(No Model.) 2 Sheets—Sheet 1.

P. E. LOREE.

AUTOGRAPHIC REGISTER.

No. 485,955. **Patented Nov. 8, 1892.**

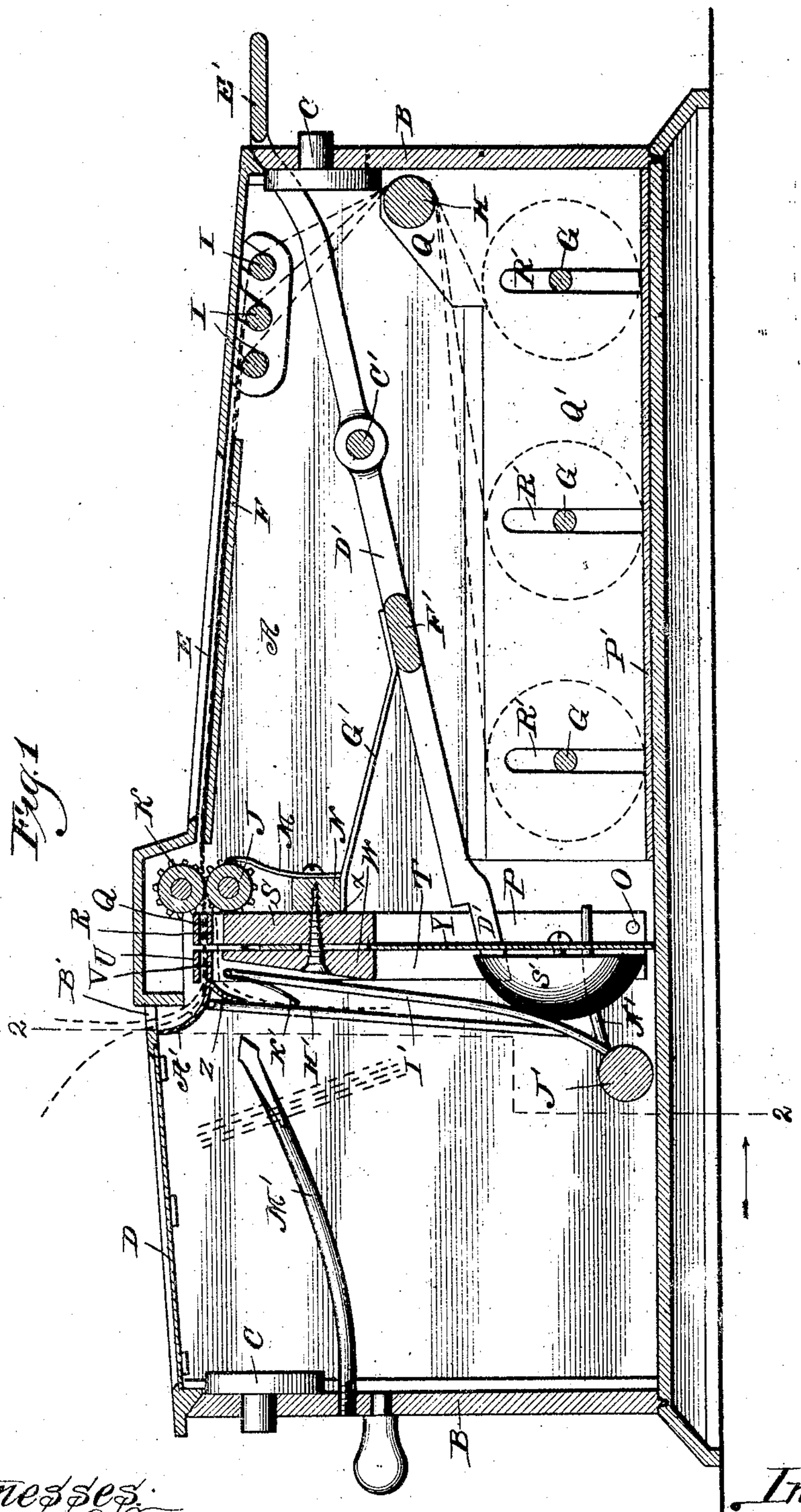

Fig. 1.

Witnesses:
John L. Tennison
Martin A. Olsen.

Inventor:
Perry E. Loree
by Edmund Baxter
his atty

(No Model.) 2 Sheets—Sheet 2.

P. E. LOREE.

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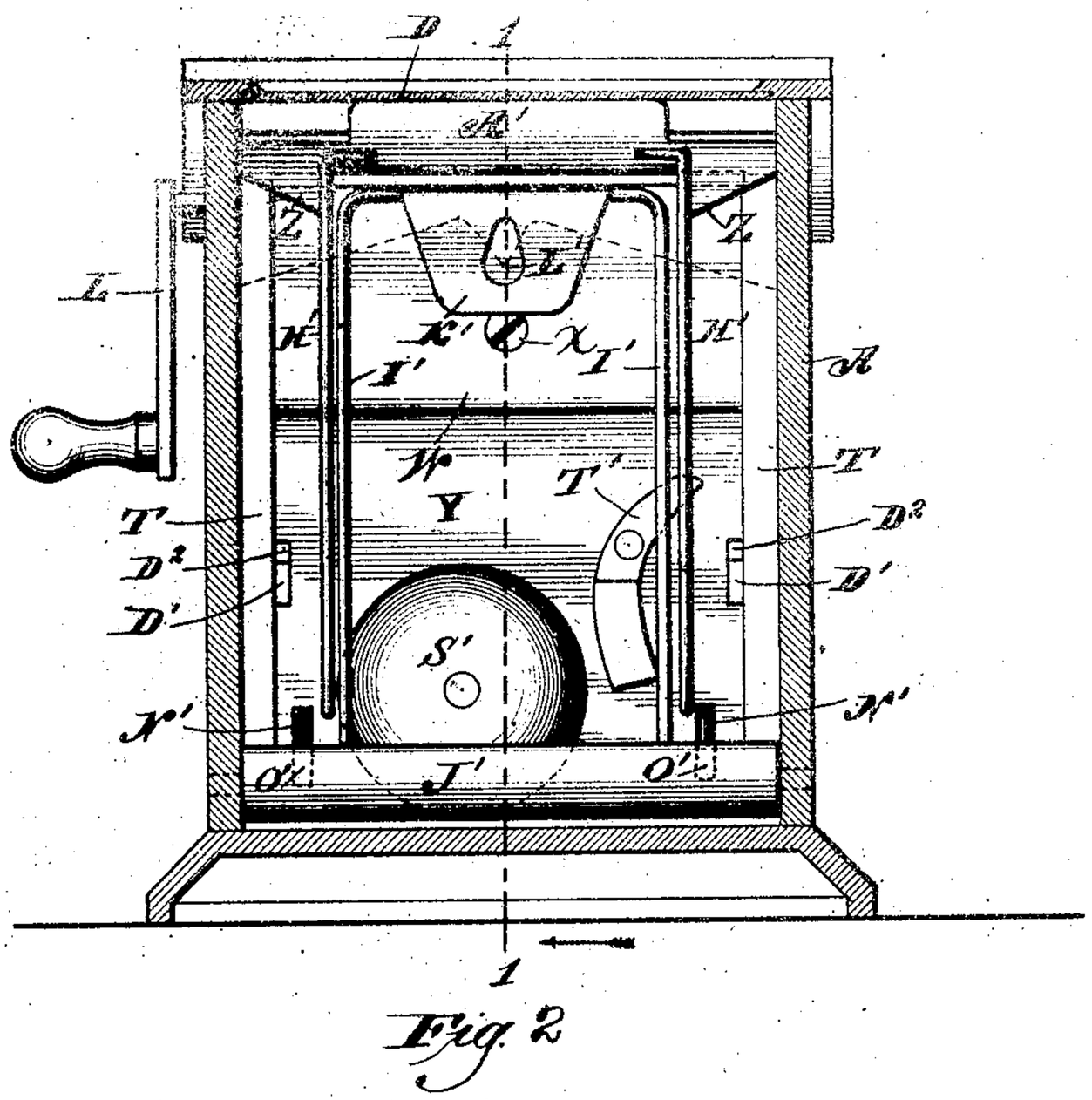
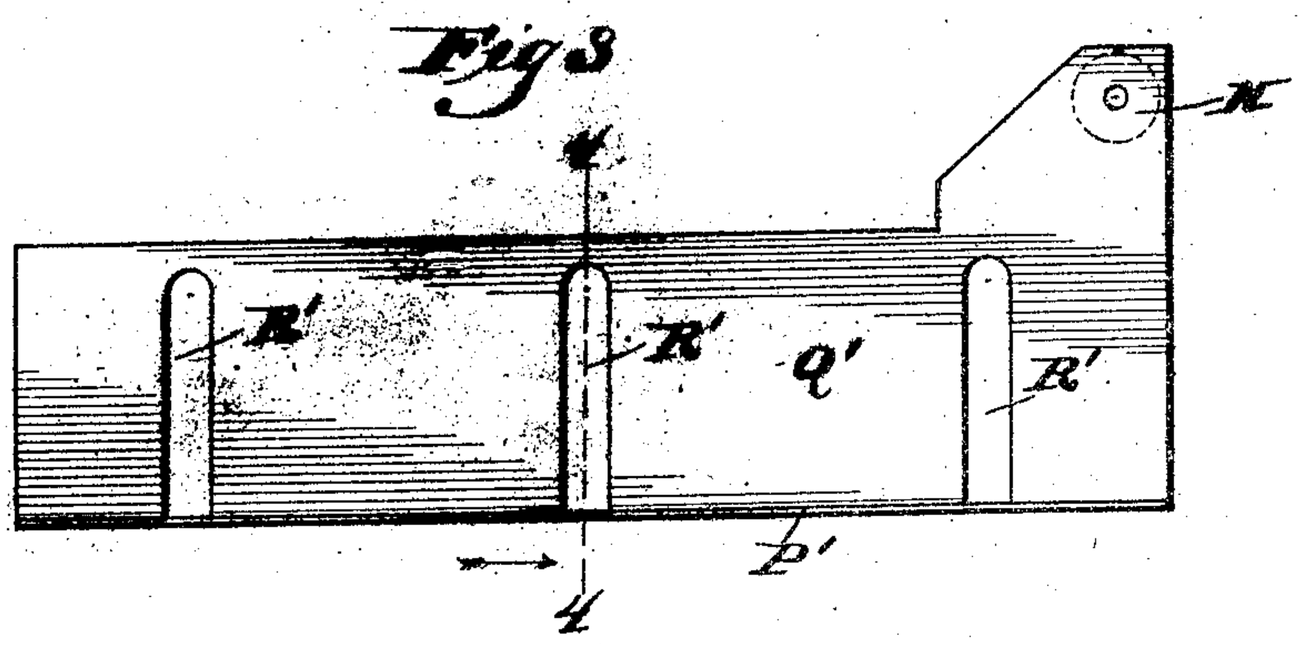


Fig. 2



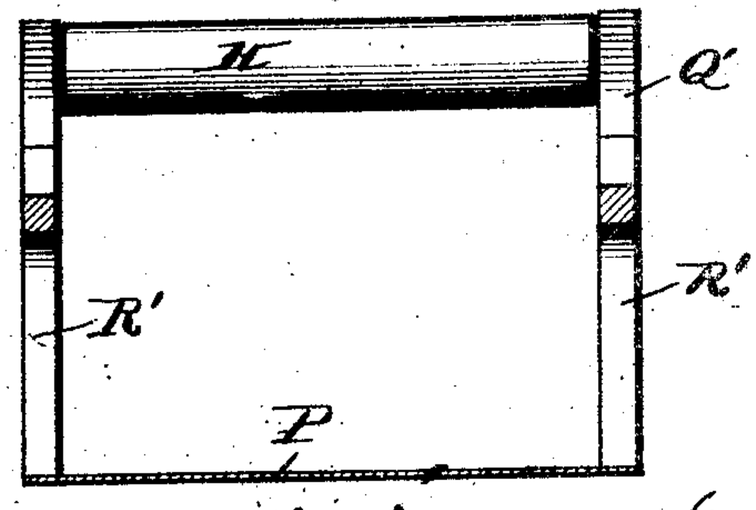


Fig. 4

Witnesses:
John L. Jamison.
Martin A. Olsen.

Inventor:
Perry E. Loree
by Edward Rector
his attorney

UNITED STATES PATENT OFFICE.

PERRY E. LOREE, OF DAYTON, OHIO, ASSIGNOR TO THE NATIONAL CASH REGISTER COMPANY, OF SAME PLACE.

AUTOGRAPHIC REGISTER.

SPECIFICATION forming part of Letters Patent No. 485,955, dated November 8, 1892.

Application filed July 11, 1892. Serial No. 439,670. (No model.)

To all whom it may concern:

Be it known that I, PERRY E. LOREE, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Autographic Registers, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to that class of machines in which two or more strips of paper are led over a writing-tablet, where they have suitable manifolding material interposed between them, by which memoranda written upon the upper strip will be duplicated upon the lower ones, and whence the lower strip is led back into the machine and filed as a record and the upper strip or strips led out of the machine and severed into checks.

My invention has for its object the improved construction and increased simplicity of this class of machines, and its novelty will be hereinafter set forth, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 represents a vertical longitudinal section of my improved machine on the line 1 1 of Fig. 2; Fig. 2, a vertical cross-section thereof on the line 2 2 of Fig. 1; Fig. 3, a side elevation of the paper-carriage for the supply-rolls of the paper strips, and Fig. 4 a vertical cross-section of the same on the line 4 4 of Fig. 3.

The same letters of reference are used to indicate identical parts in all the figures.

The working parts of the machine are inclosed in a suitable casing A, having removable end walls B, which are secured in place by dowel pins at their lower ends and by locks C at their upper ends, and having, also, in its top two openings D E, the former being covered with glass and the latter being located immediately above the usual writing-tablet F. The paper strips are carried in supply-rolls mounted upon spindles G, and are led thence over a common guide-roller H, thence upward over individual guide-rollers I, thence forward over the writing-tablet F and beneath the opening E in the top of the casing, and thence between a pair of feed-rollers J K. These rollers are geared together, and the spindle of the roller J projects outside the casing and has secured upon it a handle L, Fig. 2, by which the rollers may be turned to draw forward the paper strips. A spring M, secured to a cross-piece N, connecting the opposite sides of the casing, bears against the pinion of the feed-roller J and offers frictional resistance to the forward movement of the rollers and also prevents backward movement thereof. Pivoted at their lower ends at O to opposite sides of the casing are two vertical plates P, one of which is shown in Fig. 1. The upper ends of these plates are connected by two cross-bars Q R, having a transverse passage-way between them, and by a cross-bar S below the bar R, the two side plates and these connecting cross-bars constituting a hinged frame connected to the sides of the casing at O. At the left of this frame and slightly separated from it is a second corresponding frame composed of similar side plates T, Fig. 2, and cross-bars U, V, and W. These two frames are secured in vertical position by a screw X, passed from the left through the cross-bars W and S into the fixed cross-piece N of the framework. Confined in the space between the two frames just described and guided vertically by them is a knife-plate Y, provided with a vertical slot, through which the screw X passes, to permit vertical play of the plate. The lower one of the paper strips is led from the feed-rollers beneath the cross-bars R and V and directed downward by deflecting-plates Z, Figs. 1 and 2, at the left-hand edge of the cross-bar V, while the two upper strips are led from the feed-rollers through the passage-way above the bars R V and below the bars Q U, and directed upward by a deflecting-plate A′ through an opening in the top of the casing at B′. The purpose of hinging the frames between which the knife-plate is confined is to enable them, when the screw X is removed, to be swung to the left away from the feed-rollers, so that the ends of the paper strips may be readily directed through the proper passage-ways between the cross-bars of the frame. This is done whenever a new supply of paper strips is placed in the machine. After the ends of the strips have been directed through the

passage-ways in the frames the latter are swung back to vertical position and the screw X reinserted to hold them in place.

Mounted upon a horizontal shaft C′, fixed at its opposite ends in the sides of the casing, are two levers D′, one at each side of the casing. The right-hand ends of these levers project through slots in the end wall B of the casing and are connected by a cross-bar E′, extending across the end of the machine. At the left of their pivotal frame C the levers D′ are connected by a second cross-bar F′, the two levers and the two cross-bars constituting a rigid frame hung upon the shaft C′. The extreme left-hand ends of the levers D′ project through slots D^2 in the knife-plate Y, Fig. 2, so that whenever the cross-bar E′ is depressed the opposite ends of the levers D′ will lift the knife-plate and cause its upper edge to pass through the space between the bars Q R and the bars U V, and thereby sever all three of the paper strips. Springs G′, secured to the lower side of the cross-piece N and bearing at their right-hand ends against the upper sides of the levers D′ or cross-bar F, operate to reset the pivoted frame and knife-plate when the cross-bar E′ is released.

The deflecting-plates Z, before referred to, direct the record-strip downward between guide-wires H′, depending from the plate A′ or other suitable support, and a filing-frame composed of a wire I′, bent to the shape shown in Fig. 2 and secured to and supported at its lower ends in a rock-shaft J′, journaled at its opposite ends in the sides of the casing. The upper horizontal portion of this filing-frame has secured to it a plate K′, provided with an eye L′, adapted, when the filing-frame is vibrated to the left in the manner hereinafter described, to pass over the end of a fixed filing-pin M′, carried by the left-hand end wall B of the casing. Secured to the rock-shaft J′ near its opposite ends are two wires or rods N′, which project to the right in Fig. 1, through vertical slots O′ in the knife-plate Y, as seen in Fig. 2. When the knife-plate is lifted by the depression of the cross-bar E′, the lower ends of the slots O′ as the plate approaches its limit of upward movement will strike and lift the rods N′ and throw the filing-frame I′ rearward, and cause the plate K′ to force the severed record-slip upon the pin M′, as indicated by the dotted lines in Fig. 1. The lost motion between the lower ends of the slots O′ and the rods N′ permits the knife-plate to be lifted far enough for the knife to sever the strips before the filing-frame is thrown to the left to file the record-slip upon the pin M′.

From the foregoing description it will be understood that an operation of the machine consists in writing the desired memoranda upon the outer strip through the opening E, turning forward the feed-rollers by means of the handle L until the portion of the strips written upon has been carried beyond the cutting-point, and then depressing the cross-bar E′ to sever all of the strips, and to file the record-slip upon the pin M.

It is desirable in machines of this class to apply some friction to the supply-rolls of the strips to preserve a proper tension upon the strips as they are withdrawn from said rolls, and I have devised an exceedingly simple and effective means for doing this. The rolls are carried in a frame composed of a bottom plate P′ and two side plates Q′. The side plates Q′ are provided with opposite vertical slots R′, in which fit the ends of the spindles G′, which are passed through the supply-rolls, while the rolls themselves rest upon the bottom plate P′ of the frame. The friction of the rolls against this bottom plate offers sufficient resistance to the turning of the rolls to produce the desired tension upon the strips, while the spindles G′, confined in the slots R′, maintain the rolls in proper position and permit them to rest upon the bottom plate of the frame as they decrease in size. The frame may be easily slid out of the machine by removing the end wall B and the empty spindles be removed and new rolls of paper placed in the frame, and when the frame is slid into the machine again it will be held in place by the end wall B.

A gong S′ is mounted upon a screw-stud carried by the knife-plate and arranged to be sounded by a striker T′, pivoted to said plate, Fig. 2. When the plate is lifted, the upper end of the striker will engage the lower end of the cross-bar W and its lower end will be thrown against the gong.

Having thus fully described my invention, I claim—

1. In an autographic register, the combination of the pair of feed-rollers for advancing the paper strips to the cutting-point, the reciprocating knife-plate Y for severing the strips, and the pivoted frame for actuating the knife-plate, composed of the levers D′, projecting outside the casing and having their ends connected by the cross-bar E′, substantially as described.

2. In an autographic register, the combination of the reciprocating knife-plate Y for severing the strips, the rock-shaft J′, the filing-frame I′, carried thereby, the plate K′, secured to said frame, the filing-pin M′, the rods N′, secured to the rock-shaft J′ and projecting through slots in the knife-plate Y, and means for reciprocating the knife-plate, substantially as described.

3. In an autographic register, the combination of the feed-rollers for advancing the paper strips to the cutting-point, the reciprocating knife-plate Y for severing the strips, the deflecting-plates A′ and Z for directing the check-strips upward and the record-strip downward, the filing-pin M′, the guide-wires H′, the rock-shaft J′, the filing-frame I′, carried by the rock-shaft and provided with the plate K′, co-operating with the filing-pin M′, the arms N′, and the lever-frame for recip-

rocating the knife-plate, provided with the operating cross-bar E′ outside of the casing, substantially as described.

4. In an autographic register, the combination of the reciprocating knife-plate Y for severing the strips, the gong S′ and striker T′, carried by said plate, a contact-piece, as W, co-operating with the striker T′ to sound the gong when the knife-plate is lifted, and means for lifting the knife-plate, substantially as described.

5. In an autographic register, the combination of the feed-rollers for advancing the paper strips, the hinged frame composed of the side plates P and cross-bars Q, R, and S, and the hinged frame composed of the side plates T and the cross-bars U, V, and W, the vertically-reciprocating knife-plate Y, confined and guided between said frames, and the lever-frame for lifting said knife-plate to sever the paper strips between the cross-bars Q R and U V, substantially as described.

6. In an autographic register, the combination of the feed-rollers for advancing the paper strips, the reciprocating knife-plate Y for severing them, the deflecting-plates A′ and Z for directing the check-strips upward and the record-strip downward, the filing-pin M′, the rock-shaft J′, the filing-frame I′, carried thereby and provided with the plate K′, co-operating with the pin M′, the rods N′, secured to the rock-shaft J′ and projecting through slots O′ in the knife-plate, the levers D′, hung on the shaft C′ and projecting through slots in the knife-plate at one end and through slots in the end wall of the casing at their opposite ends, the cross-bar E′, connecting their outer ends, and a resetting-spring G′ for the levers and cross-bars, substantially as described.

PERRY E. LOREE.

Witnesses:
THOMAS CORWIN,
F. A. L. SNECKNER.