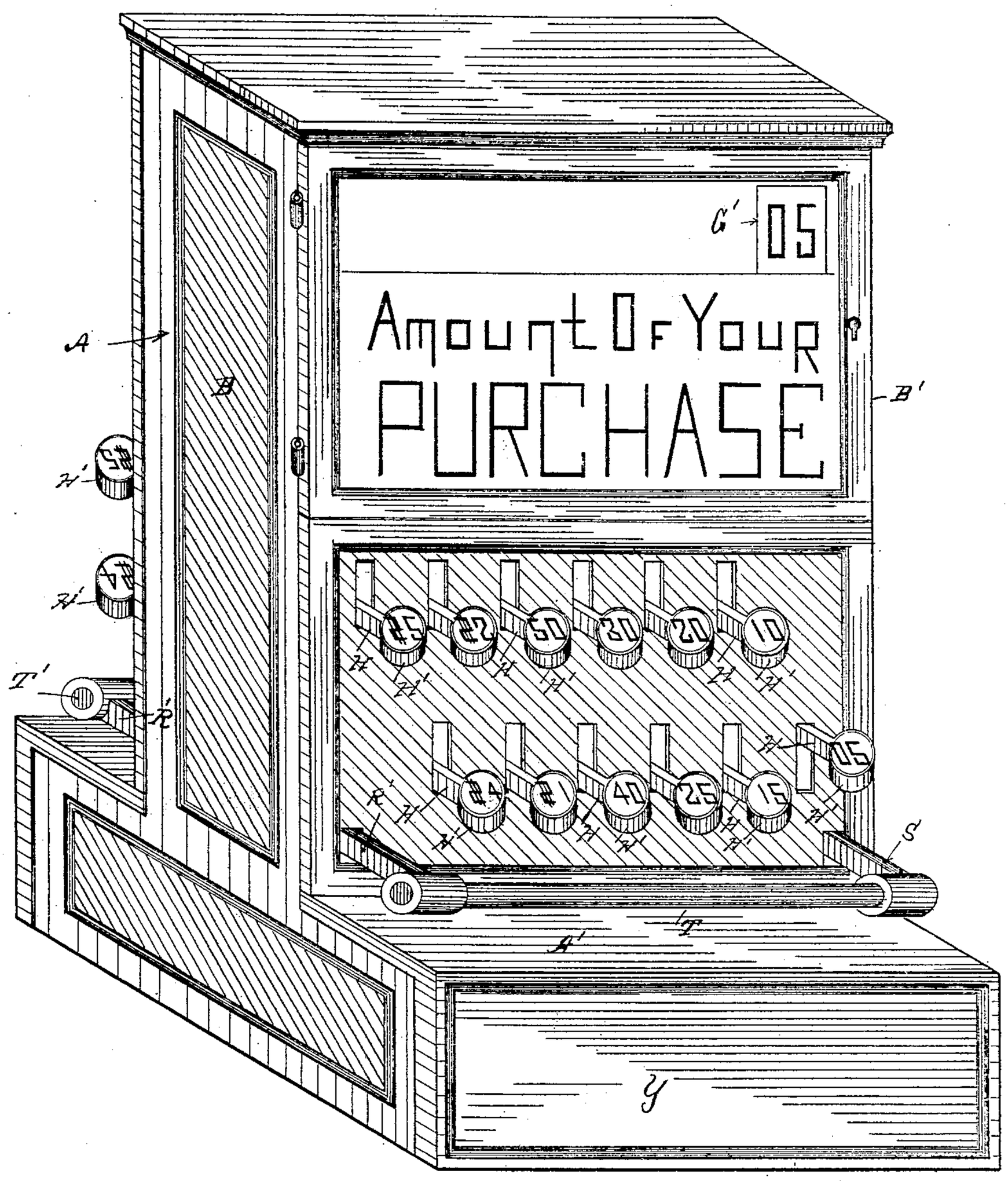
(No Model.) 4 Sheets—Sheet 1.

W. H. CLARK.

CASH REGISTER.

No. 496,341. Patented Apr. 25, 1893.

Fig. 1.



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4 Sheets—Sheet 2.

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CASH REGISTER.

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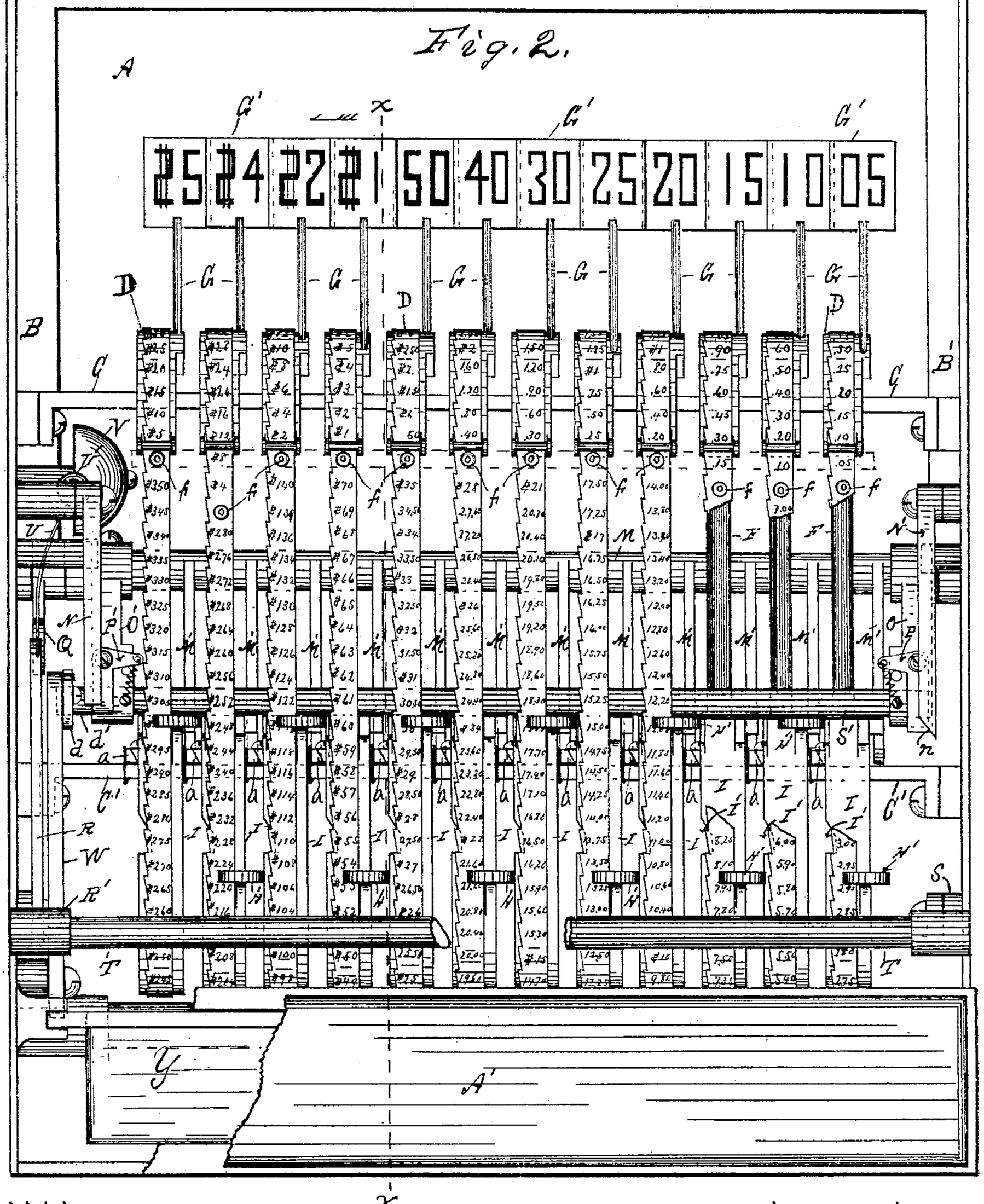
Fig. 2.



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(No Model.)

4 Sheets—Sheet 3

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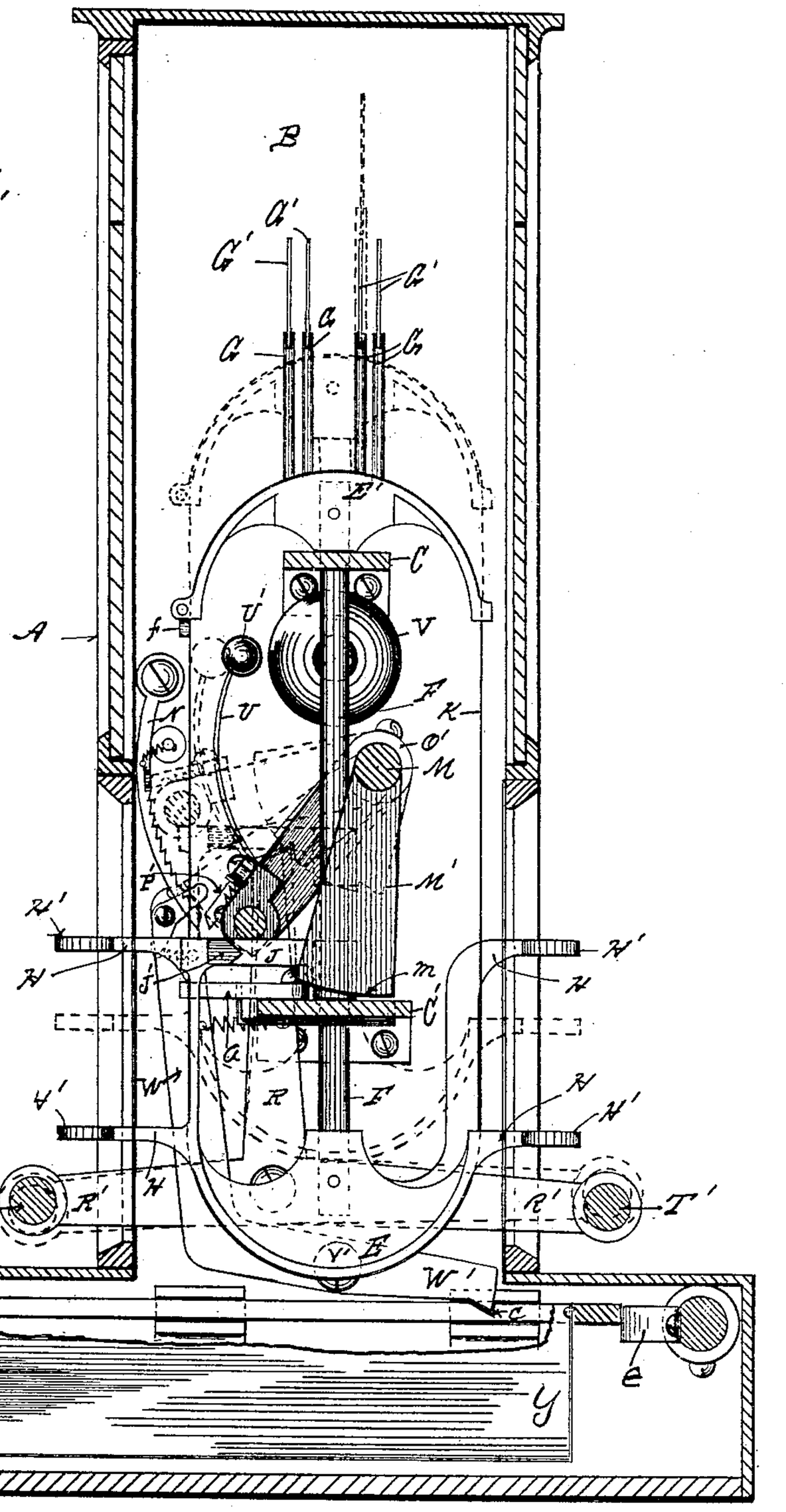
CASH REGISTER.

No. 496,341. Patented Apr. 25, 1893.

Fig. 3.



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(No Model.)

4 Sheets—Sheet 4.

W. H. CLARK.

CASH REGISTER.

No. 496,341. Patented Apr. 25, 1893.

Fig. 4.

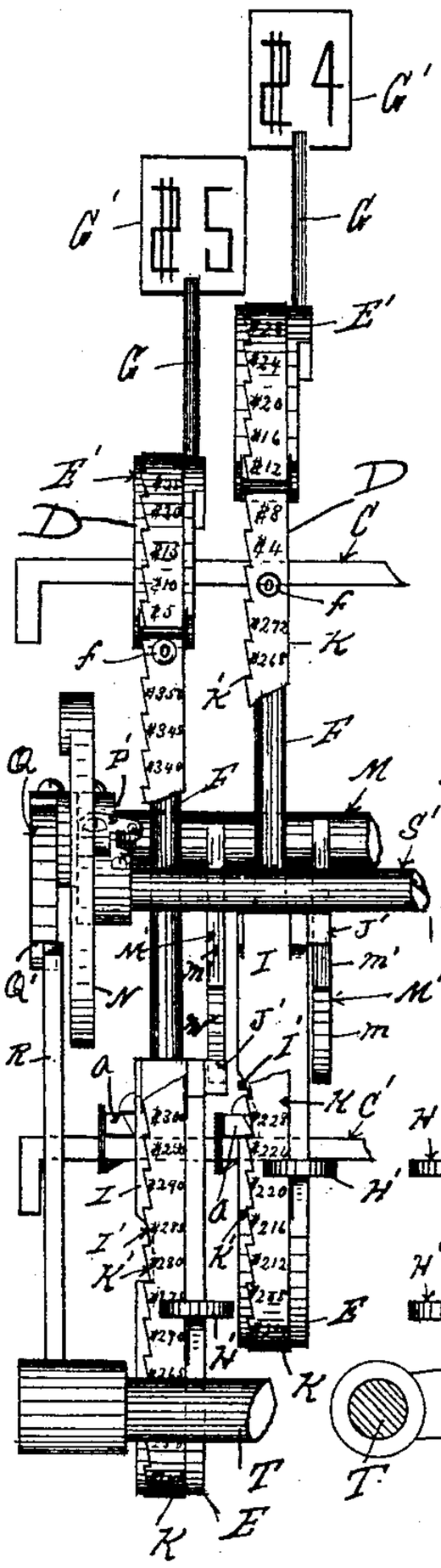


Fig. 5.

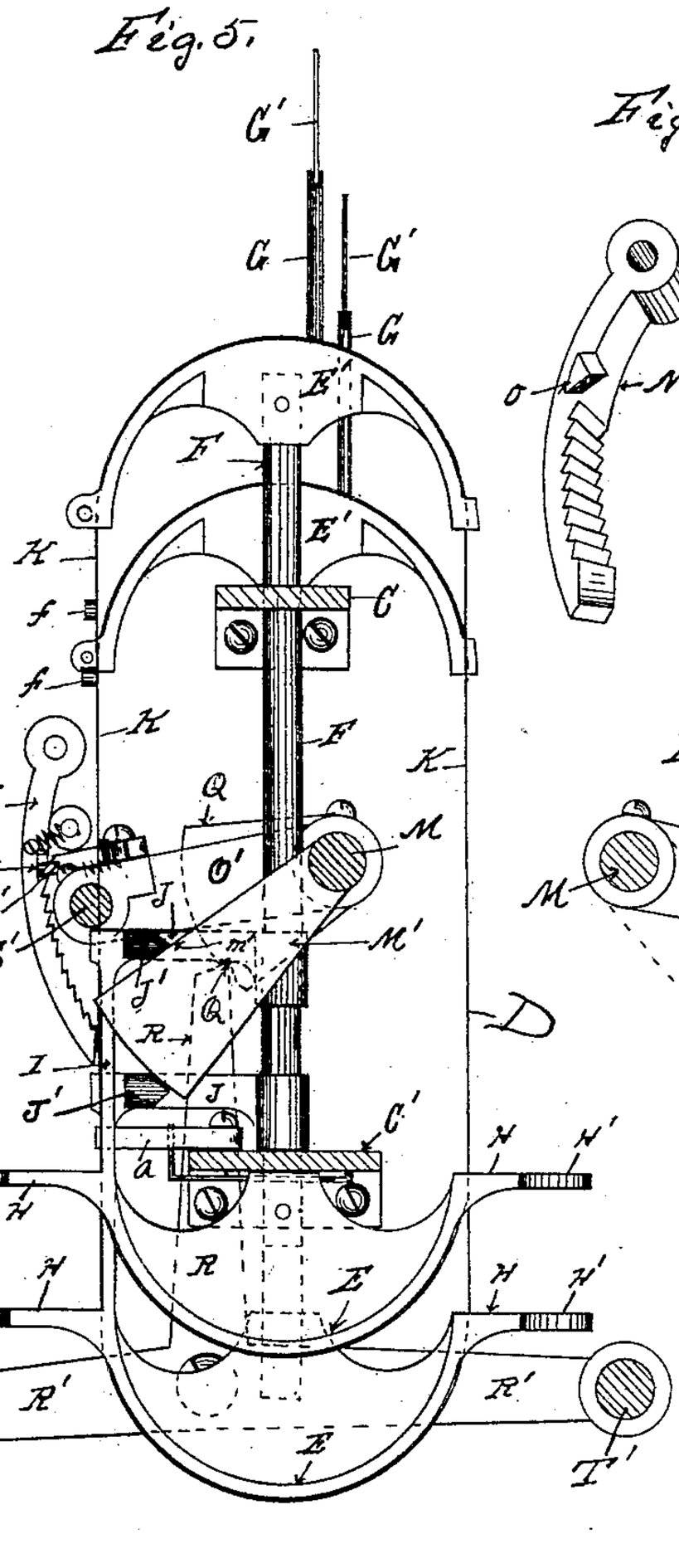


Fig. 7.

Fig. 8.

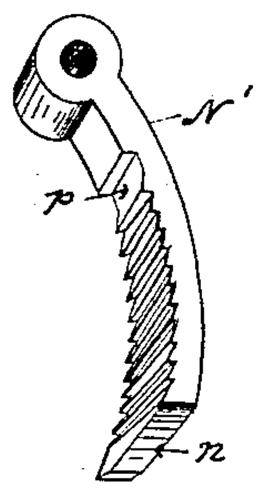
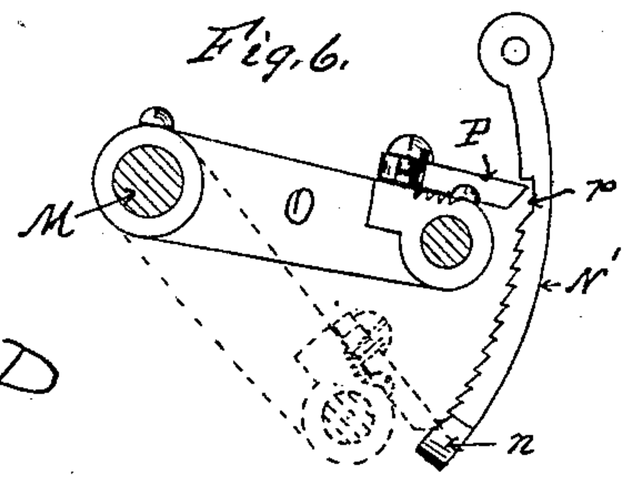


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM H. CLARK, OF ERIE, PENNSYLVANIA, ASSIGNOR TO THE ERIE CASH REGISTER COMPANY, OF SAME PLACE.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 496,341, dated April 25, 1893.

Application filed April 9, 1892. Renewed March 16, 1893. Serial No. 466,352. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. CLARK, a citizen of the United States, residing in Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Cash-Registers; and I do hereby 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 letters of reference marked thereon, forming a part of this specification.

My invention consists in the improvements in cash registers, hereinafter set forth and explained, and illustrated in the accompanying drawings in which:

Figure 1. is a perspective view of my improved cash register. Fig. 2. is a front view in elevation of the same with the case removed therefrom. Fig. 3. is a vertical transverse section of the same on the line *x x* in Fig. 2, looking in the direction of the arrow. Fig. 4. is a front view in elevation of a section of one side of the same. Figs. 5, 6, 7, and 8 are detail views of parts of the same.

In the construction of my improved cash register shown in the drawings, A is the upright portion of the case inclosing the mechanism of my machine and A′ the base inclosing the cash drawer. To the ends B and B′ of the upright portion of the case A, I secure longitudinal bars C and C′ which form part of the frame and serve as supports for the vertically moving register and tablet carriers D, hereinafter described. These register and tablet carriers D are preferably constructed of a lower semi-circular section E, and an upper semi-circular section E′ secured together by means of a central rod F which passes through and moves vertically in holes in the longitudinal bars C and C′. In the upper sections E′, I secure standards G to which indicator tablets G′ are secured, and to the lower section E are secured arms H preferably one on each side thereof which project outward through openings in the front and rear of the case, and are provided with operating knobs or buttons H′; these arms H being also so secured to the sections E that each alternate arm H is above the one on the section preceding it, so that they project through the sides of the case in two horizontal rows, thus affording ample room for the operating knobs or buttons thereon. One side of each of the lower sections E is also provided with a vertical extension I in one side of which is a notch I′, as and for the purpose hereinafter set forth, and from the upper end of the extension I is an arm J which extends inwardly and is preferably secured to the vertical rod F, and on one side of the arm J is a projection stop J′ as and for the purpose hereinafter set forth. And secured around the frames formed by the sections E and E′ are register bands K (preferably of metal) provided with serrated teeth K′ on one edge thereof, and also on the outside face thereof with figures indicating amounts to be registered, said bands being also adapted to be moved around thereon.

On the top of the supporting bar C′, are mounted horizontally moving spring dogs *a* adapted to enter the notches I′ in the portions I of the register and tablet carriers D when they are raised, and engage with the teeth K′ on the register bands K and move them forward one notch, so as to register the desired amount. This is done by having on each register band opposite each of the notches or teeth K′ therein characters or figures indicating certain amounts as may be desired, for example in the machine shown in the drawings, the first figure is five cents the next ten cents and so on until the band is filled with numbers each increasing five cents in amount until every notch in the band is provided with a number. The next register band is supplied with numbers at intervals of tens, the next at intervals of fifteens, &c.

At the rear of the connecting rods F of the register and tablet carriers D, and mounted in the bearings L and L′ on the sides B and B′ of the frame is a rock shaft M provided with arms M′ one for each of the register and carriers D, the lower ends *m* of said arms M′ operating as soon as any one of the register and tablet carriers D is started to be raised, to engage with the upper sides of the stops J′ on all of the remaining register and tablet carriers D and lock there in their normal position until the one being raised has made its

full upward traverse and been returned to its normal position, and when such register and tablet carrier is raised to its full height, the upper side m' of said arm M′ engages with the under side of the stop J′ thereon and retains it locked in such raised position until released, as hereinafter described. On the sides B B′ of the case are pivoted the curved spring actuated ratchet arms N and N′ (Figs. 7 and 8) and near the ends of the rock shaft M, there are secured thereto arms O O′, preferably coupled together by means of a longitudinal rod S′ which when the register and tablet carriers D are down at the lowest point rests on the tops of all of the arms J thereon, but when any one of the register and tablet carriers D is raised it carries the rod S′ upward therewith and rocks the shaft M so as to bring the ends m of the arms M′ thereon over the lugs J′ on all of the remaining arms J completely locking them as hereinbefore described. The arms O O′ have pivotal spring actuated dogs P and P′ thereon, the dog P being adapted to engage with the ratchet N′ only when traveling downward over the teeth thereon, if any attempt is made to reverse the movement thereof before its full traverse downward is made, and to be moved sidewise by means of the inclined surface n on the lower end of the ratchet arm N′ so that it will travel along the side of the ratchet arm N′ from the commencement of its upward movement until it passes into the enlarged slot D above the ratchet teeth thereon and is ready again to move downward over the teeth thereon, while the dog P′ being adapted to engage with the ratchet arm N only when traveling upward over the teeth thereon, if any attempt is made to reverse the movement thereof before its full traverse upward is made, and when the full traverse upward is made the dog P′ passes into the inclined notch o in the upper portion of the ratchet arm N and is thereby moved to one side of the ratchet arm N down along which it passes on its return movement, these dogs P P′ operating on the ratchet arms N N′ so as to compel the moving of the register and tablet carriers their full traverse upward when once started, and also likewise the full traverse downward before another register and tablet carrier can be moved.

For the purpose of retaining the register and tablet carriers in a raised position, I secure to the rock shaft M an arm Q at one side of the machine which is provided with a notch Q′ adapted to engage, when any one or more of the register and tablet carriers D are raised to their uppermost point of traverse, with the upper end of an arm R on a transverse lever R′ pivoted to the lower portion of the side frame B′, this lever R′ I preferably couple to a like transverse lever S pivoted in like position to the side frame B by means of longitudinal rods T and T′ extending across the front and rear of the upright portion of the machine, so that the operator by pressing downward on the rod T or by raising up on the rod T′ can release the register and tablet carriers D, so that they will return by gravity to their normal positions. The upper end of the arm R also when moved back out of the notch Q′ engages with arm U of a bell hammer U′ so as to strike an alarm on a bell V.

Pivoted on a stud V′ on the side frame B is a bell crank lever W W′, the arm W′ of which engages with a notch c in the edge of the drawer Y, while the other arm W extends upward where a spring actuated catch d thereon engages with the end d' of the rod S′ as it is being raised by the raising of one or more of the register and tablet carriers D which operates to lift the end of the arm W′ out of the notch c in the drawer, and allows the spring e at the back of the drawer Y to throw it outward, when however the rod S′ moves downward to its normal position the spring catch d allows it to pass without disturbing the position of the bell crank lever W W′.

In setting the registering mechanism at zero, the knobs f on all of the register hands K are moved up to the register reading line, (indicated by dotted line in Fig. 2,) as shown in the fourth, fifth, and &c., of the register and tablet carriers D, the operator then raises the operating knob or button indicating the amount to be registered, which operation raises the indicator tablet G′ indicating the amount to be registered, and at the same time moves the indicator band K on the indicator and tablet carrier attached to said operating knob forward one notch, thus registering the amount desired, and at the same time the end of the rod S′ engages with the spring catch on the arm W of the bell crank lever W W′ and releases the drawer Y which is then forced open by the spring e. When it is desired to operate the machine again to register and indicate another amount the operator depresses the rod T and thereby releases the register and tablet carrier previously operated, and it instantly returns to its normal position by gravity, when the machine is again in condition to be operated. It will be observed from the construction hereinbefore described that the machine may be operated with equal facility from either side, and it will also be observed that two or more of the register and tablet carriers D may be simultaneously raised and operated at the same time.

Having thus fully described my invention, so as to enable others to construct and operate the same, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination in a cash-register, of non-rotating register band supports, with register bands, marked with the numbers to be registered, mounted on said register band supports, and operating-arms and spring actuated dogs on the frame adapted to engage with said register bands and move them on said register band supports, substantially as and for the purpose set forth.

2. The combination in a cash register, of movable register and tablet carriers, and indicating tablets supported thereon, with register bands marked with the numbers to be registered, and mounted on said register and tablet carriers and adapted to be moved thereon, substantially as and for the purpose set forth.

3. The combination in a cash register, of register and tablet carriers, movably mounted on supports therefor, operating arms for moving said register and tablet carriers, tablets secured to and moving with said register and tablet carriers, and register bands having teeth on one edge thereof movably mounted thereon, with dogs adapted to engage the teeth on the register bands and move them forward, substantially as and for the purpose set forth.

4. The combination in a cash register, of register and tablet carriers adapted to be moved independently of each other, and fixed indicator tablets, and movable register bands thereon, with a rock shaft having a locking arm for each register and tablet carrier adapted to be engaged by any one of said register and tablet carriers when moved, so as to lock all of the other register and tablet carriers in their normal positions, substantially as and for the purpose set forth.

5. The combination in a cash register, of movable register and tablet carriers, movable register bands having teeth on one edge thereof, and stops on the register and tablet carriers, with spring dogs adapted to engage with one of the teeth in the register bands, when the register band and tablet carrier is moved in one direction, and a rock shaft having arms thereon adapted to engage with the stops on the register and tablet carriers, so that the moving of one of said register and tablet carriers will rotate said rock shaft so as to lock all of the other register and tablet carriers, substantially as and for the purpose set forth.

6. The combination in a cash register, of movable register and tablet carriers, movable register bands mounted on said register and tablet carriers, and dogs for engaging teeth on said register bands, with a rock shaft having arms thereon and adapted to be moved so as to engage with said register and tablet carriers, arms adapted to engage with ratchet bars at the sides of the machine, and an arm adapted to be engaged so as to retain said register and tablet carriers in a raised position, and a lever adapted to retain the catch engaging said arm, substantially as and for the purpose set forth.

7. The combination in a cash register, of register and tablet carriers, movable register bands thereon, locking mechanism adapted to lock all of the other carriers when one is moved, with a lever adapted to engage and retain the cash drawer in a closed position, and a rock shaft adapted to engage and raise said lever out of engagement with the drawer on the raising of any one of the register and tablet carriers, substantially as and for the purpose set forth.

8. The combination in a cash register, of register and tablet carriers, as E E′, register bands, as K, movably mounted thereon, and stops as J′ on said register and tablet carriers, with a rock shaft, as M having arms M′, and arms O O′ thereon, a rod, as S′ connecting said arms O O′ and pawls on said arms O O′ adapted to engage with ratchet bars N N′, substantially as and for the purpose set forth.

9. The combination in a cash register, of a rock shaft, as M having arms, as M′ thereon adapted to engage with stops on the register and tablet carriers, with arms, as O O′ at the sides of the machine and connected by a rod S′ adapted to be engaged by the register and tablet carriers, and ratchet bars, as N N′ adapted to engage spring dogs on the arms O O′, and an arm, as Q on said rock shaft M adapted to engage a throw off lever as R R′, substantially as and for the purpose set forth.

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

WILLIAM H. CLARK.

Witnesses:
WM. P. HAYES,
EDWARD TUOBY.