(No Model.)

H. C. COOPER.

MANUAL SALES RECORDER.

No. 527,667. Patented Oct. 16, 1894.

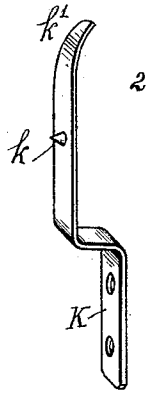

Fig. 4.

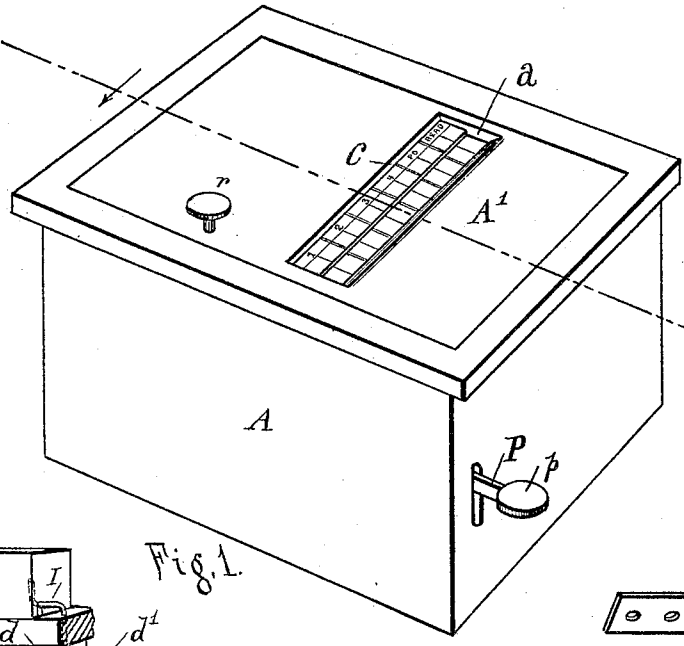

Fig. 1.

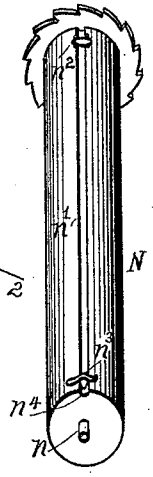

Fig. 3.

Fig. 5.

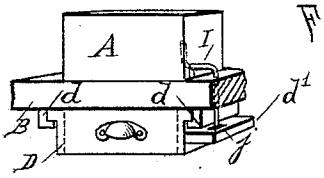

Fig. 6.

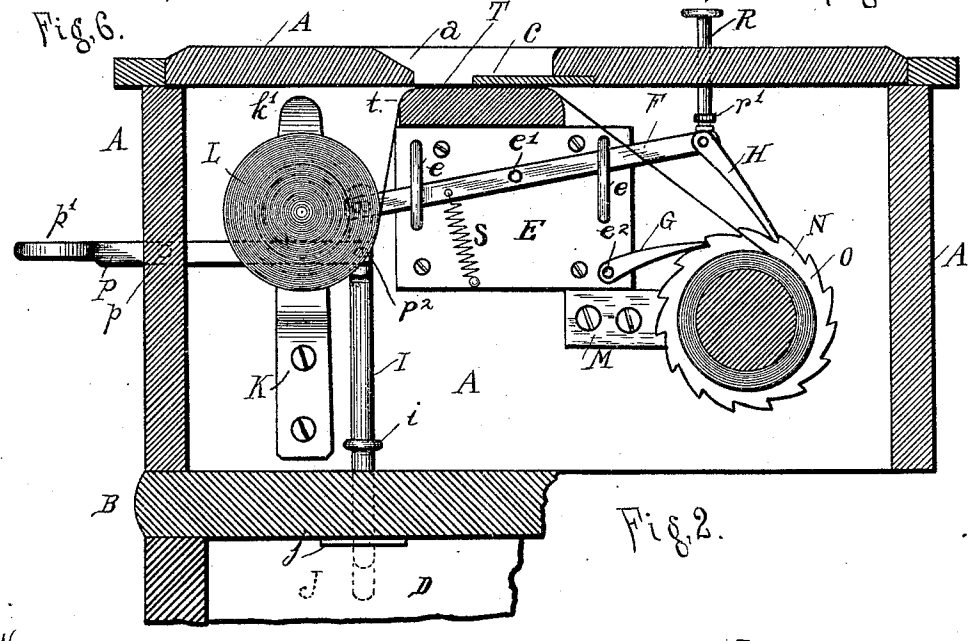

Fig. 2.

Witnesses.
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UNITED STATES PATENT OFFICE.

HENRY C. COOPER, OF SPRINGFIELD, ILLINOIS.

MANUAL SALES-RECORDER.

SPECIFICATION forming part of Letters Patent No. 527,667, dated October 16, 1894.

Application filed August 26, 1893. Serial No. 484,154. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. COOPER, a citizen of the United States, residing at Springfield, in the county of Sangamon and State of Illinois, have invented a new and useful Manual Sales Recorder, of which the following is such a full, clear, and exact description as will enable those skilled in the art to which it pertains, to make and use the same.

My invention relates to sales recorders of that class in which the daily transactions are recorded item by item in succession on a strip of paper within the machine, the mechanism being so constructed and arranged that each and every time the cash drawer is opened the strip of paper is moved forward one step so as to bring beneath the opening in the top of the machine blank spaces on the strip of paper on which the transactions may be successively recorded.

The purposes of my invention are to provide novel and improved means for automatically moving the strip of paper by steps, to provide improved means for connecting the strip of paper with the propelling roller, to provide improved and effective means for supporting the roll of paper and the roller within the machine, and to provide means for connecting the machine with the cash drawer in such manner that the drawer will be locked whenever the drawer is closed and will remain so at all times except when the lever operating the mechanism is depressed by the operator, thereby releasing the bolt which locks the drawer. The novel features of constructions and combinations of mechanism by which I attain these purposes are hereinafter fully set forth and specifically claimed.

In the drawings forming part hereof and to which reference is hereby made, Figure 1 is a perspective view of the complete machine. Fig. 2 is a vertical longitudinal section on the line 2 of Fig. 1. Fig. 3 is an enlarged detached view of the paper roller and shows the means for connecting the strip of paper with the roller. Fig. 4 is a detached view of one of the springs supporting the roll of paper. Fig. 5 is a detached view of one of the springs supporting the roller. Fig. 6 illustrates an alternative means for connecting the locking bolt with the cash drawer.

Similar letters indicate similar parts in all the views.

My manual sales recorder is intended to be connected to and used with cash drawers such as are now in common use.

The operating mechanism is contained in a rectangular box A of any convenient size.

The box A is secured in proper position on the counter B by any suitable means. The box top A′ has a transverse opening *a*. In one side of the opening *a* is a glass plate C through which entries made on the strip of paper may be read as hereinafter explained.

The cash drawer D is underneath the counter and is supported on and slides in guides *d*, though any other suitable supports and guides for the drawer may be used.

To one side of the box A the plate E is secured in any suitable manner, preferably by screws as shown. On the plate E are studs or pins e' and e^2.

The lever F is fulcrumed on the stud or pin e' and the detent G is pivotally supported on the stud or pin e^2.

Staples or guides *e* on the plate E permit the lever F to turn freely on its fulcrum but prevent it from slipping off of the stud e'.

The plate E, and the connected pivots and guides are of practical advantage in that the intermediate lever and its spring, and the detent may be fitted and placed on the plate in proper position relative to each other before the plate and connected parts are placed in the box, thereby greatly facilitating the putting together of the mechanism.

The pawl H is pivotally connected with one end of the lever F. The other end of the lever is pivotally connected with the upper end of the bolt I.

The bolt I extends vertically downward through the counter end. When the drawer is closed the lower end of the bolt rests in a hole J in the edge of one side of the drawer and serves to lock the drawer. A staple *i* steadies and guides the bolt.

A perforated plate *j* is secured to the edge of the drawer and prevents wear thereof. In practice I prefer to use a straight bolt entering a hole in the edge of one side of the drawer.

In case the side of the drawer is not suffi-

ciently thick to permit the bolt hole in its edge, I secure a cleat d' to the side of the drawer and the hole is made in and the perforated plate j is secured to this cleat in such position that the bolt will enter the hole in the cleat. In this case the bolt I is crooked so that the lower end of the bolt will extend out beyond the guides d.

The spring standards K are suitably secured to the inside of the box, one on each side, and in line with each other. These standards have near the upper end conical projections k which enter the central hole in the roll of paper L and serve to support the roll in a horizontal position on the standards. The upper ends k' of the standards extend above the roll and are curved outward as shown, so that they may be conveniently pressed apart for the purpose of inserting the roll, and so that the edges of the paper may not be injured by rubbing against the standards.

The spring roller-supports M are secured to the inside of the box in a horizontal position one on each side of the box, and in line with each other. These supports are curved inward and at their ends have holes in which the spindles n of the rollers N turn. These supports M are sufficiently springy to permit the free ends of the supports to be readily pressed apart by the hands while inserting or removing the rollers. The roller N has at each end a spindle n which turns in the hole m in the support M.

The means for connecting the strip of paper with the roller consists of a longitudinal rod n' connected with the roller at one end by a hinge n^2. The free end of the rod n' slips under and is retained in place by a spring catch n^3. One end of this catch is secured to the roller and the other end is free so that the rod may slip under the free end. There is a longitudinal groove n^4 in the roller in which the rod n' rests. To connect the paper with the roller, the rod n' is raised, the paper is placed under the rod and the end of the rod hooked under the catch n^3. The ratchet wheel O is secured to one end of the roller N. The operating lever P is fulcrumed on a pin in the end of the box and at its outer end has a thumb piece p'. The inner end of the lever has pivotal connection p^2 with the bolt I.

Instead of connecting the lever P directly with the bolt I and connecting the bolt directly with the lever E as shown, a link may be interposed between the bolt I and the lever E, and the lever P may be connected with said link, without departing from my invention.

The vertical rod R is pivotally connected with the lever F and has at its upper end a push button r. The staple r' guides and steadies the rod.

A spring S has its lower end suitably secured to the box and its upper end is so connected with the lever F that when the mechanism is at rest the normal relative position of the parts is as shown in Fig. 2.

The transverse horizontal bar T connects the sides of the box and lies immediately under the opening a in the top A'. This bar supports the strip of paper in a horizontal position under the opening a so that the paper may be readily written upon. The edges t of the bar are rounded so as not to abrade the paper.

Suitable numbers or symbols to indicate the salesman, or the character of the transactions to be recorded may be etched on the glass plate C or may be printed or stamped on the edge of the opening a adjacent to the glass C.

To insert the paper and operate the machine the procedure is as follows: Spring apart the upper ends of the standards K sufficiently to permit the roll of paper L to enter between them, insert the cones k in the central hole in the roll and release the standards and they will react sufficiently to keep the cones in the hole and support the roll on the cones. Pass the loose end of the paper over the cross bar T and carry it down and connect it with the roller N as already described. The strip of paper then underlies the opening a in position to be written upon. The transaction is then recorded through the opening a in its appropriate place on the strip of paper in the usual well known manner. In order to unlock the cash drawer the lever P is depressed. This raises the bolt I thereby unlocking the drawer and permitting it be opened and the proceeds of the recorded transaction deposited therein. The same movement of the lever P also raises the near end of the lever E thereby depressing the remote end of the lever E and causing the pawl H to engage with the teeth on the ratchet wheel O, and move the connected roller N one step, thereby winding the strip of paper on the roller sufficiently to draw under the glass plate C that part of the strip on which the transaction is recorded, leaving it in such position that the record may be inspected through the glass but may not be changed. When the roller N has been rotated one step the detent G drops into one of the notches of the wheel O and prevents the roller from turning backward. As soon as the drawer is closed the lever P is released and the spring S reacts to depress the lever E and force the bolt I downward into the hole in the edge of the drawer thereby again locking the drawer. The mechanism may be operated in like manner by pressing down on the button r.

Instead of placing the register on top of the counter as set forth it may be so placed as to bring the top of the machine flush with the top of the counter, or the register may be placed in any suitable or convenient position relative to the cash drawer, it being only essential that its position shall be such that the bolt will engage with the drawer to lock the drawer substantially as set forth.

I do not broadly claim the roll of paper, the strip of paper underlying the opening in the

top of the machine, nor the roller upon which the strip of paper is wound, as I am aware that the same have heretofore been used.

I am aware that in cash recorders a removable frame formed of two parallel side pieces united by a series of transverse rods has been used to support both ends of the paper roll and both ends of a rotatable roller on which the paper is to be wound, and that an operating lever and a pawl have been fulcrumed on one of said side pieces.

I am also aware that parallel brackets attachable to the back of the box have been used to support both ends of the paper roll and both ends of a roller on which the paper is to be wound, an operating lever being connected with a shaft supported on said brackets. In cash-recorders of the kind described there is a necessary relation between the roll, the roller and the side pieces or the brackets, and the mechanism would be incomplete without the use of the two side pieces or two brackets as the case may be. I use only a single plate which is secured directly to the side of the box and has no direct connection with the roll or roller, and the plate is provided with studs or pins on which the operating lever and the detent respectively turn, and with guides in which the lever moves. By this means I am enabled to materially simplify and cheapen the construction.

I do not claim broadly the use of plates to support the roll, the roller and the operating mechanism, but confine myself to a single plate attachable directly to the side of the box and constructed substantially as set forth.

What I do claim as new, and desire to secure by Letters Patent, is—

1. In a manual sales recorder the combination of the box, the spring standards secured to the box, the roll of paper supported on said standards, the spring roller-supports secured to the box, the roller pivotally supported on said supports, the strip of paper extending from the roll to the roller, the means for connecting said strip with said roller the cross bar having rounded edges and supporting the central part of said strip, the operating lever fulcrumed on the box, the bolt connected with the operating lever, the intermediate lever connected with said bolt, the pawl connected with the intermediate lever and adapted to rotate the ratchet wheel, the ratchet wheel connected with the roller and the detent pivotally supported on the box and adapted to engage with the ratchet wheel, as set forth and for the purpose stated.

2. In a manual sales recorder, the combination of the box, the lever fulcrumed on the box, the bolt connected with the lever, the push rod passing through the top of the box, and connected with the lever, the pawl connected with the lever and engaging with the ratchet, and the ratchet connected with and adapted to rotate the roller, as set forth and for the purpose stated.

3. In a manual sales recorder, the combination of the box having a transverse opening in the top and having a transverse bar underlying said opening, the roll of paper horizontally supported in the box and adapted to turn freely in its supports, the horizontal roller supported in the box and adapted to turn on its supports, the strip of paper extending from the roller over the transverse bar and having its end connected with the roller, the ratchet wheel on the roller, the lever fulcrumed on the box, the spring connected with said lever, the bolt, the push-rod and the pawl connected with the lever, and adapted to rotate the roller step by step, as set forth and for the purpose stated.

4. In a manual sales recorder, the combination of the box provided with a perforated lid and a cross bar, the roll standards secured to the box, the roll of paper supported on said standards, the roller supports secured to the box, the roller provided with a ratchet wheel and adapted to turn in its supports, the strip of paper extending from the roll over the cross bar and attached to the roller, the means for attaching the strip to the roller, the plate secured to the box, the upper and lower studs on the plate adapted to support the intermediate lever and the detent respectively, the lever fulcrumed on the upper stud, the detent fulcrumed on the lower stud and engaging with the ratchet wheel, the operating lever fulcrumed in the end of the box, the bolt connected with the adjacent ends of the operating and the intermediate levers, the push rod connected with the upper end of the intermediate lever and the spring connected with said lever, as set forth and for the purpose stated.

5. The means for connecting the manual sales recorder with the drawer consisting of a horizontal cleat secured to the drawer and provided with a perforated plate; in combination with the box, the roll of paper, the horizontal roller and the transverse bar supported in the box, the strip of paper extending from the roll to the roller and passing over the transverse bar, the ratchet wheel connected with the roller, the levers and the pawl operating the roller and the bolt connected with said levers, as set forth and for the purpose stated.

In witness whereof I have hereunto subscribed my name, at Springfield, Illinois, this 19th day of August, A. D. 1893.

HENRY C. COOPER.

Witnesses:
TAD A. BAILEY,
ALEX. D. DU BOIS.