

(No Model.)

2 Sheets—Sheet 1.

J. H. EICKERSHOFF.
CHECK PUNCHING AND RECORDING MACHINE.

No. 549,770

Patented Nov. 12, 1895.

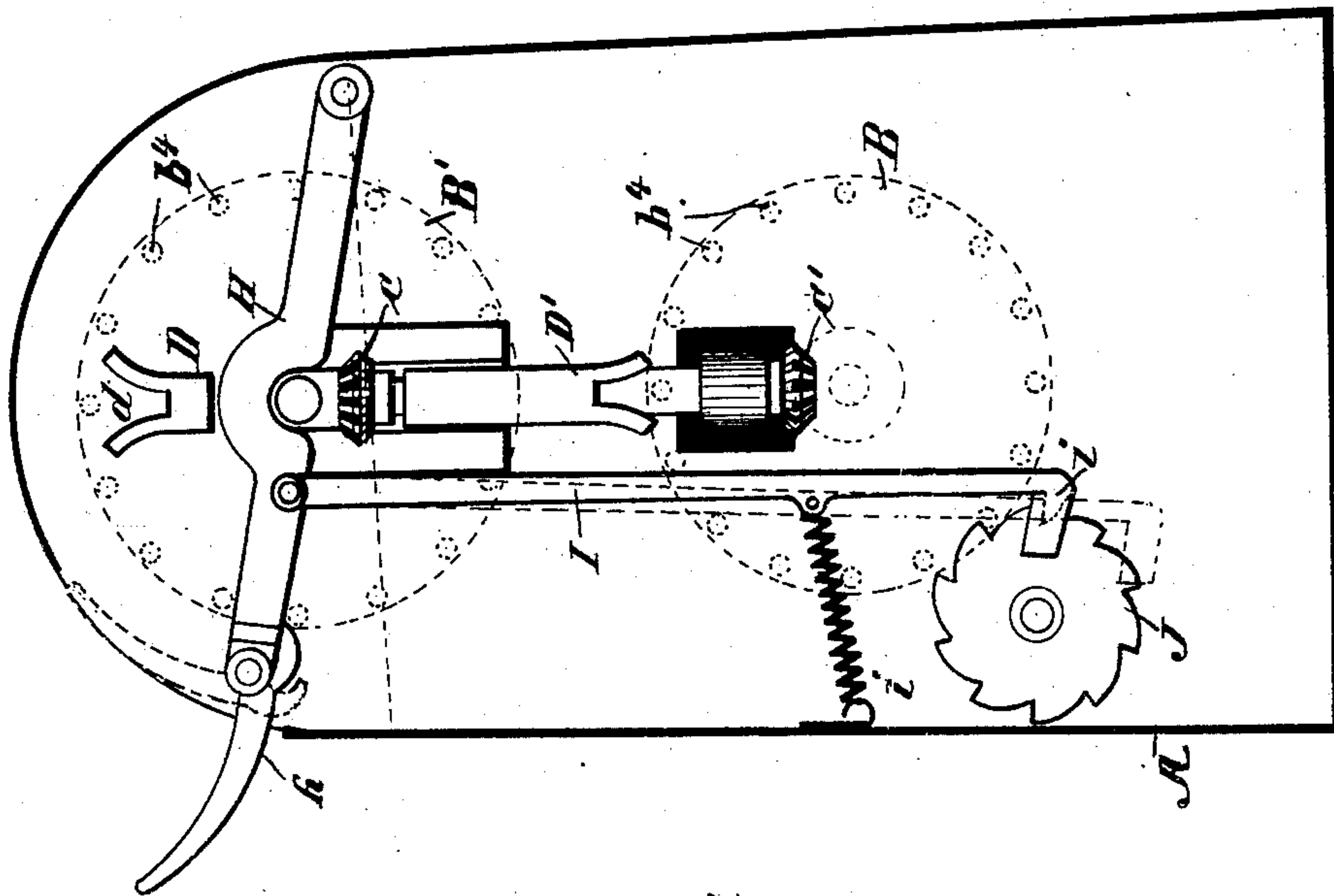


Fig. 2.

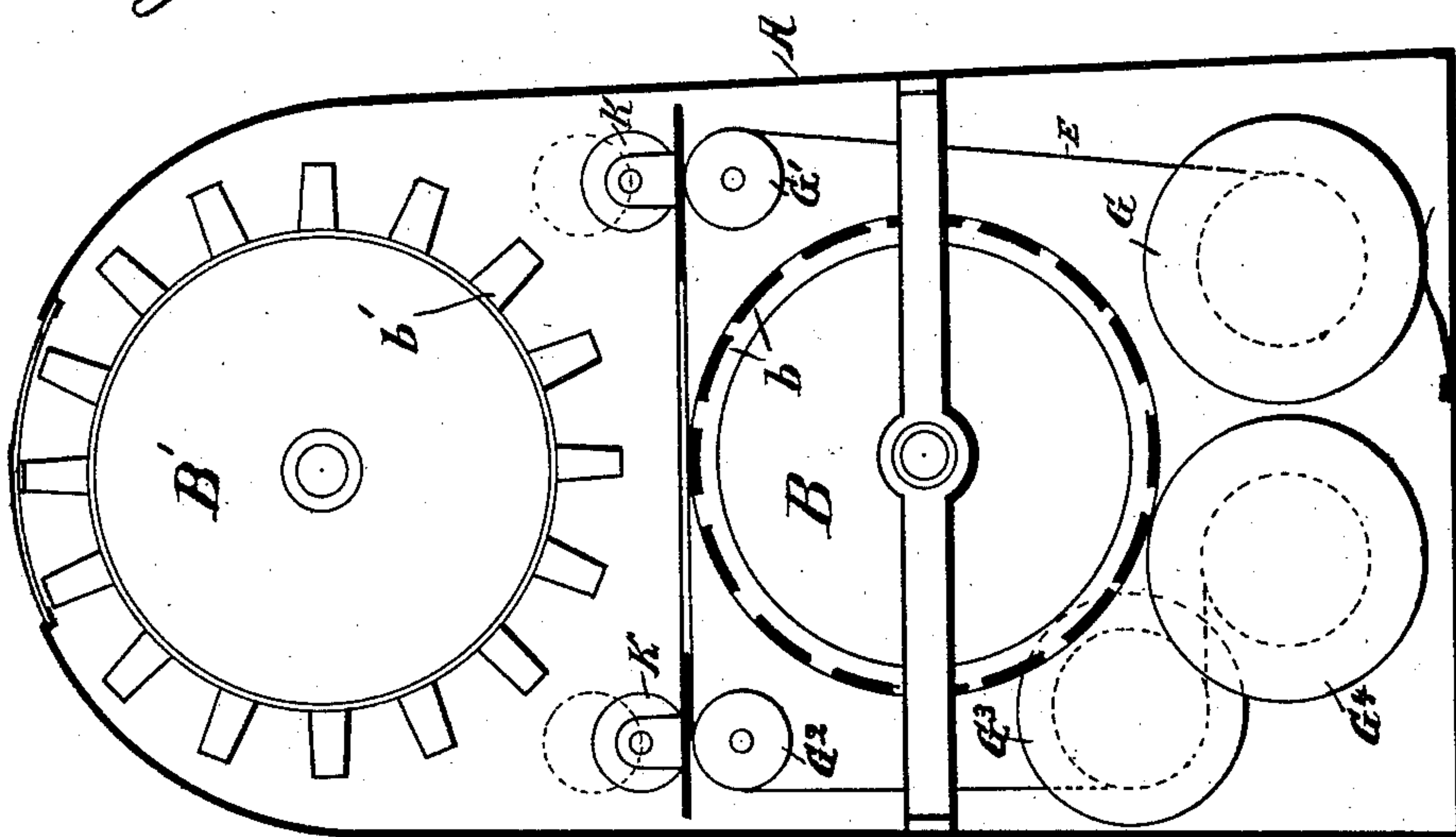


Fig. 1.

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UNITED STATES PATENT OFFICE.

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CHECK-PUNCHING AND RECORDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 549,770, dated November 12, 1895.

Application filed July 20, 1895. Serial No. 556,636. (No model.)

To all whom it may concern:

Be it known that I, JOHN HENRY EICKERSHOFF, a citizen of the United States of America, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Registering-Machines for Collectors, of which the following is a specification.

The object of my invention is, first, to provide an efficient registering device for bill-collectors whereby the figures of the receipts will be ineradicably duplicated upon a record-strip contained within the device, thereby serving as a check against fraud upon the part of the collector, and, second, to provide a registering device of the kind referred to sufficiently compact to be readily carried in the pocket.

My invention consists in the mechanism and combination and arrangement of mechanisms hereinafter described and claimed.

In the drawings, Figure 1 is a side elevation showing a portion of the mechanism; Fig. 2, a like view from the other side showing another portion of the mechanism; Fig. 3, a central vertical section; Fig. 4, an end elevation; Fig. 5, a section on line 5 5 of Fig. 4; Fig. 6, a modified form of compensating mechanism; Fig. 7, a portion of a bill, and Fig. 8 a portion of the record-strip; Fig. 9, an enlarged detail view.

Mounted in a casing A is a die-wheel B, provided on its periphery with a series of dies *b*. Mounted in sliding bearings *a*, directly above die-wheel B, is a wheel or pulley B', carrying on its periphery a series of punches *b'*, corresponding with and adapted to register with the dies in wheel B. The bearings *a* are supported by springs *a'*, which normally hold the punches *b'* out of dies *b*. The dies and punches are symmetrically arranged on the wheel, and in order to punch any character it is necessary to bring the corresponding punch and die into line with each other. To accomplish this, a bevel-pinion *b²* is mounted on the wheel B' and revolves therewith. Meshing with this pinion is a bevel-pinion *c*, secured to a shaft C, supported in a bearing *a²*, extending from bearing *a*. This shaft is squared at its lower end and fits into a socketed shaft C', supported by a bearing *a³*. The squared portion of shaft C is adapted to

slide longitudinally in the socket in shaft C'; but by imparting circumferential movement to shaft C shaft C' will be rotated therewith. 55

Mounted on the lower end of shaft C' is a bevel-pinion *c'*, which meshes with a bevel-pinion *b³*, carried by and adapted to rotate with the wheel B. By rotating wheel B' motion is transmitted through the above-described gearing to wheel B, which is rotated simultaneously therewith. 60

To bring a die and punch into register and to prevent revolving the wheels B and B' when thus brought into position, I mount pins *b⁴* on the edge of wheels B and B', so arranged that each die and punch will have its separate pin. Secured to the back of the casing is a guide D, provided with a forked end *d*. Secured to the extension *a'* of sliding bearing *a* is a guide D', provided with a similar forked end. By bringing wheel B' into a position in which one of the pins *b'* is in line with the forked end of guide D the wheel B is revolved, so as to bring a pin in line with the fork of guide D'. 75

The record-strip E is wound on a spool G, then passed over a guide-roller G', thence over a guide-roller G², thence partly around a roller G³, and into a storage-reel G⁴ in frictional engagement with the roller G³. Between guide-rollers G and G' the strip passes between the dies and punches, so that when a punch is made it will cut and register the character in the record-strip. A yoke-lever H, pivoted to the casing, takes over the sliding bearings *a*, and is provided with a hinged end *h*, projecting through the casing. An arm I, pivotally secured to the lever H, carries a catch *i*, adapted to engage with a ratchet-wheel J, which is connected with friction-roller G³. A spring *i'* holds the catch in contact with the ratchet-wheel. The friction-roller G³ is held against storing-roll G⁴ by means of a spring *g*. The spindle carrying the friction-roller is provided with a mortise-and-tenon clutch *g'*, so that the roll may be removed without disturbing the ratchet-wheel. The rolls G G' G² G³ G⁴ are preferably mounted on the front plate of casing A, which is made removable, so that by use of a key the record-strip may be easily taken out and a portion of it removed without disconnecting the remaining portion from the rolls. 100

Gripping-rollers K are mounted on a plate directly above guide-rollers G' G² and are adapted to be swung out of contact with these rollers by means of a handle k. A
5 spring k' normally holds these rollers down.

In order to punch or receipt a bill, the gripping-rollers K are thrown up, as shown in dotted lines in Figs. 1 and 4, the bill is placed
10 are then returned to their normal position. Suppose the sum of one hundred and twenty-three dollars and seventy cents is to be receipted. The punch-wheel B is turned by means of a key inserted in socket b⁵ until the
15 die and punch for the figure 1 are in register directly over the bill. Lever H is actuated and forces punch-wheel B' downward. One of the guiding and locking pins b⁴ on wheel B enters the forked guide D, and the wheel
20 is prevented from rotating, while guide D' takes over one of the pins b⁴ in wheel B and locks it from rotation, the two guides serving to insure perfect alignment. The depression of the punch-wheel forces the punch through
25 the bill and record-strip, thereby cutting the figure 1 in both bill and record-strip. The depression of lever H carries the catch i below a tooth in the ratchet-wheel J a distance such as to allow the return stroke of
30 the lever to withdraw the punch from the record-strip before the catch engages with the ratchet-tooth. When the punch is freed, the engagement takes place and the remaining stroke of the lever actuates the ratchet-wheel,
35 thereby feeding the record-strip into position for the next figure. The bill being held in frictional contact with the record-strip by the gripping-rollers is moved ahead by the strip and is in position for the next figure. The
40 friction-roll G³ being held in frictional engagement with storing-roll G⁴ allows slipping to compensate for the different circumferential velocities of the friction-roll and storage-roll as the strip is wound from one to the other.
45 After the desired characters are stamped in the bill it is removed and appears as shown in Fig. 8, while the record-strip appears as shown in Fig. 7.

In Fig. 6 I have shown a modified form of
50 driving mechanism for connecting the wheels B and B'. A sprocket-wheel I is mounted on wheel B and a similar wheel 2 mounted on B'. A sprocket-chain 3 connects these sprockets. Pivotaly mounted between the sprockets is
55 a frame 4, carrying a roller 5 at one end and a roller 6 at the other. A crank-arm 7 is connected by a link 8 with lever H. By bringing lever H down, which forces punch-wheel B' downward, the frame 4 is swung and rollers
60 5 and 6, contacting with the chain, carry it with them and the chain is kept taut and held in operative engagement with the sprocket-wheels.

Instead of employing punches which cut
65 out the figures entirely, the punches may be arranged to puncture or indent the paper.

While my machine is more especially de-

signed for use in collecting outside of the business headquarters, it is obvious that it may be used in or out of the establishment. 70

I claim as my invention—

1. The combination in a registering machine for collectors of a punch wheel and a die wheel mounted in the same radial plane, one of said wheels being mounted to slide in
75 a plane at right angles to the axis of the other wheel; means for rotating the wheels concurrently; a record strip; and means for feeding the record strip substantially as and for the purpose set forth. 80

2. The combination in a registering machine for collectors of a punch wheel and a die wheel mounted in the same radial plane one of said wheels being mounted to slide in
85 a plane at right angles to the axis of the other wheel; means for rotating the wheels concurrently; a record strip; means for feeding the record strip, and means for automatically returning the sliding wheel to its normal position substantially as and for the purpose set
90 forth.

3. The combination in a registering machine for collectors of a punch wheel and a die wheel mounted in the same radial plane, one of said wheels being mounted to slide in
95 a plane at right angles to the axis of the other wheel; means for rotating the wheels concurrently; a record strip; means for feeding the record strip, and a connection between the sliding wheel and feed mechanism whereby
100 movement thereof actuates the feeding mechanism and advances the record strip substantially as and for the purpose set forth.

4. The combination in a registering machine for collectors of a punch wheel and a
105 die wheel mounted in the same radial plane, one of said wheels being mounted to slide in a plane at right angles to the axis of the other wheel; means for rotating the wheel concurrently; means for insuring alignment between
110 the corresponding dies and punches; a record strip and means for feeding the record strip substantially as and for the purpose set forth.

5. The combination, in a registering machine for collectors, of a punch wheel mounted
115 in sliding bearings; a die wheel mounted adjacent thereto; means for rotating the wheels concurrently; means for moving the punch wheel in the direction of the die wheel; a series of pins on the punch and die wheels cor-
120 responding to the punches and dies; a stationary forked guide for the punch wheel, adapted to receive the pins, and a forked guide for the die wheel adapted to move with the punch wheel and embrace the pins on the
125 die wheel, substantially as and for the purpose set forth.

6. The combination in a registering device for collectors, of a punch wheel and a die wheel mounted in the same radial plane, one of said
130 wheels being mounted to slide in a plane at right angles to the axis of the other wheel; a gear carried by the punch wheel, a gear carried by the die wheel, a space compensating

connection between the gears whereby the wheels may be rotated concurrently; a record strip and means for actuating the record strip substantially as and for the purpose set forth.

5 7. The combination in a registering device for collectors, of a punch wheel and a die wheel mounted in the same radial plane, one of said wheels being mounted to slide in a plane at right angles to the axis of the other
10 wheel, a record strip mounted on a series of rollers; a ratchet wheel connected with and adapted to actuate the storage roll, and an arm depending from the lever and carrying a catch adapted to engage with and actuate
15 the ratchet wheel, substantially as and for the purpose set forth.

8. The combination, in a registering machine for collectors, of a punch wheel mounted in sliding bearings; a die wheel mounted ad-

jacent thereto; a lever for actuating the punch wheel; means for returning the lever to its normal position; a record strip mounted upon a series of rollers; a ratchet wheel adapted to actuate the storage roll; an arm depending from the lever and carrying a catch adapted
20 to engage with and actuate the ratchet wheel, the arm and catch being so arranged relatively to the lever that the downward movement of the lever carries the catch beyond the ratchet tooth to be engaged, whereby the up-
25 ward movement of the lever frees the punch from the record strip, and bill, before the catch engages with the ratchet tooth, substantially as and for the purpose set forth.
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Witnesses:

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