(No Model.) 5 Sheets—Sheet 1.

P. E. LOREE.

AUTOGRAPHIC REGISTER.

No. 499,679. Patented June 13, 1893.

Fig. 1.

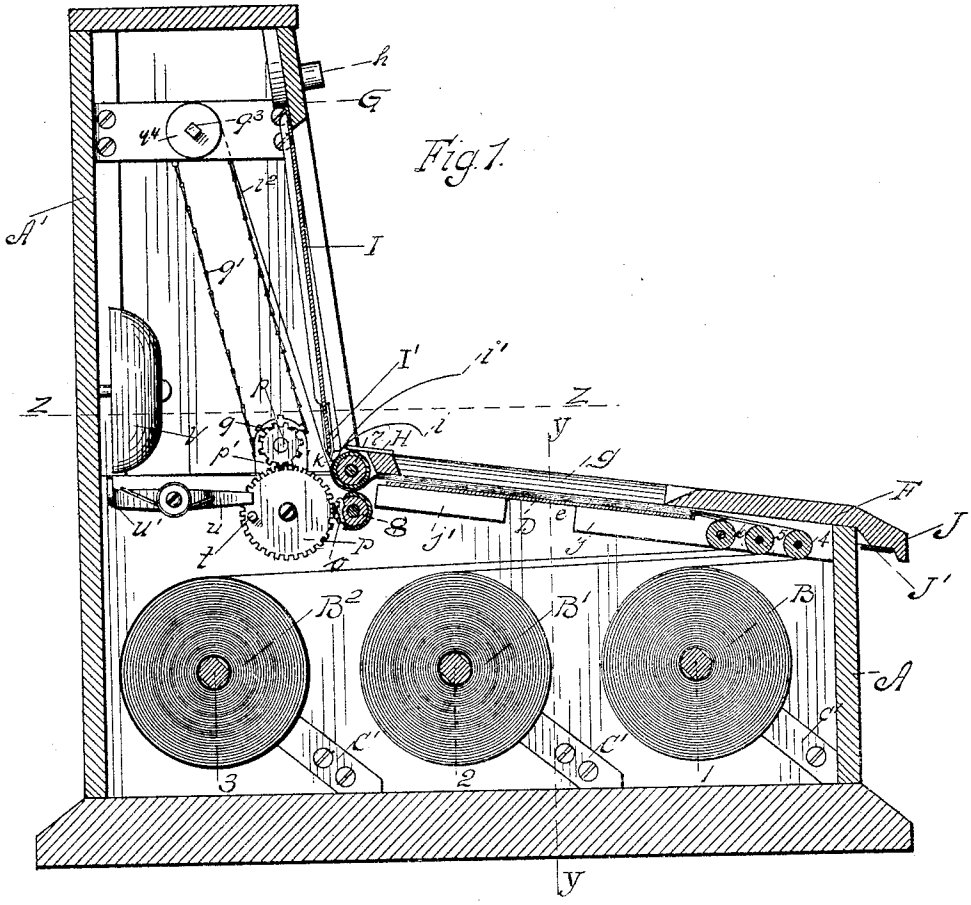
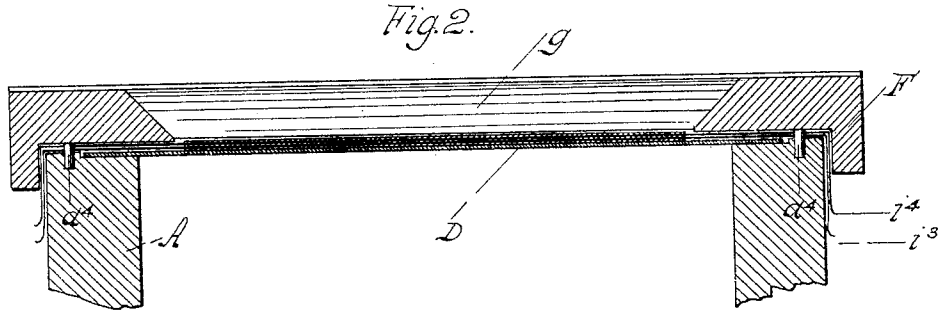


Fig. 2.



WITNESSES:

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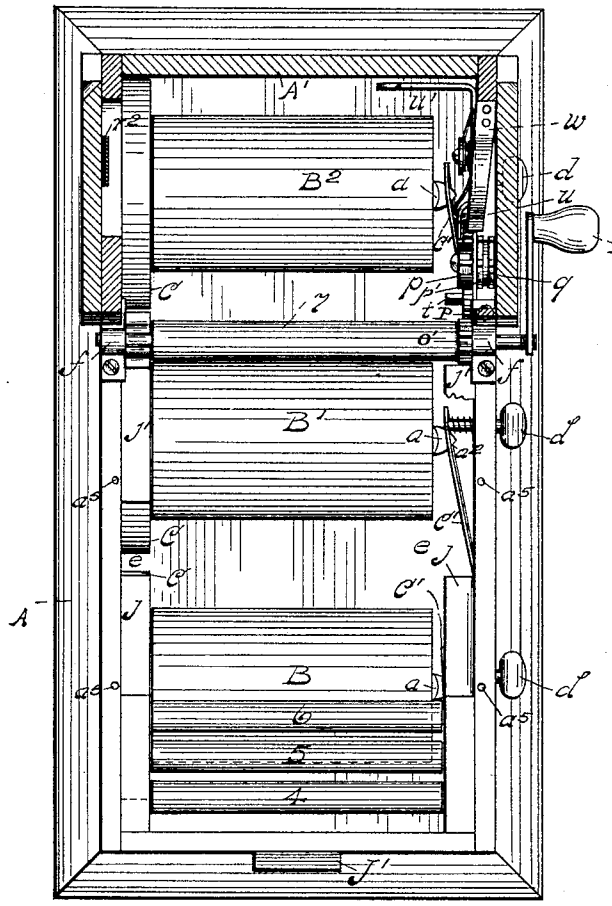

Fig. 3.

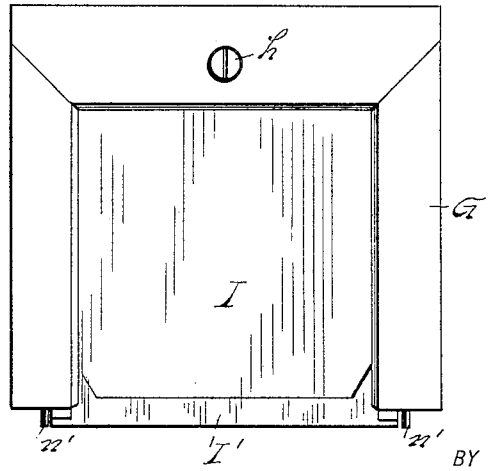

Fig 13.

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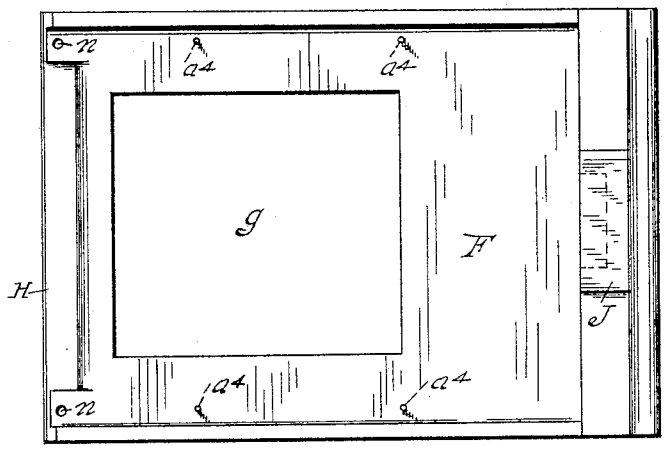


Fig. 4

Fig. 5.

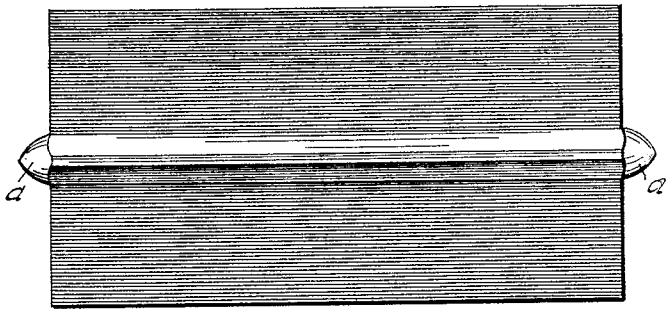
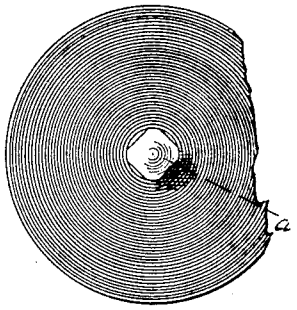


Fig. 6.



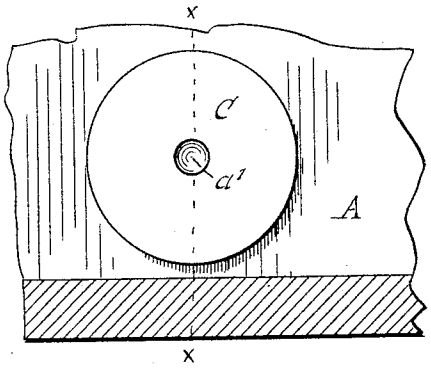


Fig. 7.

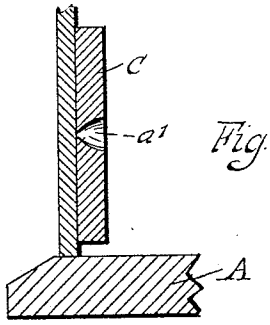


Fig. 8.

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AUTOGRAPHIC REGISTER.

No. 499,679. Patented June 13, 1893.

Fig 9.

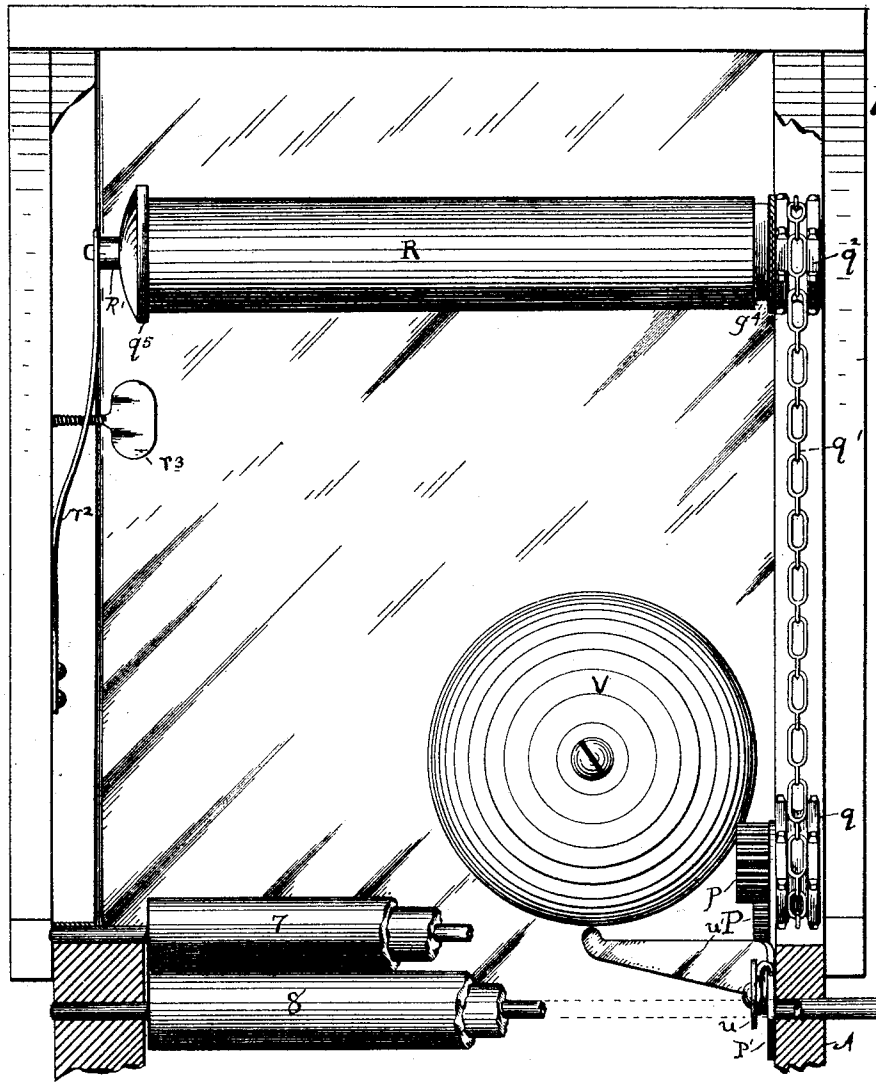


Fig 10

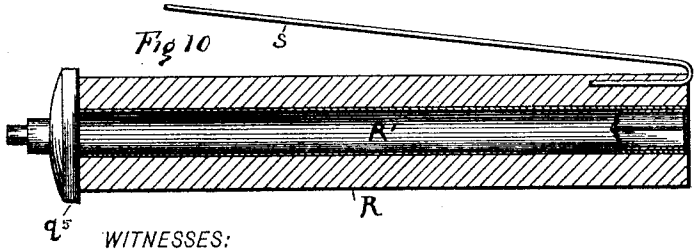
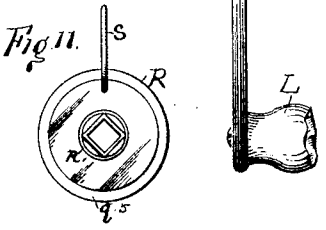


Fig 11.



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(No Model.) 5 Sheets—Sheet 5.

P. E. LOREE.

AUTOGRAPHIC REGISTER.

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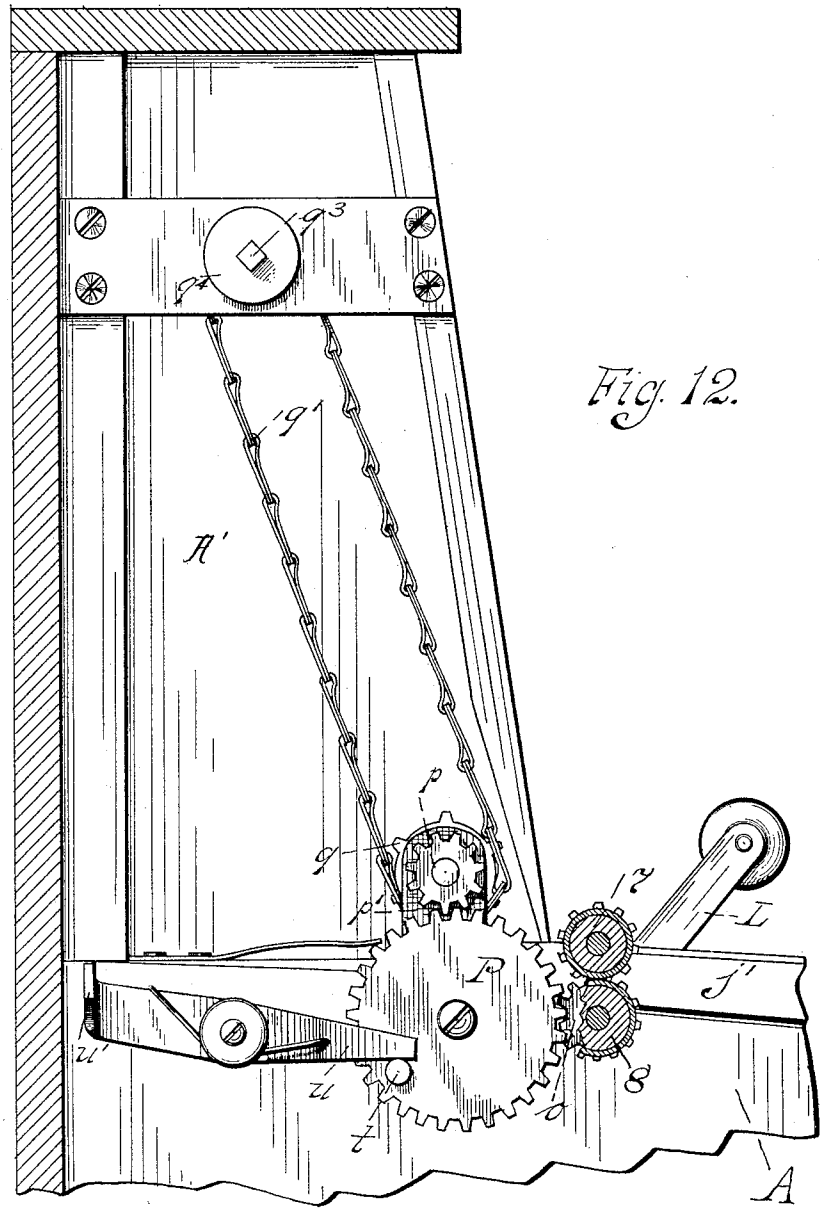

Fig. 12.

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UNITED STATES PATENT OFFICE.

PERRY E. LOREE, OF DAYTON, OHIO.

AUTOGRAPHIC REGISTER.

SPECIFICATION forming part of Letters Patent No. 499,679, dated June 13, 1893.

Application filed October 6, 1892. Serial No. 448,093. (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; and I do 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 and figures of reference marked thereon, which form a part of this specification.

My invention relates to new and useful improvements in autograph registers of the character adapted to use in stores or other places where commodities are dealt in and exchanged for a price in money.

The objects of the invention are several. Notably among them, are means afforded of having the retained or filing copy of the sale last recorded, secured in a position conveniently and readily exposed to view, and subsequently filed on a roller; the improved means of securing the hand rest or tablet frame and carbon sheets to the casing, and other points to be hereinafter described and claimed.

In the drawings presented herewith as supplemental to the specification, Figure 1, is a side elevation in section, longitudinally through the center of the apparatus, showing the roller-propelling and bell-sounding mechanism, &c. A portion of the rubber casing is removed from the lower or crank-actuated roller, to show the teeth thereof, meshing in the main ratchet wheel. Fig. 2, is a transverse sectional view in full size, on the line *y—y* of Fig. 1, showing the tablet frame or hand rest. This view is intended to show the manner of securing the carbon sheets and tablet frame or hand rest, to the casing. Fig. 3, is a plan view from the top, on the line *z—z* of Fig. 1. The bell is removed from this view. Fig. 4, is a detached, detail view of the hand rest or tablet frame, from the under side; Fig. 5, a view of one of the rollers containing a roll of paper, detached from the apparatus; Fig. 6, an end view of the same with part of the paper broken away; Fig. 7, a view of one of the plates forming the bearing for one end of the roller. The lower portion of one of the sides of the casing is broken away. Fig. 8, is an end sectional view of the same on the line X—X of Fig. 7; Fig. 9, an elevation in full size from the front showing the interior of the upright portion of the casing, the front part being broken away just below the rollers 7 and 8, which rollers appear partly in section with a portion of the rubber casing broken away; Fig. 10, a detached detail view of the filing roller; Fig. 11, an end view of the same; Fig. 12, a side sectional view of the upright portion of the apparatus, showing the rotating mechanism. The rubber casing is removed from the rollers 7 and 8, to show the gears. Fig. 13 is a detached view of the window.

I will now designate in detail, the essential features by letters and figures; the same letter or figure indicates a corresponding part wherever found.

A, represents the cabinet or casing, having sides inclining upwardly from the front; this casing terminates rearwardly in an upright portion A′. The casing may be constructed of wood or metal, and the upright portion A′ may be an integral part with the lower part or separate. I prefer the use of metal in the construction of the casing.

B, B′ and B², represent a series of rolls of paper supported on rollers 1, 2, and 3; these rollers are constructed with four rounded corners extending longitudinally and terminating in beveled ends (*a*), adapted to have a bearing on one side of the casing in a recess (*a′*) in plate C, attached to the casing in any suitable way, or the recesses may be directly in the sides of the casing. I find, however, the use of plate C, as a means of furnishing a bearing for these rollers, on this side of the casing, more desirable, as they can be easily removed and replaced by new ones, should it be found that constant friction in the bearing point enlarges the recess (*a′*) to an undesirable extent. I do not apprehend this, however, as my purpose in providing these rollers with beveled ends as described, was to avoid a too rapidly wearing away of the bearing points.

On the opposite side of the casing, springs C′ having apertures (*a²*) therein, similarly shaped to those in plate C, furnish bearings. These springs are adjustable by means of thumb screws (*d*) and the tension of the

springs may be lessened when it becomes necessary to remove a roller from which the paper has been exhausted, to replace it with a new one or tighten the roller against the plate, C, to prevent the paper from unwinding too freely. Openings (*e*) in the upper sides of the casing, allow the rolls of paper to be placed in the apparatus. The leading ends *i*, *i'*, and i^2, are brought forward and passed through rollers 4, 5 and 6 journaled in the casing; these rollers are placed far enough apart to allow the paper to pass unobstructed. A plate D, is placed on supports *j* and *j'* and forms a surface for the writing, and may be termed the tablet. The plate may be of sheet metal, glass or any other suitable material.

The following is the order in which the plate is prepared with the paper: That from roll B'', is first brought forward over roller 6, and placed on the plate D; next a carbon sheet i^3 is placed thereon; the paper from roll B' is then passed over roller 5, and placed on carbon sheet i^3. Next in order is a second sheet of carbon i^4, following which is the paper from roll B. The leading ends *i*, *i'*, and i^2, of the paper are then passed through rollers 7 and 8, journaled in bearings (*f*). These rollers are each provided with a rubber casing, as it is found an elastic or yielding surface at this point, facilitates an easy movement of the paper. (Further allusion to these rollers will be hereinafter made.) The tablet frame or hand rest F, with a square opening (*g*) in the center, through which the paper to be written upon, is accessible, is next placed in position and locked by means of a recess J, in the front thereof, adapted to fit over a projection J' in the front of the casing. These parts are first secured one within the other. Then the frame F, is lowered on the sides of the casing; pins (a^4) on the under surface thereof and protruding downwardly, pass through the sides of the carbon sheets and thence into cavities (a^5) in the upper side edges of the casing, thereby maintaining the tablet portion of the device securely.

At the rear end of the frame F, a transverse metal blade H is secured thereto, and the edge is adapted to extend rearwardly beyond the end of the frame; against this blade the leading ends *i*, and *i'*, containing the duplicate copies are drawn and cut off. At each end of this blade, openings (*n*) are adapted to receive pins (*n'*) on the lower part of window G. This window is provided with any suitable locking device *h* attachable to the upper part thereof, by which it is secured to the upright portion A' and the removable frame F becomes secured therewith. The glass I, enables the eye to penetrate this upright section of the register. At the lower extremity of this window, I provide a transverse metal strip I' bent over so as to form a channel or groove for the lower edge of the glass to fit in. It also forms a rounded or non-obstructing surface for the paper, *i* and *i'*, as they pass through the transverse opening, *k* between rollers 7 and 8 and said piece I'.

The power transmitting mechanism is contained in the upright extension of the casing and is imparted by means of crank L, attached to the shaft of roller 8. This roller together with roller 7, is provided with toothed or gear wheels *o* and *o'* that mesh one in the other. The teeth of wheel *o*, mesh in those of a main gear wheel P, (the functions of this wheel are two-fold, and further reference to it will be hereinafter made) the teeth of which in turn mesh in those of wheel *p*, attached to a common shaft which also supports a sprocket wheel *q*, from which motion is conveyed by means of chain, *q'*, to a second sprocket wheel, q^2, having a bearing on shaft, q^3, which shaft is provided with an integral flange, q^4, furnishing a bearing for one end of a filing roller R. (Further mention will be made of this filing roller as it is an important feature of my invention, and one that I am desirous of securing a proper claim on.) A metal plate *p'*, attached to the casing in the rear of the wheel P, separates the gear wheel *p*, and the sprocket wheel *q*, from each other, and forms bearings of both.

The roller R, is preferably constructed of wood with a longitudinal circular opening through the center adapted to receive the hollow shaft R'. This shaft is provided with an integral flange or washer q^5, at one end, against which one end of roller R, has a bearing. A spring, r^2, and the shaft, q^3, comprise the bearings for the shaft R'. It will be noticed this shaft does not penetrate the roller the entire length, and that the bearing, q^3 enters the opening in the roller to receive the shaft,—see Fig. 10 for an idea of the relative lengths of these parts. This construction is important as it enables the flange q^4, to furnish a bearing for one end of the roller, the flange, q^5, on the shaft, furnishing a similar bearing at the other end. The bearing imparted to the roller by these flanges is sufficient only to carry the roller around when there is no pressure on it from the paper. Tension is transmitted to the same by the thumb screw r^3. A wire (*s*) is inserted in one end of the roller R, and bent to extend longitudinally therewith and adjacent to the outer surface thereof. This roller is a means of preserving a continuous daily record of all sales that are made, and is non-accessible to all who are not provided with a key.

The operation of it is as follows:—The leading end i^2, having been passed through the rollers, is folded or lapped over an inch or two from the end. The wire (*s*) is placed between the fold, and the paper is then wrapped several times around the roller R, until it becomes sufficiently secured thereto to continue to receive the paper when the roller and shaft R' are rotated by the power transmitted from the crank L. It will be seen that the shaft R' may revolve independently of the roller R, which is always the case when the slack pa-

per is taken up by roller R. Sufficient tension being thereby imparted to the roller by the paper becoming tight, tends to keep it stationary, while the shaft R′ rotates. In other words, the circumference of roller R, being considerably greater than that of the rollers 7 and 8, it takes up more paper while in motion than can be fed through said rollers. Consequently it can only revolve when there is some slack in the paper. I do not mean that it is necessary to have a quantity of loose paper in the cabinet before this roller is permitted to rotate. On the contrary, it rotates when there is the least slackness in the paper being unwound, and the record is always in a position to be read through the window until it is taken up by the roller. The main gear wheel P, is provided with a pin (*t*) extending laterally from the side thereof. Every revolution of the wheel brings the pin (*t*) against a spring-actuated bell-hammer (*u*), raises and releases the same, causing the arm (*u′*) to come in contact with the bell (*v*) to sound an alarm. This alarm serves notice that the duplicates *i* and *i′*, are far enough from the tablet to be cut off. This obviates the necessity of keeping the eye constantly on the writing to see if it is in a proper position to be torn off. Finally I employ a ratchet connection (*w*), adjacent to the wheel P, and meshing in the teeth thereof, the office of which is to prevent the revolving mechanism from being turned backward to alter the record or in any way tamper therewith.

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

1. In an autographic register, the combination with the casing consisting of parts A and A′, the former provided with the projection J′ and slots *e*, of the tablet frame F with recess J, adapted to receive the projection J′, and a series of pins adapted to enter a corresponding series of cavities in the casing, and thereby secure the carbon sheets i^3 and i^4 on the plate D, substantially as herein described.

2. In an autographic register, the combination with the casing composed of sections A and A′ provided with the tablet-frame F with openings *n*, *n*, and the window G with pins *n′ n′*; of the sprocket wheel *q* and gear wheel *p*, both upon a common shaft; the sprocket wheel q^2 and shaft q^3, the chain *q′* by which wheel q^2 receives its motion from wheel *q*; the feed rollers 7 and 8, the latter provided with a crank L, and both carrying inter-meshing gear wheels *o*, and *o′*; the main gear wheel P, and the filing roller R, substantially as and for the purposes specified.

3. In an autograph register, the combination with the casing having the projection J′ and slots *e*, the tablet-frame F with recess J, and openings *n*, *n*, the window G with pins *n′ n′*; of the shafts 1, 2, and 3 with beveled ends; the bearings therefor consisting of the plate C with recess *a*, the spring plate C′ with opening a^2, and thumb-screw *d*, said spring plate being secured to the side of the casing on an incline to the axis of the shaft; the feed rollers 7 and 8 with gear wheels *o* and *o′*, the gear wheel P, the sprocket wheel *q* and the gear wheel *p* with the intervening plate *p′*, the sprocket wheel q^2, with bearing on shaft q^3, and the filing roller R, substantially as and for the purposes specified.

4. In an autographic register, the combination with the casing and inclined and vertical covers adapted to be secured to each other and locked to the casing, of a filing roller, with an inner shaft of somewhat shorter length, said roller having a bearing at one end against a flange integral with said shaft, and at the other end against a flange integral with the shaft bearing, and means for rotating said shaft and roller, as herein described.

5. In an autograph register, the combination of the paper-dispensing shafts 1, 2, and 3 with the beveled ends as herein described, the bearings therefor consisting of the plate C with recess *a*, the spring plate C′ having a normal outward tendency, and aperture *a′*, the thumb-screw *d* to adjust said bearing as the same is worn by usage, the feed rollers 7 and 8 carrying gear wheels *o* and *o′*, the gear wheels P, and *p*, the sprocket wheels *q* and q^2, and the filing roller R, substantially as and for the purposes specified.

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

PERRY E. LOREE.

Witnesses:
B. S. McKAY,
HARVEY CONOVER.