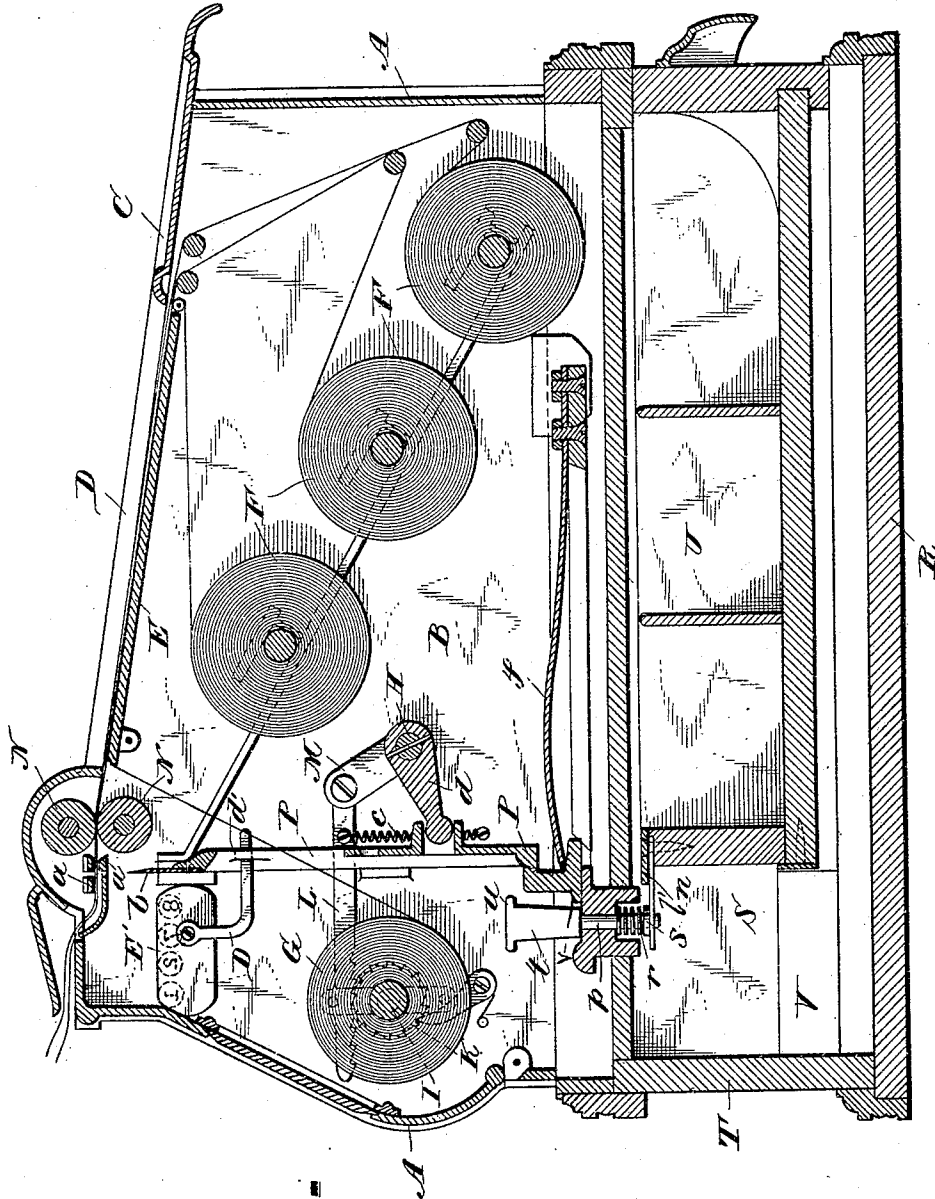


C. D. GRIMES & G. E. HARTER.
COMBINED AUTOGRAPHIC REGISTER AND CASH DRAWER.

No. 552,365.

Patented Dec. 31, 1895.



Witnesses.
J. Thomas Cross
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(No Model.)

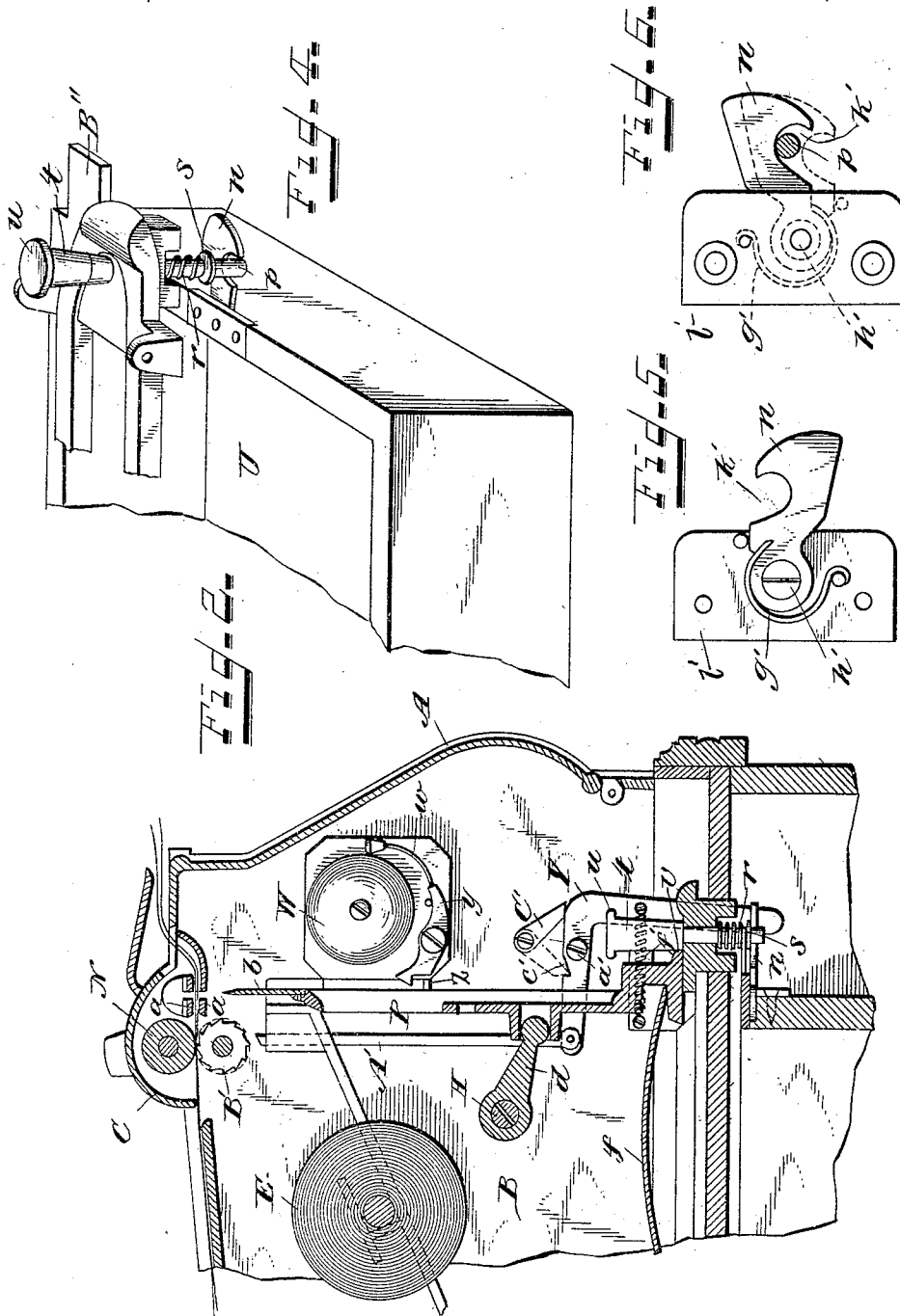
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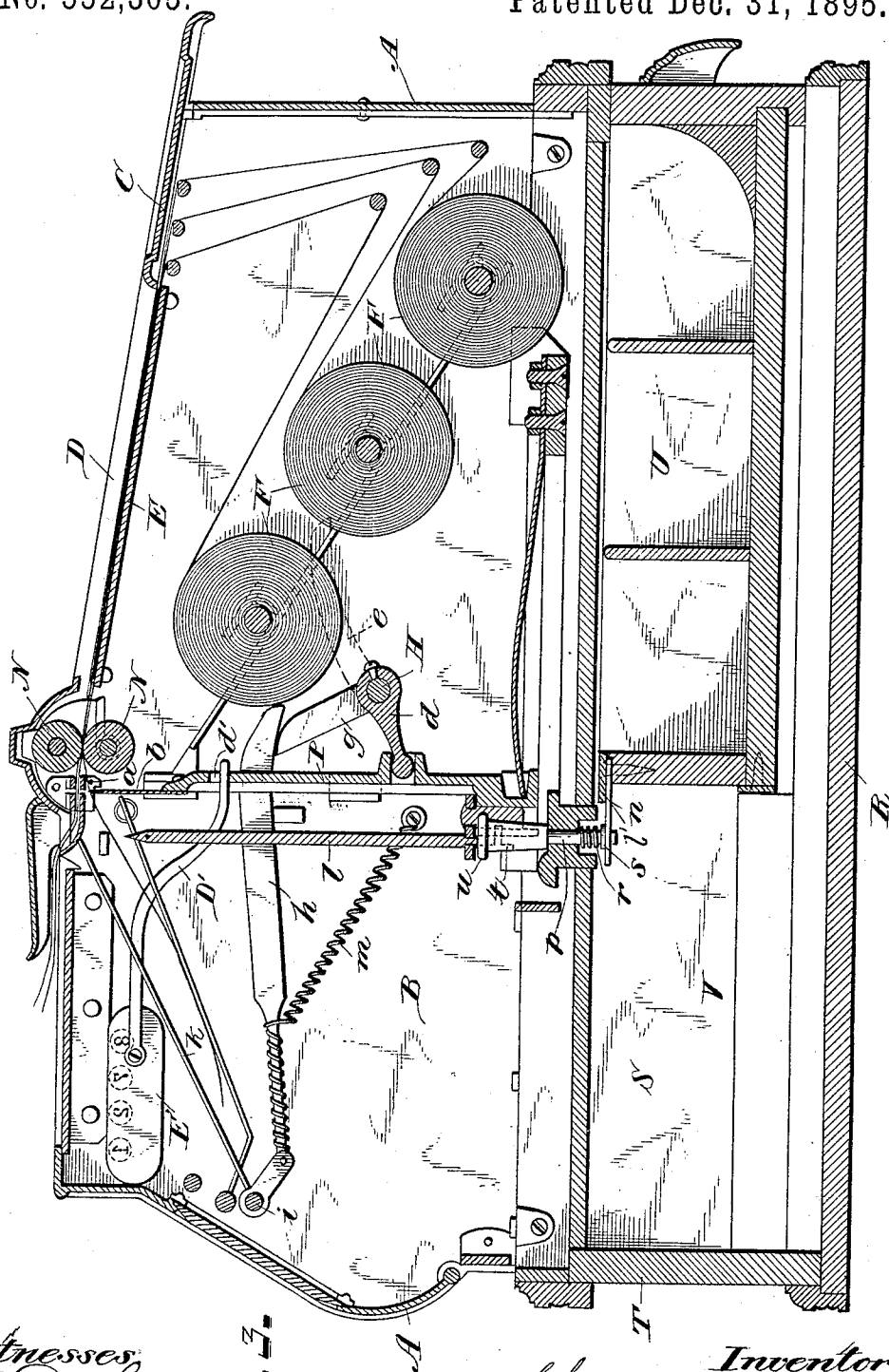
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UNITED STATES PATENT OFFICE.

CHARLES D. GRIMES AND GEORGE E. HARTER, OF DAYTON, OHIO, ASSIGNORS,
BY MESNE ASSIGNMENTS, TO THE CARTER-CRUME COMPANY.

COMBINED AUTOGRAPHIC REGISTER AND CASH-DRAWER.

SPECIFICATION forming part of Letters Patent No. 552,365, dated December 31, 1895.

Application filed April 28, 1892. Serial No. 431,027. (No model.)

To all whom it may concern:

Be it known that we, CHARLES D. GRIMES and GEORGE E. HARTER, citizens of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in a Combined Autographic Register and Cash-Drawers, 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 has for its object to combine, in connection with the various autographic registers in use, a cash-drawer and registering mechanism; and it consists of certain novel improvements in construction and operation to be hereinafter more particularly pointed out and claimed.

Our invention has more particular reference to that class of registers in which a cutting mechanism is employed to sever the sheets or tickets from the rolls, and in combining therewith a cabinet within which is located a cash-drawer operated by a spring to open the case, the cash-drawer being kept locked by mechanism in connection with the cutting mechanism of the autographic register, whereby the movement of the cutting mechanism will release the drawer; and it consists further in combining with this cutting mechanism an alarm-bell and a registering mechanism, so that with each operation of the cutting mechanism of the register the bell will be rung and the operation registered in suitable registering-counters which are displayed through suitable openings in the case. Mechanism is also provided to lock the register from any further operation while the cash-drawer is unlocked.

We prefer to adapt our improvements to two different forms of autographic registers, in one of which all the sheets are severed from their respective rolls, and one sheet is filed away within the case, while in the other form an additional strip of paper is employed upon which the totals of the sales are alone arranged to be transferred, and the sheet containing these summaries is wound up upon a receiving-roll, operated by the hand-crank by which the cutting mechanism is operated.

Other forms of autographic registers, however, it will be readily understood, could also have our improvements applied thereto without departing from the spirit of our invention.

In the accompanying drawings, Figure 1 represents a central longitudinal section of a "summary-register" with our improvements applied thereto, looking toward one side of the case. Fig. 2 is a similar longitudinal section of our device, looking toward the other side of the case and with the roll-paper compartment and parts of the cash-drawer cabinet cut away. Fig. 3 is a central longitudinal section showing "filing-register" with our improvements combined therewith. Fig. 4 is a perspective view of the rear end of the cash-drawer and lock. Fig. 5 is an inverted view of the latch for locking the cash-drawer. Fig. 6 is a top plan view of same, showing locking-bolt in cross-section and the second position of the latch in dotted lines.

Like letters indicate identical parts in all the figures.

A A are the ends, B B the sides, and C the top, of an ordinary autographic-register case for the working parts of the register. The top C is provided with the usual opening D, under which is secured the writing-tablet E, supplied with manifolding material, and over which tablet the duplicate strips of paper are passed with carbon-paper between them in the usual way.

F F F are the dispensing-rolls, from which the paper strips are supplied, each of which is journaled independently of the other in the usual bearings.

In the summary-register illustrated in Figs. 1 and 2, the third or bottom strip of paper has only a narrow strip of manifolding material, so that the sum totals of the various tickets are alone transferred to the bottom strip, which strip is received and wound up on the receiving-roll G, which is operated by the shaft H, by which the cutting mechanism is also operated in the usual way, the roll G being mounted on the shaft I, upon which a ratchet-wheel K is secured, which ratchet-wheel is impelled by the movement of the rack-bar L, held in engagement therewith by

spring *c*, which rack-bar is connected with the shaft *H* by the connecting-arm *M*, secured thereto.

N N are the usual gripping-rollers feeding the paper strips from their respective rolls and operated by a hand-crank in the usual way. Immediately in front of these feed-rollers are the slotted knife-bars *a a*, between which bars the paper strips to be severed are fed. Sliding in guides on each side of the case is a knife-carrier frame *P*, upon which is secured the knife-blade *b*, arranged so that the knife-blade may be brought within the slots in the knife-bars *a a*, to sever the sheets. Upon the shaft *H* is keyed an arm *d*, which engages with a recess formed in the knife-carrier plate *P*, whereby the knife-carrier frame and knife may be reciprocated in the usual way by the rocking of the shaft *H* by means of the hand-crank *e* without the case, while the spring *f* engaging with the knife-carrier frame returns the cutting mechanism to its normal position.

In a filing-register, the shaft *H* also carries an arm *g*, which engages with the bar *h*, which bar is in pivotal connection with the shaft *i* carrying filing-arms *k*, while filing-pins *l* are secured to the knife-carrier frame *P*, so that the filing-pins will be raised with the cutting-knife to receive the severed sheets, and upon the return movement of the operating-shaft *H* the arm *g* will come into engagement with the bar *h* and thus rock the shaft *i*, and the filing-frame *k* will file the severed sheet on the pins *l* in the usual way, the spring *m* returning the filing-frame to its normal position when the sheets are filed.

The various mechanical features above indicated being all old and well known, it is thought the above description will be sufficient for the purpose here.

The autographic register is mounted on a cabinet or case, consisting of bottom *R*, sides *S*, and back *T*. Within this cabinet a cash-drawer *U* is located, arranged to slide in and out in the usual way, and when unlocked propelled from the case by the spring *V*, bearing against the same. This cash-drawer may be divided into any number of compartments, and of course it is not essential that it should be located in the exact way shown in the drawings. Secured to the rear of the cash-drawer, on top of the back edge of the drawer, is a plate *l'* to which is pivoted a latch *n* (provided with a notch *k'*) by means of the pivot-pin *h'*, so that the latch will have a horizontal swinging motion. A vertically-sliding bolt *p* extends down from the register-case through a suitable opening in the bottom of the case into the compartment in the rear of the cash-drawer in such a position as to engage with the latch *n* within the notch *k'* when the drawer is closed, the bolt in its normal position being held down so as to engage with this latch by the coiled spring *r*, mounted on the bolt *p* which acts between the floor of the register-case and the enlargement *s* on the

bolt. A spring *g'* secured to the plate *l'* acts upon this latch *n*, and tends to throw it into the position shown by the dotted lines in Fig. 6. The upper portion of this bolt has an enlarged head *t* expanded into a flange *u*, and extending up into the autographic-register case. A lug *v* is formed on the rear of the knife-carrier frame *P*, and as the knife-carrier frame *P* is raised to sever the sheets from the roll this lug *v* will come in contact with the flange *u* and raise the bolt *p* and thus unlock the cash-drawer, and allow it to be propelled from the case by the spring *V*. It may be desired however to omit the spring *V*, or for some reason this spring *V* may fail to act, and when this spring is omitted or fails to operate we wish to provide means to avoid the necessity of pulling out the cash-drawer at the same time that the knife is operated. With an ordinary catch it would be obvious that when the knife-carrier frame *P* returns to its normal position it would again lock the drawer, so that if the spring *V* were inoperative or omitted in order to open the drawer it would be necessary to pull it out before releasing the knife-operating mechanism, or if the operator failed to withdraw the drawer in time the knife-carrier would again have to be raised. In order therefore that the drawer when once unlocked shall continue so until it is withdrawn and again returned to its normal position, we pivot the latch *n* to the drawer and provide the spring *g'* so that when the bolt *p* has been withdrawn and the drawer unlocked, if the drawer has not been propelled from the case when the knife-carrier frame *P* returns to its normal position, the bolt *p* will descend and rest on top of the latch *n*, as shown by the dotted lines in Fig. 6, so that by this arrangement of parts the drawer is unlocked by means of the operation of the cutting mechanism and means are provided to prevent the relocking of the drawer until the same has been withdrawn.

W is a gong or bell, arranged to be struck by the hammer *w*, which hammer is secured to the trip-lever *y*, while the knife-carrier frame *P* carries the pin *z*, arranged to trip the lever *y*, so as to ring the bell upon each operation of the cutting mechanism, as will be readily understood.

Y is a bell-crank lever pivoted at *a'* to one side of the case. The horizontal arm of this lever has pivoted thereto a locking-rod *A'*, having a beveled upper end, while a ratchet-wheel *B'* is mounted upon the lower feed-roller shaft of the gripping-rolls *N*. The vertical arm of this bell-crank lever *Y* extends down into the cash-drawer cabinet through a suitable slot in the case, and when the drawer is locked a plate or arm on the back of the drawer comes in contact with this bell-crank lever so as to rock it and to draw the locking-bolt *A'* out of connection with the ratchet-wheel *B'*. A coiled spring *f'* is connected with the vertical arm of the bell-crank lever *Y* and to the side of the case, so that as

soon as the drawer is unlocked by the operation of the cutting mechanism and is propelled from the case by the spring V, and the arm on the drawer removed from its contact with the lower end of the bell-crank lever Y, the bell-crank lever Y will be at once rocked back, which will then bring the locking-bolt A' into mesh with the ratchet-wheel B' and thus lock the feeding-rollers, so as to prevent any operation of the feeding mechanism until the drawer is locked. A dog C' is pivoted to the side of the case, directly over this bell-crank lever, and a notch c' is cut therein, so that when it is desired to disuse the locking mechanism for the feed-rollers the dog C' may be brought into engagement with the notch c' and the locking-bolt will be held out of engagement with its ratchet-wheel.

In order to register and indicate the number of times the machine is used, a registering or counting mechanism is employed, of any of the usual types. A slot d' is cut in the knife-carrier plate P, and an arm or finger D' enters this slot. The other end of this arm D' is in connection with the counting-wheels inclosed in a suitable compartment E', so that every reciprocation of the knife-carrier plate P will move the arm D' and cause the appropriate counting-disk to register its movement. As many of these counting-disks as are desired can be provided, and a suitable opening is provided in the case, so that the numbers will be visible from the outside. We have not illustrated this counting or registration device, except in outline, as any of the various forms of such counters can be used. In connection with this counting mechanism, it is intended that the strips from the paper rolls shall be divided off into tickets, these tickets being numbered consecutively, so that if the machine is at all times properly used the number of the ticket on the writing-tablet will at all times be the same as that shown in the counting-disks.

Of course it will be understood that we do not wish to be confined to the particular form of autographic register shown herewith in connection with our cash-drawer.

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

1. In an autographic register employing a plurality of paper strips, the combination of feeding mechanism for advancing one or more of said strips, a movable knife for severing the same, a cash drawer, a lock therefor, means intermediate said lock and the knife operating mechanism for releasing the drawer at each operation of the knife, and a locking device interposed between the drawer and the feeding mechanism and co-operating therewith to automatically lock said mechanism when the drawer is opened and unlock it when the drawer is closed, substantially as described.

2. In an autographic register in which a plurality of paper strips are employed, the combination of feeding mechanism for advancing one or more of said strips, a knife for severing the same, a cash drawer, a lock therefor, means intermediate said lock and the knife-operating mechanism for releasing the drawer at each operation of the knife, a spring for throwing the drawer open when released, and a locking device interposed between the drawer and feeding mechanism and moving automatically into position to lock said mechanism when the drawer is opened, and thrown out of such position by the closing of the drawer, substantially as described.

3. In an autographic register in which a plurality of paper strips are employed, the combination of feeding mechanism for advancing the strips in the same direction over a writing tablet, a reciprocating knife for severing all of the strips, a filing pin moving with the knife to file the record slips, a money drawer, a lock therefor, means intermediate said lock and the knife-operating mechanism for releasing the drawer at each operation of the knife and filing pin, a spring for throwing the drawer open, and a locking device interposed between the drawer and feeding mechanism and operating to lock the latter when the drawer is opened and unlock it when the drawer is closed, whereby operation of the feeding mechanism while the drawer remains open is prevented.

4. In an autographic register in which a plurality of paper strips are employed, a single pair of feed rollers for advancing all of the strips, a movable knife for severing all of the strips, a cash drawer, a lock therefor, means intermediate said lock and the knife-operating mechanism for releasing the drawer at each operation of the knife to sever the strips, a spring for throwing the drawer open when released, and a locking device interposed between the drawer and feed rollers for locking the latter when the drawer is opened and unlocking them when the drawer is closed, substantially as described.

5. In an autographic register in which a plurality of paper strips are employed, the combination of feeding mechanism for advancing the record strips, a cash drawer, and a locking lever and locking bolt interposed between said drawer and the feeding mechanism and co-operating therewith to automatically lock said mechanism when the drawer is opened and unlock it when the drawer is closed, substantially as described.

6. In an autographic register in which a plurality of paper strips are employed, the combination of feeding mechanism for advancing the strips, a cash drawer, a lock therefor released at each operation of the machine, and a locking device interposed between the drawer and the feeding mechanism and co-operating therewith to automatically lock said

mechanism when the drawer is opened and unlock it when the drawer is closed, substantially as described.

7. In an autographic register in which a plurality of paper strips are employed, the combination of feeding mechanism for advancing the strips, a cash drawer, a lock therefor released at each operation of the machine, a spring for throwing the drawer open when released, and a locking device interposed between the drawer and the feeding mechanism and co-operating therewith to automatically lock said mechanism when the drawer is opened and unlock it when the drawer is closed, substantially as described.

8. The combination with an autographic register and cutting mechanism therefor, and a registering mechanism to register the operations of the cutting mechanism, of a cash drawer, lock for same, and means for unlocking said drawer by the movement of the cutting mechanism, substantially as shown and described.

9. The combination with an autographic register and cutting mechanism therefor, and a registering mechanism to register the operations of the cutting mechanism, of a cash drawer, lock for same, mechanism for unlocking said drawer by the movement of the cutting mechanism, and means to prevent the relocking of the drawer until the same has been withdrawn, substantially as shown and described.

10. The combination with an autographic register and feeding and cutting appliances therefor, of a cash drawer, lock for same, mechanism for unlocking said drawer upon the operation of the cutting mechanism, means to prevent the relocking of the drawer until the same has been withdrawn, and connecting mechanism between the drawer and the feeding mechanism whereby said drawer will be unlocked by the operation of the cutting mechanism and thereupon the feeding mechanism will be locked against further operation.

11. In a combined cash drawer and autographic register, the combination, with the feeding mechanism of the register and the cash drawer, of a locking bolt to engage with the feed mechanism, and spring actuated lever connecting said bolt and drawer, whereby upon the opening of the drawer said feed mechanism may be locked from further movement, substantially as shown and described.

12. In a combined cash drawer and autographic register, the combination with a cash drawer and feed rollers for the register, with ratchet wheel thereon, of a locking bolt to engage said ratchet wheel, and bell crank lever one end of which is pivoted to said bolt and the other end in connection with said drawer with spring to actuate said lever when the drawer is unlocked, whereby the locking bolt may secure the feed rollers against further movement while the drawer is open, substantially as shown and described.

13. The combination with an autographic register and vertically reciprocating knife carrier therefor, of a cash drawer, catch on said drawer, and sliding bolt to engage same, with lug on said knife carrier to engage said bolt and release same upon the reciprocation of the knife carrier, and spring to propel the drawer from the case, substantially as shown and described.

14. The combination with an autographic register and vertically reciprocating knife carrier therefor, of a cash drawer, latch horizontally pivoted thereto, spring acting thereon, and vertically sliding bolt to engage said latch, with lug on said knife carrier to engage said bolt and release same upon the reciprocation of the knife carrier, substantially as shown and described.

15. The combination with an autographic register and vertically reciprocating knife carrier therefor, and a registering mechanism with operating lever therefor in connection with said knife carrier, of a cash drawer, catch on said drawer, and sliding bolt to engage same, with lug on said knife carrier to engage said bolt and release same upon the reciprocation of the knife carrier, with spring to propel the drawer from the case, substantially as shown and described.

16. The combination with an autographic register, feed rollers and vertically reciprocating knife carrier therefor, of a cash drawer, catch on said drawer, sliding bolt to engage same, with lug on said knife carrier, to engage said bolt and release same upon the reciprocation of the knife carrier, a locking bolt to engage with the feed mechanism and spring actuated lever connecting said bolt and drawer, all substantially as and for the purpose described.

17. The combination with an autographic register, feed rollers and vertically reciprocating knife carrier therefor, of a cash drawer, latch horizontally pivoted thereto, spring acting thereon, and vertically sliding bolt to engage said latch with lug on said knife carrier to engage said bolt and release same upon the reciprocation of the knife carrier, a locking bolt to engage with the feed mechanism, and spring actuated lever connecting said bolt and drawer, substantially as shown and described.

18. In a combined cash drawer and autographic register, the combination with the feeding mechanism, of the register and the cash drawer, of a locking bolt to engage with the feed mechanism and spring actuated lever connecting said bolt and drawer with pivoted dog arranged to be brought into connection with said lever to hold said locking mechanism permanently out of engagement, substantially as shown and described.

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