

No. 810,508.

PATENTED JAN. 23, 1906.

D. PETERSON.  
MACHINE FOR CHANGING MONEY.

APPLICATION FILED JULY 14, 1905.

7 SHEETS—SHEET 1.

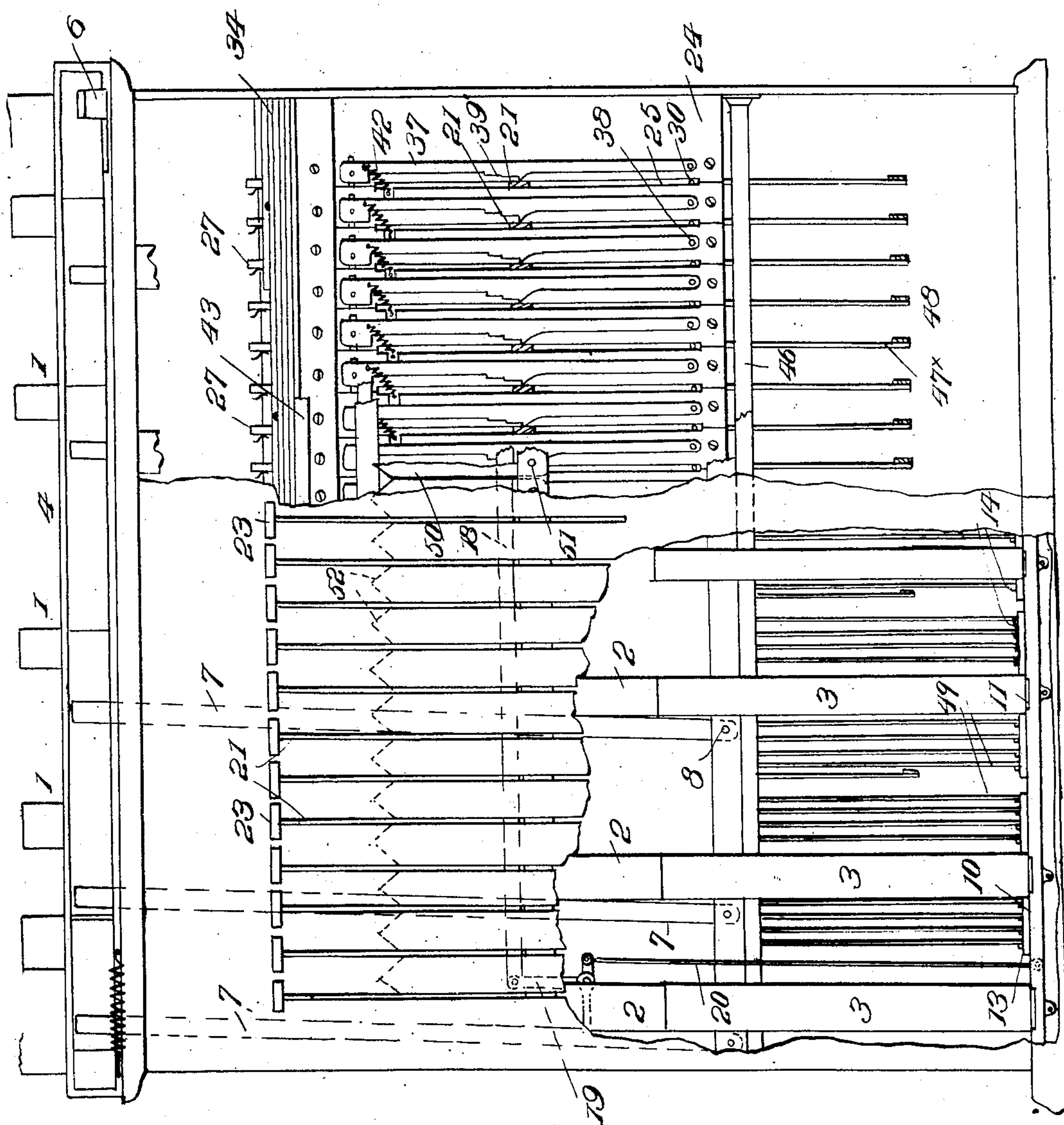


Fig. 1.

Witnesses

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By

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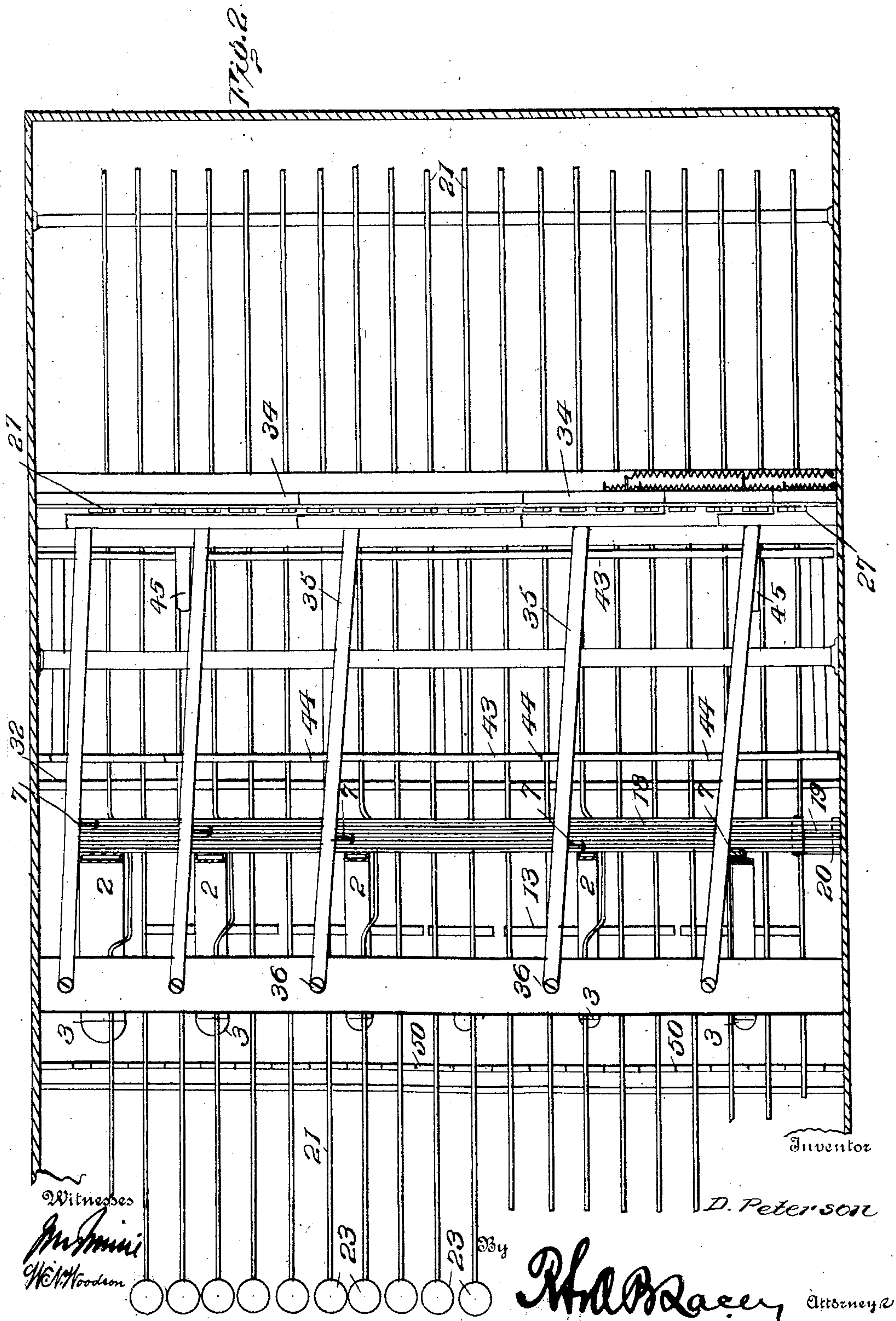
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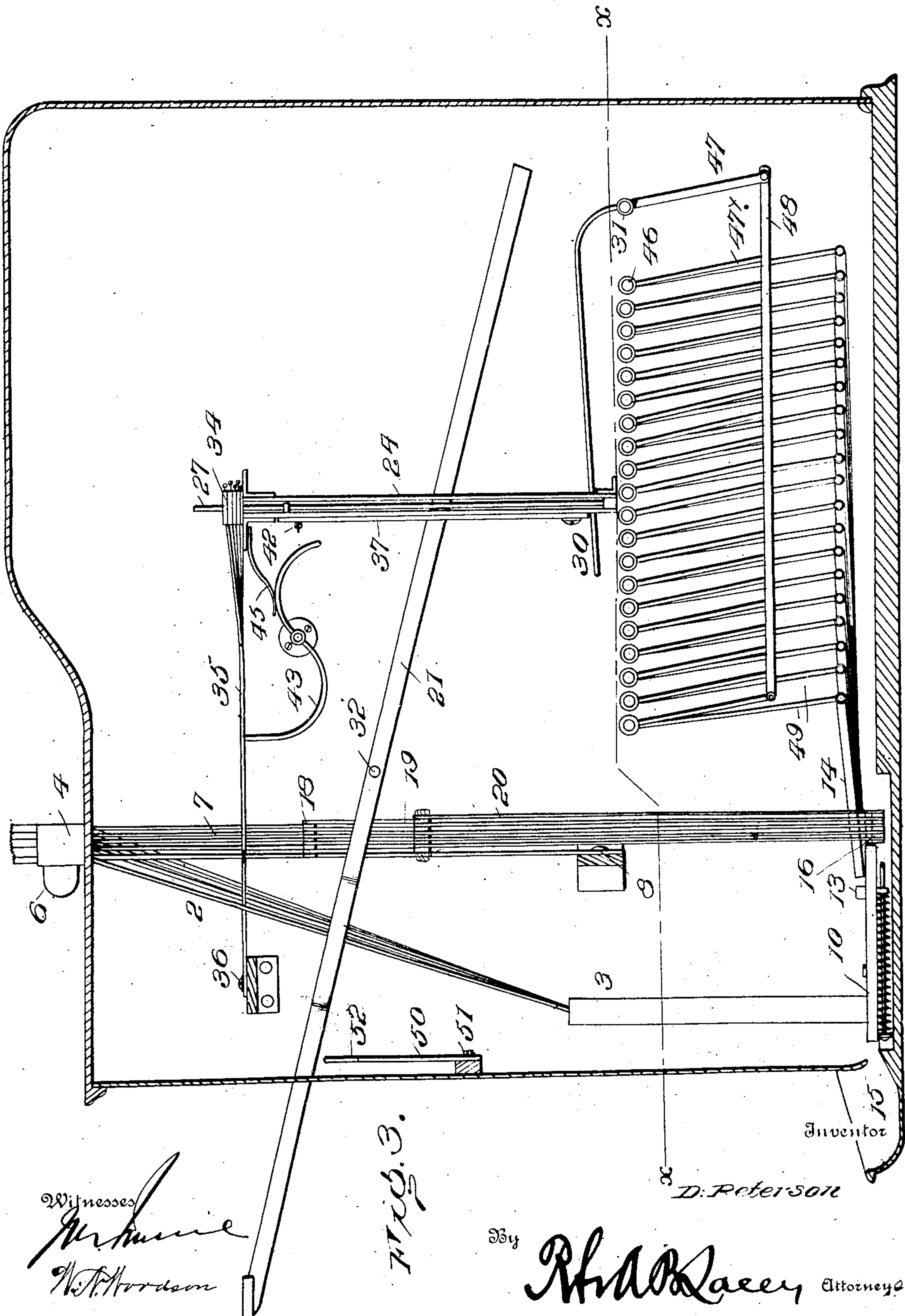
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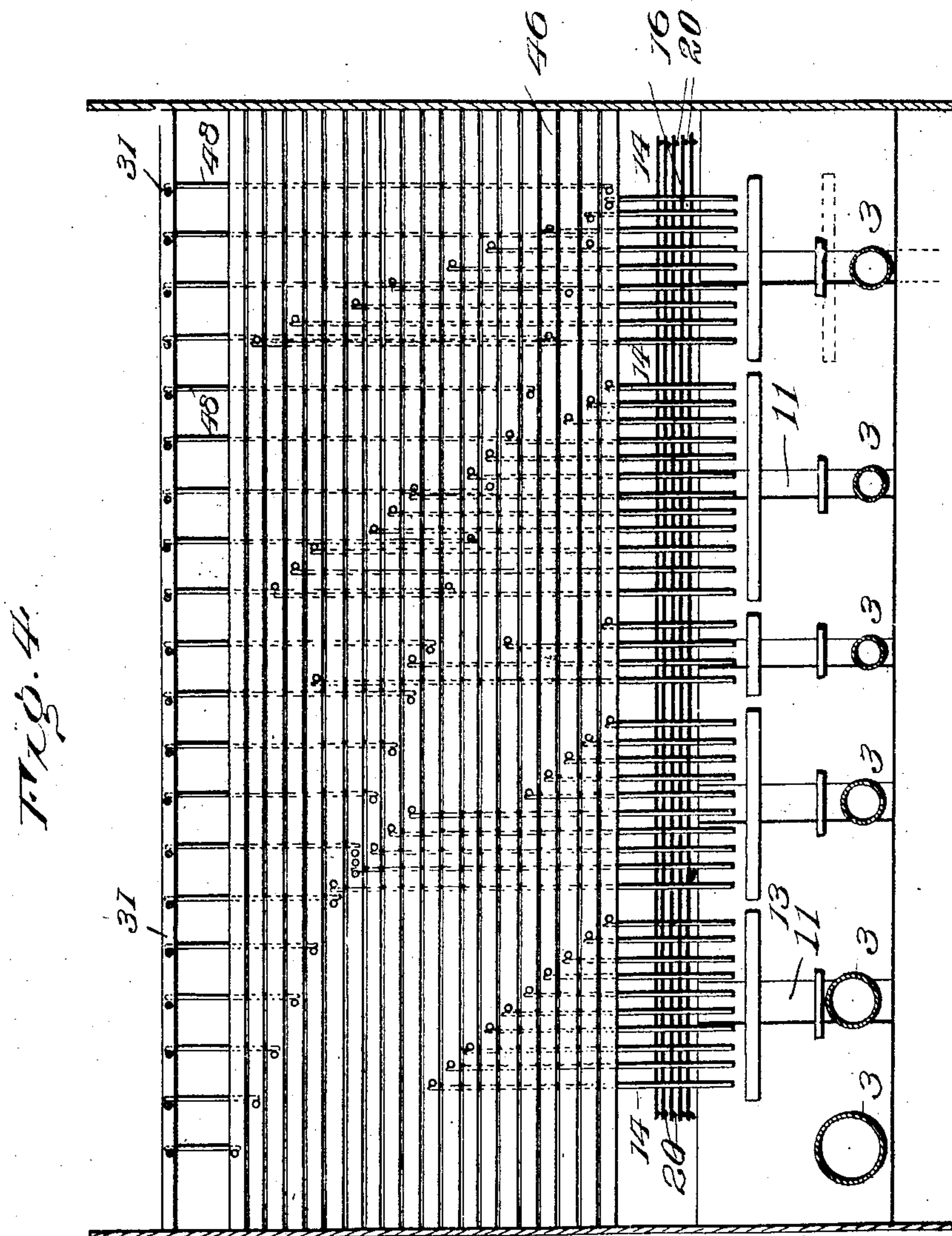
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7 SHEETS—SHEET 4.



Inventor

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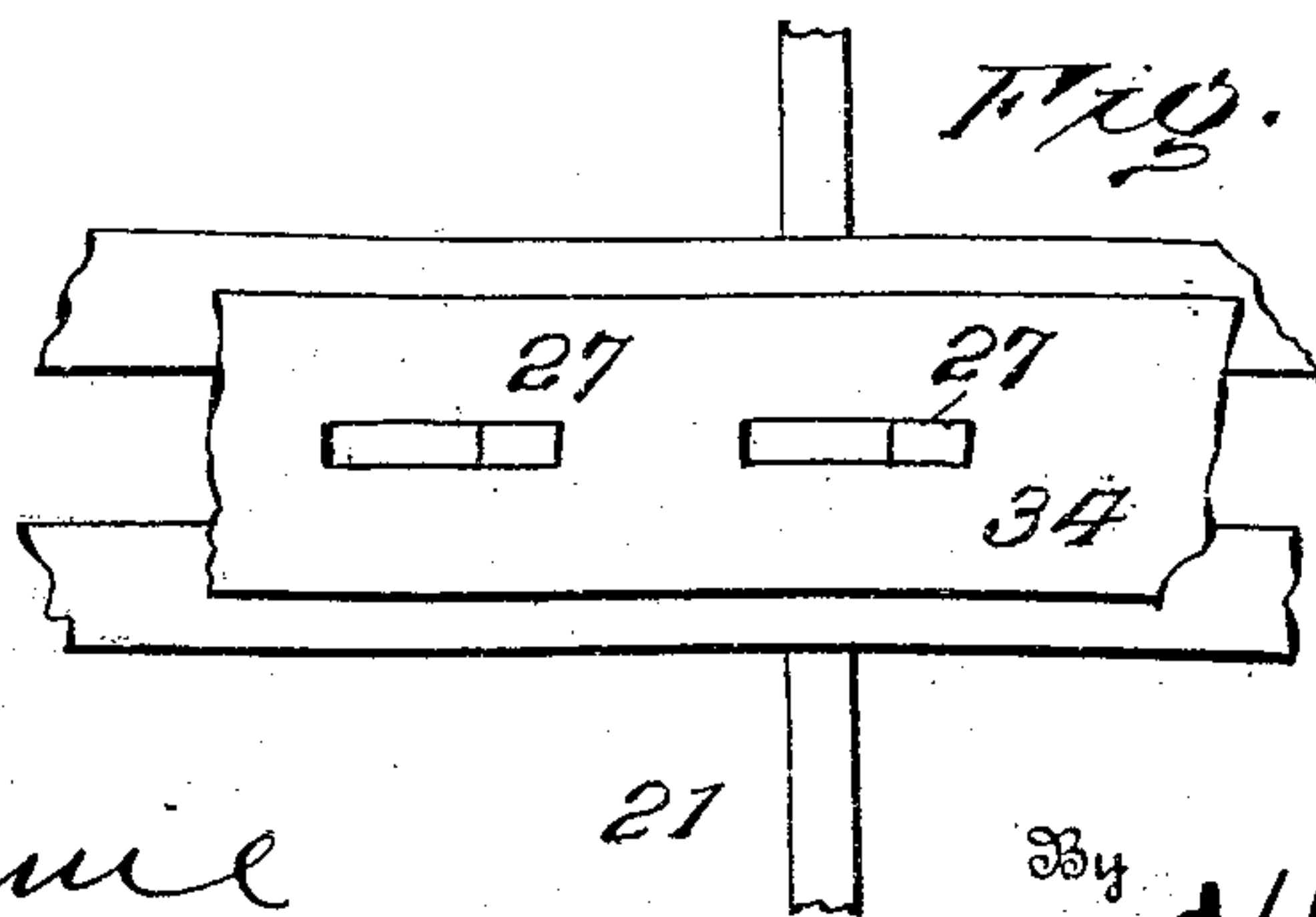
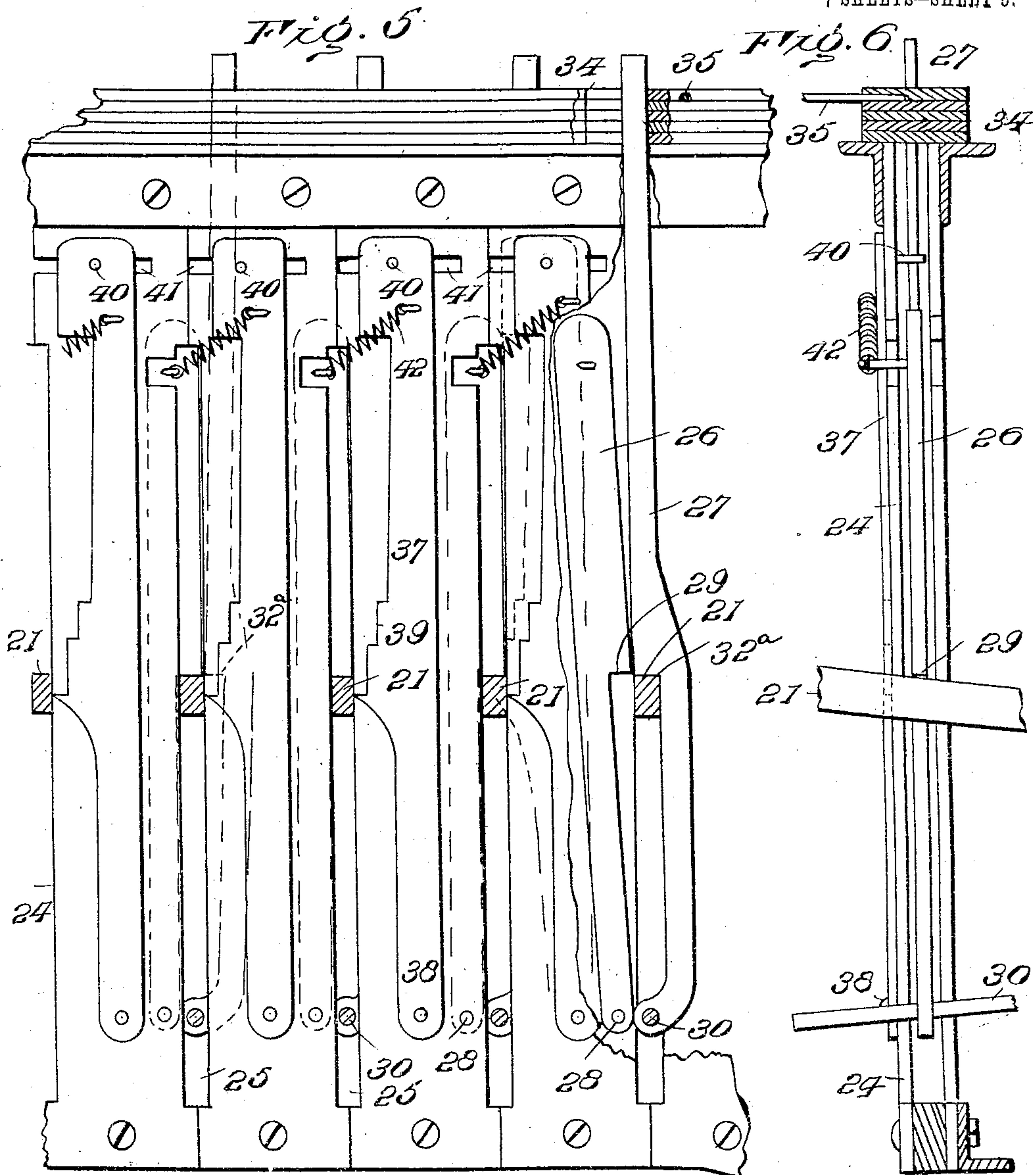
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7 SHEETS—SHEET 5.



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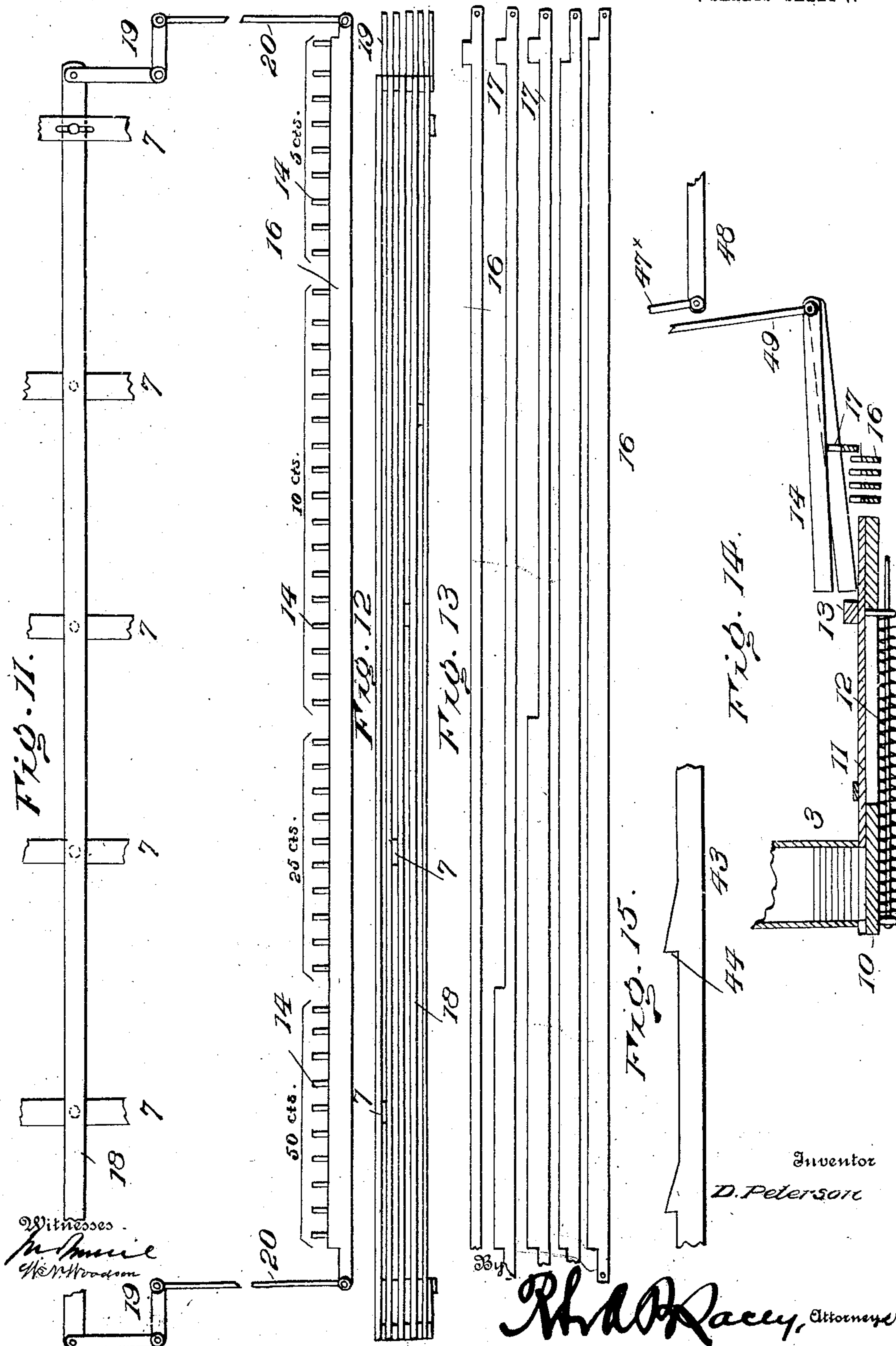
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7 SHEETS—SHEET 7.





# UNITED STATES PATENT OFFICE.

DANIEL PETERSON, OF LAMONT, OKLAHOMA TERRITORY.

## MACHINE FOR CHANGING MONEY.

No. 810,508.

Specification of Letters Patent.

Patented Jan. 23, 1906.

Application filed July 14, 1905. Serial No. 269,680.

*To all whom it may concern:*

Be it known that I, DANIEL PETERSON, a citizen of the United States, residing at Lamont, in the county of Grant, Territory of Oklahoma, have invented certain new and useful Improvements in Machines for Changing Money, of which the following is a specification.

This invention aims to devise a machine of novel formation for mechanically making change and which shall be of such construction that it is practically impossible to beat it and which facilitates business transactions in mercantile pursuits and reduces the chances of mistakes in making change.

In its organization the machine comprises a series of tubes for the reception of coin for making change, an ejector for each coin-tube to effect delivery of the change when the machine is actuated, a plurality of actuators for the coin-ejectors, selecting mechanisms adapted to be actuated by the coin deposited in the machine for throwing certain ejector-actuators out of action, thereby preventing delivery of change in excess of the value of the coin placed in the machine for operation thereof, setting mechanisms for adjusting the machine according to the amount of change required, locking mechanisms for preventing operation of the delivery mechanism over and above the value of the coin placed in the machine, and a guard to preclude operation of more than one key-lever at each operation of the machine.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment is shown in the accompanying drawings, in which—

Figure 1 is a front elevation, parts broken away. Fig. 2 is a plan view, the casing being shown in section. Fig. 3 is a side elevation, the casing being shown in section. Fig. 4 is a sectional view on the line *xx* of Fig. 3. Fig. 5 is a detail elevation of the lock-out mechanism. Fig. 6 is an end view of the same, parts in section. Fig. 7 is a detail plan view of Fig. 6. Fig. 8 is a perspective detail view of

the lever connections. Fig. 9 is a horizontal section of the coin-slide. Fig. 10 is a detail vertical section of the same. Fig. 11 is a front elevation of the train of levers shown in Fig. 8. Fig. 12 is a plan view of the same. Fig. 13 is a view of the group of selecting-levers. Fig. 14 is an enlarged detail view of the coin-slide and delivery mechanism. Fig. 15 is a detail view of the lock-bar.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

It is to be understood that the working parts of the machine are specifically housed, the cabinet-work being of any design, material, and finish. The coin-entrances 1 are conveniently positioned to admit of the coins being readily deposited therein, the same occupying an elevated position to admit of the coins passing to their respective coin-tubes by gravitative action through coin-chutes 2. There will be as many coin-entrances as there are coin-tubes 3 and according to the capacity of the machine and the number of different coins in general circulation. The machine disclosed herein is adapted for making change from a dollar to a dime in amounts a multiple of five. It is to be understood that with slight modifications the machine may be adapted for making change to the exact amount of a purchase in cents by the provision of a tube for receiving one-cent pieces. For all practical purposes a machine for making change in multiple of five will alone be manufactured. Between each coin-tube 3 and coin-entrances 1 is arranged the coin-chute 2, and at the juncture of the coin-entrance and coin-chute 2 is arranged a guide 4, in which operates a slide 5, the latter being provided at a convenient point with a finger-piece 6. The coin-entrances 1 are out of line with their respective chutes. Hence the coins deposited therein do not at once enter the coin-chutes and pass into the coin-tubes, but are received in the guide 4 and remain therein until the slide 5 is operated to move the coins to the respective coin-chutes. A selecting-lever 7 is provided for each coin-entrance and is pivoted at 8 to a cross-bar or other convenient support, and its upper end extends into the guide 4 and is arranged to extend into the path of the coin 9, so as to be actuated when moving the operated slide 5. When a coin of prescribed value is placed in the proper coin-entrance, it is received in the



guide 4 and occupies a position between a shoulder or projection of the slide 5 and the upper end of the selecting-lever 7, and upon moving the operating-slide to bring the coin in register with its chute the upper end of the selecting-lever is correspondingly moved, with the result that the ejector-actuators not required for operation are thrown out of action. This will be explained more fully hereinafter.

The coin-tubes 3 vary in diameter according to the different coins in circulation, and a space is provided between their lower ends and a support 10, corresponding to the thickness of the coin, so that only one may be delivered at a time. An ejector 11 is provided for each coin-tube and is of a thickness to insure delivery of one coin only at each actuation. The several coin-ejectors are mounted to receive a reciprocating movement and are held retracted by means of a spring 12. A cross-head 13 is located at the inner end of each ejector and extends in the path of a group of ejector-actuators 14, mounted so as to be thrown into and out of action. The ejectors when shot forward by their respective actuators pass beneath the respective coin-tubes and displace the bottom coins, which are delivered into a tray or suitable receptacle 15, conveniently positioned to admit of the change being readily accessible. When the ejectors are released by removing pressure from the operating-key, they are returned to normal position by means of the retracting-springs 12. A series of lifters 16 are arranged beneath the ejector-actuators 14 and are of such formation as to act upon a series of ejector-actuators so as to throw certain ones out of the path of the ejectors while permitting the remainder to occupy a position in the path of the ejector to actuate the same when depressing the selected key. Each of the lifters consists of a bar, and the several bars are arranged side by side in the same horizontal plane and their upper edges are cut away, as shown at 17, to provide clearance for the actuators that are to remain in operative position after certain other actuators are thrown out of position. Each lifter 16 is connected with a selecting-lever 7, so as to be operated thereby when moved by the operating-slide 5 and the coin interposed between said slide and the lever.

For connecting a lifter with the selecting-lever 7 the following means have been devised, the same consisting of a bar 18, bell-crank levers 19, and connecting rods or bars 20. The bar 18 is parallel with the lifter 16 and is connected with the vertical arms of the bell-cranks 19, whereas the horizontal arms of said bell-cranks are connected with the lifter by means of the parts 20. As a selecting-lever 7 is moved the bell-crank levers 19 are rocked, thereby causing the lifter 16 to rise and to come in contact with one or more

of the actuators 14 and move the same, so as to clear the ejectors and prevent operation of those desired to remain inactive. Each lifter 16 has a part 17 cut away, so as to leave certain of the actuators 14 in operative position and to throw certain of said actuators out of operation or the path of the cross-head 13 of the ejectors not required to be operated.

A series of levers 21 are pivotally mounted intermediate of their ends at 32, and one end of each projects from the housing or cabinet and is provided with a button 23, to be pressed upon and bearing a number corresponding to the amount of the sale, which in the present instance is a multiple of five. In the present instance there are twenty levers 21, one being provided for each amount from five up to and inclusive of one dollar, and these levers are normally locked, so as to prevent movement except upon placing of a coin in the machine in the movement of the operated slide 5 to effect a release thereof. Within the housing or cabinet and at some distance from the selecting-lever 7 is arranged a frame 24, having a plurality of vertical slots 25, in which is adapted to operate the respective levers 21. The frame 24 may be of any construction, and, as shown, comprises spaced plates and upper and lower supporting-bars. A series of levers 26 and 27 are located in the space formed between the plates of the frame 24, the levers 26 being arranged upon one side of the respective levers 21 and the levers 27 upon the opposite side of said levers 21. The levers 26 are pivoted at their lower ends at 28 to the frame 24, and each is provided at a point between its ends with a shoulder 29 to normally engage over the cooperating lever 21 and prevent vertical movement thereof at its inner end. Each of the levers 27 is mounted upon a horizontal arm 30 of an elbow-lever 31 and is adapted to move vertically with said arm and to turn thereon and has a shoulder 32<sup>a</sup>, corresponding with the shoulder 29 of the lever 26 and normally in horizontal alinement therewith, so as to engage over the lever 21 when the lever 26 is moved aside. Each of the levers 27 projects above the levers 26 and frame 24 and passes through registering slot 33 in a series of slides 34, mounted above the frame 24. When a lever 27 is moved, it effects a corresponding movement of the cooperating lever 26 and disengages the latter from the lever 21, while at the same time permitting engagement of the lever 27 therewith. There is a slide 34 for each lifter 16 and selecting-lever 7. Each slide 34 is arranged to operate a certain series of levers 27 and may be properly designated as a "setting-slide." A setting-lever 35 is provided for each setting-slide and selecting-lever, the setting-levers 35 being approximately in the same horizontal plane and pivotally supported near their front ends, as shown at 36, and having their inner or rear



ends suitably connected with the respective setting-slides.

The setting-levers 35 extend across the path of the respective selecting-levers 7, so as to be actuated thereby when operating the slide 5. Other levers 37 are pivoted at their lower ends 38 to the frame 24 and are located exterior to said frame and are provided intermediate of their ends with a series of shoulders 39 to engage with the cooperating levers 21 and prevent their backward movement after being started until moved to the limit of their stroke or when the lock mechanism of the setting-levers 35 is tripped and permits the working parts to return to normal position. A pin 40 projects from the upper end of each lever 37 and extends through a slot 41 of the frame into the path of the cooperating lever 27, thereby permitting the latter upon returning to a normal position to trip the lever 37 and move it to a given position and withdraw the shoulders or stops 39 out of the path of the lever 21. A spring 42 connects companion levers 37 and 26. Hence upon return of the levers 27 and 37 to normal position the lever 26 is at the same time caused to assume a normal position by the action of the spring 42. It is to be understood that a group of levers 26, 27, and 37 is provided for each lever 21. After a coin has been deposited in a coin-entrance 1 and the operating-slide 5 actuated to move the selecting and setting mechanisms it is necessary that said mechanisms be maintained in the adjusted position until the required lever 21 has been operated. This operation is effected automatically by means of a lock 43, which engages with the operated setting-lever 35 and holds it in the moved position. The lock 43, as shown, consists of a third plate extending transversely of the machine and having its upturned edge formed with catches 44, arranged about opposite to the respective setting-levers 35. One edge of the catches 44 is beveled, whereas the opposite edge is abrupt to form a shoulder against which the operated selecting-lever 35 abuts. The opposite edge portion of the plate 43 is reversely curved and extends in the path of the inner ends of the levers 21, so as to be engaged thereby, whereby the operated lever 21 upon reaching the limit of its movement comes in contact with the lock 43 and trips the same to effect a release of the setting-lever 35, held thereby. A spring 45 exerts a pressure upon the lock 43 to normally hold it in given position.

The selecting mechanism embodies a series of rock-shafts 46, which are disposed in parallel relation, each having connection with the vertical arm 47 of an elbow-lever 31 by means of an arm 47' and a link 48. Each rock-shaft 46 has connection with certain ejector-actuators 14 by means of arms 49. Upon rocking in one of the shafts 46 the se-

ries of actuators 14, connected therewith are moved to effect delivery of the desired change by operating one or more of the ejectors 11.

A machine embodying the invention has the coin-tubes filled with coin of the different denominate values, such as five-cent pieces, dimes, quarters, and half-dollars. Each tube contains coin of like value. A purchase having been made amounting to ten cents and a half-dollar being tendered in payment, the merchant or operator places the fifty-cent piece in the coin-entrance corresponding to the tube receiving one-half dollars and the operated slide 5 is moved, thereby actuating the setting-lever 35, corresponding to the half-dollar position, and moving the corresponding setting-slide 34, which becomes locked by the catch 44 of the lock device 43. The movement of the setting-slide 34, corresponding to the half-dollar, causes a corresponding movement of the levers 27, representing a value of fifty cents or less, thereby releasing the levers 21 from fifty cents to five cents or less. Upon depressing the lever 21 corresponding to the sale made—that is, ten cents—forty cents change is delivered, because the rock-shaft operatively connected with the lever 21 representing the ten-cent sale is the only one actuated, the ejectors representing twenty-five cents, ten cents, and five cents being operated. Any other actuators that may be operated are thrown out of action by the lifter elevated by the setting-lever actuated by the fifty-cent piece. On the other hand, should a sale amount to fifty cents and a half-dollar be rendered in payment and deposited in the fifty-cent coin-entrance and the slide 5 operated the same levers 27 will be moved; but upon pressing downward upon the fifty-cent key 21 no change will be delivered, because the actuators 14, operated by the movement of the fifty-cent lever, will clear the coin-ejectors. Hence no delivery will be effected. As a further illustration, suppose the amount of the purchase is five cents and one dollar be given in payment. This coin is placed in the one-dollar coin-entrance and the slide 5 operated so as to cause an elevation of the lifter to throw the ejector-actuators corresponding to the five-cent ejector out of operation, thereby permitting ninety-five cents change to be delivered upon pressing down upon the five-cent key, it being understood that all of the ejectors, with the exception of the five-cent ejector, are operated upon depressing the key corresponding to the amount of the purchase.

The operating-levers 21 are divided in groups, and a guard is provided for each group, said guard consisting of a series of movable elements which are spaced apart a distance which in the aggregate corresponds to the width of any one of the levers, said elements being crowded upon depressing the selecting-lever 21, thereby preventing any



other lever of the group being depressed. The elements 50 consist of plates pivoted at their lower ends 51 to a support and having their upper ends oppositely beveled, as shown at 52, to form flaring spaces to admit of the selecting-lever 21 passing between adjacent members 50 of the guard upon actuating the said lever. When the outer end of a lever 21 has been depressed and passes between adjacent members 50 of the guard, the members at each side of the lever thus depressed are crowded together, thereby preventing the depression of any other lever of the group released by operation of the selected setting-lever 35.

Having thus described the invention, what is claimed as new is—

1. In a machine for changing money, the combination of a series of coin-tubes, coin-delivery mechanism comprising a series of ejectors and a corresponding series of actuators therefor, coin-entrances, selecting and setting mechanisms adapted to be actuated by the coin deposited in a coin-entrance to effect a release of the operating-levers and to throw the required coin-ejector mechanism into operative position, a series of operating-levers operatively connected with the ejecting mechanism to effect delivery of the required amount of change, and a guard to prevent operation of more than one lever at each actuation of the machine.

2. In a machine for changing money, the combination of a series of coin-tubes, means for effecting a delivery of coins from said tubes and comprising a series of ejectors and corresponding actuators, a selecting mechanism for throwing certain of the ejector-actuators out of operation and adapted to be controlled by a deposited coin and a setting mechanism for effecting a release of certain ejector-actuators, and key-operated levers adapted to be released by said setting mechanism.

3. In combination, a series of coin-tubes, cooperating coin-ejectors, actuators therefor, operating means for the actuators, and a selecting mechanism comprising a plurality of members adapted to be independently operated through the instrumentality of a deposited coin, whereby certain actuators are thrown out of operation.

4. In combination, a plurality of coin-tubes, cooperating coin-ejectors, ejector-actuators, operating means for the latter, a selecting mechanism comprising a series of independent operable elements, a series of coin-entrances, and a slide common to all of the coin-entrances and adapted to receive operating elements of said selecting mechanism, whereby any one of the elements of a selecting mechanism may be actuated by a determinate coin deposited in the machine so as to throw certain of the ejector-actuators out of operation.

5. In combination, a series of coin-tubes, cooperating ejectors, actuating means for said ejectors, a setting mechanism adapted to be operated by means of a deposited coin, a series of locking-levers normally preventing operation of the actuating means, and a corresponding series of cooperating levers adapted to be actuated by the said mechanism for throwing the coin-ejector-actuating means into operative position.

6. In combination, a series of coin-tubes, coin-ejectors therefor, actuating means for said ejectors, a series of setting-slides, means for moving a setting-slide through the intervention of a coin deposited in the machine, a series of key-operated levers, means for normally preventing operation of said levers, other levers connected in groups with the respective setting-slides and adapted to effect a release of certain of the key-operated levers, and connecting means between the coin-ejector-actuating means and said levers operated by means of the setting-slides.

7. In combination, a series of coin-tubes, coin-ejectors therefor, actuating means for said ejectors, a series of setting-slides, means for moving a setting-slide through the intervention of a coin deposited in the machine, a series of key-operated levers, means for normally preventing operation of said levers, other levers connected in groups with the respective setting-slides and adapted to effect a release of certain of the key-operated levers, and connecting means between the coin-ejector-actuating means and said levers operated by means of the setting-slides, and means for preventing return of a key-operated lever after being initially moved until it has completed its stroke in the operation of the machine.

8. In combination, coin-delivery mechanism, actuating means therefor, selecting means for throwing certain of the ejector-actuating means out of operation, a setting mechanism to effect a release of certain parts of the ejector-actuating means, for certain of the key-operated levers, and connecting means between the key-operated levers and the ejector-actuating means.

9. In combination, coin-delivery mechanism, actuating means therefor comprising a plurality of elements, a selecting mechanism adapted to throw certain parts of the actuating means out of operation, a series of key-operated levers, locking means therefor, a setting mechanism for throwing the locking means of certain key-operated levers out of action, and means for establishing communication between a certain group of key-operated levers and a corresponding part of the delivery-actuating means.

10. In combination, a series of coin-tubes, cooperating ejectors, a series of ejector-actuators, a selecting mechanism for throwing certain ejector-actuators out of operation, a



series of rock-shafts each having operative connection with certain ejector-actuators to effect delivery of a given amount of change, a setting mechanism, a series of key-operated levers, locking means therefor adapted to be actuated by the setting mechanism to effect a release of certain key-operated levers, and connecting means between the key-operated levers and the rock-shafts thrown into operative position by the setting mechanism simultaneously with the release of the key-operated levers corresponding to the value of the coin placed in the machine.

11. In combination, a series of coin-tubes, ejectors, ejector-actuators, a selecting mechanism for throwing certain of the actuators out of operation, a series of rock-shafts having operative connection with certain ejector-actuators, a setting mechanism comprising a series of slides, a series of key-operated levers, locking-levers for the key-operated levers, releasing-levers adapted to effect disengagement of the locking-levers from the key-operated levers and themselves to make engagement therewith and adapted to be operated by the said setting-slides, and connect-

ing means between the said rock-shafts and the releasing-levers for transmitting motion from a key-operated lever to a rock-shaft and the series of ejector-actuators connected therewith.

12. In combination, coin-tubes, coin-ejectors, actuators therefor, selecting mechanism for throwing certain of the actuators out of operation, rock-shafts having certain actuators connected therewith, a selecting mechanism comprising a series of slides, key-operated levers, locking-levers therefor, releasing-levers adapted to be actuated in groups by the said setting-slides, a series of elbow-levers operatively connected with the respective rock-shafts and supporting the respective releasing-levers, and locking means for the key-operated levers to prevent their return after being initially operated until moved to the limit of their stroke.

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

DANIEL PETERSON. [L. s.]

Witnesses:

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