

No. 703,174.

Patented June 24, 1902.

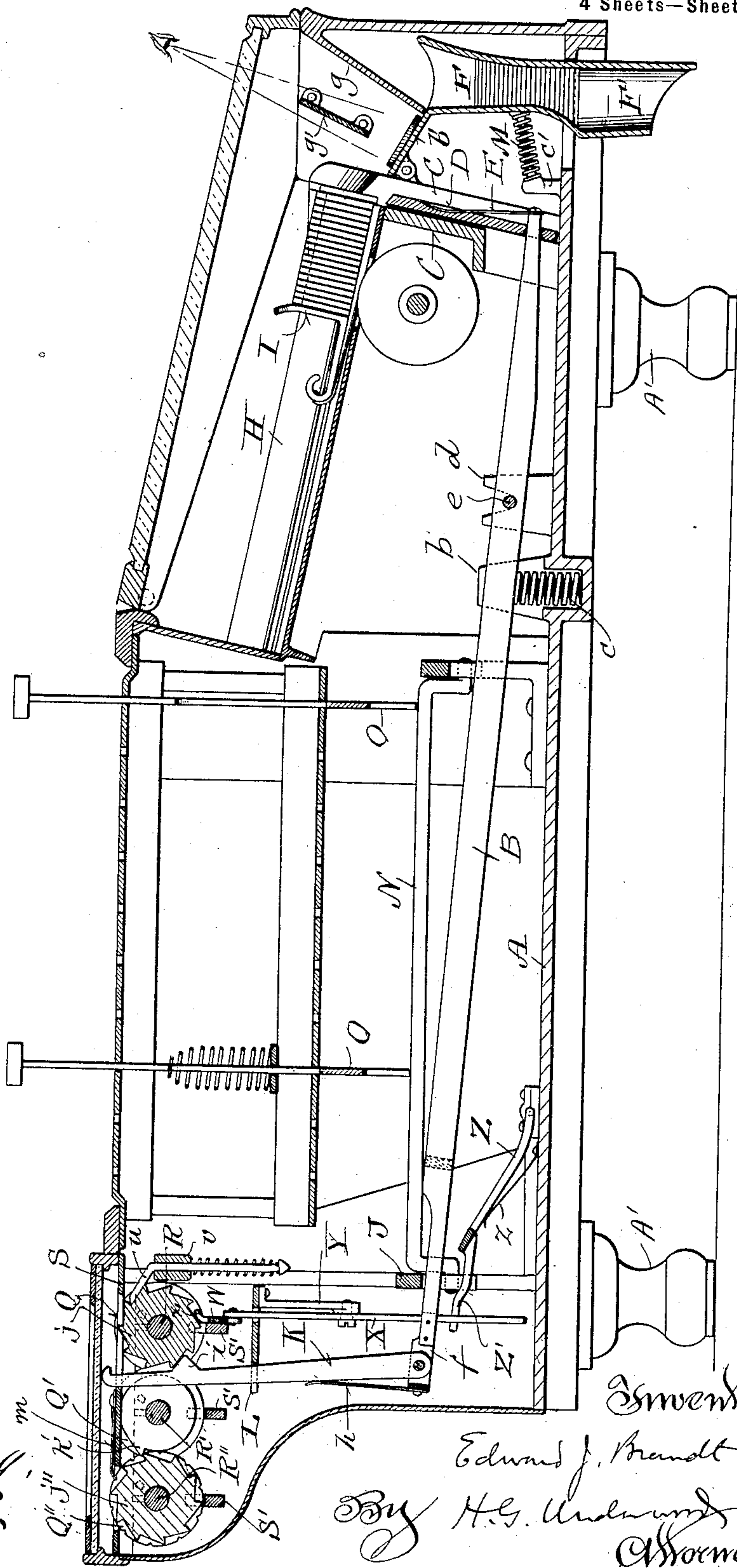
E. J. BRANDT.  
COIN DELIVERY MACHINE.

(Application filed Aug. 28, 1901.)

(No Model.)

4 Sheets—Sheet 1.

*Fig. 1.*



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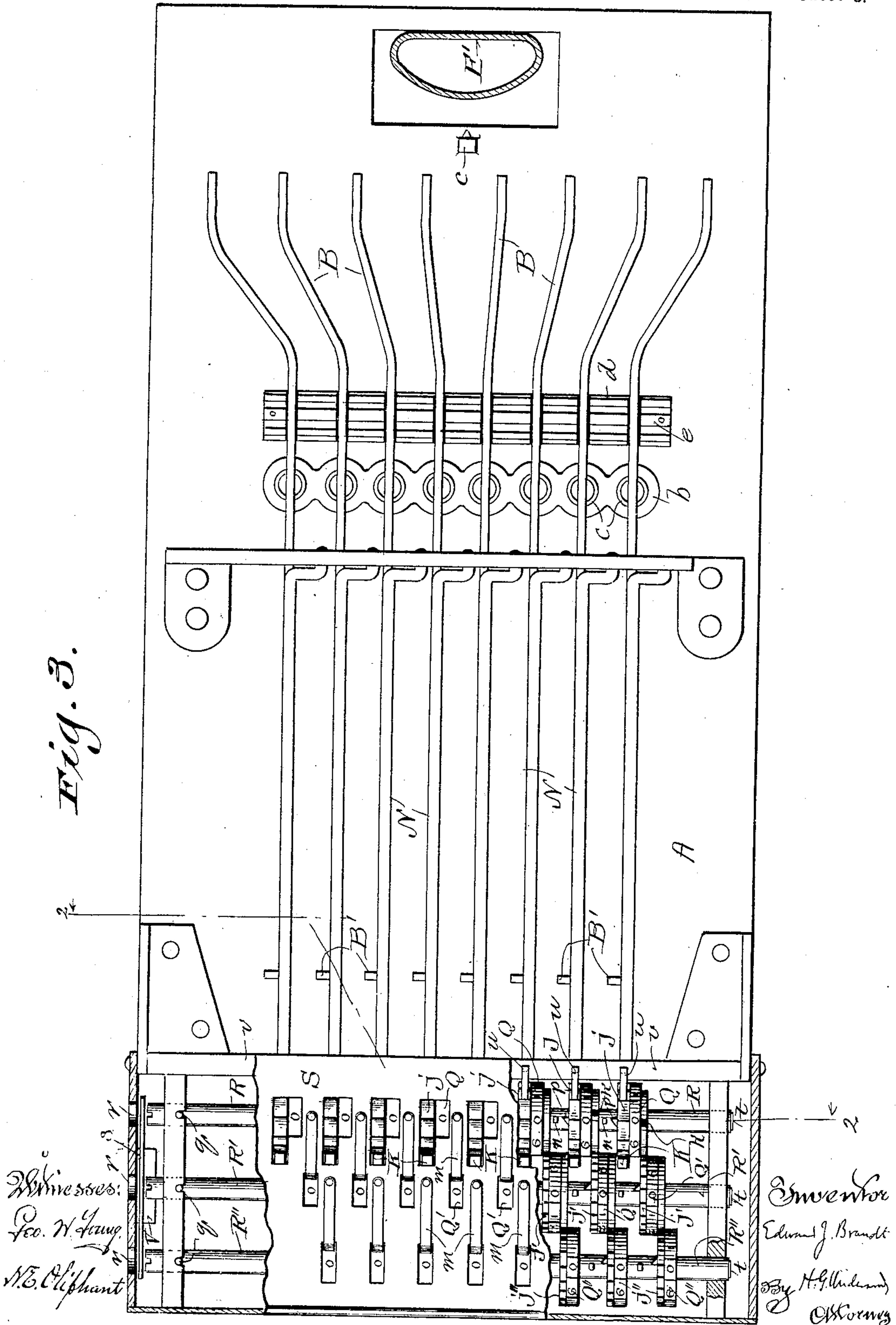


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Fig. 3.





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4 Sheets—Sheet 4.

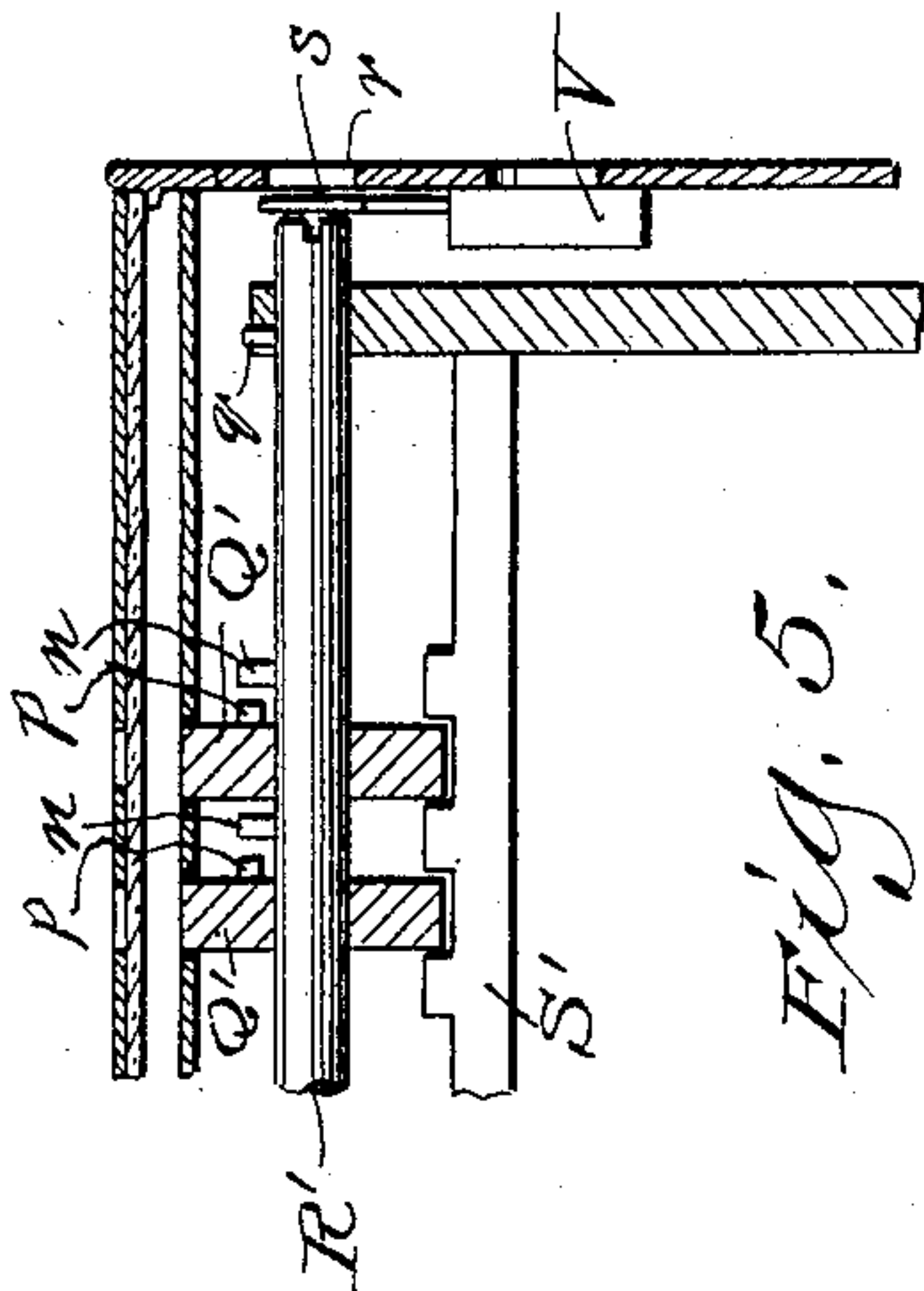


Fig. 5.

Fig. 6.

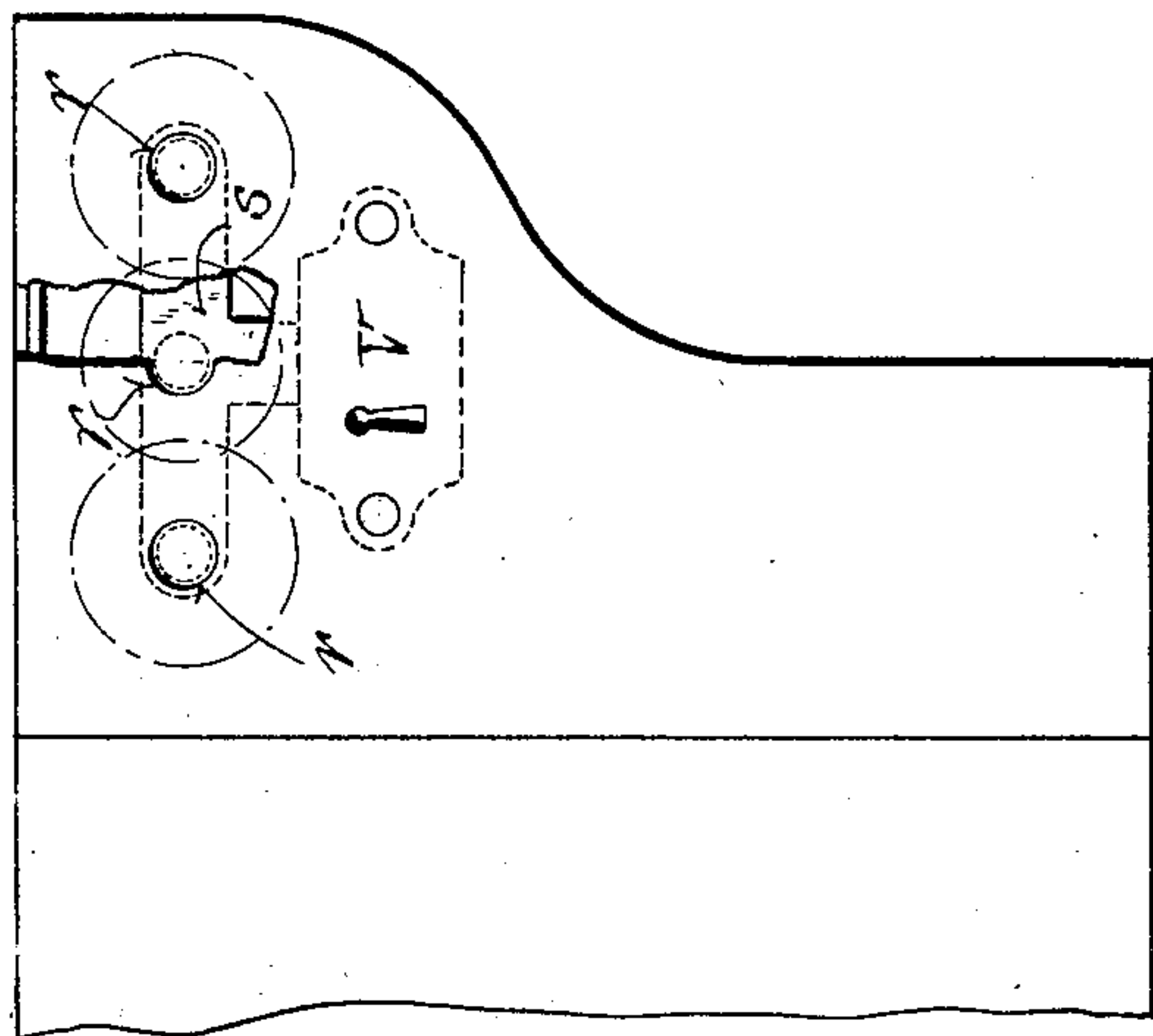
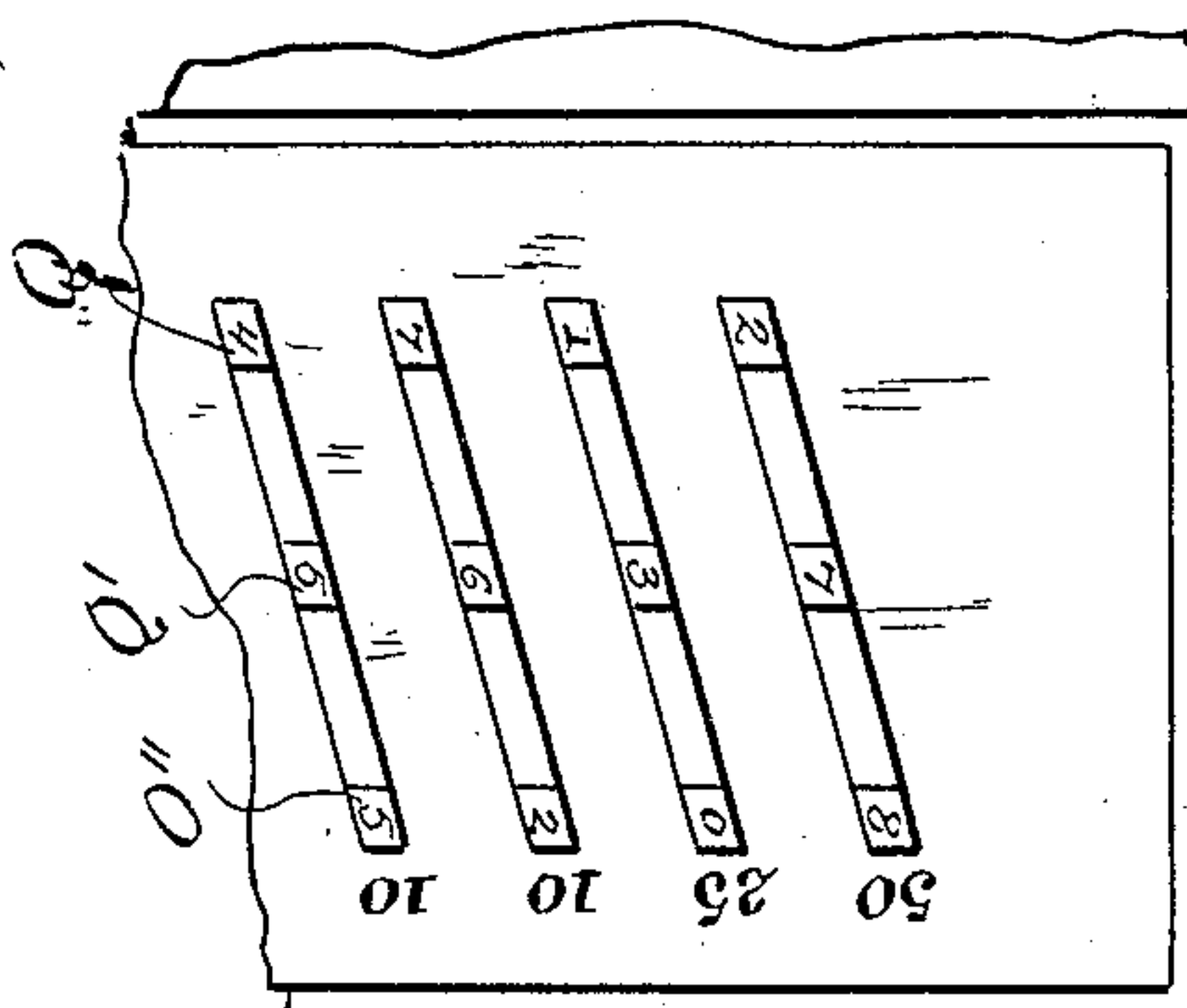


Fig. 4.

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# UNITED STATES PATENT OFFICE.

EDWARD J. BRANDT, OF WATERTOWN, WISCONSIN.

## COIN-DELIVERY MACHINE.

SPECIFICATION forming part of Letters Patent No. 703,174, dated June 24, 1902.

Application filed August 28, 1901. Serial No. 73,577. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD J. BRANDT, a citizen of the United States, and a resident of Watertown, in the county of Jefferson and State of Wisconsin, have invented certain new and useful Improvements in Coin-Delivery Machines; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to improve the detail of coin-delivery machines similar in species to what is disclosed in my United States Patent No. 658,828, October 2, 1900, said invention consisting in what is hereinafter particularly set forth with reference to the accompanying drawings and subsequently claimed.

Figure 1 of the drawings represents a vertical longitudinal section of my improved coin-delivery machine; Fig. 2, a transverse sectional view of the same, indicated by lines 2 2 in the third figure; Fig. 3, a plan view of the machine in horizontal section at different elevations, parts being broken; Fig. 4, a side elevation of a portion of said machine; Fig. 5, a detail sectional view of what is shown in the fourth figure; and Fig. 6, a plan view of another portion of the aforesaid machine.

Referring by letter to the drawings, A indicates the rectangular cast-metal base-plate that constitutes part of the machine-casing, this plate being mounted on legs A' and provided with a transverse cross-kerfed socket-rib *b*, as well as a transverse cross-kerfed and longitudinally-channeled rib *d*, that forms a seat for a fulcrum-rod *e*, extending through levers B, impinging spiral springs *c* in the sockets of the former rib, said lever being arranged in the cross-kerfs of both ribs. Made fast on plate A, forward of said ribs thereon, are end stilts of a plate C, having front vertical recesses at intervals thereof. Each plate-recess is engaged by a pusher D, having a lower eye, through which extends the forward end of a lever B, and a leaf-spring E in connection with the lever bears against the pusher in a recess of same. The upper edge of plate C is notched at intervals, and each notch is intercepted by a guide-recess for a pusher. The notches are of variable dimensions in proportion to the diame-

ters of arbitrarily-selected coins, and each notch is beveled to present a thin rear edge. Each plate-notch is the outlet of a rearwardly-inclined chute H, the bottom of which is below said notch, and said plate serves as a temporary stop for coin arranged in the chute forward of an automatic follower I, such as is common in that species of machine to which my improvements relate.

Mounted in the machine-casing are rockers N, that tilt against lateral lugs B' of the levers aforesaid. Plates O set edgewise in the machine have feet that bear on the rockers, and spring-controlled push-shanks of the plates are provided with upper index-buttons corresponding to various fractional divisions of an arbitrarily-selected unit of currency.

The construction, relative arrangement, and operation of parts thus far specified is similar to what is disclosed in the patent above noted, the novel features of the machine being hereinafter described.

A frame-bar J of the machine is arranged over the rear portions of levers B to limit upward movement of same, and in pivotal connection with a yoke *f*, fast to each of said levers back of said bar, is an upwardly-extended taper-shank pawl K, guided in a notch of a horizontal plate L, fast at its ends to standards of the machine-frame. Each pawl is opposed by a leaf-spring *h*, fast to the adjacent lever-yoke, and a triangular lug *i* extends forward from said pawl above guide-plate L, this lug being normally in mesh with ratchet-wheel *j*, rigid with a units-disk Q of an automatic register mechanism. A pallet *k* of the disk acts on a ratchet-wheel *j'* of a tens-disk Q' of the register mechanism, and a pallet *k'* of the latter disk acts on a ratchet-wheel *j''* of a hundredths-disk Q'' of said mechanism, the peripheral spaces of all the disks being marked with characters of the Arabic notation. The units, tens, and hundredths disks are in echelon, loose on parallel arbors R R' R'', having their bearings in the machine-frame, and said disks engage slots in a horizontal plate S of said frame under glass constituting part of the top of the machine-casing, said plate being provided with spring-clicks *m*, that engage peripheral notches of the tens and hundredths disks. Each series of disks engage recesses in a bar



S' of the machine-frame, the slotted plate S and the bars serving to prevent play of said disks longitudinally of their arbors.

Each of the aforesaid arbors is provided with a row of cogs *n*, that are normally clear of lateral teeth *p* of the ratchet-wheels rigid with the counting-disks of the register mechanism. Each arbor is also provided with a pin *q*, that normally engages a notch in the machine-frame to hold said arbor against rotary movement, the adjacent end of the arbor being longitudinally kerfed and in line with an aperture *r* in the machine-casing. A cross-head bolt *s* of a lock V is normally shot between the kerfed ends of the aforesaid arbors and the casing-apertures in line therewith, and the other ends of the arbors are opposed by leaf-springs *t*, made fast to the machine-frame. By retracting the bolt of the lock and using a tool similar to an ordinary screw-driver through an aforesaid casing-aperture an arbor alined with said aperture can be pushed against resistance of the opposing spring *t* to have its pin clear the corresponding notch. This being done, all the cogs *n* of the arbor will be in position to operate against the lateral teeth *p* of ratchet-wheels rigid with the counting-disks loose on said arbor, and by one full turn of this arbor all of the disks thereon are simultaneously adjusted to expose the peripheral character "0" of each.

Vertically-sliding spring-controlled detents *u*, guided in apertures of a frame-bar *v* of the machine, engage the ratchet-wheels rigid with the units-disk of the register mechanism to prevent back-throw of said disks operated upon by the pawls K aforesaid, and the bar S', corresponding to said units-disk Q, is provided with pins *w*, engaging longitudinal slots of a slide-plate W, having ears *x*, that are brought into engagement with said ratchet-wheels by movement of said plate to prevent the aforesaid disks from overrunning.

In pivotal connection with plate W is the upper end of a lever X, fulcrumed on a bracket Y, depending from guide-plate L central of the same, the lower end of the lever being provided with a cam-groove *y*, engaged by an arm Z' of a rocker Z, having the cranked ends thereof in bearings on the machine-base and opposed by leaf-springs *z*, the strength of these springs being sufficient to support said rocker in normal position under the levers B aforesaid. Operation of any one of levers B causes the pawl K therewith to engage an opposing ratchet-wheel *j*, this wheel and counting-disk Q therewith being moved one space. Downward movement of the pawl brings its lug *i* into moving contact with guide-plate L, and thus said pawl is tilted against resistance of its spring *h* to clear the ratchet-wheel with which it has been engaged. The pawl-actuating lever acts on rocker Z to cause a shift of slide-plate W, whereby the ears *y* of this plate are brought in position to prevent overrunning of any of the adjacent disks.

Simultaneous with the operations aforesaid the pusher D, in connection with the tilted lever, operates against a coin in its path to dislodge said coin from the adjacent chute to finally escape from the machine.

From the foregoing it will be readily understood that the delivery of each coin is tallied by the registering mechanism above specified, and at any time the amount of fractional currency paid from the machine can be readily determined.

The coin-delivery chute F of the machine is preferably made with an upper inclined flange *b'*, hinged to plate C, and a spiral spring M is arranged between the back of the chute and a stud *c'* on the machine-base to normally hold the flange of said chute against the lower edge of an inclined plate *g*, arranged transversely of the machine. Back of plate *g* is a baffle-plate *g'* transversely of the machine. The delivery-chute F being in normal position, coins dislodged from chutes H strike baffle-plate *g'*, and being thereby deflected automatically arrange themselves under the same on the inclined flange *b'* of said delivery-chute. Hence opportunity is afforded for auditing payments from the machine without handling the coin. The baffle-plate being set in the line of vision under the transparent front cover portion G of the machine it does not obstruct the vision, and the sum expressed by a coin or combination of coin temporarily at rest under said plate can be read without adding the same, as a word is read without spelling. Delivery-chute F is swung back against resistance of its spring M to permit escape of coin from the machine, and the spout end F' of said chute may be made with especial reference to discharging the coin into an envelop.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The coin-pusher levers, pawls in connection with said levers, register mechanisms having units-disk ratchet-wheels thereof arranged to be actuated by the pawls, and a bar arranged over said levers to limit upward movement of same.

2. The coin-pusher levers, pawls in connection with said levers, register mechanisms having units-disk ratchet-wheels thereof arranged to be actuated by the pawls, and detents engageable with said ratchet-wheels, pawl-lugs normally engaging the ratchet-wheels, and means whereby there is disengagement of a pawl-lug from a ratchet-wheel when a corresponding lever is actuated in one direction of its movement.

3. The coin-pusher levers, taper-shank spring-controlled pawls in connection with said levers and provided with triangular lugs, a notched plate engaged by the pawl-shanks and arranged in the paths of their lugs, and register mechanisms having units-disk ratchet-wheels thereof arranged to be actuated by the pawls.



4. The coin-pusher levers, pawls in connection with said levers, registering mechanisms having units-disks ratchet-wheels thereof arranged to be actuated by the pawls, an apertured bar, and spring-controlled ratchet-wheel detents guided in the bar-apertures.

5. The coin-pusher levers, pawls in connection with said levers, register mechanisms having units-disks ratchet-wheels thereof arranged to be actuated by the pawls, a slide-plate provided with ears, and means for automatic shift of the plate to bring its ears in and out of engagement with said ratchet-wheels coincident with the movements of any one of the aforesaid levers.

6. The coin-pusher levers, pawls in connection with said levers, register mechanisms having units-disks ratchet-wheels thereof arranged to be actuated by the pawls, a slide-plate provided with ears arranged to be brought into engagement with said ratchet-wheels, a cam-lever in connection with the slide-plate, a rocker arranged to be actuated by any one of the aforesaid coin-pusher levers against spring-resistance, and an arm in connection with the rocker engaging the cam portion of the slide-plate lever.

7. The coin-pusher levers, pawls in connection with said levers, a guide-plate for the pawls, register mechanisms having units-disk ratchet-wheels thereof arranged to be actuated by the pawls and provided with ears arranged to be brought into engagement with said ratchet-wheels, a bracket suspended from the guide-plate, a cam-lever fulcrumed

on the bracket and connected to the slide-plate, a rocker arranged to be actuated by any one of the aforesaid coin-pusher levers against spring-resistance, and an arm in connection with the rocker engaging the cam portion of the slide-plate lever.

8. The parallel arbors longitudinally adjustable in bearings and provided with pins normally engaging machine-frame notches springs opposing ends of the arbors farthest from the pins, a lock having a cross-head bolt normally shot between the other ends of said arbors and casing-apertures through which to insert an arbor adjusting and turning tool, counting-disks of register mechanisms loose on the aforesaid arbors but held against play longitudinally of the same, and cogs aligned on each arbor to be brought in opposition to laterally-projecting teeth in connection with the corresponding series of disks.

9. The parallel arbors, counting-disks of register mechanisms loose on the arbors, a plate having slots engaged by the disks of each register mechanism, and bars having recesses engaged by said disks below the plate.

In testimony that I claim the foregoing I have hereunto set my hand, at New York, in the county of New York and State of New York, in the presence of two witnesses.

EDWARD J. BRANDT.

Witnesses:

THEKLA BRANDT,  
WM. C. DUNCAN.