No. 630,601. Patented Aug. 8, 1899.

W. L. EGRY & T. F. SCHIRMER.

AUTOGRAPHIC REGISTER.

(Application filed Oct. 29, 1898.)

(No Model.)

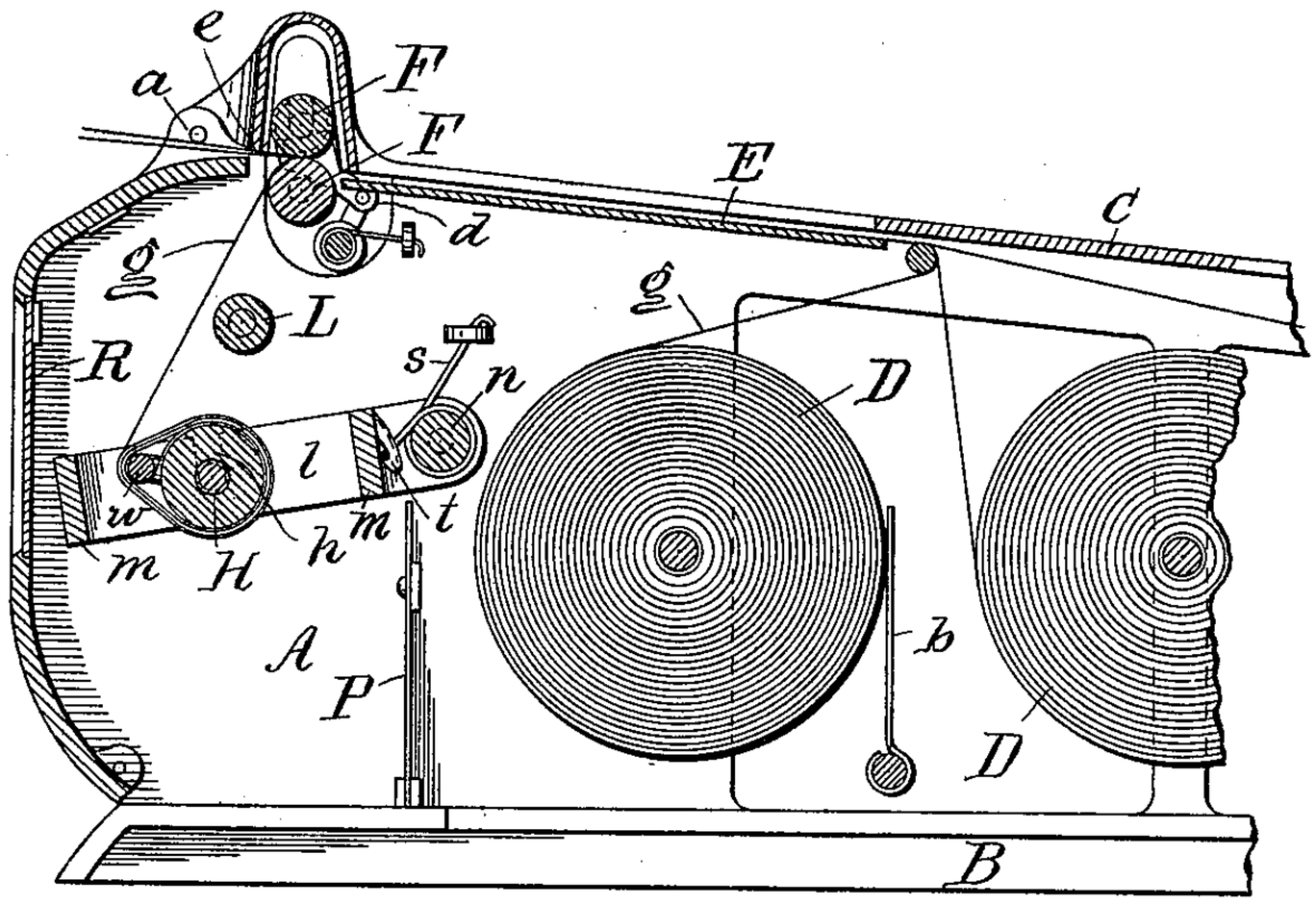


Fig. 1.

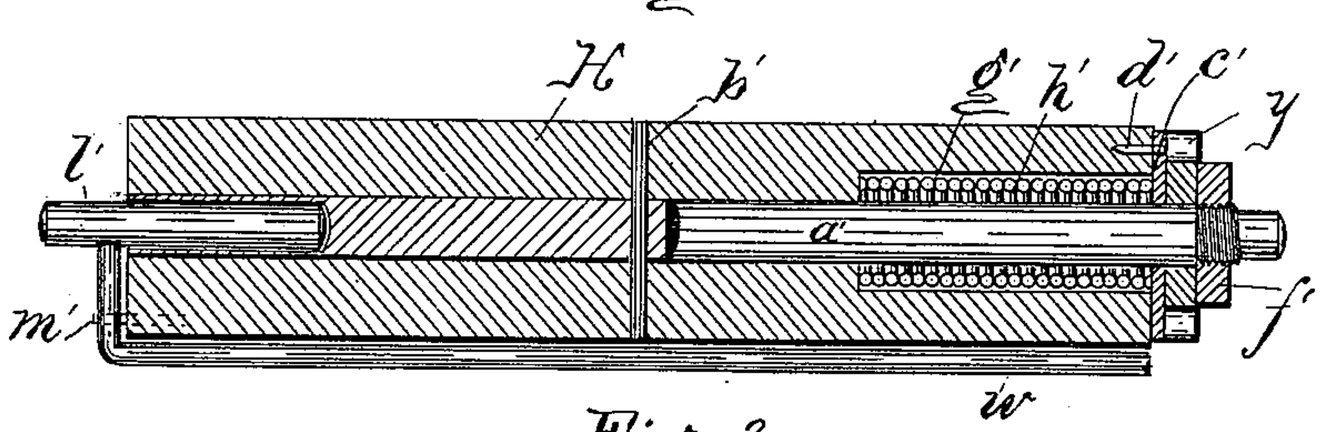
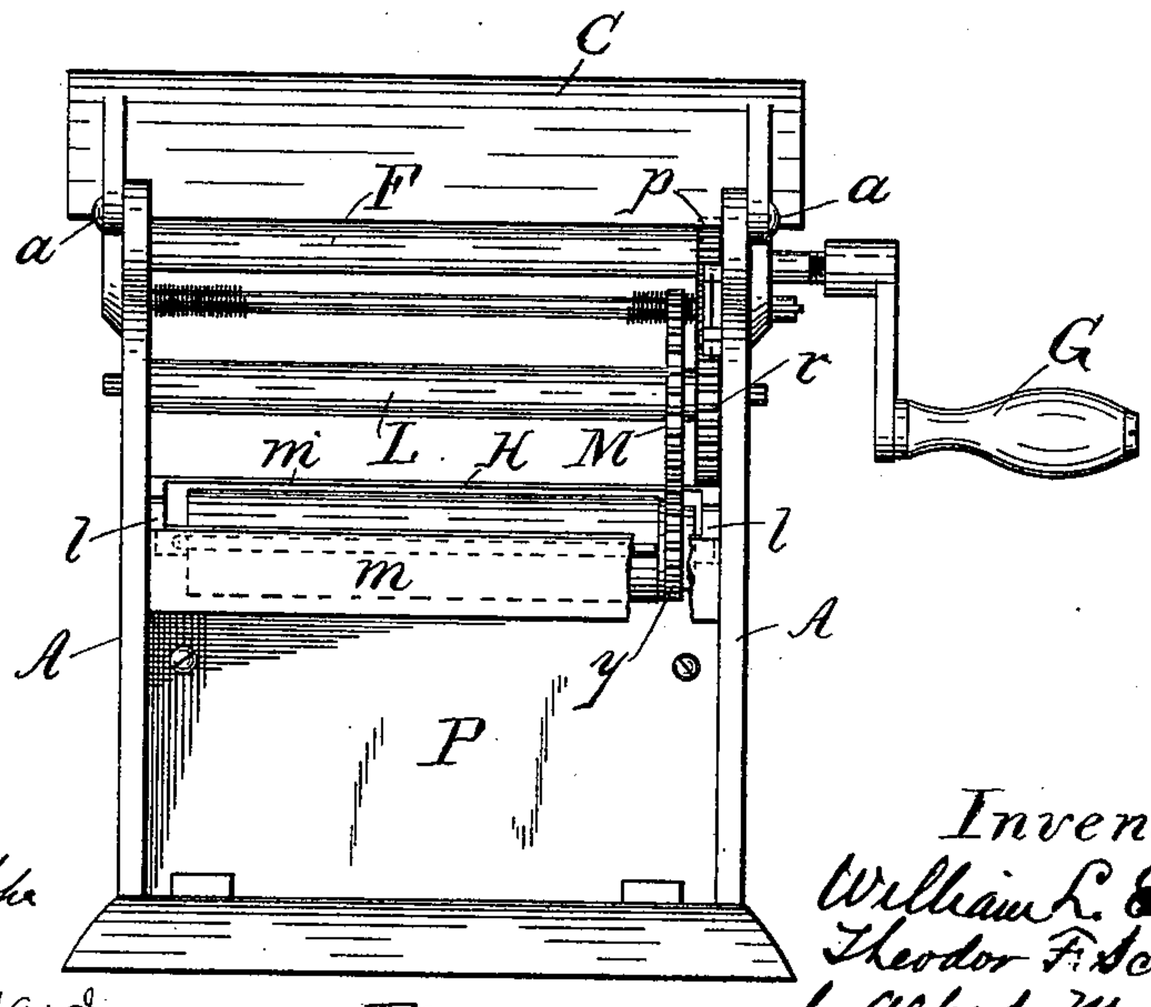


Fig. 3.



Witnesses.
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Fig. 2.

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UNITED STATES PATENT OFFICE.

WILLIAM L. EGRY AND THEODOR F. SCHIRMER, OF DAYTON, OHIO, ASSIGNORS TO THE EGRY AUTOGRAPHIC REGISTER COMPANY, OF SAME PLACE.

AUTOGRAPHIC REGISTER.

SPECIFICATION forming part of Letters Patent No. 630,601, dated August 8, 1899.

Application filed October 29, 1898. Serial No. 694,874. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM L. EGRY and THEODOR F. SCHIRMER, citizens of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented a certain new and useful Improvement in Autographic Registers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

Our invention relates to machines for making duplicate copies of writings, whether of sales-slips for use in stores or business memoranda of various kinds, such as bills of lading and the like, in which it is intended to provide a record-strip to be stored away for secret preservation in the case.

The invention relates particularly to that class of duplicating-machines in which a storage-roll for the record-strip is employed; and it has for its object to provide an exceedingly simple and effective method of mounting the storage-roll, so that ready and easy access may be had to the same and also to enable the operator to readily and easily consult or remove the record-strip when desired and to attach the unused portion of the strip to the roll at a moment's notice in starting the machine.

In the drawings, Figure 1 is a central longitudinal section of our improved machine with the rear portion broken away. Fig. 2 is a front elevation of same with the front of the case removed. Fig. 3 is a central longitudinal section of the storage-roll.

The main features of the register are of the usual and well-known description, in which A A are the sides, B the bottom, and C the top, of the case in which the operating parts are mounted, the top being hinged to the sides at *a*, so as to allow ready access to the case for the loading of the machine with the paper strips, which are, as usual, mounted on rolls D D, journaled in the sides of the case and provided with tension-springs *b* to prevent the rolls from overrunning.

E is the writing-tablet, over which the paper strips are passed and where is interposed between the strips the usual manifolding material.

F F are the feed-rollers, between which the strips are passed, the rollers being kept in proper tension by the usual springs bearing against the journals of the upper feed-roll and arranged to be separated by the cam-lever *d* to allow for the insertion and adjustment of the slips when out of alinement, while G is the hand-crank, attached to the lower feed-roller, by means of which the rollers are rotated to feed the strips, one or more of them passing without the case where they are torn off against the cutting edge *e*. The lower or bottom strip *g* is the record-strip, which is wound up on the storage-roll H. This storage-roll is mounted in side slots *h* in the sides of a frame made up of sides *l l* and cross-bars *m m*, the rear of the frame being provided with a rod or bar *n*, with journals at the ends, by means of which the frame is mounted in and pivoted to the side walls A A of the case.

The lower feed-roller F is provided with a gear *p*, which meshes with a gearing *r* on the shaft L, journaled in the case underneath the feed-rollers. This shaft L also carries a gear M, which meshes with the gear *y* upon the outer end of the storage-roll H. Mounted on the rod or bar *n* is a coiled spring *s*, one end of which is attached to the case and the other end is secured to the lug *t* on the frame, so that the tension of the spring keeps raised the frame on which the storage-roll H is mounted. Any sort of spring to act on the storage-roll frame can be employed; but we prefer a coiled spring encircling the rod *n* from end to end with the ends of the coils attached to the case and the contact portion hooked under the lug *t*. It will be evident from this construction that the pressure of the spring on the storage-roll frame will keep the storage-roll gear in mesh with the gear M and that the rotation thereof by the gearing with the feed-rolls will rotate the storage-roll to wind up the record-strip for preservation.

It is evident that as the storage-roll increases in size with the winding up of the strip some provision must be made to allow

the storage-roll to slip to compensate for the increased length of strip wound up with each subsequent revolution of the roll, and in order to accomplish this we provide as follows: a' is the spindle of the roll H, upon which the roll is rigidly secured by pin b'. c' is a plate loosely mounted on the spindle a' and movable laterally, but prevented from rotating by the pin d'. The gear y is then mounted loosely on the spindle a' and held by nut f'', screwed on the spindle. The end of the roll H is hollowed out to form a recess g', within which is mounted the spring h', bearing against the plate c'. It will be evident from this that the friction between plate c' and the gear y will be sufficient to permit the gear to rotate the roll (the amount of friction being regulated by the nut f'') and that at the same time the gear can slip to compensate for the increased amount of strip stored on the roll.

With registers of this class it frequently happens that it is desired to consult the record-strip, and to do this it is necessary to tear the paper strip and remove the storage-roll. It is therefore of great importance that the storage-roll shall be capable of ready and easy removal and replacement and that the record-strip can be readily attached again to the roll. Our frame for holding the storage-roll enables us to accomplish this with the greatest ease. By merely pressing down the outer end of the frame the storage-roll can be instantly removed by raising it up from the slots in the frame, within which it is mounted. The record-strip can then be readily consulted, the roll replaced, and the machine continue its work. To start the strip on the roll, we provide the rod w, secured to the spindle-pin l' at one end and extending to the other end of the roll with this end open, so that the paper strip may be easily passed around this rod, when a turn of the storage-roll will secure the strip thereto. The pin l' is loosely inserted in the end of the roll in a recess formed in the spindle a', and the outer end of the pin forms the end of the spindle for supporting the roll. The pin l' and rod w are, however, prevented from rotating by the pins m', driven into the roll on each side thereof.

In removing the storage-strip from the roll with the rod w permanently secured to the roll the paper is apt to be found wound very tightly thereon, so that it is difficult to remove same without unwinding the strip with the rod w, attached to spindle-pin l', so that it can be readily removed. The storage-strip at once becomes loose, so that its removal is very easy, and to further facilitate the withdrawal of the spindle-pin l' and rod w we prevent the rod from rotating by the pins m', because it is difficult to start the paper on the roll, and the rod becomes wedged so tight under its freedom of movement that it is difficult to withdraw same.

To separate the storage-compartment from the supply-compartment, we provide the partition P, while the front of the case R is hinged to the bottom, so that the storage-compartment can be easily opened up to permit access to the storage-roll and the record-strip mounted thereon.

While we have shown our improved method of mounting the storage-roll as applied to a register supplied with paper mounted on rolls and fed by feed-rollers, it will of course be understood that the invention in this respect will be equally applicable to registers of other classes, whether the supply-strips are mounted in rolls or supplied from folded packages or otherwise disposed in the supply-compartment or whether the strips are fed by feed-rollers or in any other well-known way.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In an autographic register, the combination, with feeding devices therefor, and a storage-roll, with driving mechanism intermediate said roll and feeding devices, of a frame pivoted to the case, with slots in the sides thereof, within which said roll is journaled, a rod on said frame, having a coiled spring mounted thereon one end of said spring attached to the case and the other end hooked under a lug on said frame, whereby said roll with its frame is kept in contact with said driving mechanism, substantially as shown and described.

2. In an autographic register, the combination with the storage-roll and gearing for rotating same, of a spindle therefor fixed to said roll, and a gear, and a plate laterally movable but non-rotatable with reference to said roll, each loosely mounted on said spindle in contact with each other, and a spring for maintaining a frictional contact between the same.

3. In an autographic register, the combination, with a storage-roll and gearing for rotating same, of a spindle therefor fixed to said roll, a plate laterally movable but non-rotatable with reference to said roll loosely mounted on said spindle, with a gear also loosely mounted thereon in contact with said plate, and coiled spring pressing said plate against said gear, and a nut to regulate the tension, whereby said roll may be driven by the friction between the plate and the gear, substantially as shown and described.

4. In an autographic register, a storage-roll for the record-strip, a spindle therefor having one end removable, with a rod secured to said removable portion and extending from end to end of the roll, parallel to the axis thereof, and pins to prevent said rod from rotating while permitting an easy withdrawal thereof endwise, substantially as shown and described.

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