

No. 621,125.

Patented Mar. 14, 1899.

M. McANENY.
COIN DELIVERING DEVICE.

(Application filed Mar. 16, 1898. Renewed Jan. 5, 1899.)

(No Model.)

4 Sheets—Sheet 1.

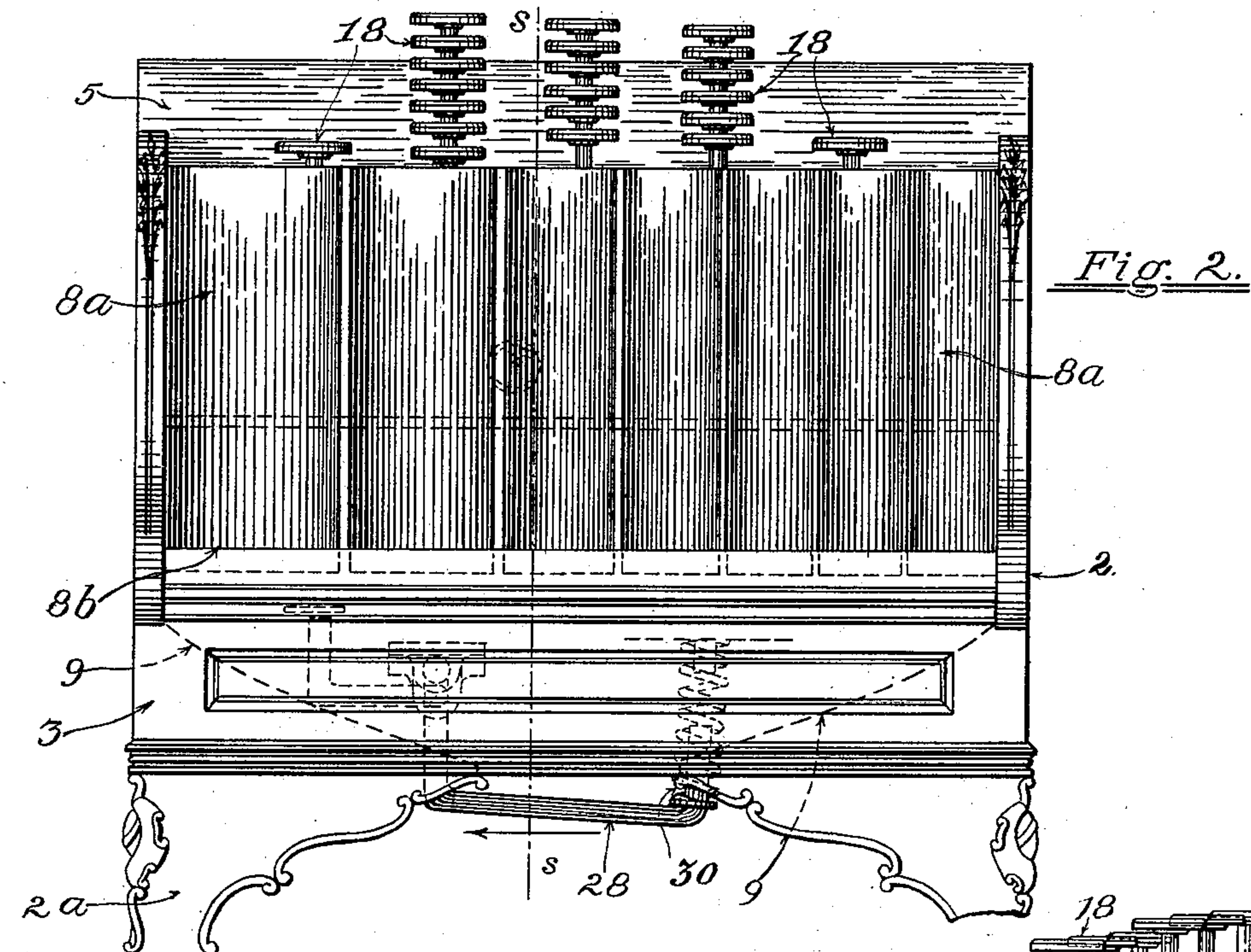
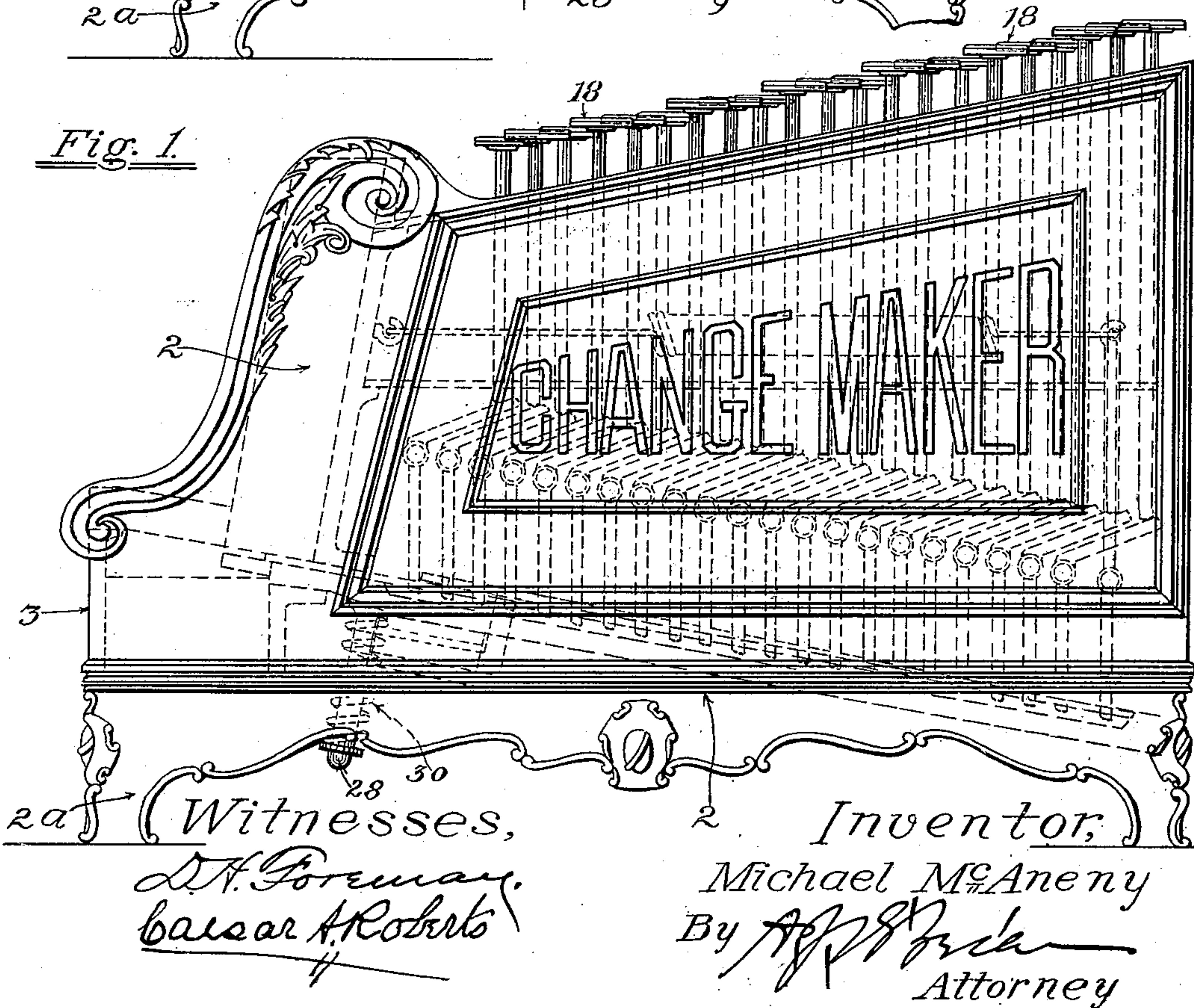


Fig. 1.



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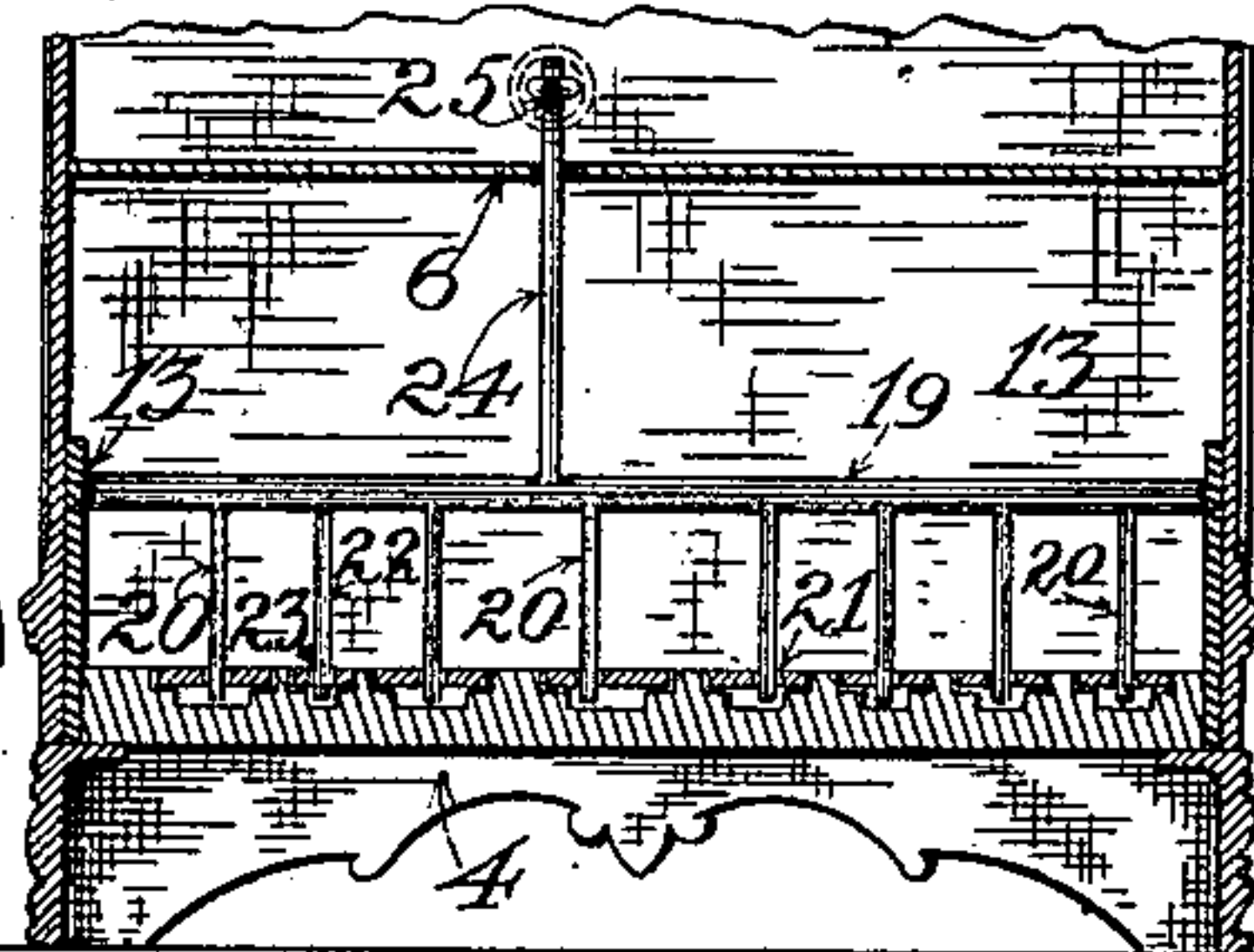
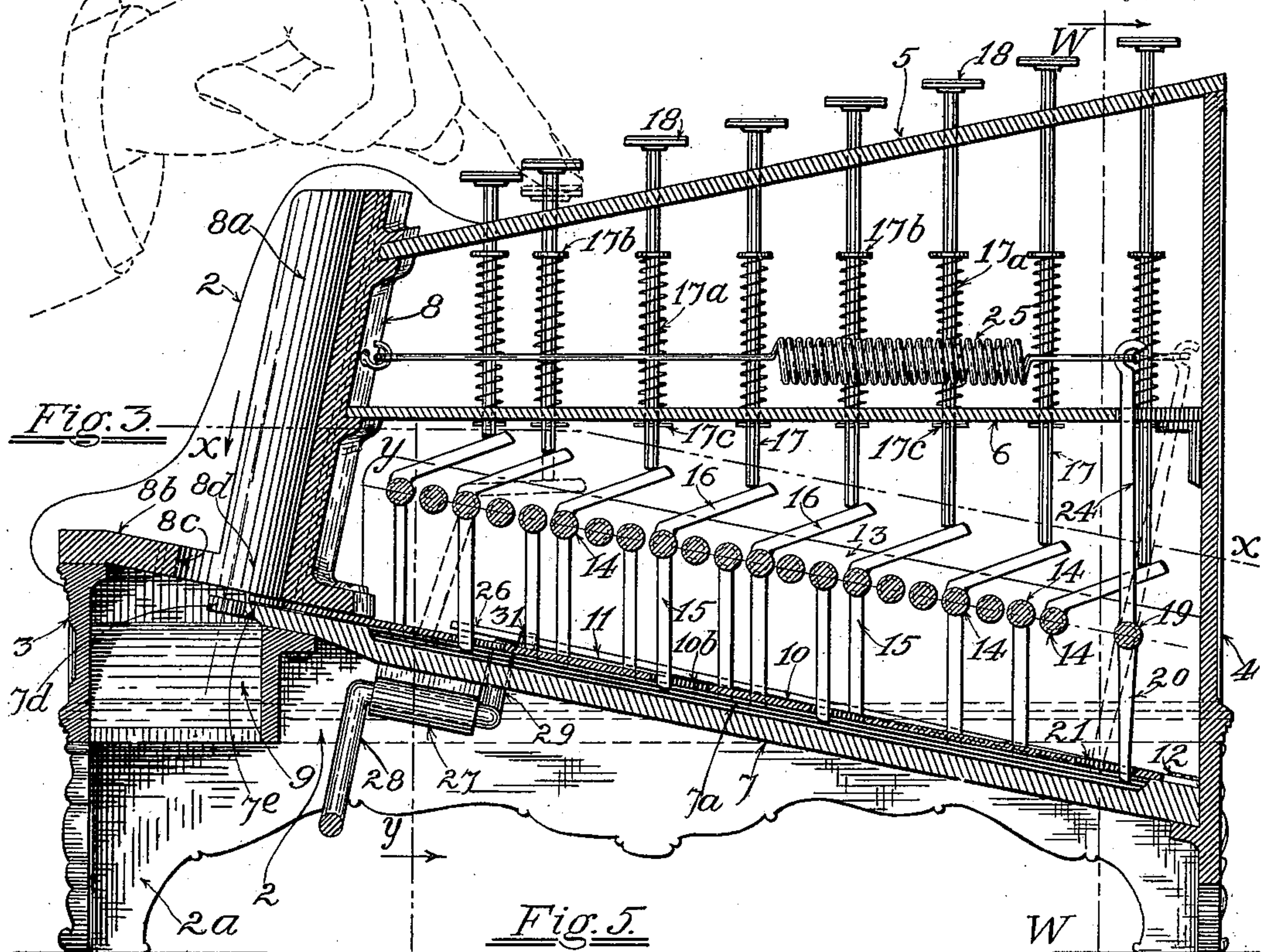
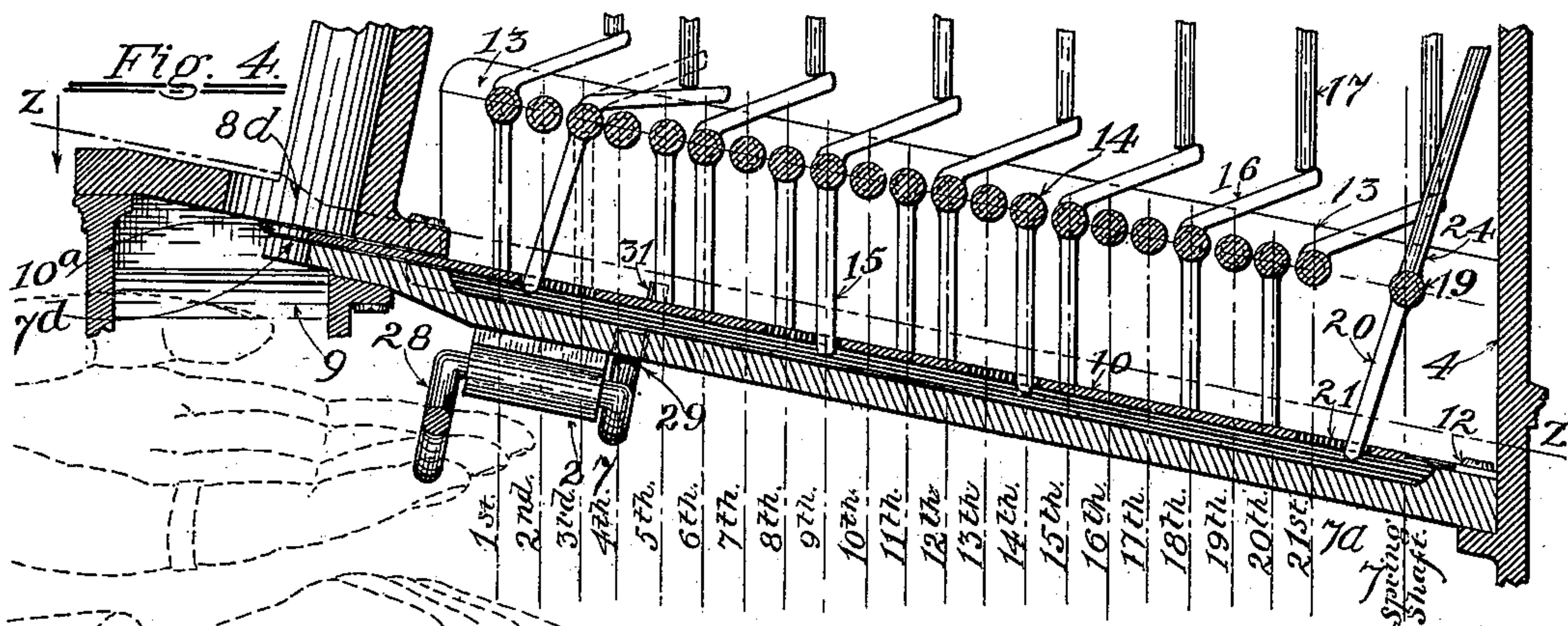
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4 Sheets—Sheet 2.



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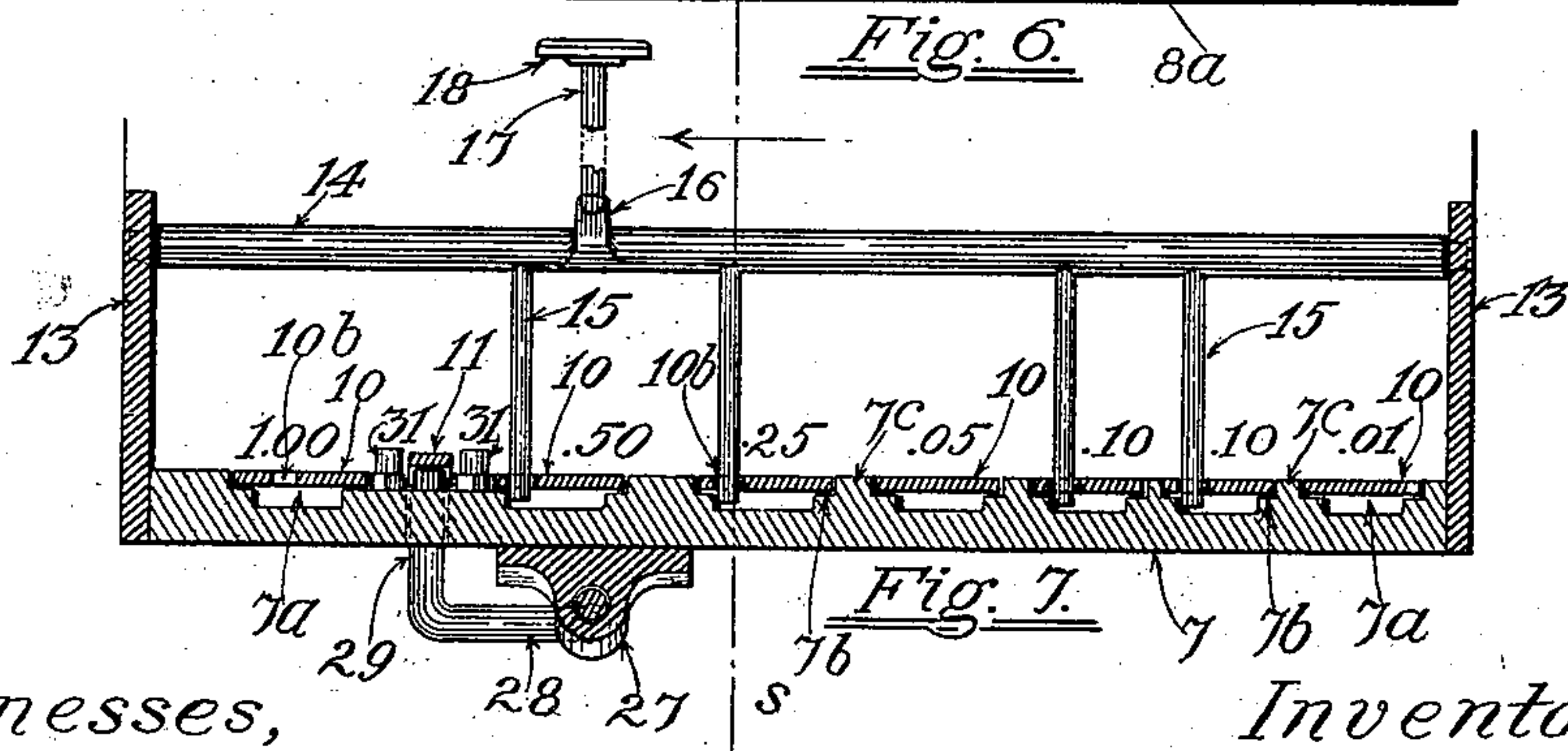
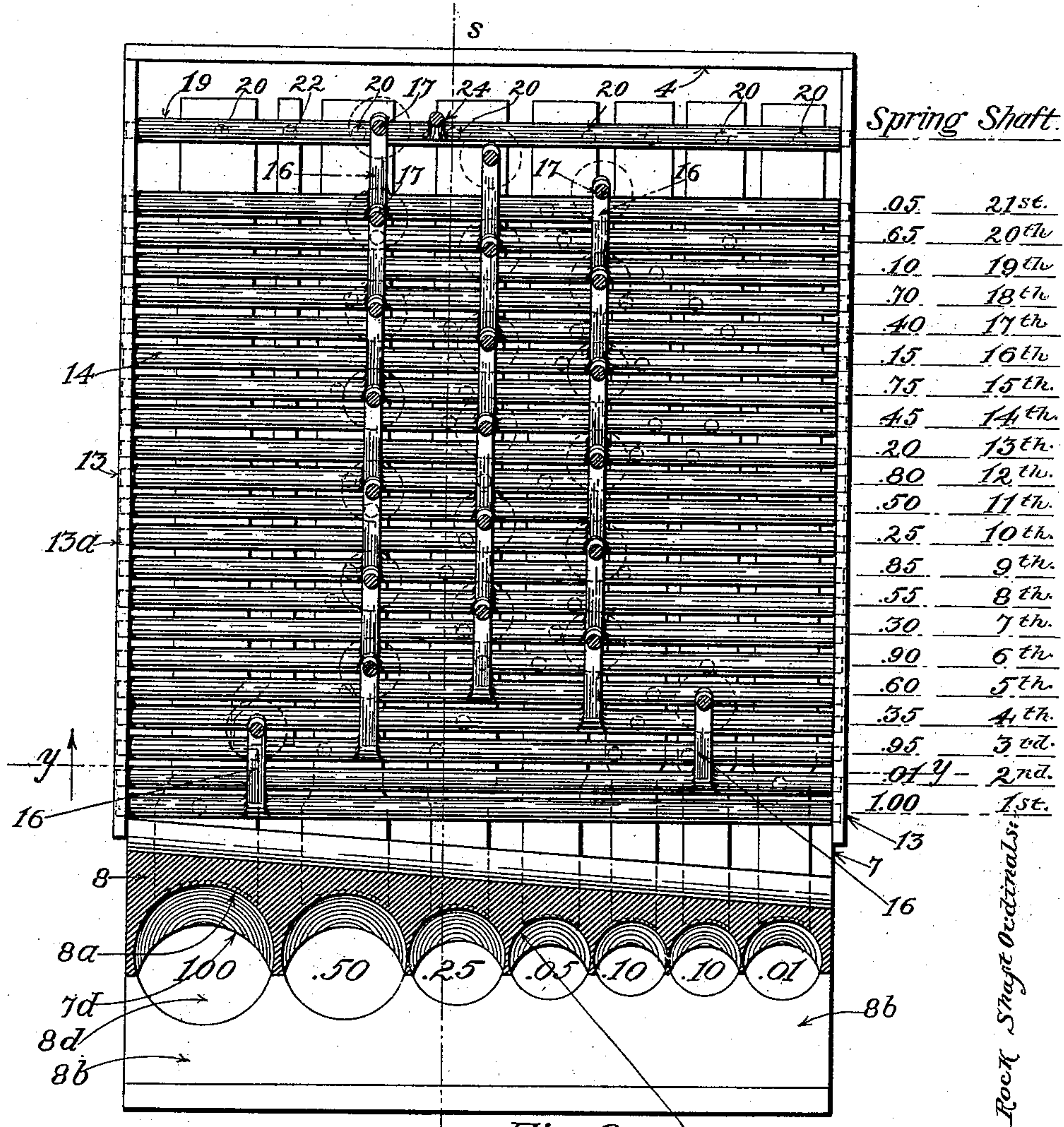
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(No Model.)

4 Sheets—Sheet 3.



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(No Model.)

4 Sheets—Sheet 4.

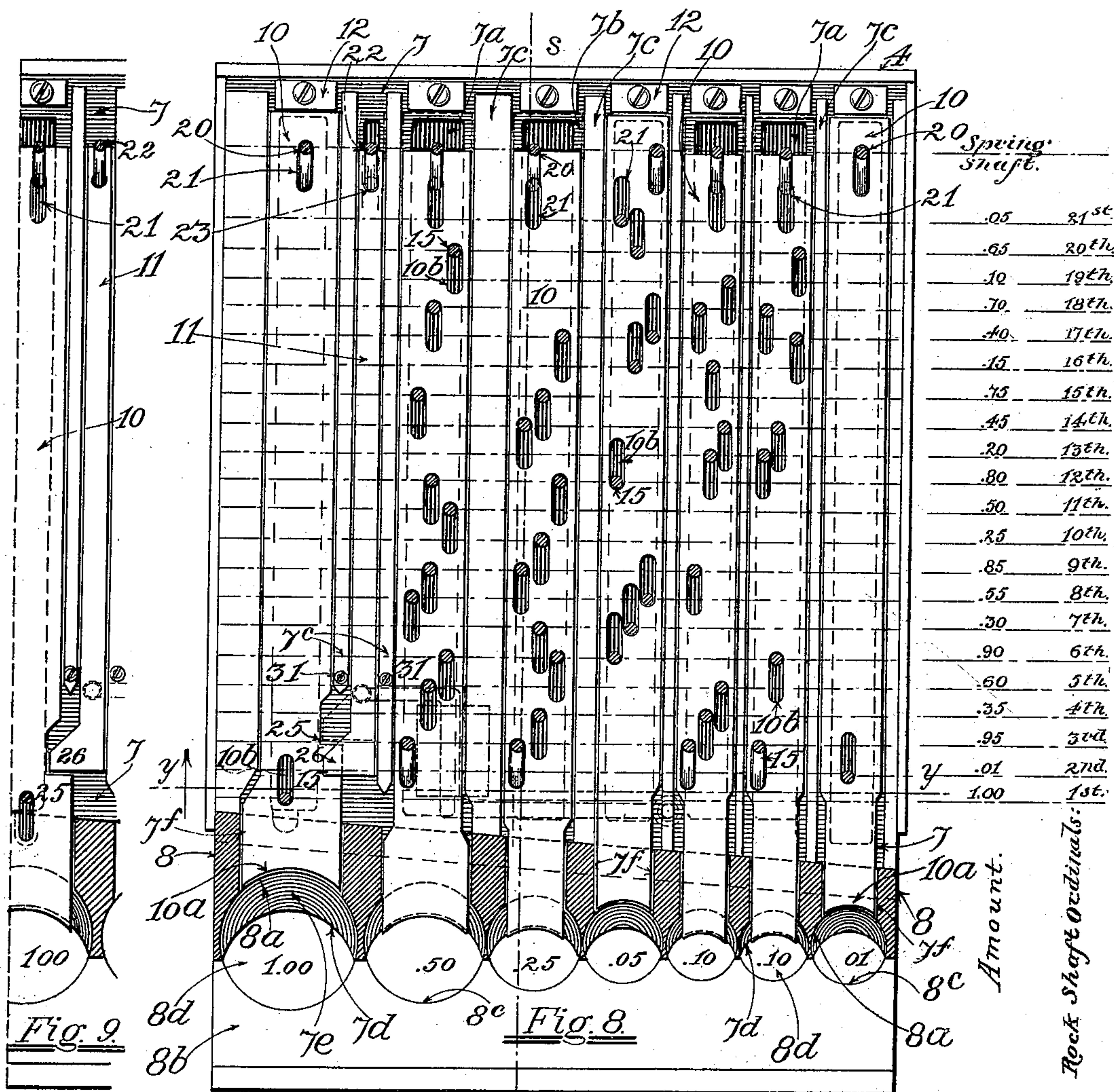


Fig. 9.

Fig. 8.

Rock Shaft Ordinals.

Amount.

.05	31 st
.65	20 th
.10	19 th
.70	18 th
.40	17 th
.15	16 th
.75	15 th
.45	14 th
.20	13 th
.80	12 th
.50	11 th
.25	10 th
.85	9 th
.55	8 th
.30	7 th
.90	6 th
.60	5 th
.35	4 th
.95	3 rd
.01	2 nd
1.00	1 st

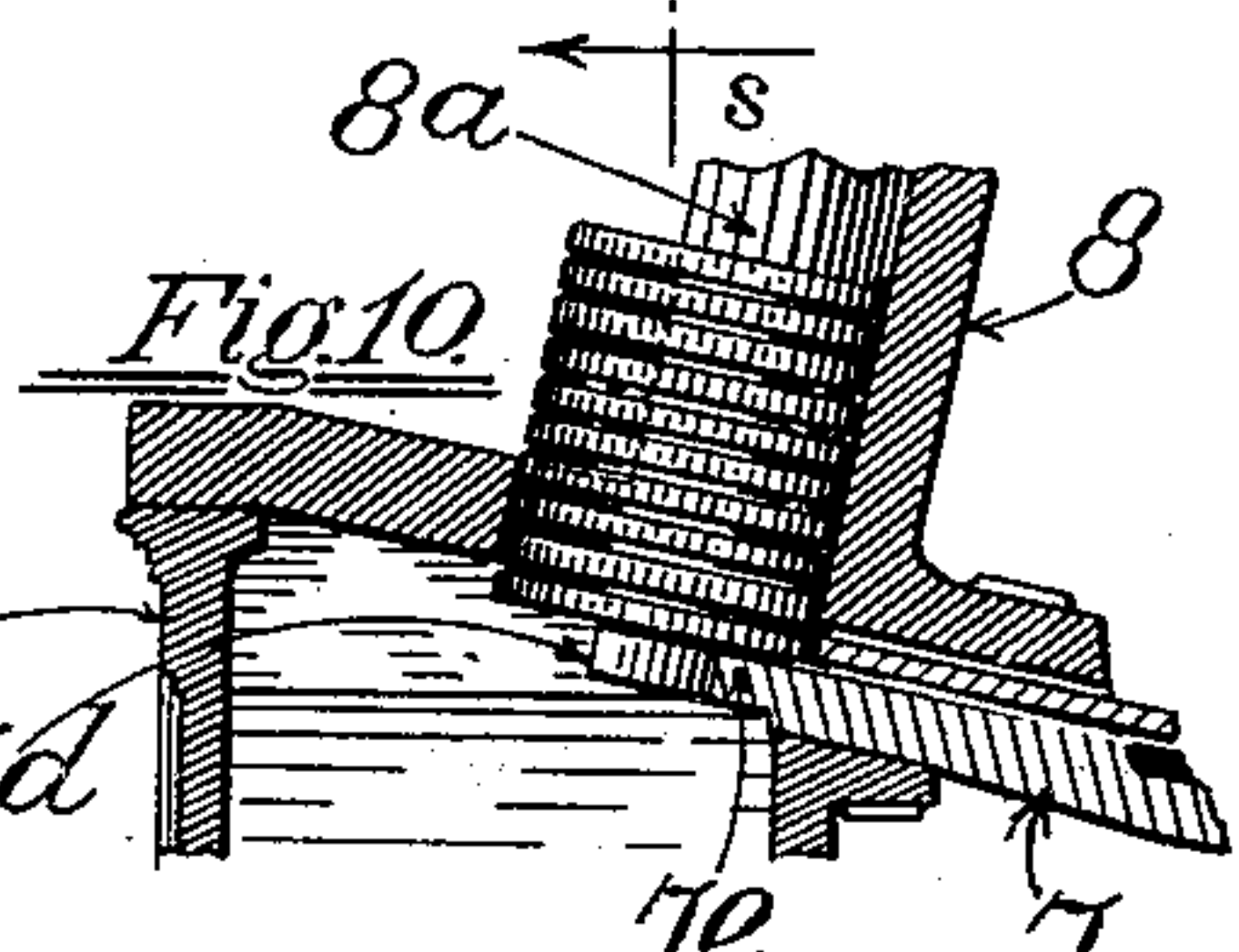


Fig. 10.

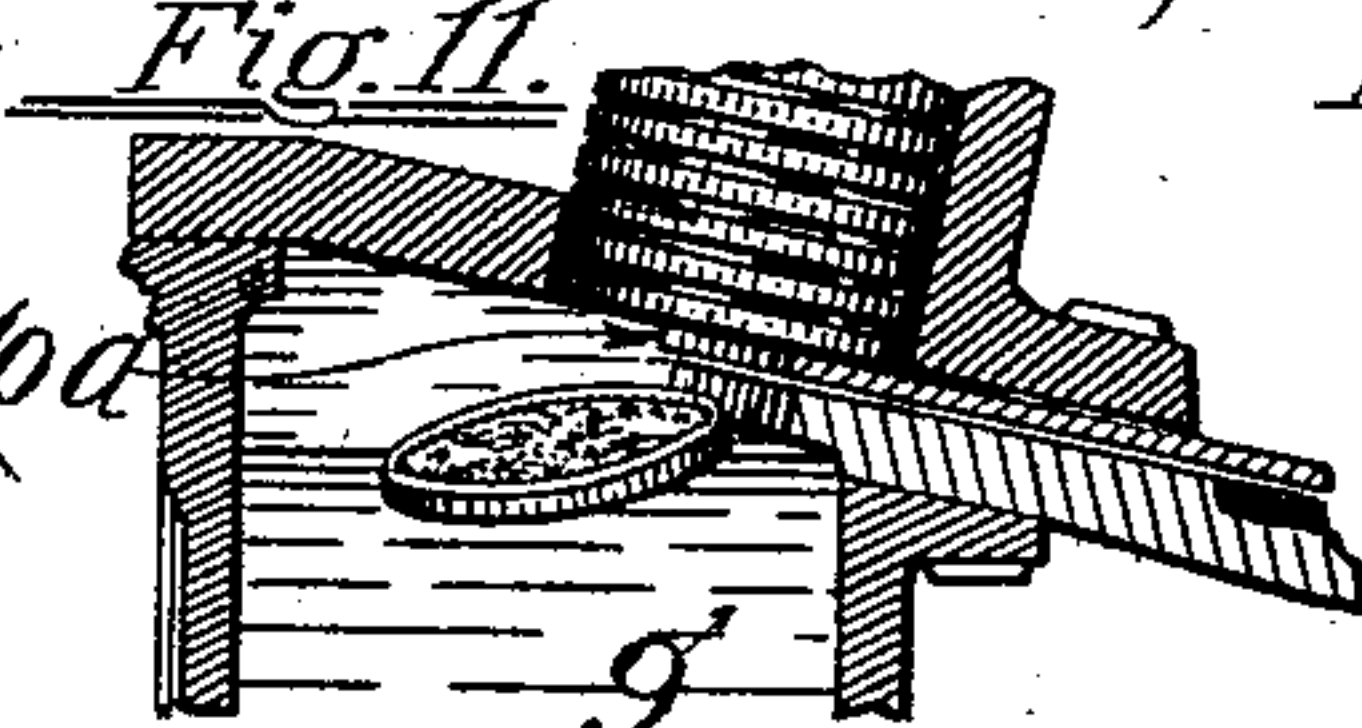


Fig. 11.

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UNITED STATES PATENT OFFICE.

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

COIN-DELIVERING DEVICE.

SPECIFICATION forming part of Letters Patent No. 621,125, dated March 14, 1899.

Application filed March 16, 1898. Renewed January 5, 1899. Serial No. 701,285. (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-Delivering 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-delivering devices or change-making machines, and is especially adapted to facilitate the rapid and accurate handling or manipulating of coin or specie currency in commercial transactions.

My object is to provide a machine of this class which shall be simple in construction, economical in cost, reliable, durable, and efficient in use and combining to a high degree in operation the possibilities of maximum speed with absolute mechanical accuracy.

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 side elevation of the machine, showing also in broken lines the interior detail construction. Fig. 2 is a front elevation of the machine. Fig. 3 is a vertical longitudinal section of the machine, taken on the line *s s*, Figs. 2, 6, 7, and 8, viewed in the direction of the arrow. Fig. 4 is a similar but fragmentary view showing the working parts in a relatively different position. Fig. 5 is a fragmentary cross-section, drawn to a reduced scale, taken on the line *w w*, Fig. 3, viewed in the direction of the arrow. Fig. 6 is a section taken on the line *x x*, Fig. 3, looking downward. In this view the side and rear end walls of the casing are not sectionized, the top plate being removed. Fig. 7 is a cross-section taken on the line *y y*, Fig. 6, viewed in the direction of the arrow.

Fig. 8 is a section taken on the line *z z*, Fig. 4. In this view the outer walls of the casing are shown in plan or top view. Fig. 9 is a similar but fragmentary view showing the parts in a relatively changed position. Fig. 10 is a detail sectional elevation showing how the respective denominations of coin are stacked and supported in their respective racks. Fig. 11 is a similar view showing how the bottom coin is ejected from the stack by the action of the coin thrust-bars. These views show also how the next succeeding coin above is banked or interlocked into the coin-rack against the action of the thrust-bar, as will be hereinafter described.

In Figs. 4 and 6 the rock-shafts are for convenience of reference marked 1, 2, 3, and so on, from the front toward the rear, the ordinals being placed below the view in Fig. 4 and to the right thereof in Fig. 6, with dotted lines extending therefrom to the said shafts. In Fig. 8 these rock-shaft ordinals are placed to the right of the view and dotted lines run therefrom through the fingers connected with the respective rock-shafts, which are not shown in this view. In Figs. 6 and 8 the amount of change delivered by actuating the respective shafts is indicated in terms placed adjacent the shaft-ordinals.

The machine herein described and illustrated is constructed with a capacity covering the coin issue from one cent to one dollar, inclusive. By the action of suitably-arranged coin thrust-bars it will produce, by pressing the properly-designated finger-key, the corresponding coin through the issue, dependent upon the capacity of the machine—as, for example, a one-cent, five-cent, ten-cent, twenty-five-cent, fifty-cent, or one-dollar coin. (See Fig. 8.) The machine has also the capacity to produce in coin change, by pressing the single suitably-designated key, any amount by gradations of five, from five cents to ninety-five cents, inclusive. This is effected by a system of interlocking a series of rock-shafts (see Fig. 6) with a number of coin thrust-bars. (See Fig. 8.) The machine further has the capacity of effecting the discharge of any such amount from five cents to ninety-five cents with one dollar, if so desired, by the

pressure of the single suitably-designed key, as shall be hereinafter explained.

Similar reference characters indicating corresponding parts in the views, let the numeral 2 designate the main exterior side pieces of the casing, which is formed of right and left suitable paneled and ornamented elongated castings, upon the lower corners of which are formed ornamented projections 2^a, forming the feet of the structure. Between these side pieces are secured, respectively, the front exterior casting 3 and the rear exterior casting 4, also the sloping top covering 5 and the interior supporting-partition 6. To lugs formed upon the inner sides of these outer walls of the construction is also secured the main base-plate 7, disposed between the side walls in a position sloping downward from the front to the rear end of the same. At right angles to the plane of this base-plate 7, of corresponding transverse dimensions and secured to the front end thereof, is an upright angular casting 8, forming at once a portion of the main front of the structure as well as a rack for the storage of the several denominations of coin. Upon the front side of the upright sloping wall of this casting 8 is formed a number of vertically-disposed semicircular grooves 8^a of varying radii, conforming to the respective diameters of the denominate coins. Extending forward at right angles to the upright plane of the coin-rack and formed integral with the casting 8 is a shelf 8^b, designed as a convenient storage-space for surplus stacks of the several denominations of coin, and also through the several circular openings 8^d, forming the downward termination of the respective coin-grooves 8^a. The semicircular wall 8^c forms a banking, against which the lower coins of the respective stacks bear to resist being displaced by the action of the thrust-bars upon the extreme lower coin. Located across the front of the structure, immediately beneath the ledge 8^b and the circular opening 8^c, is a hopper-shaped rectangular casting 9, into which the ejected coins are discharged in a heap and deposited in the upturned palm of the hand, as shown by broken lines in Fig. 4. Upon the upper side of the main base-casting 7 is formed a number of parallel longitudinal grooves or ways 7^a. (See Figs. 3, 6, 7, and 8.) These grooves are designed to register as to number and position with the coin grooves or receptacles 8^a and terminate at their respective forward ends adjoining the lower rear flange of the rack-wall 8, as clearly shown in Figs. 3 and 4. Adjacent either side of the grooves 7^a are formed upon the base-casting 7, throughout the entire length of the grooved portion thereof, planed shoulders 7^b, (see Fig. 7,) and adjoining which, upon a still higher plane, are formed a number of dividing-tongues 7^c of varying widths, (see Figs. 6 and 7,) the sides of which are also planed and finished upon true and accurate parallel lines. These planed

surfaces form guides within which the several steel coin thrust-bars 10 and the auxiliary interlocking bar 11 are designed to slide freely.

The extreme forward end of the base-plate 7 terminates in a series of semicircular recesses 7^d, (see Figs. 6 and 8,) formed in the edge of the same, of dimensions and in position conforming to the respective circular openings 8^d, but occupying a position sufficiently within the bounds of the area of the circular openings 8^d to form the crescent-shaped supporting ledges or shelves 7^e, upon which the respective stacks of coin take support, as shown in Fig. 10. It will be observed also that the space between the under side of the banking-wall 8^c and the upper side of the shelf 7^e is slightly greater than the thickness of the standard coin, thus effecting a clearance for the extreme lower coin and permitting it to be ejected by the thrust-bar from beneath the stack and from off the ledge 7^e. The engaging ends of the thrust-bars 10 terminate in arc-shaped jaws 10^a, designed to register with the respective coins. This jaw end 10^a is also formed somewhat thinner than the thickness of the corresponding coin, thereby permitting the jaw to pass clear of the first adjoining coin above, as clearly shown in Fig. 11.

Through the forward shouldered end of the base 7 are formed a number of grooves or ways 7^f, (see Fig. 8,) within which and under the adjoining flange or base of the casting 8 the engaging ends of the thrust-bars slide freely.

To the extreme rear end of the base 7, adjoining the ends of each of the several thrust-bars, are secured banking-blocks 12. Upon each side of the base 7, adjoining the thrust-bars and parallel thereto, are secured the supporting-plates 13, (see Figs. 3, 6, and 7,) into each of which, near the upper edge, is drilled a series of adjoining holes 13^a. In these holes are journaled a series of rock-shafts 14, (see Figs. 4 and 6,) arranged immediately above the coin thrust-bars 10, transverse thereto and connected therewith by a number of suitably-arranged depending thrust-bar arms or fingers 15. (See Figs. 3, 7, and 8.) The extreme lower ends of these fingers are designed to engage the coin thrust-bars within suitably-arranged elongated openings or slots 10^b. (See Figs. 3 and 8.) The ends of the slots 10^b form stops, which are engaged by the lower ends of the fingers when the latter are actuated to move the slides forwardly to eject the coins.

Extending backward from the upper side of each of the rock-shafts 14, at nearly right angles to the thrust-bar fingers 15, are a number of arms 16. In the drawings are shown twenty-one of these arms, corresponding to the number of rock-shafts 14.

Immediately above the outer ends of each of the arms 16 is placed an upright key-stem

or push-rod 17, (see Figs. 1 and 3,) designed to take thrust engagement upon the respective arms 16 by downward pressure upon the finger buttons or caps 18, secured upon the extreme upper outer ends of the stem-rods. The key-stems 17 are supported in suitably-disposed holes drilled into both the top plate 5 and the partition-plate 6 and are held normally in the elevated position by individual coil-springs 17^a, fitted upon each by a banking-collar 17^b and the partition-plate 6. The upward movement of each spring-actuated stem is limited by suitably-placed wire pins 17^c, which bank against the under side of the partition-plate 6. In the construction here shown there are twenty-one keys or buttons, corresponding to the number of thrust-bar rock-shafts, which are arranged conveniently in a banked keyboard above the upward-sloping top plate 5, as shown in Figs. 1 and 2 in elevation and indicated by the dotted circles in Fig. 6. The amount of change resulting from pressure upon any key is indicated by distinguishing-marks, as numerals, formed on the key-faces. In the drawings these distinguishing-numerals are not shown on the keys, but are indicated in Figs. 6 and 8 in connection with the several rock-shafts by the tabulated columns of figures to the right.

In holes formed in the rear ends of the supporting-plates 13 is journaled a rock-shaft 19, (see Figs. 3, 5, and 6,) which is connected with the several thrust-bars 10 by depending arms or fingers 20, which engage the bars within the slots 21. (See Figs. 3, 4, 5, and 8.) Also suitably arranged upon the rock-shaft 19 is a depending arm or finger 22, designed to engage the rear end of the auxiliary bar 11 within the circular opening 23, into which it is closely fitted. This finger 22 is substantially the same in construction as the fingers 20, but it has a different function—namely, the movement of the auxiliary bar 11 in both directions, while the fingers 20 actuate the thrust bars or slides 10 in but one direction. Hence the finger 22 is for convenience given a different reference character. Oppositely disposed upon the rock-shaft 19 is a single upright arm 24, having a hooked-shaped upper extremity, to which is secured a retaining-spring 25, which spring is anchored to the rear side of the coin-rack wall 8. (See Fig. 3.)

Upon the side of the forward end of the dollar thrust-bar 10 is formed a notched shoulder or offset 25. (See Figs. 8 and 9.) Adjacent this shoulder the extreme forward end of the interlocking bar 11 terminates in a side protruding lug 26, designed to be within the plane of the notched shoulder 25 and under certain conditions adapted to slide freely over and above the same, as shown in Figs. 3, 7, and 8, while under certain other conditions the lug 26 is designed to drop into the notched space of the bar 10, and thus engage the shoulder 25 from the rear, as shown in Fig. 9.

Fitted into suitable boxing 27 upon the un-

der side of the base-plate 7 is a rock-shaft 28, placed adjacent the coin-hopper 9, in order that it may be under the convenient control of the operator. The angular end of this rock-shaft terminates in an upwardly-extending vertical stud 29, which passes through a suitable opening in the base-plate 7 and is designed to engage and support the interlocking bar 11, adjacent the lug 26. (See Figs. 3 and 7.) This stud 29 is designed to be held normally in the elevated position, as shown in Fig. 7, by an actuating-spring 30, housed upon the end of the opposite arm of the rock-shaft 28, (see Fig. 2,) thus sustaining the interlocking bar 11 normally in the disengaged position with reference to the dollar thrust-bar 10, as shown in Figs. 7 and 8. That the bar 11 may be kept in proper alinement in this position two guide-studs 31 are provided upon the adjoining flange 7^c, adjacent the elevated end of the bar.

By referring to Fig. 6 and the adjoining tabulated columns of figures it will be seen that the thrust-bars for the individual coins—viz., one dollar, one cent, twenty-five cents, fifty cents, ten cents, and five cents—are connected, respectively, with the rock-shafts numbered 1, 2, 10, 11, 19, and 21. Into each of these several rock-shafts is fitted but one depending finger 15, as indicated by the small circle in broken lines shown within the lines of each of the respective shafts (see Fig. 6) and located thereon in a position directly above and engaging through a corresponding slot the particular thrust-bar leading to the coin of the amount indicated. Thus it will be seen that by actuating either of these rock-shafts through the instrumentality of the corresponding key the corresponding coin only is ejected from its respective rack. I will designate these as "unit amounts." The other combined or aggregate amounts are obtained by the concerted action of two or more unit thrust-bars—as, for example, ninety-five cents, which it will be found is assigned to the third rock-shaft. From this shaft there depend four fingers 15, (see Figs. 6 and 7,) located thereon, as indicated, and engaging through suitable slots (see Fig. 8) the unit-bars fifty, twenty-five, ten, and ten. Actuating this shaft by the single corresponding key imparts the forward stroke or movement simultaneously to the four coin thrust-bars, and thus produces the aggregate sum by the one operation. Thus it will be readily understood how any aggregate amount from five to ninety-five by gradations of five is obtained by a single key action.

The ten-cent bar only is inserted in duplicate, as will be seen, for the purpose of producing certain aggregate amounts by a single concerted thrust, as has been shown in the example of ninety-five cents just cited. By reference to Fig. 4 it will be seen that the movement of any one or more of the coin thrust-bars causes a corresponding movement of the retaining-spring rock-shaft 19, since its

several fingers 20 (see Figs. 5 and 8) are interlocked one each with a bar 10. Through the elastic force of the spring 25 the thrust-bars are held normally in the extreme rear position against the banking-blocks 12, (see Fig. 3,) in which positions the fingers 20 are in engagement with the rear end of the respective slots 21, while the fingers 15 of the rock-shafts occupy a position adjoining the forward end of their corresponding slots 10^b. (See Fig. 3.) In actuating any single thrust-bar, or, for example, the ninety-five cent combination, it will be seen that the fingers 20, engaging the inactive one-cent, five-cent, and one-dollar bars, (see Fig. 8,) idly oscillate through the corresponding slots 21, while such other rock-shaft fingers 15 than those on the third shaft, which engage the fifty, twenty-five, ten, and ten bars, through other combinations remaining inactive, are engaged by the corresponding slots 10^b of these active thrust-bars.

It will be observed that since the interlocking bar 11 is engaged positively within the closely-fitted circular opening 23 by the arm 22 it vibrates in unison with every movement of the rock-shaft 19, whether the same be caused by the action of a unit thrust-bar or by that of a combination; but with the supporting-stud 29 normally holding it in the elevated position its action amounts simply to an ineffective movement upon the top of the stud. If the operator desires, however, to increase the amount by one dollar, he tips the rock-shaft 28 upwardly with the coin-receiving hand, as shown in Fig. 4, lowering the supporting-stud 29 and allowing the lug 26 to fall into engagement with the shoulder 25 of the dollar-bar, as shown in Figs. 4 and 9, and thus adding one dollar to the primary amount, whether it be a unit or compound action.

Numerous changes may be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope, and hence I do not wish to limit myself to the precise details of construction herein set forth.

By the use of the word "stops" I desire it to be understood that this term is intended to be generic and to cover all forms of connection between the fingers and slides which will permit of a forward movement of the latter when the fingers are actuated.

Having thus described my invention, what I claim is—

1. In a coin-delivering device, the combination with a number of coin-receptacles, of a number of longitudinally-slotted coin-ejecting slides adapted to enter said receptacles, a rock-shaft having a plurality of fingers engaging slots in as many slides as there are fingers, the fingers normally engaging the forward extremities of the slots, and a yielding-retained rock-shaft having fingers nor-

mally engaging the rear extremities of slots in all the slides.

2. In a coin-delivering device, the combination with a number of coin-receptacles, of a plurality of longitudinally-slotted coin-ejecting slides adapted to enter said receptacles, one of said slides having a plurality of slots, a number of rock-shafts having fingers adapted to engage normally the forward extremities of the slots in the slides, one of said shafts having a plurality of fingers, the arrangement being such that one finger of the last-named shaft and one finger of one of the other shafts engage distinct slots in the plurally-slotted slide, whereby the last-named slide may be independently actuated by the finger of either shaft, the finger of the other shaft in the meantime remaining idle.

3. In a coin-delivering device, the combination with a number of coin-receptacles, of a plurality of longitudinally-slotted coin-ejecting slides adapted to enter said receptacles, one of said slides having a plurality of slots, a number of rock-shafts having fingers adapted to engage normally the forward extremities of the slots in the slides, one of said shafts having a plurality of fingers, the arrangement being such that one finger of the last-named shaft and one or more fingers of the other shafts engage distinct slots in the plurally-slotted slide, whereby the last-named slide may be independently actuated by the slot-engaging finger of either shaft, the engaging finger of the other shaft or shafts in the meantime remaining idle, and a yielding-retained rock-shaft having fingers normally engaging the rear extremities of slots in all the slides.

4. In a coin-delivery device, the combination with coin-receptacles, of coin-ejecting slides adapted to enter said receptacles, rock-shafts having fingers adapted to engage one or more of said slides for the purpose of imparting the forward movement, and a yielding-retained rock-shaft having fingers engaging all the slides for the purpose of imparting the return movement after each forward thrust.

5. In a coin-delivery device, the combination with coin-receptacles, of coin-ejecting slides adapted to enter said receptacles, rock-shafts having fingers adapted to engage said slides, and means for actuating said shafts to impart the forward movement to the slides, and another rock-shaft yieldingly connected with a fixed support and having fingers engaging all the slides for imparting the return movement after each forward thrust.

6. In a coin-delivery device, the combination with coin-receptacles, of slides or thrust-bars adapted to enter said receptacles, for the purpose of ejecting coins, rock-shafts, a suitable connection between said shafts and the slides, whereby as the shafts are actuated, the slides are thrust forward into the coin-receptacles, and a yielding-retained rock-shaft

having fingers engaging all the slides for the purpose of imparting the return movement after each forward thrust.

7. In a coin-delivery device, the combination with coin-receptacles and slides or thrust-bars adapted to enter said receptacles, of a series of rock-shafts having fingers for actuating the slides in one direction, and a yieldingly-retained rock-shaft having fingers engaging all the slides for moving the latter in the opposite direction.

8. In a coin-delivery device, the combination with coin-receptacles, and slides adapted to enter said receptacles, of a series of rock-shafts having fingers for imparting the forward movement to the slides, and another rock-shaft yieldingly connected with a fixed support and connected with all the slides for imparting the return movement.

9. In a coin-delivery device or money-changing machine, the combination with coin-receptacles and slides for entering said receptacles, of a series of fingered rock-shafts for actuating the slides in one direction and a series of spring-retained key-stems for operating the rock-shafts, and a yieldingly-retained rock-shaft having fingers engaging all the slides for actuating them in the opposite direction.

10. In a coin-delivery device, the combination with coin-receptacles, coin-ejecting slides for entering the receptacles, a series of rock-shafts having fingers engaging the slides, a series of spring-retained vertically-movable key-stems or push-rods for actuating the rock-shafts and imparting the forward movement to the slides, and means common to all the slides for imparting the return movement, consisting of a yieldingly-retained rock-shaft having fingers engaging all the slides.

11. In a coin-delivery device, the combination with coin-receptacles and coin-ejecting slides or thrust-bars adapted to enter said receptacles, of a series of rock-shafts having depending fingers adapted to engage said slides for imparting the forward movement, another rock-shaft having depending fingers engaging all the slides for imparting the return movement, the last-named rock-shaft having an upwardly-projecting arm, and a spring connected with said arm at one extremity and with a fixed support at the opposite extremity.

12. In a coin-delivery device, the combination of a suitable casing having coin-receptacles mounted thereon, the said casing having a longitudinally-grooved base-plate provided with shoulders adjacent the grooves, slotted coin-ejecting slides engaging said shoulders, actuating rock-shafts having fingers projecting through the slots in the slides into the grooves of the base-plate, and a yieldingly-retained rock-shaft having fingers engaging all the slides.

13. In a coin-delivery device, the combination of a casing having coin-receptacles mounted thereon and a base-plate longitudinally

grooved in line with said receptacles, having shoulders adjacent the grooves and tongues separating the shoulders, coin-ejecting slides engaging said shoulders and having slots formed in line with the grooves of the base-plate, actuating-shafts having fingers or arms projecting through the slots of the slides into the said grooves, and a yieldingly-retained rock-shaft having fingers engaging all the slides.

14. In a coin-delivery device, the combination of a casing provided with a base-plate, vertical side plates and coin-receptacles of coin-ejecting thrust-bars engaging said base-plate and adapted to enter said receptacles, rock-shafts journaled in the side plates and having depending fingers engaging said thrust-bars, the said shafts being also provided with upwardly-projecting arms, spring-held key-stems or push-rods mounted on the casing and engaging the arms of the rock-shafts, and a yieldingly-retained rock-shaft suitably connected with all the thrust-bars.

15. In a coin-delivery device, the combination with coin-receptacles, of slotted coin-ejecting slides adapted to enter said receptacles, rock-shafts having fingers adapted to project into the slots of the slides, whereby as the said shafts are actuated the slides are given the forward movement, a yieldingly-retained rock-shaft having fingers adapted to engage slots formed in all the slides, an auxiliary slide located adjacent one of the ejecting-slides and adapted to interlock therewith, said auxiliary slide having an opening engaged by a finger on the yieldingly-retained shaft whereby the auxiliary slide is reciprocated during every reciprocation of an ejecting-slide, and means for normally holding the auxiliary slide out of engagement with its adjacent coin-ejecting slide.

16. In a coin-delivery device, the combination with coin-receptacles, of slotted coin-ejecting slides adapted to engage said receptacles, rock-shafts having fingers adapted to project into the slots in the slides, whereby as the said shafts are actuated, the slides are given the forward movement, a yieldingly-retained rock-shaft having fingers adapted to engage slots formed in all the slides, an auxiliary slide located adjacent one of the ejecting-slides and adapted to interlock therewith, said auxiliary slide having an opening engaged by a finger on the yieldingly-retained shaft whereby the auxiliary slide is reciprocated at every reciprocation of a coin-ejecting slide, and means for normally holding the auxiliary slide out of engagement with its adjacent coin-ejecting slide, the said means comprising a spring-held rock-shaft having a stud adapted to hold the auxiliary slide above the plane of the ejecting-slide.

17. In a coin-delivery device, the combination with coin-receptacles, of slotted coin-ejecting slides adapted to engage said receptacles, rock-shafts having fingers projecting

into the slots of said slides and normally located at the forward extremities of the slots, a yielding-retained rock-shaft having fingers projecting into slots formed in all the slides and normally located at the rear extremities of the slots, whereby the yielding-retained rock-shaft is actuated every time a slide is given the forward movement, and imparts the return movement to the slide or slides after each forward thrust.

18. In a coin-delivery device, the combination with coin-receptacles, of slotted coin-ejecting slides adapted to engage said receptacles, rock-shafts having fingers projecting into the slots of said slides and normally located at the forward extremities of the slots whereby a yielding-retained rock-shaft having fingers projecting into slots formed in all the slides and normally located at the rear extremities of the slots, whereby the yielding-retained rock-shaft is actuated every time a slide is given the forward movement, and imparts the return movement to the slide or slides after each forward thrust, and an auxiliary slide or thrust-bar located adjacent any coin-ejecting slide or thrust-bar and adapted to interlock therewith, the said auxiliary slide having an opening into which is fitted a finger on the yielding-retained rock-shaft whereby the auxiliary slide is reciprocated at every reciprocation of a coin-ejecting slide, and means for normally holding the auxiliary slide out of engagement with the adjacent coin-ejecting slide.

19. In a machine of the character described, the combination of a casing provided with top, bottom and intermediate plates and having coin-receptacles, coin-ejecting slides engaging the bottom plate and adapted to enter said receptacles, rock-shafts having fingers engaging said slides, and arms extending at an angle to the fingers, spring-supported key-stems passing through the top and intermediate plates and engaging the arms of the rock-shafts whereby as the key-stems are depressed, the rock-shafts are actuated for the purpose of imparting the forward movement to the coin-ejecting slides, and a yielding-retained rock-shaft suitably connected with all the slides for imparting the return movement.

20. In a machine of the character described, the combination of a casing provided with top, bottom and intermediate plates and having coin-receptacles, coin-ejecting slides engaging the bottom plate and adapted to enter said receptacles, rock-shafts having fingers engaging said slides and arms extending at an angle to the fingers, key-stems passing through the top and intermediate plates of the casing and having stops below the intermediate plate, coil-springs surrounding said key-stems and located between stops on the stems and the upper surface of the plate, the said stems being adapted to engage the arms on the rock-shaft and actuate the latter as the stems are depressed, and a yielding-re-

tained rock-shaft having fingers engaging all the slides for imparting the return movement.

21. In a coin-delivery device, the combination with coin-receptacles, of longitudinally-slotted coin-ejecting slides adapted to enter said receptacles, a series of rock-shafts arranged one in front of another crosswise of the slides, the said shafts having fingers engaging the slots of the slides, the fingers of the shafts and the slots in the slides being so arranged that the fingers of a plurality of rock-shafts engage slots in the same slide, the fingers being normally located at the forward extremities of the slots whereby as a slide is actuated by one rock-shaft, the fingers of another shaft engaging slots in the same slide may remain idle.

22. In a coin-delivery device, the combination with coin-receptacles, of longitudinally-slotted coin-ejecting slides adapted to enter said receptacles, a series of rock-shafts arranged one in front of another crosswise of the slides, the said shafts having fingers engaging the slots of the slides, the fingers of the shafts and the slots in the slides being so arranged that the fingers of a plurality of rock-shafts engage slots in the same slide, the fingers being normally located at the forward extremities of the slots whereby as a slide is actuated by one rock-shaft, the fingers of another shaft engaging slots in the same slide may remain idle, and a yielding-retained rock-shaft having fingers normally engaging the rear extremities of slots formed in all the slides.

23. In a change-maker, the combination with coin-receptacles, of coin-ejecting slides adapted to enter said receptacles, said slides being provided with stops, a number of rock-shafts arranged crosswise of the slides, the said shafts having fingers engaging the stops of the slides, the fingers of the shafts and the stops of the slides being so arranged that the fingers of a plurality of rock-shafts engage stops on the same slide, the fingers being located in the rear of and normally engaging the stops, whereby as a slide is actuated by one rock-shaft, the finger of another shaft engaging a stop on the same slide remains idle.

24. In a change-maker, the combination with coin-receptacles, of coin-ejecting slides adapted to enter said receptacles and provided with stops, a number of rock-shafts arranged crosswise of the slides, the said shafts having fingers engaging the stops of the slides, the fingers of the shafts and the stops of the slides being so arranged that the fingers of a plurality of rock-shafts engage stops on the same slide, the fingers being located in the rear of, and normally engaging the stops, whereby as the slide is actuated by one rock-shaft, the finger of another shaft engaging a stop on the same slide remains idle, and a yielding-retained rock-shaft having fingers located in front of, and normally engaging stops with which the slides are provided.

25. In a change-maker, or coin-delivering

device, the combination with a number of coin-receptacles, of a plurality of coin-ejecting slides adapted to enter said receptacles and provided with stops, one of said slides 5 having a plurality of stops, a number of rock-shafts having fingers located to the rear of and engaging the stops, one of said shafts having a plurality of fingers, the arrangement being such that one finger of the last-named shaft and one finger of one of the other 10 shafts engage distinct stops of the slide having a plurality of stops, whereby the last-named slide may be independently actuated by the finger of either shaft, the finger of the 15 other shaft in the meantime remaining idle.

26. In a change-maker or coin-delivering device, the combination with a number of coin-receptacles, of a plurality of coin-ejecting slides adapted to enter said receptacles 20 and provided with stops, one of said slides having a plurality of stops, a number of rock-shafts having fingers located in the rear of, and engaging the stops, one of said shafts having a plurality of fingers, the arrangement 25 being such that one finger of the last-named shaft and one or more fingers of the other shafts engage distinct stops of the slide having a plurality of stops, whereby the last-named slide may be independently actuated 30 by the stop-engaging finger of each shaft, the engaging finger of the other shaft or shafts in the meantime remaining idle, and a yielding-retained rock-shaft having fingers located in front of and normally engaging stops 35 on all the slides.

27. In a machine of the class described, the combination with a number of coin-receptacles, of a plurality of coin-ejecting slides adapted to enter said receptacles, a number 40 of rock-shafts having fingers adapted to engage the slides, one of said shafts having a

plurality of fingers, the arrangement being such that one finger of the last-named shaft and one finger of one of the other shafts engage the same slide, whereby the last-named 45 slide may be independently actuated by the finger of either shaft, the finger of the other shaft in the meantime remaining idle.

28. In a coin-delivering device, the combination with coin-receptacles, of coin-ejecting 50 slides provided with stops, rock-shafts each having fingers adapted when actuated to engage stops of certain slides and cause the latter to enter certain receptacles, and means independent of said fingers for automatically 55 retracting the slides, substantially as described.

29. In a coin-delivering device, the combination with coin-receptacles, of coin-ejecting 60 slides provided with stops, rock-shafts each having fingers adapted when actuated to engage shoulders of certain slides and cause the latter to enter certain receptacles, and a yielding-retained rock-shaft having fingers 65 engaging other shoulders of all of the slides for retracting the latter, substantially as described.

30. In a coin-delivering device, the combination with coin-receptacles, of longitudinally-slotted coin-ejecting slides, rock-shafts 70 each having fingers normally engaging the forward extremities of slots in certain of the slides, and a yielding-retained rock-shaft having fingers operatively engaging all of the slides to retract the latter, substantially 75 as described.

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

MICHAEL McANENY.

Witnesses:

ISHAM R. HOWZE,
EDITH HIMSWORTH.