

H. M. GEIGER.
MANUAL SALES RECORDER.

No. 549,777.

Patented Nov. 12, 1895.

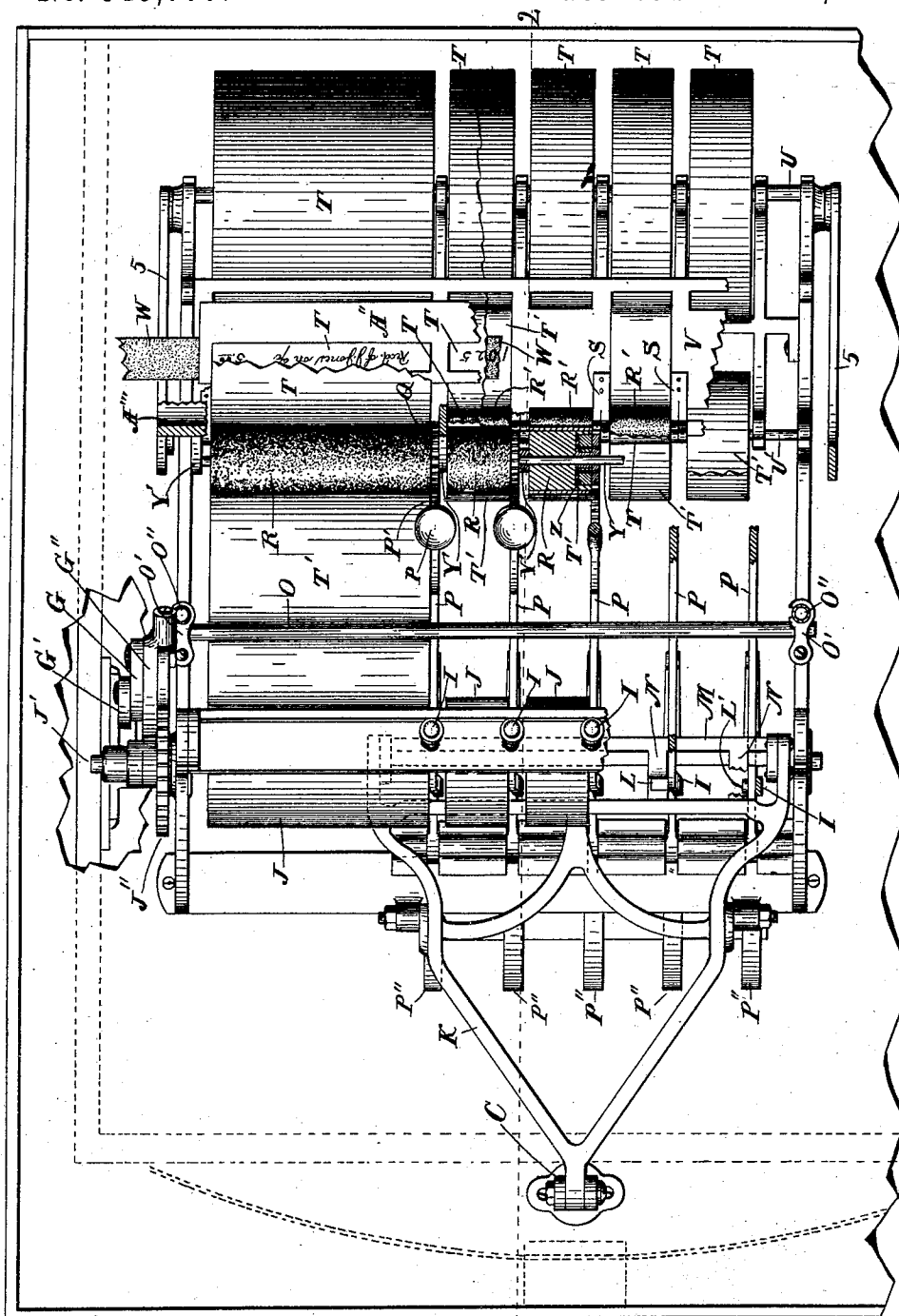


Fig. 1.

WITNESSES:

INVENTOR

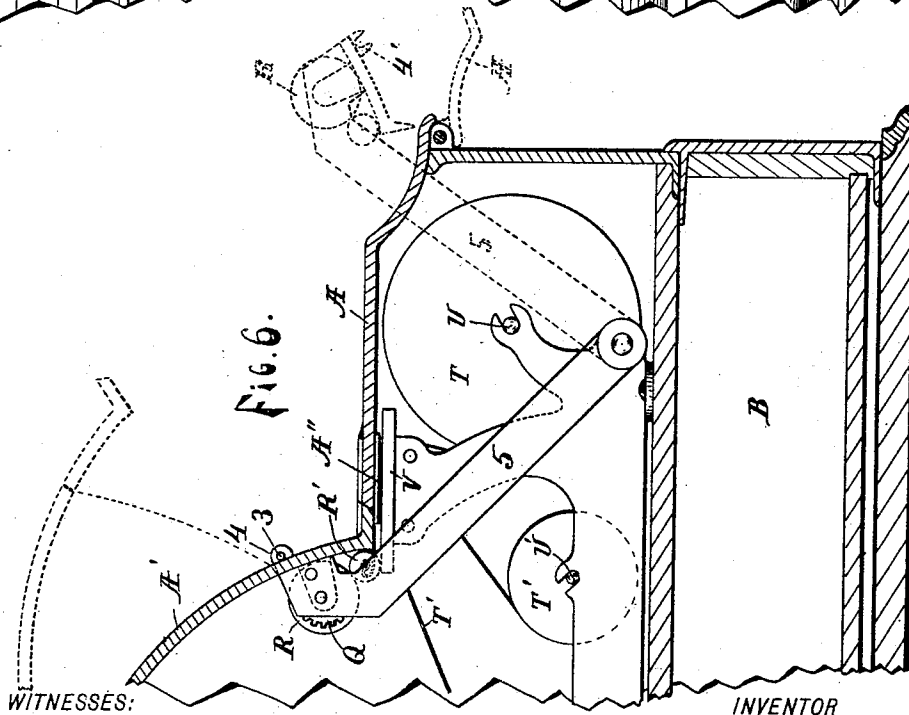
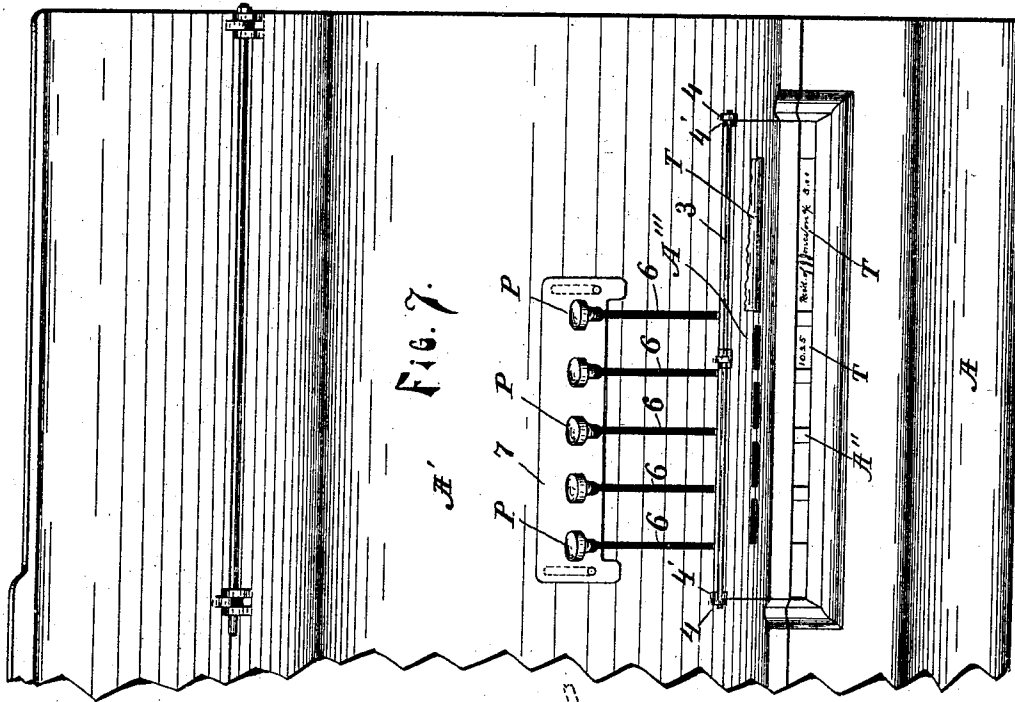
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His - ATTORNEY.

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UNITED STATES PATENT OFFICE.

HARRY M. GEIGER, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO THE
CHAMPION CASH REGISTER COMPANY, OF SAME PLACE.

MANUAL SALES-RECORDER.

SPECIFICATION forming part of Letters Patent No. 549,777, dated November 12, 1895.

Application filed July 27, 1894. Serial No. 518,728. (No model.)

To all whom it may concern:

Be it known that I, HARRY M. GEIGER, a citizen of the United States, residing at the city of Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Manual Recorders and Cash-Drawers, of which the following is a specification.

This invention relates to certain new and useful improvements in manual recorders and cash-drawers, and it more especially refers to certain improvements upon the manual recorder or cash-drawer patented to me May 2, 1893, No. 496,733, although a portion of the invention may be used in connection with other forms of manual recorders and cash-drawers; and the objects of my invention are, first, to furnish, in connection with the permanent record of the cash received or paid, a statement to the purchaser of the amount of money he has paid, which statement is detached from the roll and is written or printed at the same time that the entry is made, which is retained by the owner of the machine; second, to furnish an improved method of operating the push-bar which throws open the drawer; third, to combine suitable and appropriate mechanism for making a plurality of impressions at the same time; fourth, the various combinations of machinery arranged and operated for the purposes more fully described hereinafter. These objects I accomplish by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of my improved manual recorder and cash-drawer with the upper portion of the cover removed in order to show more fully the arrangement of the parts within the case. Fig. 2 is a longitudinal sectional view of the machine on line 2 2 of Fig. 1. Fig. 3 is a detail section, on an enlarged scale, of the paper-delivery mechanism. Fig. 4 is a sectional view of the large friction-roller which is operated to carry the free end of the paper containing the entries or statements which are removed for the purchaser, said Fig. 4 showing the parts on an enlarged scale. Fig. 5 is an end view of the roller shown in Fig. 4. Fig. 6 is a side elevation, with a portion of the case removed, of

a portion of the front part of the machine, showing the construction of the swinging support of the friction-roll R and its connections, the dotted lines showing the position of the friction-roll R when turned back in order to obtain access to the paper; and Fig. 7 is a plan view of the case, showing the keys and open face which allows for the printing or writing upon the paper. It also shows the openings from which the copies are removed.

Similar letters and figures refer to similar parts throughout the several views.

A represents the case or outer shell, which may be constructed of any suitable material and in any suitable form, for receiving the internal mechanism which operates the paper-rolls and cash-drawer.

A' is a lid to cover the upper part of the case.

A'' is a plate or fender over the strips of paper.

A''' is the plate to which the friction-rolls R are attached.

B represents the cash-drawer, preferably placed beneath the working mechanism of the rolls and provided with a locking device for retaining the same in position and means for throwing the drawer outwardly or opening the same when the lock is removed. The locking device consists of a locking-dog C, supported on a swinging and locking frame K, hereinafter described, said locking-dog C engaging with an opening in the locking-plate D, into which opening the dog C drops, retaining the drawer closed and locked until the oscillation of the rocking-dog frame K raises the locking-dog C from its locking position in the locking-plate D. At the rear of drawer, or in some suitable position, is placed a spring E, which spring is compressed when the drawer is shoved within the case, and which spring by its tension throws out the drawer B as soon as the dog C is lifted from locking position.

F is a cam-surface or incline attached to the drawer B, adapted to come in contact with the latch G' when the drawer is thrown open, thereby lifting the latch G' and the connecting-bar G, thereby operating the pawl G'', which pawl is held in operative position by

means of the connecting and operating rod H. J' is a shaft supporting the roller J, and J'' is a ratchet with which the pawl G'' engages, the whole being constructed so that the outward movement of the drawer, striking the latch G', lifts the connecting-rod G, operates the pawl G'', and revolves the ratchet-wheel J'' and with it the roller J, the latch G' being attached by a pivot to the lower end of the connecting-bar G and swinging or bearing against a pin, so as to be held in the position shown in Fig. 2 when the drawer is opened; but when the drawer is shoved into the case the latch G' turns upon its pivot until it falls over in front of the incline F, dropping into the position shown in said Fig. 2.

I is a push-rod operated by the key-rod P. The push-rod I is provided with a slot I', through which the shaft J' passes, the object of this construction being merely to allow the longitudinal movement of the push-rod. Any other suitable form might be used.

I'' is a spiral spring adapted to raise the push-rod I to its normal position when released from pressure caused by the downward movement of the key-rod P.

It will be understood that in the form of manual recorder and cash-drawer illustrated in the drawings the push-rod is wedge-shaped and that the spools are each provided with suitable mechanism, whereby the depression of the push-rod attaches the spool to its particular cone, so that the same will revolve with its shaft. In other words, in the form of machine shown in Fig. 1 the spools are supported loosely on their shaft and only attached to revolve therewith whenever the key corresponding to the particular spool is pressed down; but as I make no claim in this application to such device I have not deemed it necessary to show in detail the mechanism whereby each spool is attached by means of its corresponding push-rod.

The rocking-dog frame K is provided with a pivot or fulcrum on which it turns and is operated through the push-bar I.

L L are the upper lugs on the push-rod I, which engage with the jaw-shaped projections N on the shaft M, this construction being substantially the same as in my patent heretofore referred to.

L' are the lower lugs, one for each push-rod I, which lower lug is in the shape of an angular foot, and the same engages with a slot in the key-rod P. The key-rod P turns upon a pivot 2 at its lower end and is provided with a widened projection at its upper end, the upper end moving in a slot 6 in the cover A'.

It will be observed that the depression of the key-rod P lowers the push-rod I, turning the shaft M—that is, the push-rod I, instead of being operated directly by the finger, as in my original patent, is operated by means of the key-rod P.

O is a rod or shaft for holding or giving direction to the paper after the same has passed from the roll T on its way to the roll J. The

rod or shaft O is provided with a latch O', held in position by a thumb-nut O''. The object of this construction is to allow the user to loosen the thumb-nut O'' and turn the latch O', so as to release the shaft O.

The key-rod P is provided with a rack-bar P', which engages with a cog-wheel Q, which cog-wheel Q is attached to the friction-roller R by means of a sort of ratchet or pawl connection, so that when the key-rod P is depressed the cog-wheel Q is revolved, and with it the friction-roller R, thereby carrying the paper T through the opening at the front of the case, as shown in Fig. 2. The key-rod P is raised to its normal position when pressure is released by means of a spring P''.

The plate A''' is provided with lugs which support the journal of the rollers R and also the small rollers R', the paper T passing between the rollers R and R'.

In order to obtain access to the paper at any time, the plate A''', which is supported on pivoted arms 5, one at either side of the machine, may be turned or thrown back into the position shown by dotted lines in Fig. 6.

S is a spring which maintains the tension between the friction-rollers R and R', so as to clasp the strip of paper T and move the same as the friction-rollers are revolved.

T represents the paper which furnishes the cash statement to the purchaser, the same passing over suitable rollers, as shown in Fig. 2, over a suitable plate, and beneath the opening in the case.

T' represents the paper which passes with the strip T until they are separated, after having received the entry thereon in pencil, ink, or otherwise. This strip then passes under the shaft O and around its roll J, there being as many strips of paper as there are series of rolls in the machine.

U represents the shaft or the roll on which T is wound and U' the shaft for the roll on which the paper T' is wound. The table over which the paper passes is shown by V. Between the upper and lower paper, at the opening, is a printing ribbon, carbon, or any suitable material for giving an impression. This ribbon is shown in Figs. 1 and 3.

In order to prevent crocking of the paper, thin plates may be used so as to remove the paper a very short distance from the printing-ribbon, the paper, however, being near enough together so that an entry made upon the upper strips will be communicated to the lower.

X is a spring-arm applied to each spool in order to keep the same from jarring out of place. The spring-arm engages with notches or depressions in the spool, as shown in Figs. 4 and 5 by X'.

Y is the shaft for the spools R, and Z is the friction-ratchet shown in Figs. 3 and 4, placed between the cog-wheel Q and the roller R. The object of the friction-ratchet is to allow the cog-wheel to turn when the rod P is raised without revolving the friction-roller R.

3 is a rod for securing the plate A''' in position.

4 are the lugs which support the securing-rod 3.

5 4' are open lugs on A'.

5 is a bar or pivoted rod, one at either side, carrying the plate A'''.

6 is a slot for key-rod P.

10 7 is a plate adapted to cover the openings in which the key-rods move.

The operation of my invention is as follows: By depressing the key-rod P, which connects with the push-rod I at L', it depresses the push-rod I, moving its corresponding spool into connection with its shaft, and also depresses the front end of the rocking-dog frame K, lifts the locking-dog C out of its connection with the cam-locking plate D, thereby releasing the drawer B, allowing the spring E to act upon the drawer, forcing the cam F against the latch G', thereby raising the bar G, communicating the motion through the pawl G'' to the ratchet-wheel J'', which operates the shaft J' and the spool J, which has been made rigid with the shaft by the downward movement of the push-rod. This advances the paper T and T' over the upper surface of the table V, and the writing or printing which has been placed upon the paper is thus advanced, that on the paper T' to be permanently retained and that on the paper T to be torn off for the purchaser. The same motion of the key-rod P operates the cogs P' on the cog-wheel Q, which communicates a reverse motion to the friction-wheel R, which, in connection with the friction-roll R', carries the paper T through the slots in the case A''', when the same may be torn off. It will be understood that the entry is made through the opening in A'' upon the upper strip T and that the same will be copied by means of the carbon strip or ribbon W upon the paper strip T'. In the description given I have referred to a machine provided with a series of rolls supported on a shaft and constructed in accordance with my patent heretofore referred to; but it will be evident that the arrangement of the paper and carbon strip or printing-ribbon may be used in connection with a single set of paper-rolls, in which case the mechanism for attaching and detaching each independent roll to its shaft need not be used, and this part of my invention is therefore applicable to forms of manual recorders and cash-drawers differing from the one described and shown in my patent.

In the drawings I have shown but two strips of paper, one above the other, for each key; but it will be understood that if it is desirable to make more than two copies or impressions the number of strips of paper may be increased, so that instead of making two impressions at once more than two can be made; but for ordinary practical purposes I deem the use of two strips of paper with a printing-ribbon between them preferable.

Having thus described my invention, what

I claim to have invented, and desire to secure by Letters Patent, is—

1. In combination with a cash drawer and case, a spring for forcing said drawer open, a dog for locking the drawer, a roll for carrying a paper strip adapted to receive written or printed impressions thereon, a roll carrying a paper strip adapted to receive impression copies of the matter written or printed on the receiving strip, means for holding said strips in juxtaposition for the interposition between them of manifolding material, friction rolls for feeding and delivering outside the case the free end of the receiving strip, a clutch operating to turn one of said friction wheels in one direction only, a rack operated by the said key mechanism for operating said clutch, a spool for winding up the copying strip, and mechanism actuated by the drawer for rotating said spool, substantially as described.

2. In combination with a cash drawer and case, a spring for forcing said drawer open, a dog for locking the drawer, key mechanism for unlocking the drawer, a roll for carrying a paper strip adapted to receive written or printed impressions thereon, a roll for carrying a paper strip adapted to receive impression copies of the matter written or printed on the receiving strip, means for holding said strips in juxtaposition for the interposition between them of manifolding material, friction rolls for feeding and delivering outside the case the free end of the receiving strip, mechanism operated by the said key mechanism for rotating said rolls, a winding spool for winding up the copying strip, a ratchet rotating with said winding spool, a swinging pawl engaging said ratchet, a pivoted detent for actuating said pawl, and an inclined projection carried by the drawer and acting to raise said detent when the drawer is opened, substantially as described.

3. In combination with a cash drawer and case for supporting the same, a roll for carrying a paper strip adapted to receive written or printed impressions thereon, a roll for carrying a paper strip adapted to receive impression copies of the matter written or printed on the receiving strips, means for holding said strips in juxtaposition for the interposition between them of manifolding material, friction rolls operating to direct one or more of said strips without the case, a key-rod provided with mechanism for operating the friction rolls, a push-rod operated by the key-rod, a locking device operated from the push-rod and a spring adapted to bring the key-rod and push-rod to normal position when pressure is released from the key-rod, substantially as described.

4. In combination with a cash drawer and case supporting the same locking mechanism for retaining the drawer closed, a spring for automatically opening said drawer, a roll for carrying a paper strip adapted to receive written or printed impressions thereon, a roll

for carrying a paper strip adapted to receive
impression copies of the matter written or
printed on the receiving strip, means for hold-
ing said strips in juxtaposition for the inter-
5 position between them of manifolding mate-
rial, a spool within the case adapted to wind
up the copying strip, mechanism for operat-
ing said spool consisting of a push-rod and a
key-rod, a shaft for giving direction to the
10 paper strip wound upon said spool, and fric-

tion rolls for directing one end of one of the
paper strips without the case, substantially
as described.

In witness whereof I have hereunto set my
hand and seal in the presence of two witnesses. 15

HARRY M. GEIGER. [L. S.]

Witnesses:

EDWARD TAGGART,
CHRISTOPHER HONDELINK.