, and

have the flat heads 8 formed on the rearward ends thereof.

The push-bar 13, preferably made of metal and of the form shown, is fitted to slide on the ways 16, usually set in the shelf 49. The pull-rod 9 is fitted into the said push-bar 13, (which may also be referred to as a coin-carrier,) it being secured therein by a pin (not shown) or otherwise. The coin-pushers 17, having the holes 18 formed therein, are formed integral with the bar 13 at the outer ends thereof. The knob 10 is secured to the outer or forward end of the said rod 9 by a pin 11. A spring 12 is carried on the reduced forward part of the said rod 9 for the purpose of automatically returning to place the said pull-rod 9, together with the push-bar 13 and one or both of the slides 2, whenever the same have been drawn forward by means of the knob 10. The stops 14, of rubber or like material, are inserted in the projections 15, formed on the push-bar 13, to serve as cushions to receive the blow of said parts when returned by the spring 12, the said stops striking against the blocking-piece 23.

The arms or retracting-hooks 19 and 20 are secured to the push-bar 13 by the holding-screws 21, and serve to draw back the slides 2 by pulling against the heads 8 of the actuating-rods 5. The troughs or chutes 25, secured to the casing by means of the supports 27, serve as conductors for the actuating-coins 24. The numeral 22 designates the coin-supporting pins or guides, which are securely fitted into the blocking-piece 23, that is located at the rear of the casing on the shelf 49. The guides 22 lie substantially parallel with the line of movement of the head 8, so that the coin, when the goods-carrier is clear forward, stands somewhat beyond the end of said guides. On the forward movement of the goods-carrier the coin slides along said guides 22 and passes off therefrom, and on the retraction of the pusher 27 drops from between said pusher and the head 8 into the coin-receptacle. Coin-gages 29 are secured by the screws 30 to the door-frames B, immediately in front of the forward and upper end of the receiving-trough 25, said gages have formed therein the slots 29', of a size to admit a coin

of the proper denomination to be used in the machine. Openings 50 are formed in the rear shelf 49, through which the coins 24 are allowed to drop onto the inclined glass-plate 53 in the cash-drawer 51. Said drawer rests on the base A, between the partition 46 and the rear wall 41, as shown in Fig. 3. Said drawer 51 is or may be furnished with a lock, (not shown,) and is adapted to be withdrawn from the casing at the right-hand end thereof, or the drawer 51 may be arranged in any other desirable or well-known manner.

D designates a box of cigars in place on top of one of the hoppers 31, which rest loosely on the ways 3, and having an opening 33 in the front thereof, as shown in Fig. 2, said box being held in place on said hopper by the holding-fingers or guide-springs 32, which springs may be formed integral with the said hopper. The delivery-troughs 35, preferably made of metal, and which I ordinarily form substantially as shown in the drawings, are secured to the front wall 39 by the screws 36, and have the openings 36', from which the cigars or other articles may be taken after having been delivered to the said troughs.

As a means for indicating the number of packages delivered, I have designed a suitable form of indicator or register, as shown, the said register consisting of a frame 60, secured to the inside of the front wall 39 of the casing by the screws 61. A shaft 67, having the ratchet-wheel 66 and detent-wheel 72 fixed thereon, is journaled in the said frame 60. Said shaft also carries the pin-disk 74, having the pin 75 fixed therein, the figured disk 79, and the arm 71, said parts being secured to the said shaft by pins or otherwise. A detent-spring 73 is secured to the frame 60, as shown in Fig. 2. Another and similar shaft 77, which is also journaled in the frame-work 60, carries the toothed wheel 76, provided with a spring 78 and the figured disk 80, the said parts being fixed on the said shaft.

A rod 63 is fitted to slide vertically in the guides 65, it being held up against the cam 62 by the spring 64. The screw-stud 70 passes through the lower forked end of said rod and is firmly screwed into the outer end of the arm 71. The pawl 68, furnished with the spring 69, is carried on the said stud between the fork ends of the rod 63. The cams 62, for actuating the registers, are secured to the under side of the slides 2 in any well-known manner. The slots or grooves 82 are formed in the forward shelf 48 to accommodate the cam 62 and the rod 63.

The operation of my improved machine (when cigars or like-shaped articles are to be delivered therefrom) is as follows: The front doors B are opened and boxes of cigars D, one end of said boxes having been removed, (and each box containing cigars of different grades, if desired,) are placed on top of the hoppers 31, the spring-guides 32 gripping the sides of the said boxes to hold them in place.

The register-disks are now so set that the number "0" of each of the figured disks shall show through the holes 81 in the frame 60 and through the holes 54, that are formed in the front wall 39 of the casing immediately in front of the said holes 81. The doors B are now closed and locked. A coin 24 of the required denomination now being passed through the opening 29', formed in gage-plate 29, enters the coin-chute 25. The said trough being set at angle, as shown, the said coin 24 is guided thereby down to and delivered upon the coin-supporting pins 22 just forward of the coin-pushers 17. The box D and the hopper 31 having been put in place, as before stated, the cigars drop down into the said hopper, which is so formed that but one cigar E may at one time pass down from the said hopper onto the forward shelf 48, immediately in front of the slide or pusher 2. By means of the knob 10 the push-bar 13 may now be drawn forward, the coin-pushers 17 pressing the coin 24 against the head 8 of the actuating-rod 5, and thereby causing the slide 2 to move forward and push the cigar E through the opening 40 in the wall 39 and deliver it into the receiving-trough 35, from which it may be taken by the purchaser. As soon as the knob 10 is released the spring 12 throws back the rod 9, and with it the push-bar 13, thus releasing the coin 24, which has thus far been held by pressure between the coin-pushers 17 and the rod 5, said coin dropping through the opening 50 onto the glass plate 53 of the cash-drawer 51, where it may be seen through the glass side 52 of the drawer. As the push-bar 13 continues its backward movement, the arm 19 comes in contact with the head 8 of the rod 5, thereby returning the slide 2 to place. The forward movement of the slide 2 operates by means of the cam 62 to press down the rod 63, which rod, through the connections hereinbefore described, operates the registering device in a well-known manner. Should there be no coin in place on the pins 22 when the push-bar 13 is drawn forward, then the slides are not moved, the holes 18 in the coin-pushers 17 allowing the said pushers to pass freely over the rods 5 and 6, as shown in Fig. 6.

Both of the slides 2 being actuable from one push-bar 13, either slide may be operated therefrom accordingly as the coin is placed in one or the other of the said coin-receiving slots in the front of the cabinet. Thus a series of goods-delivering apparatuses are adapted to be operated from the same handle. In practice in some cases I use one apparatus for selling light-colored and the other for dark-colored cigars, or one for five-cent and the other for ten-cent cigars, as may be preferred.

Having thus described my invention, I claim—

1. In a selling-machine, the combination, with the goods-carrier having a rearwardly-

extending rod, of coin-guides, substantially as described, below said rod and terminating back of the forward position of the coin when said rod is forward, the hand-operated coin-carrier standing when in its rearward position back of said rod above said guides, said coin-carrier being constructed to move forward in the absence of a coin without engaging said rod, and a coin-chute delivering the coin onto said guides between said rod and coin-carrier, whereby the coin is interposed between said coin-carrier and rod when these are retracted, and is supported therebetween during the early part of the forward movement thereof, the goods-carrier being forwardly actuated through the interposed coin.

2. In a selling-machine, the combination, with the goods-carrier having a rearwardly-extending rod, of coin-guides below said rod and terminating back of the forward position of the coin when said rod is forward, said guides consisting of two parallel rods set to sustain a coin of the proper diameter and to allow smaller coins to fall through between them, the hand-operated coin-carrier standing when in its rearward position back of said rod above said guides, said coin-carrier being constructed to move forward in the absence of a coin without engaging said rod, and a coin-chute delivering the coin onto said guides between said rod and coin-carrier, whereby the coin is delivered to the guides between said coin-carrier and rods when these are retracted, and whereby coins of the required diameter only are supported between said coin-carrier and rod during the early part of the forward movement thereof, the goods-carrier being forwardly actuated through the interposed coin.

3. In a selling-machine, the combination, with the goods-carrier 2, having the push-rod 5, of the coin-carrier constructed to present a coin to said rod, and a hook fixed on said coin-carrier for retracting said goods-carrier by engaging with said rod, all substantially as shown and described.

4. In a selling-machine, the combination, with the goods-carrier 2, of the rod 5, having head 8, the coin-carrier, the pins 22 for supporting the coin rearward of said head and

forward of said coin-carrier, and the retracting-hook 19, all arranged and operating substantially as described.

5. In a selling-machine, the combination, with the goods-carrier, of the rod 5, fixed to said carrier and having the head 8, the fixed pins 22, the coin-carrier 13, and the chute 25, set to deliver a coin onto said pins between said head 8 and said coin-carrier, the coin acting as the means of actuating the goods-carrier throughout its forward stroke, all combined and operating substantially as described.

6. In a selling-machine, the combination, with two goods-carriers each provided with a push-rod, substantially as described, of the double coin-carrier actuated by one handle-rod, coin-supporting guides, substantially as described, fixed below each end of said coin-carrier and terminating back of the forward position of the coin when said rod is forward, a coin-chute set to deliver coins to each set of guides between said coin-carrier and rod when these are retracted, and a retracting-hook on said coin-carrier for each of said push-rods, whereby a coin may be interposed between either said coin-carrier and the corresponding push-rod when these are retracted, and is supported therebetween during the early part of the forward movement thereof, the coin-carrier being forwardly actuated through the interposed coin, and the coin being dropped at the beginning of the retractive movement.

7. In a selling-machine, the combination, with the cabinet having the box-receiving case therein, of the hopper below said case and the glass panel in front of said case, and having therein the finger-space 38, substantially as described, and for the purpose specified.

8. In a selling-machine, the combination, with the cabinet having the box-receiving case therein, of the hopper below said case and having the large opening 33 therein, and the glass panel in front of said large opening, and having therein the narrow opening 38, substantially as shown and described.

HENRY D. HINCKLEY.

Witnesses:

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HENRY L. RICKARD.