No. 713,205. Patented Nov. 11, 1902.

R. J. CARY.

CASH REGISTER.

(Application filed Aug. 3, 1901.)

(No Model.) 4 Sheets—Sheet 1.

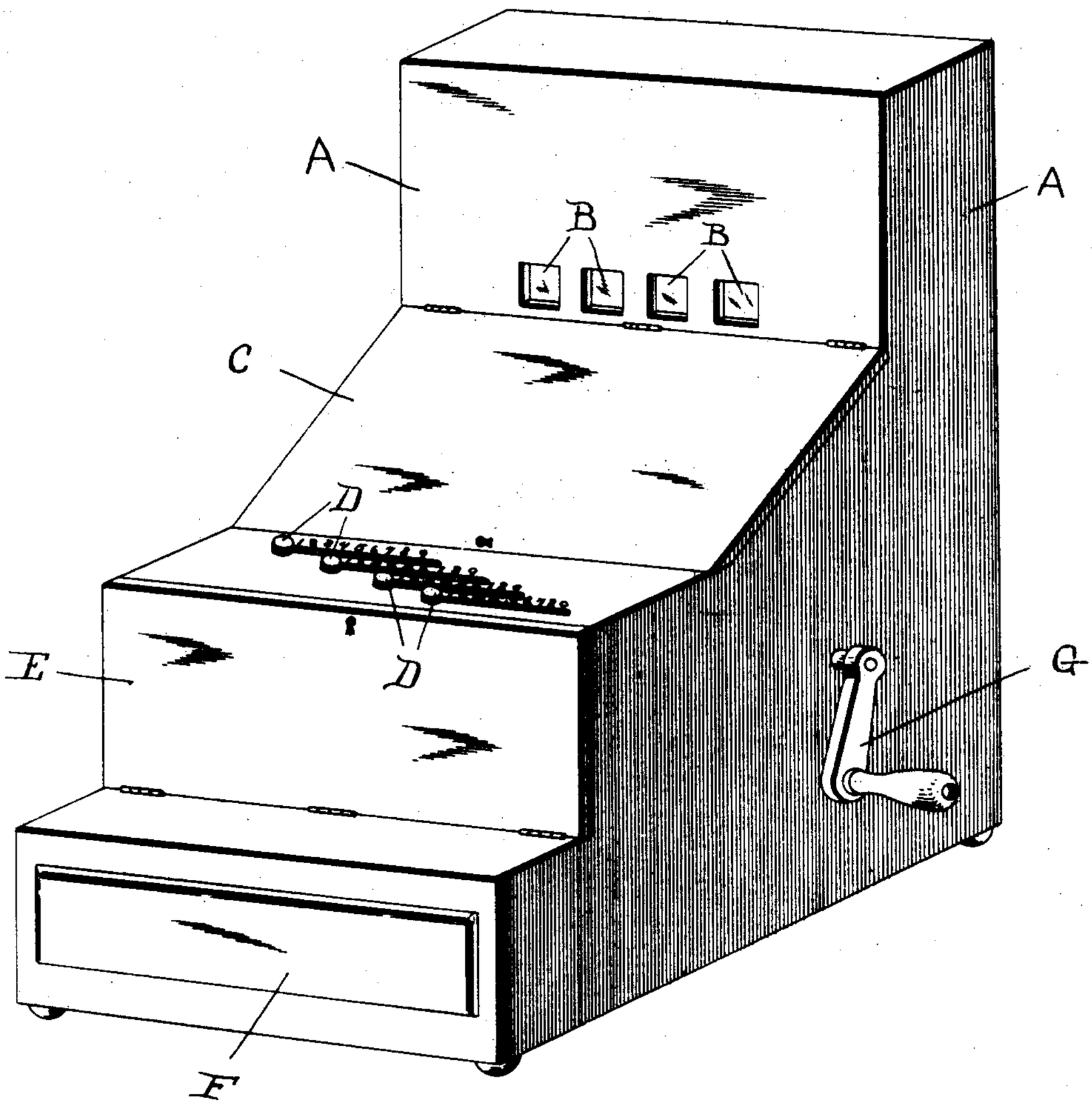

Fig. 1.

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(No Model.) 4 Sheets—Sheet 2.

Fig. 2.

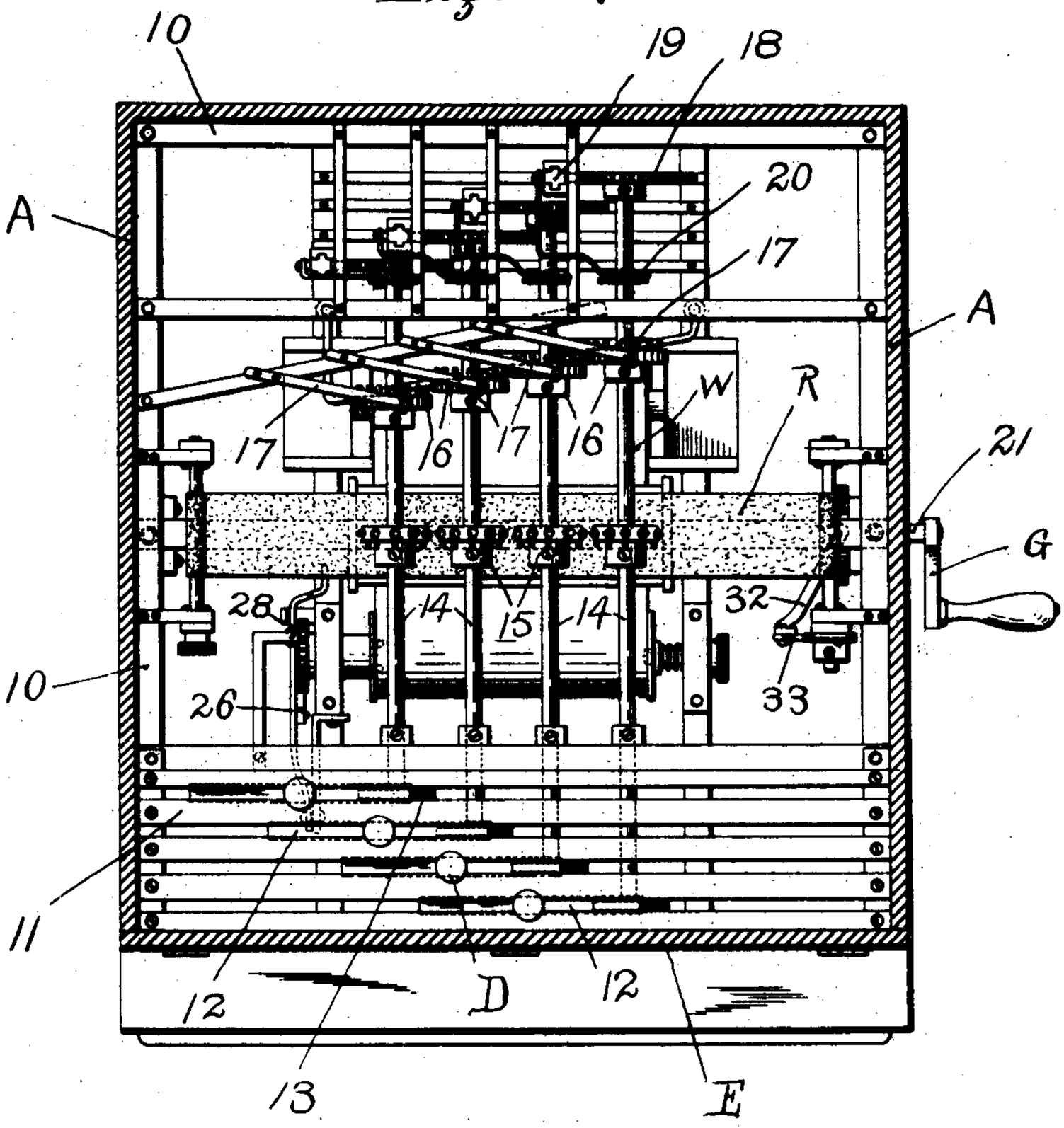
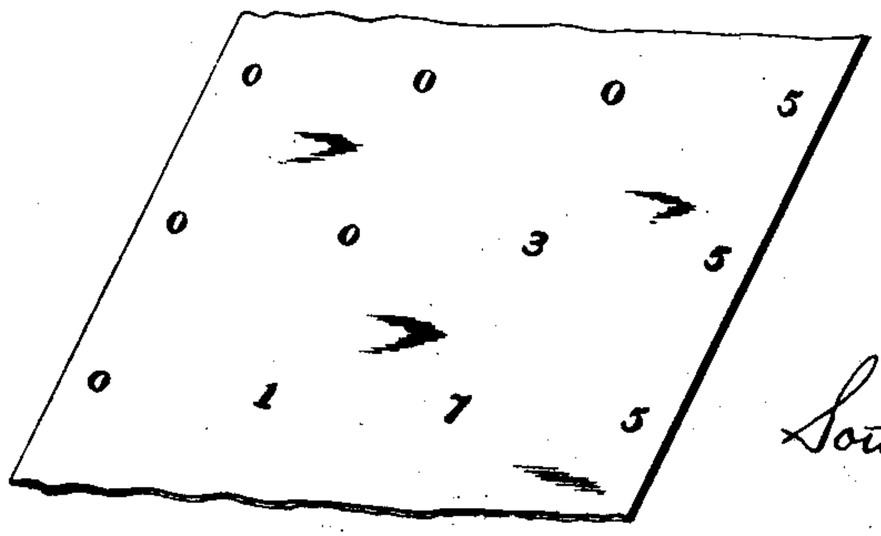


Fig. 8.



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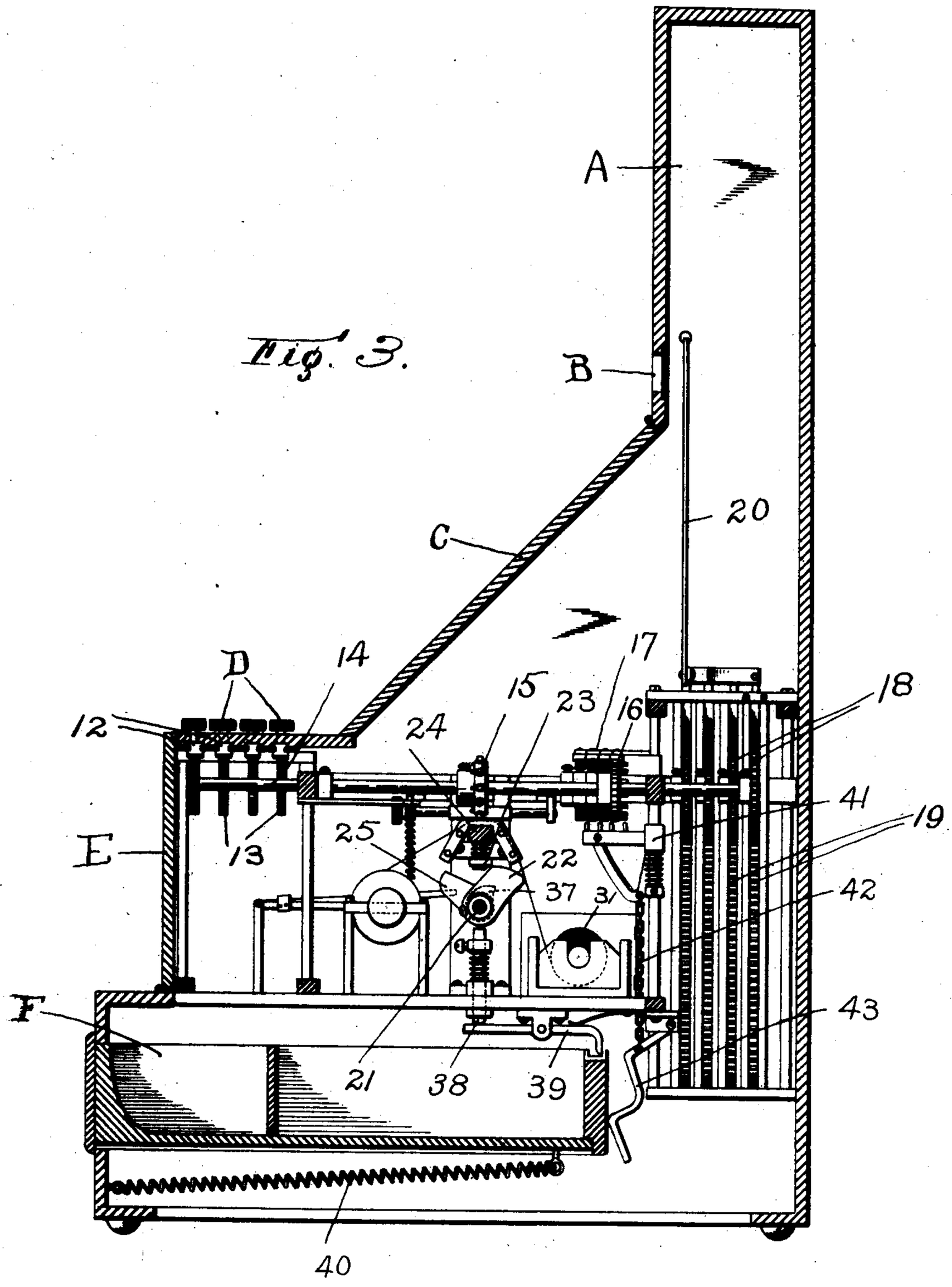
(No Model.) 4 Sheets—Sheet 3.

Fig. 3.



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(No Model.) 4 Sheets—Sheet 4.

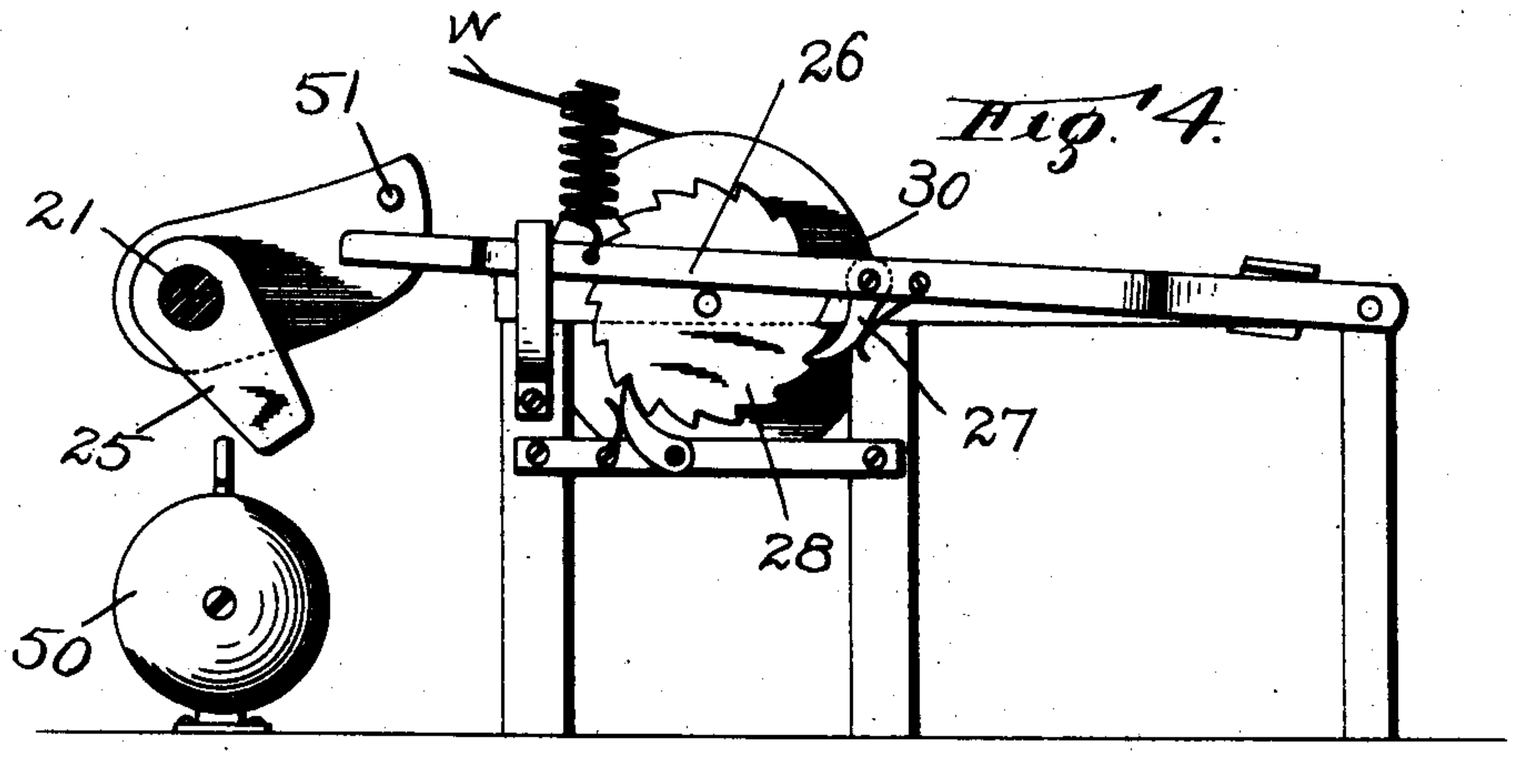

Fig. 14.

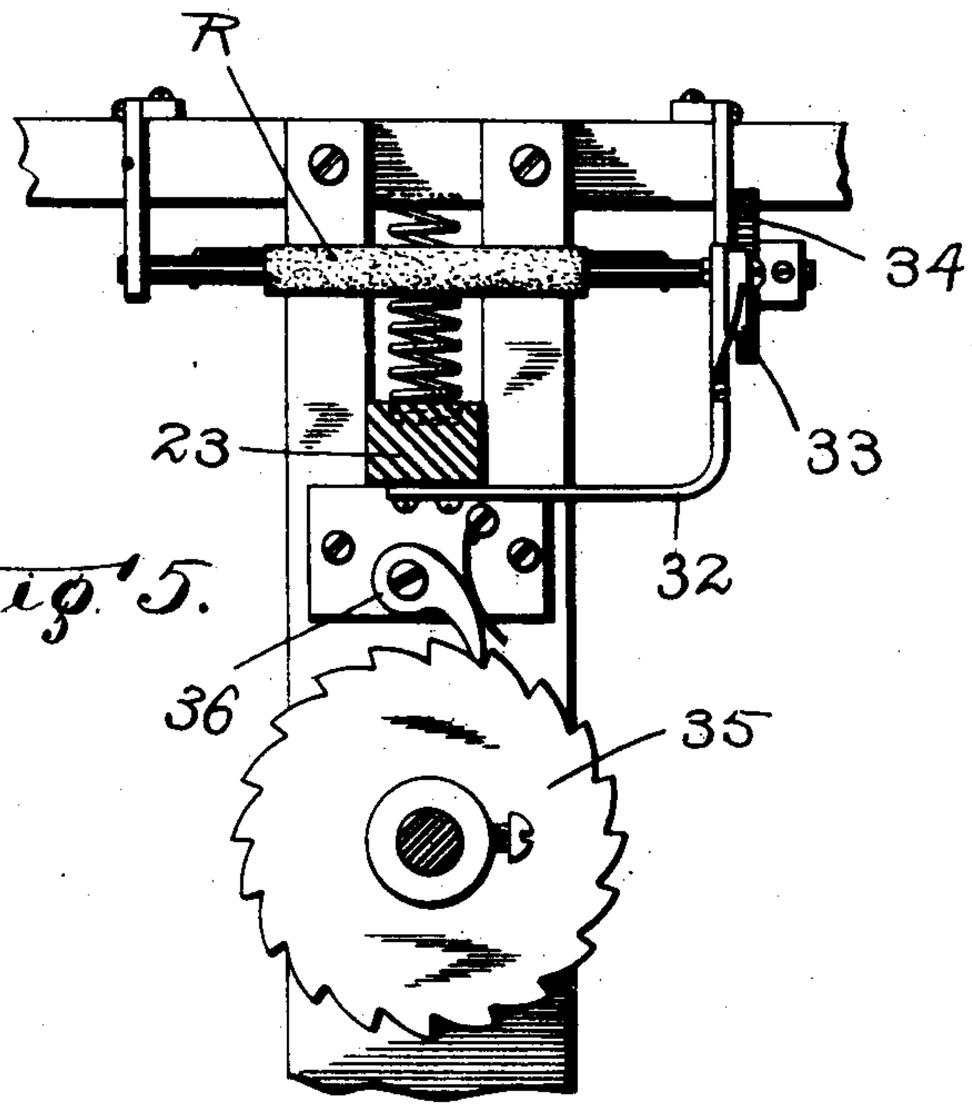

Fig. 5.

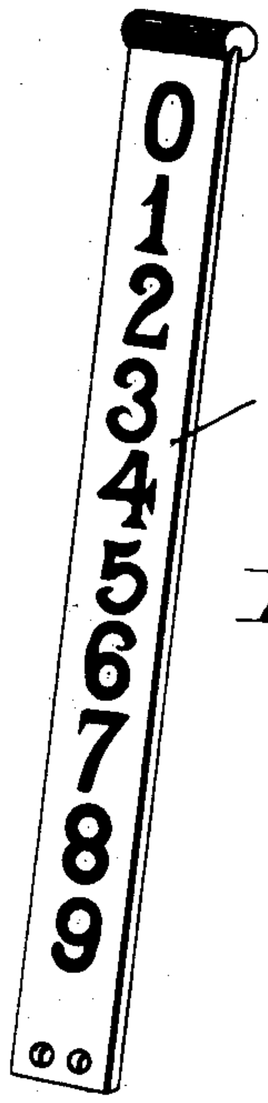

Fig. 6.

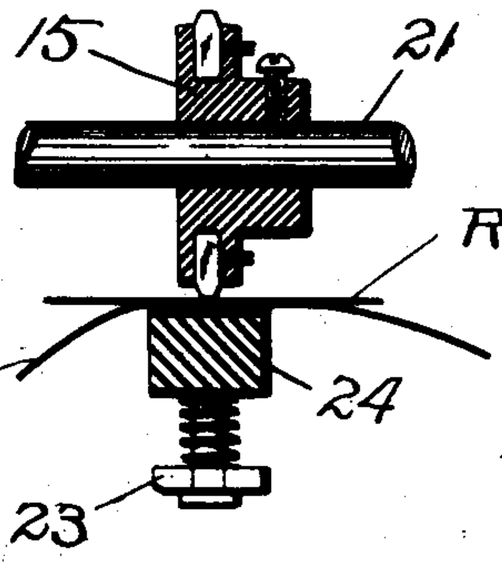

Fig. 7.

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UNITED STATES PATENT OFFICE.

ROBERT J. CARY, OF NORTHBORO, MASSACHUSETTS.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 713,205, dated November 11, 1902.

Application filed August 3, 1901. Serial No. 70,707. (No model.)

To all whom it may concern:

Be it known that I, ROBERT J. CARY, a citizen of the United States, residing at Northboro, in the county of Worcester and State of Massachusetts, have invented a new and useful Cash-Register, of which the following is a specification.

This invention relates to a cash-register which has been designed with a view of providing a strong, simple, compact, and efficient construction which will produce results which are equally accurate and as reliable as the results produced by the more expensive forms of cash-registering machines.

The especial object of this invention is to provide a cash-register with a series of printing-wheels which are controlled and set to different positions by means of movable pieces or slides, the setting of the wheels to different positions serving to display the amounts about to be recorded and the character of the transaction, if desired, and the operation of opening the cash-drawer serving to take an impression from said type-wheels upon a strip of paper, which is advanced after each operation of the machine. The successive transactions are shown by the successive rows of figures thus printed, and the total amount of transactions can be ascertained by footing up the several columns of printed figures.

To these ends this invention consists of the cash-register and of the combinations of parts therein, as hereinafter described, and more particularly pointed out in the claims at the end of this specification.

In the accompanying four sheets of drawings, Figure 1 is a perspective view of a cash-register constructed according to my invention. Fig. 2 is a sectional plan view of the same. Fig. 3 is a transverse sectional view. Fig. 4 is an enlarged detail view of the paper-winding connections. Fig. 5 is an enlarged detail view of the ribbon-feeding connections and of the ratchet for preventing the operating-shaft from being turned backward. Fig. 6 is a perspective view of one of the indicator-slides. Fig. 7 is an enlarged detail view of the printing mechanism, and Fig. 8 is a detail view of a portion of the printed paper strip on which the transactions are recorded.

In a large proportion of the cash-registering machines which are now employed each machine is operated from a keyboard or an arrangement of finger-keys at the front of the machine.

The connections for controlling a cash-register from a keyboard are necessarily comparatively expensive and complicated, and it frequently happens in the use of cash-registering machines of this type that mistakes are made by depressing the wrong key.

The especial object of my invention is to simplify and cheapen the cost of cash-registering machines by controlling the operation of the machine from a number of hand-operated movable pieces or slides which can be first moved back and forth according to the amount to be recorded, the record of the transaction then being made by the operation which opens the cash-drawer.

Referring to the accompanying drawings and in detail, a cash-register constructed according to this invention, as herein illustrated, comprises a casing A, having glazed openings or orifice B for exposing the amounts or characters of successive transactions recorded. Extending down from the orifices B is a hinged cover C, and movable in slides near the front of the machine are the finger-pieces D, which can be set to different positions according to the amount of transaction about to be recorded.

As herein illustrated, a machine constructed according to this invention is provided with four finger-pieces D to indicate amounts in four columns of figures. The front of the casing is closed by a hinged door E, and below the hinged door E is the cash-drawer F. When the finger-pieces D have been set to proper positions corresponding to the character and amount of the transaction about to be recorded, the transaction can be recorded and the cash-drawer opened by turning the crank G at the side of the machine.

The operative parts of a cash-register constructed according to my invention for performing the recording, displaying, and cash-drawer-opening operations are most clearly illustrated in Sheets 2 to 4, inclusive, of the drawings.

As shown most clearly in Fig. 2, the operative parts of the machine are mounted upon and carried by a metallic framework 10, ar-

ranged immediately inside of the casing A. Near the front of the machine the framing 10 is provided with guide-pieces having ways for receiving the slides 12, which are controlled by the finger-pieces D, before referred to. Each of the slides 12 carries a rack which meshes with and turns a gear 13, secured on one of the longitudinal shafts 14 of the machine, in the present instance four longitudinal shafts corresponding with the four finger-pieces D being illustrated. Secured near the center of the shafts 14 are the printing or type wheels 15, and at the rear of the type-wheels 15 the shafts 14 are provided with ratchet-wheels 16, which are engaged by stop arms or pawls 17. At their rear ends the shafts 14 are provided with gears 18, which mesh with and operate the vertically-movable slides 19. Each of the vertically-movable slides 19 is provided with a numbered slide or strip 20, as illustrated most clearly in Fig. 6, which numbered slides or pieces 20 are exposed to view through the orifices B in the casing of the machine to display the various amounts as the same are recorded. By means of this construction by shifting the finger-buttons D the type-wheels may be set to the proper position and the amounts of the transaction about to be recorded properly displayed.

The connections for taking an impression from the type-wheels and for releasing the cash-drawer are most clearly illustrated in Fig. 3. As shown in this figure, 21 designates the operating-shaft or main shaft of the machine, which is turned by the crank G at the side of the machine. Mounted on the shaft 21 are printing arms or cams 22, which are arranged to engage and lift a cross-bar 23 to raise the platen or printing rod 24 with a spring-pressure, so as to press the paper W up into engagement with the type-wheels. The paper W is wound on a storage-roll 31, and as the same is printed it is wound up on a roll 30.

The paper-winding connections are most clearly illustrated in Fig. 4. As shown in this figure, one of the arms or cams 22 is provided with a pin 51, which engages with and depresses a spring-supported lever 26, carrying a pawl 27, which meshes with and turns a ratchet-wheel 28 on the winding-out roll 30. Secured on the operating-shaft 21 near one end thereof is an arm or cam 25, arranged to engage the striker of an alarm-bell 50, which is sounded at each rotation of the operating-shaft.

The connections for opening the cash-drawer as the operating-shaft is turned are most clearly illustrated in Fig. 3. As shown in dotted lines in this figure, the operating-shaft 21 is provided near its center with an arm or cam 37, arranged to depress a spring-bolt 38 to raise a latch 39, releasing the cash-drawer F, so that the same will fly open under the tension of its spring 40. To prevent the type-wheels from again being adjusted or shifted until the cash-drawer has been returned to its original position, I have provided a special locking construction for locking the longitudinal shafts 14 against rotation until the cash-drawer has been pushed back to its closed position.

As shown in Fig. 3, 43 designates a pivoted arm, which is connected by a flexible connection 42 to draw down a spring-frame 41, having pins or projections coöperating with corresponding pins extending from the sides of the ratchet-wheel 16. By means of this construction when the cash-drawer F is opened the frame 41 will be lifted and each pin will hold its shaft 14 from turning.

The ribbon-feeding connections and the pawl-and-ratchet arrangement for preventing the operating-shaft from being turned backward are most clearly illustrated in Fig. 5. As shown in this figure, the printing bar or platen 23 is provided with a bracket or arm 32, carrying a spring-pressed pawl 33, engaging a ratchet-wheel 34 on the end of the ribbon-roll R, so that by means of this arrangement when the printing bar or platen 23 moves down to its normal position the ribbon will be fed or advanced to present a fresh portion thereof below the type-wheels. Secured on the operating-shaft 21 near the crank end thereof is a ratchet-wheel 35, which is engaged by a pawl 36 to prevent the operating-shaft from being turned backward. By means of this construction at each operation of the machine a complete record of a transaction will be printed on the strip of paper *w*, as illustrated in Fig. 8, and by combining printing-wheel shafts which extend from the front to the rear of the machine with finger-operated slides movable transversely across the machine and vertically-movable displaying-slides a compact arrangement is provided in which the parts are directly connected, so as to be readily set and controlled from the slides.

When it is desired to open the cash-drawer, the finger-pieces can be set to their zero positions and a series of ciphers will be printed in the several columns of figures, so that a record of each time the cash-drawer is opened without recording a sale is secured. Furthermore, by providing either one of the type-wheels with the necessary characters the several transactions registered may be classified under different heads—for example, if it is desired to separate different departments of a business or when it is desired to register different transactions, such as "Paid out," "Charged," &c.

I am aware that numerous changes may be made in the construction of my cash-register by those who are skilled in the art without departing from the scope of my invention as expressed in the claims. I do not wish, therefore, to be limited to the construction I have herein shown and described; but

What I do claim, and desire to secure by Letters Patent of the United States, is—

1. In a cash-register, the combination of a plurality of shafts extending from the front

toward the rear of the machine, a type-wheel mounted on each of said shafts, a plurality of finger pieces or slides movable transversely with respect to the frame of the machine, and each having a rack geared to turn a type-wheel shaft, and a plurality of vertically-movable indicating-slides having racks geared to the type-wheel shafts.

2. In a cash-register, the combination of a plurality of shafts extending from the front toward the rear of the machine, finger pieces or slides movable transversely with respect to the frame of the machine, and each having a rack geared to turn one of said shafts, a type-wheel secured on each of said shafts, vertically-movable indicating-slides, each having a rack geared to one of said shafts, a cash-drawer, and an operating-shaft connected to first take an impression from said type-wheels and then release the cash-drawer.

3. In a cash-register, the combination of a plurality of type-wheels, means for setting the type-wheels, means for taking an impression therefrom, a cash-drawer, a ratchet-wheel turning with each of the type-wheels, a vertically-movable spring-lifted locking-slide having pins for engaging the ratchet-wheels to hold the type-wheels from turning when the cash-drawer is opened, and a releasing-lever connected to be actuated by the cash-drawer to draw down the locking-frame when the cash-drawer reaches a substantially closed position.

4. In a cash-register, the combination of a plurality of shafts extending from the front toward the rear of the machine, a type-wheel and a ratchet-wheel mounted on each of said shafts, finger pieces or slides movable transversely with respect to the frame of the machine, and each having a rack geared to turn a type-wheel shaft, vertically-movable indicating-slides having racks geared to the type-wheel shafts, a spring-lifted vertically-movable locking-frame having pins for engaging the ratchet-wheel, a cash-drawer, and a releasing-lever flexibly connected to the locking-frame and arranged to be actuated by the cash-drawer to move down the locking-frame when the cash-drawer reaches a substantially fully closed position.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ROBERT J. CARY.

Witnesses:
HENRY H. COOK,
ARTHUR A. MOORE.