

No. 620,954.

Patented Mar. 14, 1899.

M. McANENY.
COIN DELIVERY DEVICE.

(Application filed June 21, 1898.)

(No Model.)

2 Sheets—Sheet 1.

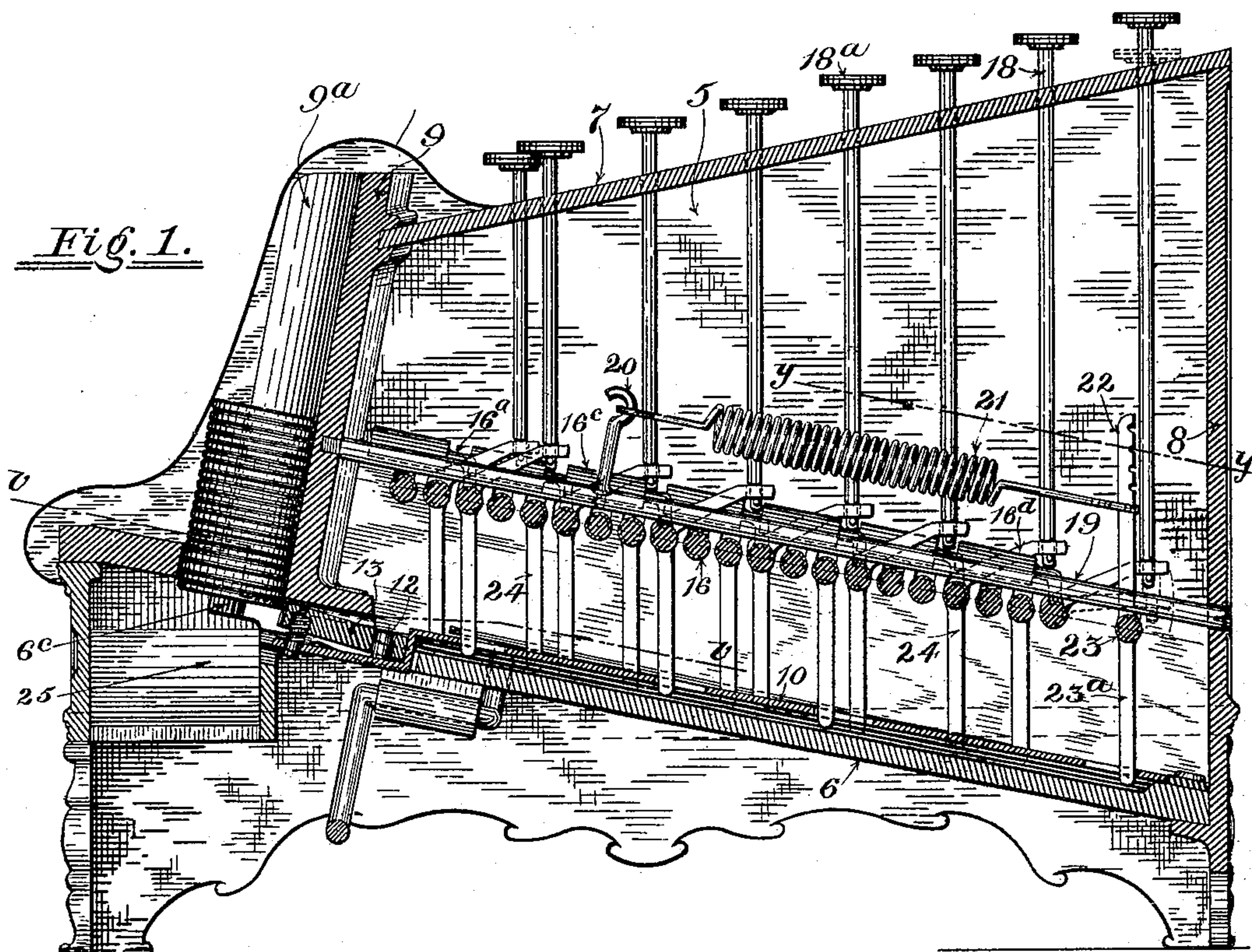


Fig. 2.

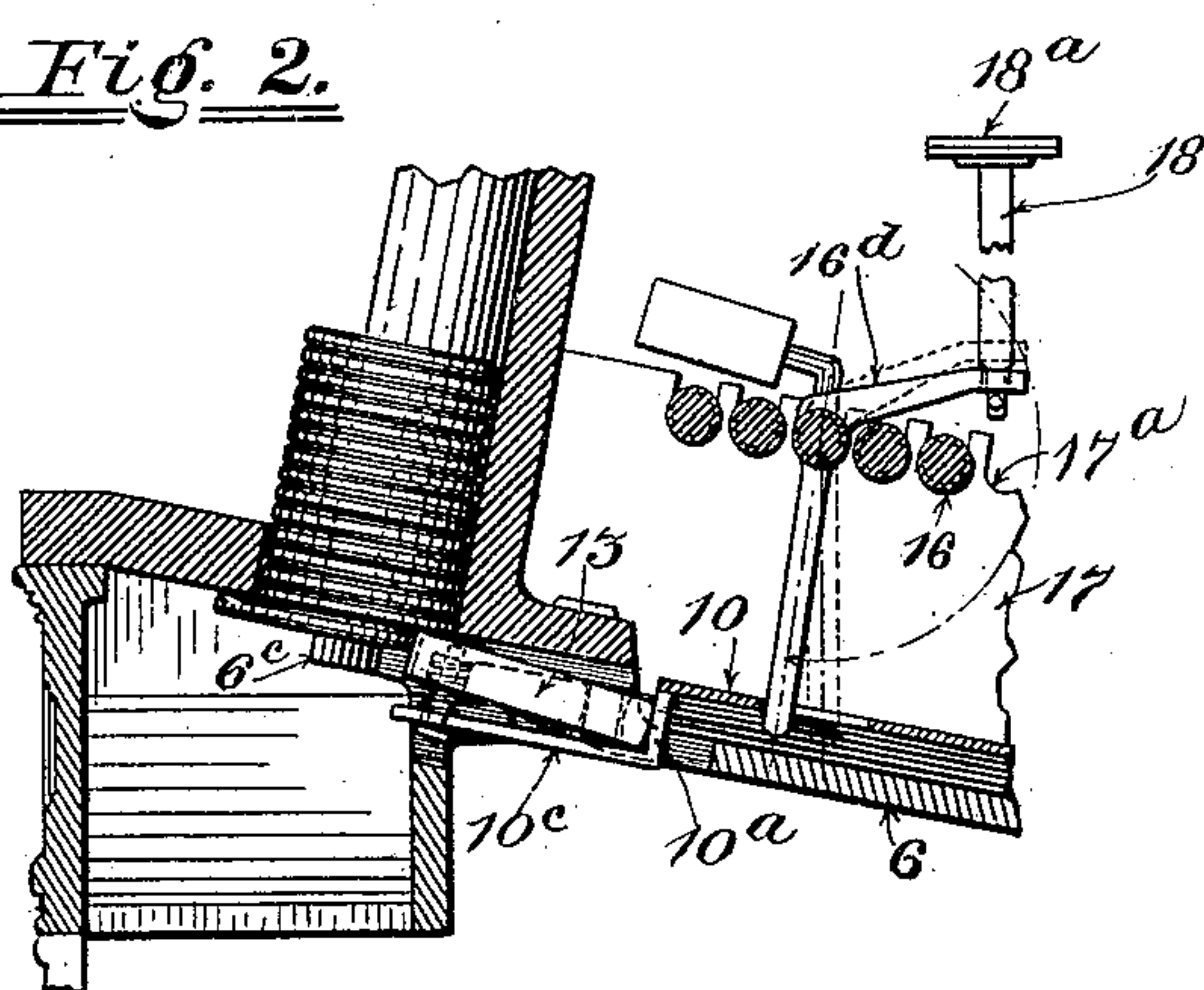
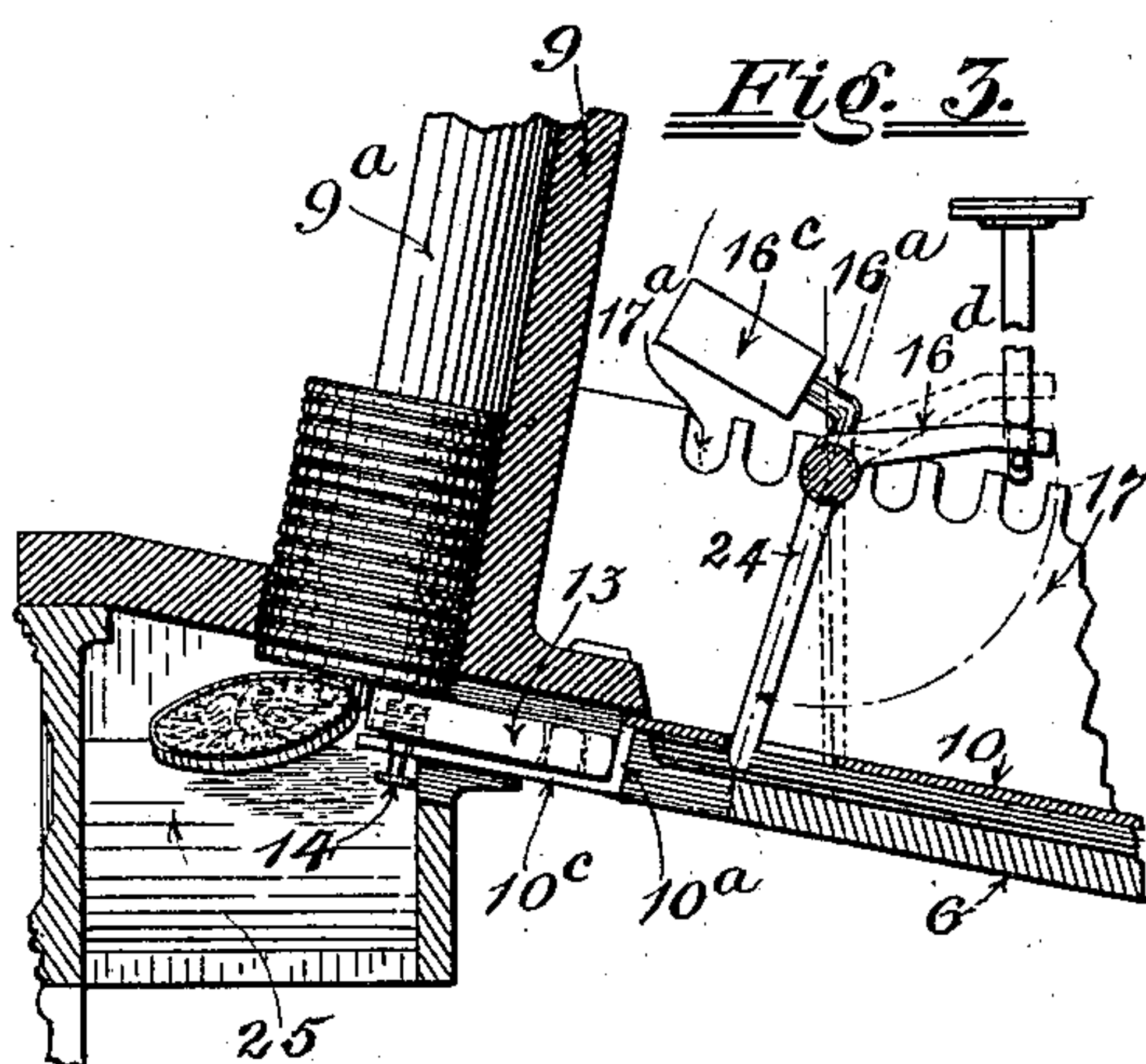


Fig. 3.



Witnesses,

A. N. Freeman
Edith Hinckworth

Inventor,

Michael McAneny.

By *[Signature]*
Attorney.

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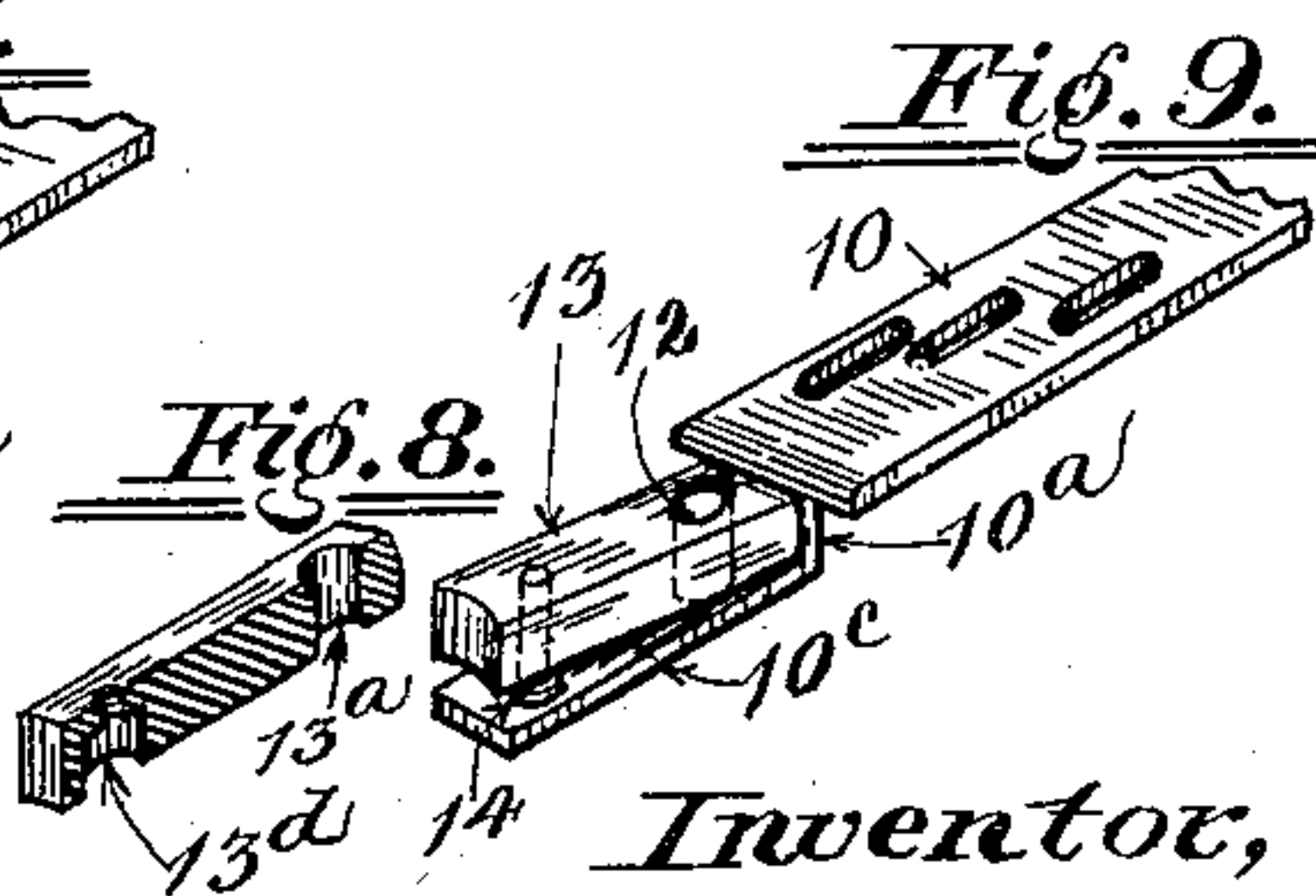
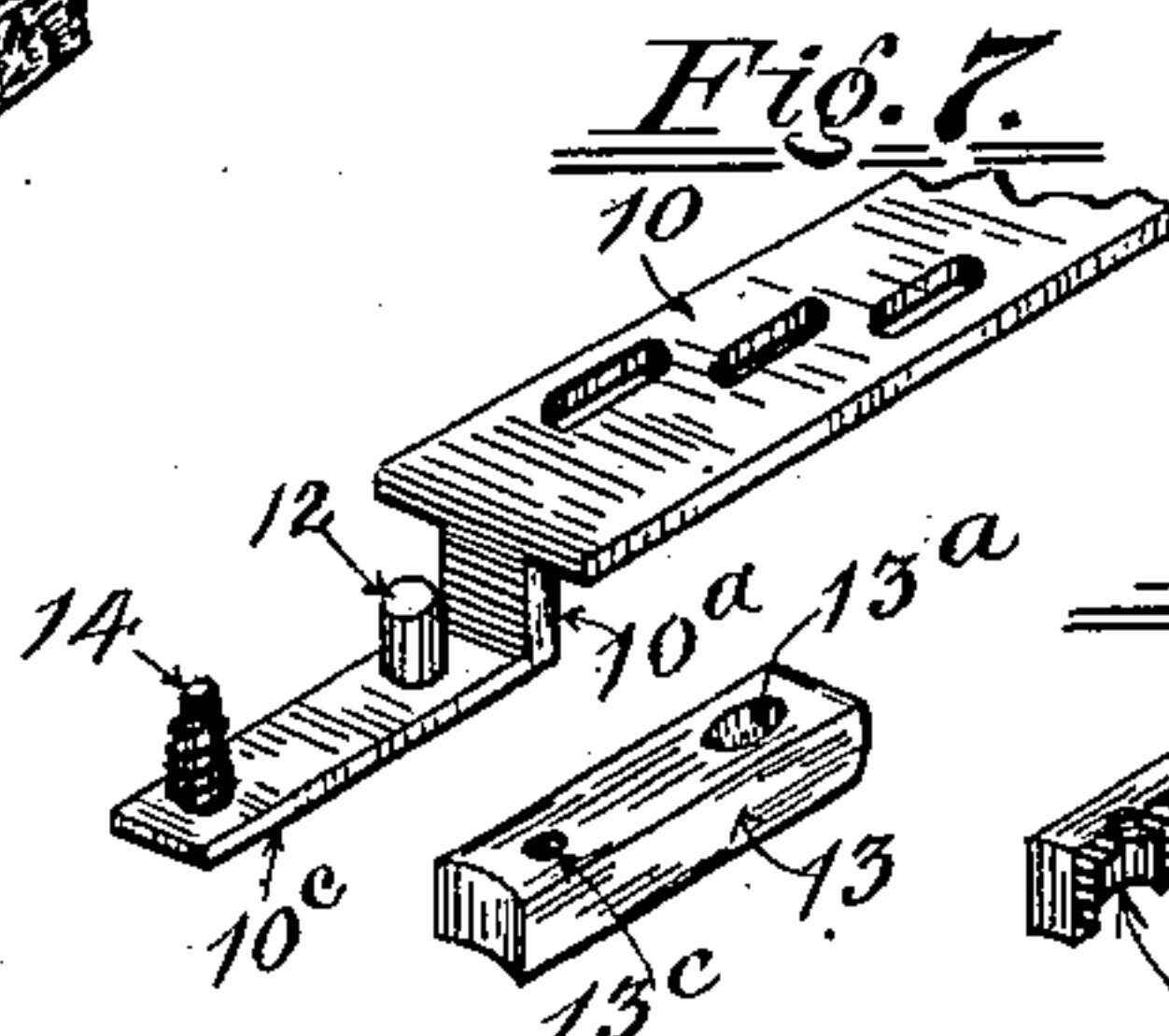
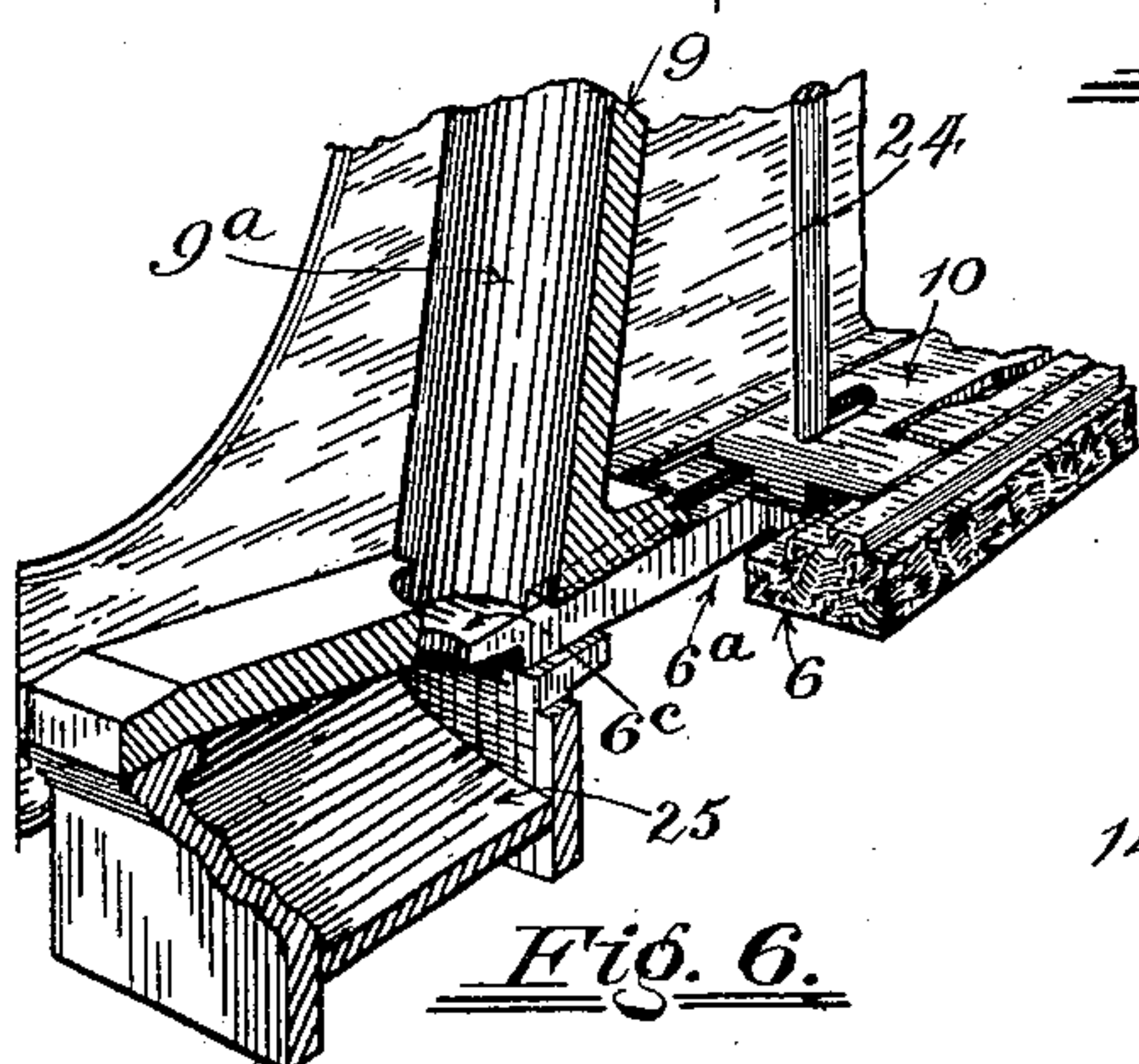
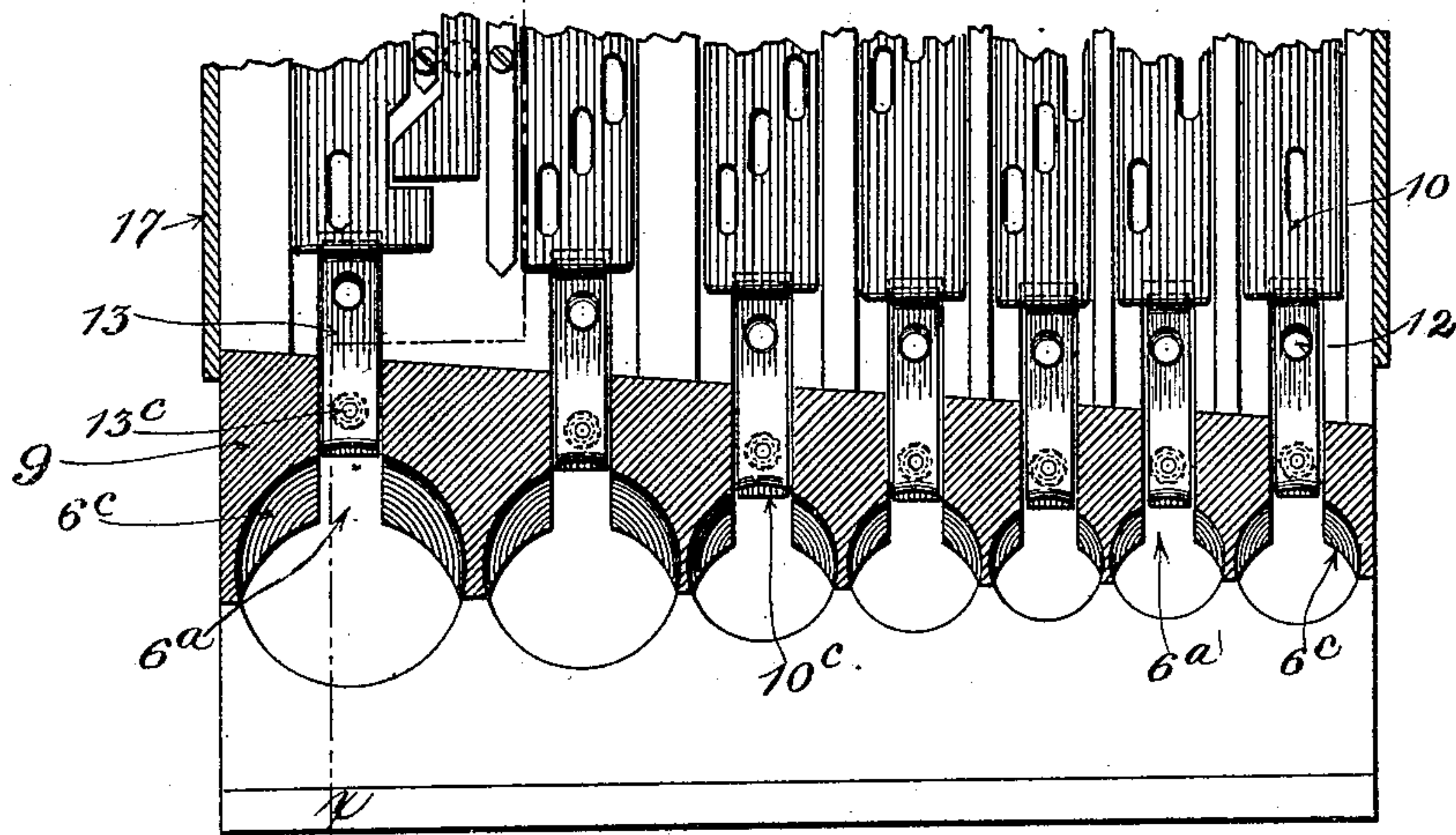
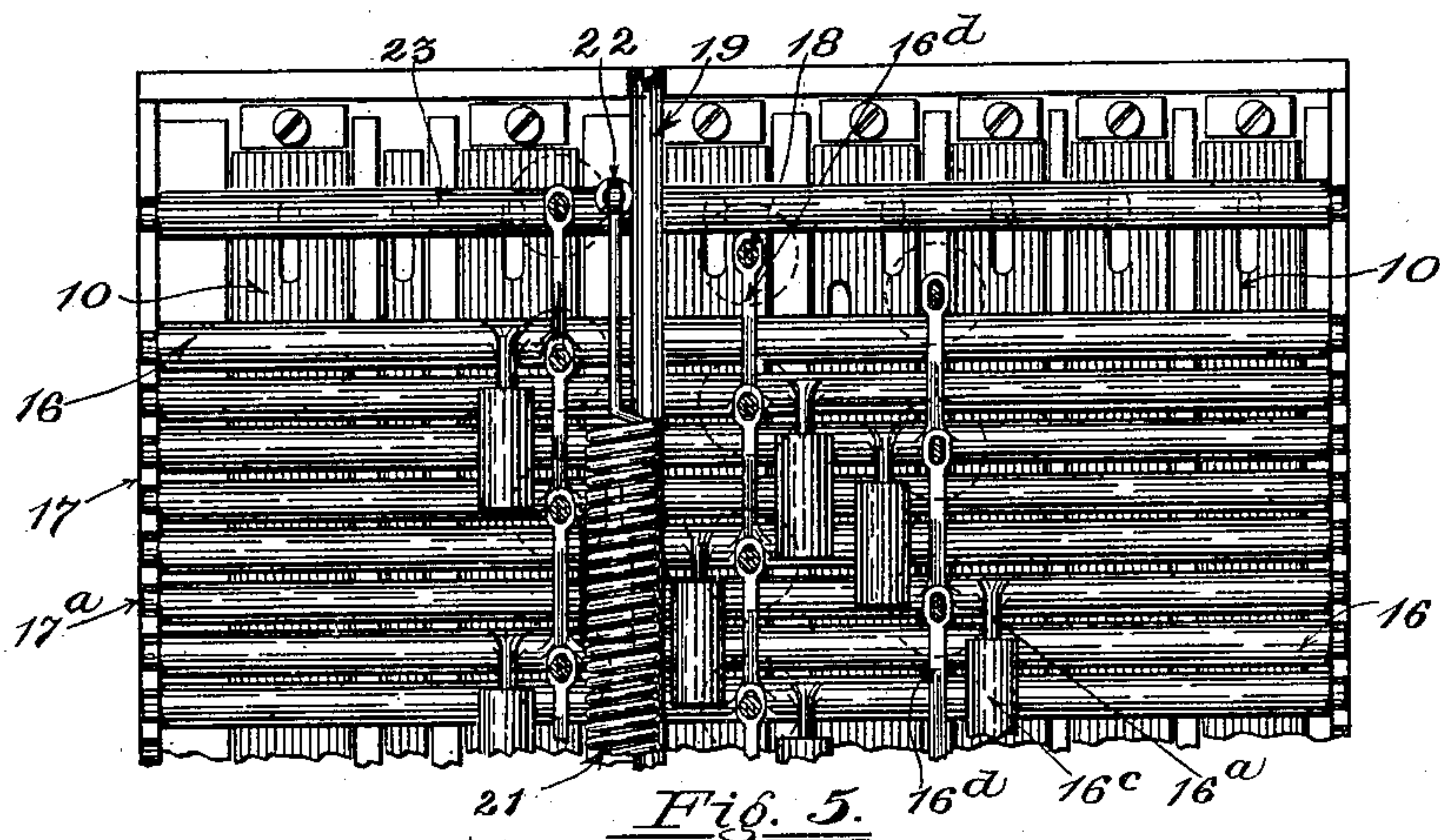
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M. McANENY.
COIN DELIVERY DEVICE.

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(No Model.)

2 Sheets—Sheet 2.



Witnesses:

A. H. Foreman,
Edith Kimworth.

Inventor,
Michael McAneny.

By *[Signature]*
Attorney.

UNITED STATES PATENT OFFICE.

MICHAEL McANENY, OF DENVER, COLORADO, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO GEORGE R. DAVIS, OF CHICAGO, ILLINOIS.

COIN-DELIVERY DEVICE.

SPECIFICATION forming part of Letters Patent No. 620,954, dated March 14, 1899.

Application filed June 21, 1898. Serial No. 684,048. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL McANENY, 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 figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in coin-delivery devices or change-making machines; and my object is to improve certain features of the construction set forth in my application for patent, Serial No. 674,118, filed March 16, 1898.

It was found by experiment that the coin-ejecting slides of my previous construction were liable to be held by the weight of the stacks of coins in the coin-receptacles from making the return movement in response to the recoil of the spring, whose function is to effect this result. It was also found that if this spring were made strong enough to produce the desired result its resistance to the forward movement of the slides would be so great as to make its use impracticable. In order to overcome this difficulty, I form an offset on each slide near its forward extremity by bending its extremity downwardly, the base-plate being cut away to permit this, whereby the forward extremity of the slide lies in a lower plane than its body portion. Upon this depressed forward extremity of the slide is placed a dog slightly less in thickness than the depth of the offset in the slide. Beneath the forward extremity of this dog is placed a weak spring, which normally raises the end of the dog into position to engage the lowermost coin of its corresponding coin-receptacle as the slide is thrust forward. As soon, however, as the coin is ejected and the weight of the stack of coins above falls on the dog it is pressed downwardly below the plane of the coin-receptacle's bottom. Thus relieved from the pressure of the stack of coins,

no resistance is offered to the return or backward movement of the slide.

The crescent-shaped bottom of the coin-receptacles is centrally slotted to permit the working of the improved construction heretofore outlined.

Other improvements consist in the use of counterweights instead of springs for raising the depressed key-stems to their normal positions, also in journaling the rock-shafts in open sockets and employing a rod whose extremities are secured to the front and rear plates to prevent the shafts from moving out of place.

Having thus briefly outlined the improvements embraced in this application, I will proceed to describe the same in detail, reference being made to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a vertical longitudinal section taken through my improved machine. Figs. 2 and 3 are fragmentary detail views showing the coin-ejecting dog carried by the slide in two positions. Fig. 4 is a fragmentary top view of the machine, showing the slides equipped with my improved coin-ejecting dogs, the mechanism above being removed. Fig. 5 is a fragmentary top view illustrating the counterbalance-weight construction. Fig. 6 is a perspective view of the crescent-shaped shelf or coin-receptacle bottom and the base-plate. Fig. 7 is a fragmentary detail view illustrating the forward extremity of my improved slide, the dog being shown detached. Fig. 8 is a longitudinal section taken through the dog shown in perspective. Fig. 9 is a perspective view of the slide, showing the dog in place.

Similar reference characters indicating corresponding parts in these views, let the numeral 5 designate the side walls of the casing; 6, the bottom plate; 7, the top plate; 8, the rear plate, and 9 the front plate, in which are formed the coin-receptacles 9^a. The forward extremity of each coin-ejecting slide is bent downwardly, forming an offset 10^a, and extended forwardly in the lower plane, as shown at 10^c. This projection 10^c is provided with an upwardly-projecting rigid retaining-

pin 12, adapted to engage an opening 13^a, formed in the dog 13. This opening is sufficiently larger than the pin to allow the forward extremity of the dog to move up and down freely. The forward portion of the projection 10^c is provided with an opening through which is passed a screw-pin 14, which engages a threaded opening 13^c, formed in the forward extremity of the dog. When the dog is at its lowest limit of movement—that is to say, resting on the projection 10^c of the slide—the screw-head projects considerably below the slide. (See Fig. 3.) Surrounding this screw is a coil-spring 15, whose lower extremity engages the projection 10^c, while its upper extremity rests against a shoulder at the top of an opening 13^d of the dog, in which the spring is located. This spring normally holds the dog in the position shown in Figs. 2 and 9 or in position to engage the lowermost coin of the stack in its corresponding coin-receptacle. As the slide 10 is thrust forward the dog 13 moves in a slot 6^a, formed in the crescent-shaped recess of the base-plate or the bottom of the receptacle for the coins. This dog remains in the position shown in Figs. 2 and 9 until the coin is ejected, when the pressure of the stack of coins forces it downwardly until the lowermost coin rests on the crescent-shaped bottom 6^c of the receptacle, thus relieving the dog from the weight of the coins and allowing the slide to make the return movement without resistance.

The rock-shafts 16 engage open sockets 17^a, formed in the side plates 17. Each rock-shaft 16 is provided with a forwardly-projecting arm 16^a, to which is attached a weight 16^c. Each shaft is also provided with a rearwardly-projecting arm 16^d, to which is attached the lower extremity of a stem 18, whose upper extremity is provided with a push-button 18^a. The counterweight 16^c has sufficient gravity to return the stem 18 and its rock-shaft to their normal positions after each coin-ejecting operation.

The rock-shafts are held in operative engagement with their bearing-sockets 17^a by a rod 19, centrally located, and whose extremities engage recesses formed in the rear and front plates 8 and 9. This rod engages all the rock-shafts from above, and therefore performs the function heretofore stated. To this rod 19 is attached an upwardly-projecting hook 20, to which is attached one extremity of a coil-spring 21, whose opposite extremity is connected with an upwardly-projecting arm 22, made fast to the rock-shaft 23, which is journaled in the side plates 17 and provided with downwardly-projecting fingers 23^a, engaging slots formed in all the slides 10. The function of the rock-shaft 23 and its attachments and connections is to return all the slides 10 to their rearward limit of movement after each forward thrust.

The arm 22 is provided with a series of notches 22^a, adapted to hold the spring ex-

tremity in place and permitting its proper vertical adjustment.

Each rock-shaft 16 is provided with one or more downwardly-projecting fingers 24, each finger engaging a stop formed by a slot in one of the slides 10, whereby as a rock-shaft is operated a slide is thrust forward and a coin ejected by the dog 13, as heretofore explained.

With the exceptions heretofore stated the operation of the machine is substantially the same as set forth in my aforesaid application.

When any push-button 18^a is pressed, its stem 18 is thrust downwardly, the rock-shaft actuated, and the fingers 24 of said shaft thrust forward, imparting a corresponding movement to the slides 10 and the dogs 13, whereby the coins are ejected from the receptacles and fall into the hopper 25, and thence into the hand of the operator. As soon as the pressure on the button 18^a ceases the counterweight 16^c, together with the spring 21, the arm 22, the rock-shaft 23, and the fingers 23^a, return the stems 18 to their upward position and the slides 10 to their rearward limit of movement.

Having thus described my invention, what I claim is—

1. In a coin-delivering device, the combination with a coin-ejecting slide, of a coin-engaging dog carried by said slide and adapted to enter a coin-receptacle, said dog being pivoted at its rear end near the forward end of the slide and normally elevated at its forward end to engage the lowermost coin by the action of a spring interposed between it and the forward end of the slide, and a headed stop-pin carried by one of the aforesaid parts and passed through the other of the aforesaid parts operating to limit the upward movement of the dog, substantially as described.

2. In a coin-delivery device, the combination with coin-receptacles slotted at their lower end, of coin-ejecting slides each of which is provided at its forward end with a coin-engaging dog adapted to enter the slot in the receptacle said dog being pivoted at its rear end and normally elevated at its forward end to engage the lowermost coin by the action of a spring interposed between it and the slide and coiled around a pin on the dog, the pin extending through the slide and provided with a shoulder forming a stop to limit the upward movement of the dog, substantially as described.

3. In a coin-delivery device, the combination with coin-receptacles, of slides whose forward extremities are depressed and provided with upwardly-projecting retaining-pins, dogs mounted on the depressed extremities of said slides, and provided with openings through which the retaining-pins pass, a screw passed through an opening formed in the forward extremity of the depressed portion of each slide and made fast to the dog, the length of the screw being such as to allow the dog the necessary movement, the top of the screw form-

ing a stop to limit the upward movement of the dog, a spring coiled around the screw and pressing upwardly on the dog, and means for thrusting the slides forward, whereby the dogs are made to eject the coins.

4. In a coin-delivery device, the combination with coin-receptacles each of which is slotted at its lower end and is provided with ledges at the sides of the slot for supporting the coins, of coin-ejecting slides each of which is provided at its forward end with a coin-ejecting dog normally positioned by the action of a spring to enter the slot and engage the lowermost coin, means for thrusting the slides forward consisting of rock-shafts having fingers engaging stops on the slides, and a yieldingly-retained rock-shaft having fingers engaging other stops on the slides to retract the latter, substantially as described.

5. In a coin-delivery device having a coin-receptacle slotted at its lower end and provided with ledges at the sides of the slot for supporting the stack of coins, the combination with a slide, a coin-ejecting dog pivotally mounted at its rear end adjacent to the forward end of the slide and provided with a spring interposed between it and the forward end of the slide and operating to elevate it normally above the plane of the ledges to engage the lowermost coin and by the forward movement of the slide to eject said coin, the tension of the spring being such that in the rearward movement of the slide the dog is moved by the weight of the stack of coins below the plane of the ledges, and a headed stop-pin carried by the dog and engaging the slide for determining the engaging position of the dog, substantially as described.

6. In a coin-delivery device, the combination with coin-receptacles, of slotted slides having depressed forward extremities, dogs mounted on said depressed extremities of the slides and adapted to enter the coin-receptacles as the slides are thrust forward, rock-shafts provided with fingers engaging slots in the slides, and means for operating the rock-shafts, whereby the slides are thrust forward, said means comprising stems connected with rearwardly-projecting arms attached to the rock-shafts, the protruding extremities of the stems being provided with suitable push-buttons, and forwardly-projecting counterbal-

ance-weights attached to the rock-shafts for returning them automatically to their normal position.

7. In a coin-delivery device, the combination of coin-receptacles whose bottoms are slotted, leaving a ledge on each side of the slot to form a support for each stack of coins, slides, a yieldingly-supported dog mounted on each slide and adapted to engage said slot, the dog being normally supported in a plane to engage the lowermost coin of the stack when the slide is thrust forward, means for thrusting the slide forward, and means for automatically retracting the slides after each forward thrust, comprising a yieldingly-retained rock-shaft having fingers engaging all the slides.

8. In a coin-delivery device, the combination of coin-receptacles whose bottoms are slotted, leaving a ledge on each side of the slot to form a support for the stack of coins, longitudinally-slotted slides, a yieldingly-supported dog mounted on each slide and adapted to enter the slots in the bottom of the receptacles, the dog being normally supported in a plane to engage the lowermost coin of the stack when the slide is thrust forward, means for thrusting the slides forward, and means for automatically retracting the slides after each forward thrust, said means comprising a spring-retained rock-shaft having fingers engaging slots in all the slides, the fingers normally engaging the rear extremities of the slots.

9. In a coin-delivery device, the combination with coin-receptacles, of slides the forward extremities of each of which is depressed and provided with an upwardly-projecting pin, dogs, each mounted on the depressed extremity of a slide and having an opening engaging the pin, a spring seated on or bearing against the slide and pressing upwardly on each dog, and means for thrusting the slides forward, whereby the dogs are made to eject the coins.

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

MICHAEL McANENY.

Witnesses:

EDITH HIMSWORTH,
A. J. O'BRIEN.