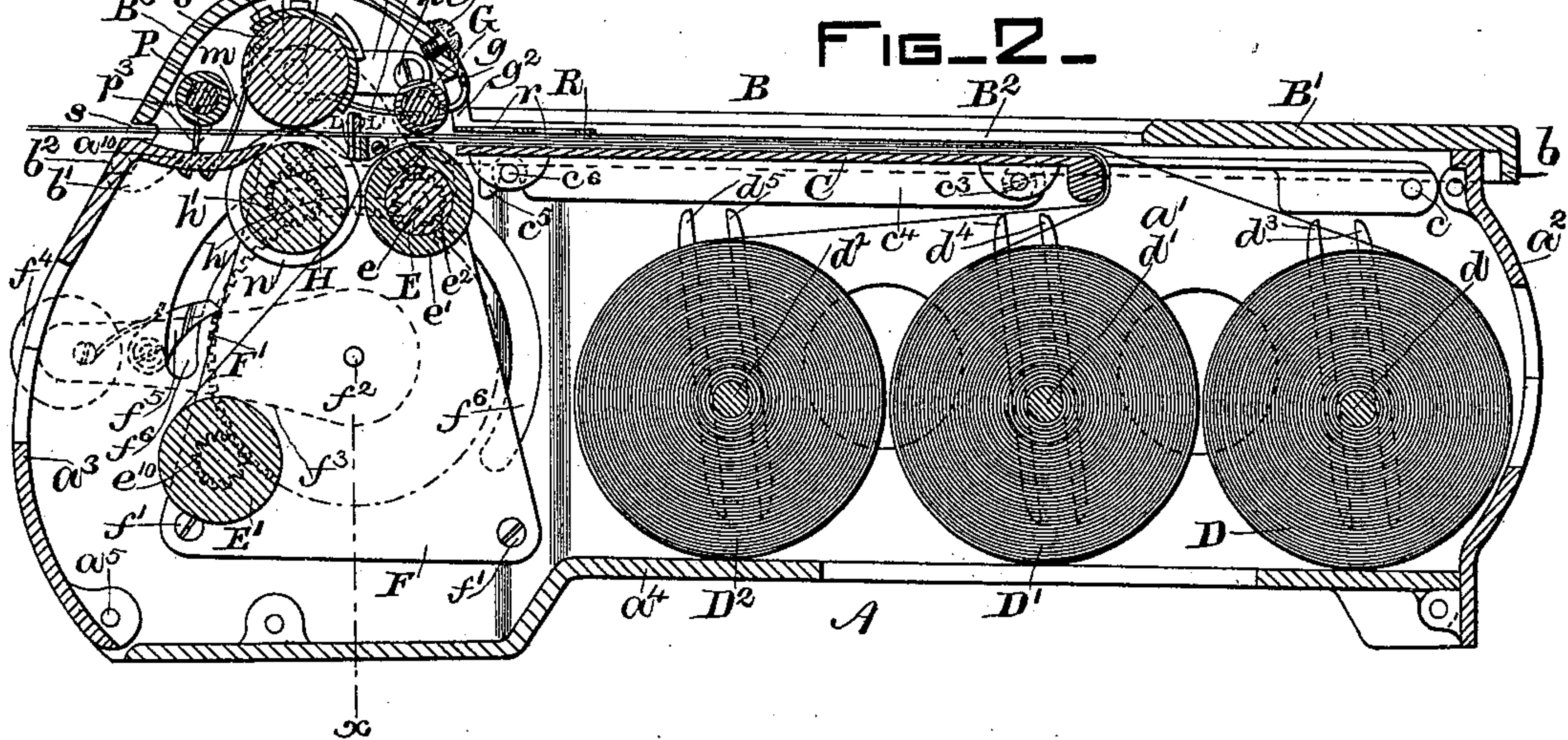
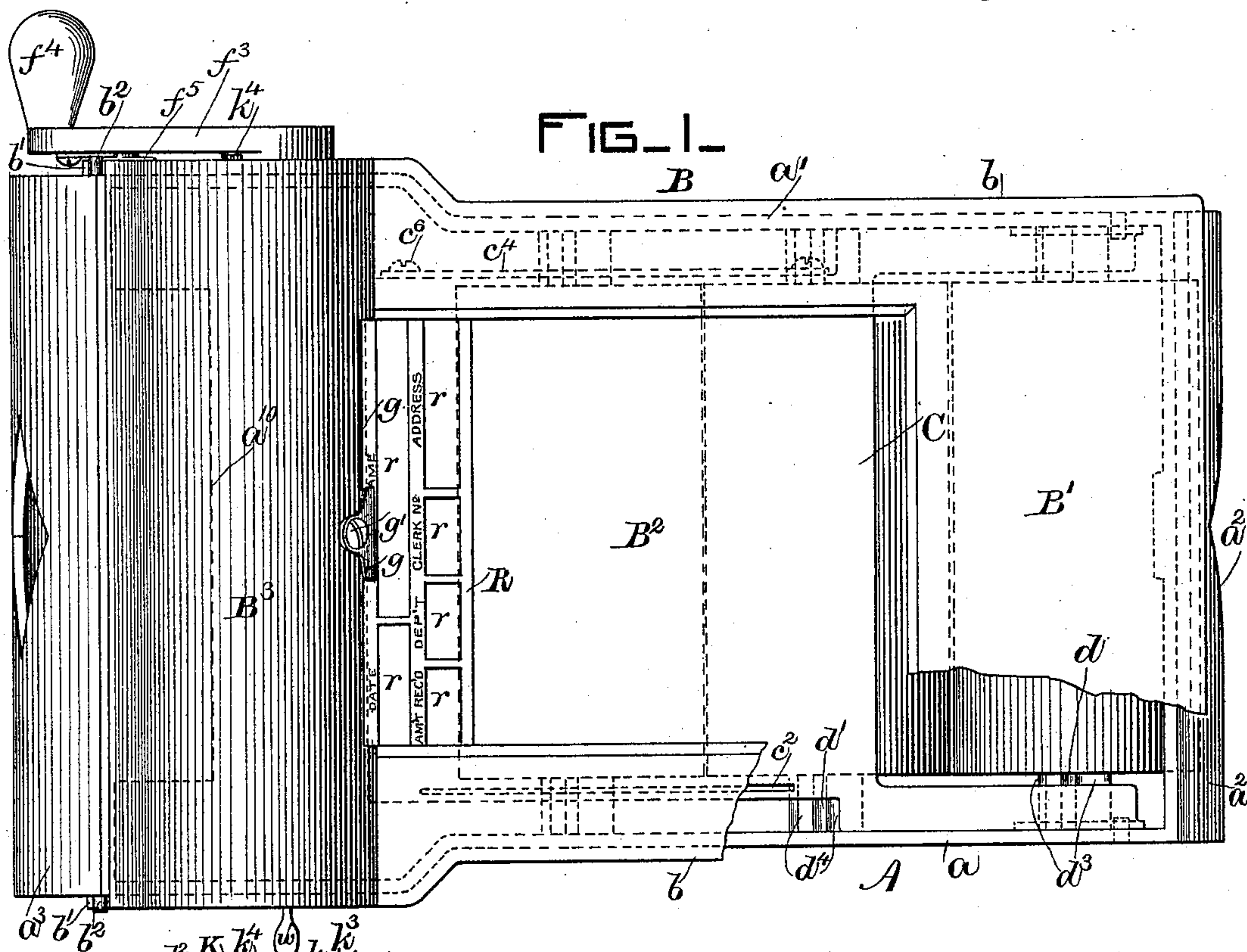


2 Sheets—Sheet 1.

Patented Aug. 3, 1897.



WITNESSES

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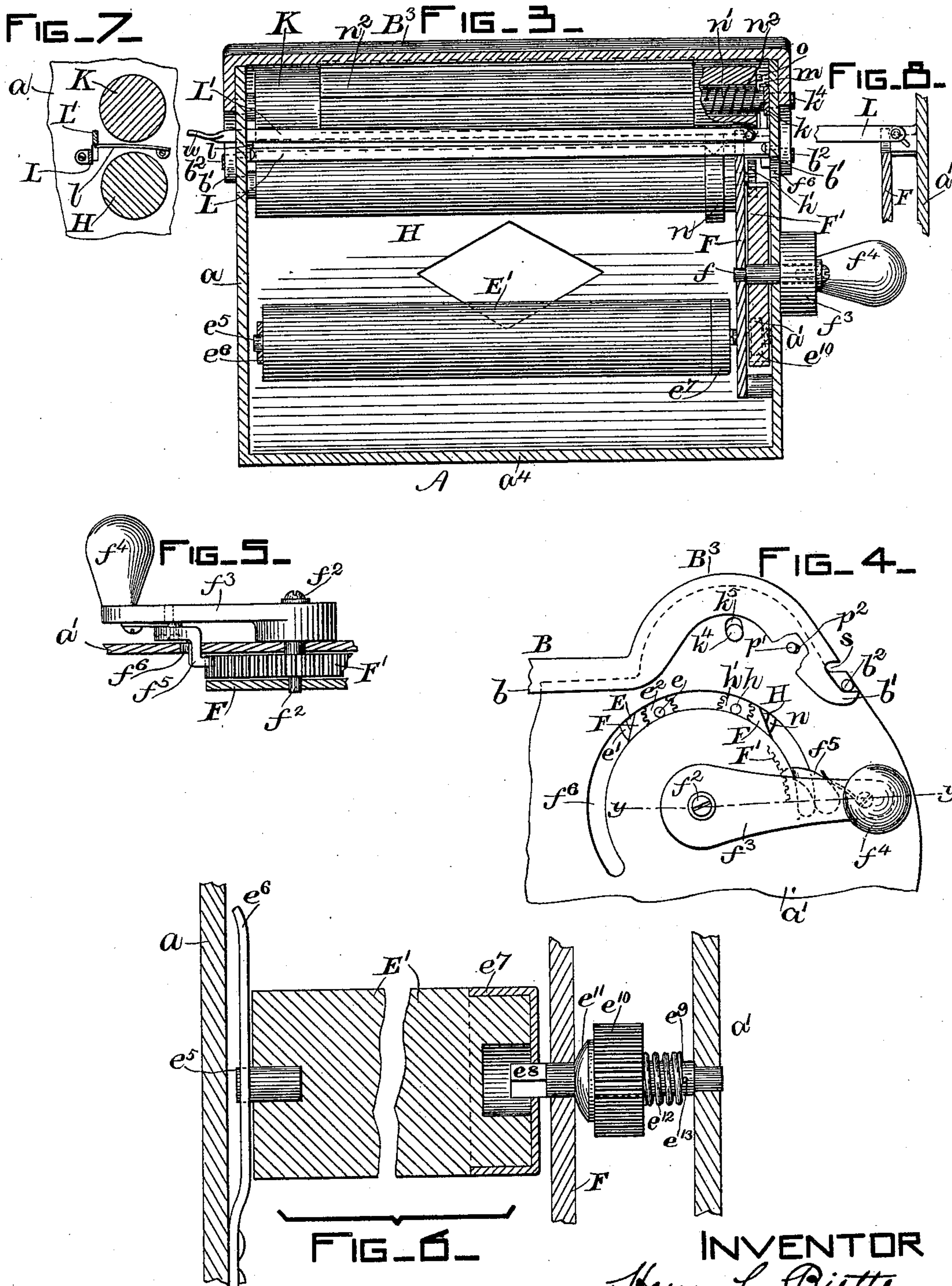
(No Model.)

2 Sheets—Sheet 2.

H. C. BIETTE.
AUTOGRAPHIC REGISTER.

No. 587,422.

Patented Aug. 3, 1897.



UNITED STATES PATENT OFFICE.

HENRY C. BIETTE, OF TORONTO, CANADA.

AUTOGRAPHIC REGISTER.

SPECIFICATION forming part of Letters Patent No. 587,422, dated August 3, 1897.

Application filed September 15, 1896. Serial No. 605,868. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. BIETTE, a subject of the Queen of Great Britain, residing at Toronto, in the Province of Ontario and Dominion of Canada, have invented certain new and useful Improvements in Autographic Registers; and I do hereby 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.

My invention relates to autographic registers, and more particularly to such devices having provision for printing the head upon one of the checks delivered therefrom.

The object of my invention is to produce an autographic register in which blank paper may be used and checks of any length formed therefrom with a suitable head printed upon one of the checks delivered from the device, and to so arrange the check feeding and printing mechanism that any length of check may be produced by the machine and a proper heading be printed upon one of the checks which is delivered.

To the above end my invention consists of the devices and combination of devices which will be hereinafter described and claimed.

My invention is illustrated in the accompanying drawings, in which like letters of reference refer to like parts throughout the several views, and in which—

Figure 1 represents a top or plan view of the device with a portion of the cover broken out to show certain details of construction of the tablet or table. Fig. 2 shows a central longitudinal section of the device. Fig. 3 is a section of the device, taken on line $x x$, Fig. 2, and looking in the direction of the arrow in said figure. Fig. 4 is a broken view of the side of device, showing the arrangement of the actuating-lever. Fig. 5 is a broken sectional view taken on line $y y$, Fig. 4. Fig. 6 is an enlarged sectional view showing the arrangement of mechanism for actuating the storing or take-up roller. Figs. 7, 8, and 9 are details to be hereinafter referred to.

In the drawings, A represents the case or frame, which is of suitable size and shape to sustain the working parts, it being shown as having the general outlines of a rectangular box open at the top and having sides a and

a' , ends a^2 and a^3 , and a bottom or base plate a^4 . The end a^3 is preferably hinged, as shown at a^5 , to swing away from the sides, to thus provide a free access to the mechanism contained within the frame A.

B represents a suitable cover, which is shaped as shown, and which is adapted to be readily attached to and detached from the frame A, and which has an edge flange b to embrace the upper edges of frame A, and which is fastened in place thereon by any suitable fastening, such as hooks b' on the forward end thereof, which engage with studs b^2 upon the sides of frame A. The other end of the cover is provided with any suitable locking device (not shown) to secure it to the frame A, in order that the contents of the case or frame may not be tampered with by unauthorized parties.

The cover B has at one end a plate B' , which forms a rest for the band, a central opening or aperture B^2 , through which the web is exposed for the purpose of receiving the marks of a pencil or other writing device used in making a check, and a rounded cap B^3 to conform to the upwardly-extended ends of the sides a and a' .

Hinged to the case or frame A at c is a tablet or table C, which rests at its free end upon suitable supports, whereby it is sustained in proper position to support the webs or checks and manifold-paper beneath the opening B^2 in cover B. The tablet C is of a length to extend from the inner end of the rounded cap B^3 to a point which approximates the edge of the rest or plate B' , from which point it is extended in the form of arms, which are pivoted to frame A at c , as before explained.

Along one edge the tablet C is provided with a slot c^2 , and upon its other edge is pivoted at c^3 a clamping-bar c^4 , which has a hooked end c^5 , engaging a stud c^6 . The manifold or carbon paper p is passed through the slot c^2 , and both ends thereof are carried across to the other edge, where they are clamped in position by the clamping-bar c^4 , as shown in Fig. 9. $D D' D^2$ represent the rolls or webs, of which any desired number may be employed, there being as many as the requirements of the particular business may demand. In the drawings three such rolls are shown, the one marked D furnishing a check to be

given to the purchaser, the one marked D' a check for the cashier, and the one marked D^2 checks which are retained within the case A and which are rolled up in the form of a web upon a storing-roller E' , the checks furnished by the webs or rolls D and D' being cut off and delivered from the device, as is usual in such apparatus.

The webs or rolls are mounted upon trunnions or axles d , d' , and d^2 , and instead of mounting said trunnions or axles in fixed bearings, as has heretofore been the practice, thus necessitating the employment of friction or brake devices in order to prevent the accidental unwinding of the webs or rolls D D' D^2 as the checks are fed out of the device, the ends of said trunnions or axles d , d' , and d^2 are dropped into inclined guides or grooves formed by the inclined ribs or projections d^3 d^4 d^5 upon the sides a and a' of frame A, within which they are adapted to have a free vertical and rotary motion, the arrangement being such that the free ends of the webs or rolls D D' D^2 can be easily thrown off, the axles or trunnions d , d' , and d^2 revolving freely, and at the same time permit the webs or rolls D D' D^2 to rest upon the bottom a^4 of the frame A and thus by their own weight exert a sufficient amount of friction to prevent the undue unwinding or unrolling of the same.

As shown in the drawings, the free ends of the webs or rolls D , D' , and D^2 are fed up over the end of the table or tablet C and thence beneath the opening B^2 in the cover B, the relative arrangement of the webs D D' D^2 and the carbon-paper p upon said tablet being shown clearly in Figs. 2 and 9. Looking at these views it will be seen that the end of the web D^2 is imposed upon or next to the table C and that one leaf or end of carbon-paper p is extended across and upon the same, the web D^2 being thence carried over a feed-roller E and secured to a storing-roller E' , upon which it is rolled, as will be explained. The end of the web D' is next drawn over the leaf of carbon-paper p upon the web D^2 and is covered by the other leaf of the carbon-paper p , the free ends of which are now clamped by the bar c^4 , as hereinbefore described. The web D is now drawn over the leaf of carbon-paper p which covers the web D' and is exposed beneath the opening B^2 in the cover B for the purpose of receiving the marks of a pencil or other writing implement by which the record of a sale is made.

It will be clear that any marks made upon the web D will be duplicated upon the webs D' and D^2 by the carbon-paper p and that triplicate checks will thus be produced.

The ends of webs or rolls D and D' D^2 are drawn from the table C by a suitable feed mechanism and are passed beneath a suitable printing mechanism which prints the check-head upon the check formed on the web D , the ends of webs D and D' being projected from a slot s between the frame A and cover

B, and are then cut off by a suitable cutting mechanism and removed from the apparatus while the web D^2 is wound upon roller E. 70

The feeding mechanism operates to bring blank portions of the webs D , D' , and D^2 beneath the opening B^2 in cover B, and as the checks formed upon the ends of the webs D and D' are projected the check upon the end of web D^2 is being fed to the storing-roller E' to be wound thereon. 75

I will now proceed to describe the mechanism for actuating the feeding and printing devices and the storing-roller. 80

Secured to the side a' of the frame A upon its inner face is a plate F, which may be attached by suitable screws f' . Between the side of frame A and the plate F is a driving-gear F' , which is carried by a short shaft f^2 , mounted in bearings in plate F and the side a' of the frame, shaft f^2 upon the outer side of the casing being provided with a lever f^3 and a handle or knob f^4 . Upon the lever f^3 is pivoted a bent pawl f^5 , which extends through a slot f^6 , cut into the side a' of frame A, and engages the teeth of the driving-gear F' , the arrangement being such that the movement of the lever f^3 upward from the position shown in Fig. 2 will rotate the driving-gear F' and actuate the feeding, printing, and storing mechanisms, as will be described. 85 90 95

Within suitable bearings in the side a and the plate F is mounted the end of shaft e of the feed-roller E, which may be provided with a frictional covering e' of rubber if so desired, and said roller E is driven by a pinion e^2 upon the end of shaft e , which is in mesh with and driven by gear F' . Coöperating with the feed-roller E is a short pressing or friction roller G, which is mounted in a bearing in the bent arm of a clip g , secured to the rounded cap B^3 of cover B by a screw g' , and which projects through a recess g^2 therein, as clearly shown in Fig. 2. 100 105 110

A bed-roller H has its trunnions h mounted in the side a and plate F in a similar manner to roller E, and it is rotated by a pinion h' , which is in mesh with and is driven by the gear F' . The storing-roller E' has a trunnion e^5 upon one end, which is mounted in a bearing in a resilient arm e^6 , which is secured to the side a of frame A, and at its other end is provided with a cap-plate e^7 , within the end of which is a polygonal opening engaged by a similar-shaped end e^8 of a short shaft e^9 , mounted in bearings in the plate F and the side a' of frame A. 115 120

In order that the storing-roller E' may be rotated to wind up the web D^2 without any liability of breaking the said web in case the crank-arm f^3 should be moved a greater distance than is necessary to wind up the slack of said web, the shaft e^9 is driven from the gear F' through a pinion e^{10} , which is loosely mounted upon said shaft e^9 and which is clutched thereto by a frictional clutch device comprising a disk e^{11} , against which 125 130

said pinion is pressed by a spring e^{12} , one end of which bears upon a pin e^{13} and the other end against said pinion.

The storing-roller E' may be removed in order to remove the web of checks contained thereon for the purpose of comparing them at the close of business with the cashier's checks by springing the resilient arm e^6 away from the end thereof a sufficient distance to release the trunnion e^5 , whereupon the roller may be disengaged from the end e^8 of shaft e^9 and taken out of the case or frame A and the web of checks D^2 removed therefrom.

In the upwardly-projected ends of sides a and a' is a printing-roller K, which is mounted to revolve in a bearing in frame A and in the end of a swinging lever k , which is pivoted at k' to the side of frame A in such manner that the roller K is free to revolve and to have a vertical movement toward and from the bed-roller H.

Upon the roller K are placed suitable printing type or characters k^2 , which when the roller K is depressed and is revolved will print the heading upon the check of the web D. The printing-roller K is normally held elevated by a suitable spring k^3 , and it is depressed by pushing down upon the end of its trunnion k^4 , which projects through an aperture k^5 in the side a' of frame A. When thus pressed down, a spring-latch m engages the end of the lever k and retains the roller K in such position that upon a revolution thereof the type k^2 will contact with the web D against the bed-roller H and print the head thereon, as before explained. When held down, the roller K is brought into contact with a frictional collar n upon the guide and bed roller H, and as the said roller H is revolved it revolves the printing-roller K, and when the printing-roller K has been revolved sufficiently to print the head upon the check or web D a pin o on the end of said roller K comes in contact with the spring-latch m and removes it from contact with the lever k , when the spring k^3 will immediately lift said roller from contact with the web D.

Roller K is mounted upon a spring-controlled axle, which normally retains the same in the position shown in Fig. 2, and it is revolved against the tension of the spring, the arrangement being such that upon the raising of the same from contact with the collar n by the release of lever k from the spring-latch m it will instantly assume its normal position, as shown in Fig. 2.

The arrangement of the spring for returning the printing-roller K to its normal position is shown in Fig. 3, wherein n' represents a spring which surrounds the end of its trunnion k^4 within a recess n^2 in the end of said roller, one end of said spring n' being fastened to said trunnion k^4 and the other end to the lever k .

P represents an inking-roller, the trunnions p' of which are mounted for a slight movement toward and from the printing-roller K

in slots p^2 in the sides a and a' of frame A, the inking-roller P being normally pressed toward the printing-roller K by a spring p^3 .

L and L' represent cutters which act to cut off from the webs D and D' the checks after they have been fed or projected from the slot s . The cutter L is a stationary cutter and fixed in place, as shown in Fig. 2, by any suitable means, the movable cutter L' being pivoted by the pin-and-slot connection, such as shown in Fig. 8, for movement toward and from the cutter L. The cutter L' is normally held raised by a suitable spring l , and it is provided with an actuating-piece w , projected through an aperture in the side a of frame A. Upon the end a^3 of the frame A is formed a shelf or deflector a^{10} for the purpose of guiding the checks through the opening s .

The top B is preferably provided with an indicator-plate R, which may be formed integrally therewith or formed separately and secured thereto and which is preferably placed adjacent to the rounded cap B³.

The plate R is cut out at the points indicated by letter r , exposing the web D through the spaces thus formed for the purpose of receiving the desired record at said points. The spaces thus formed are provided with headings comprising arbitrary words or symbols, such as "Date," "Name," "Address," &c., which indicate that this information is to be recorded on the check at this point. The printing-roller K is provided with type corresponding to the arbitrary words or symbols upon the indicating-plate R, and the relative location of plate R and printing-roller K and the time of operation are such that the printing-roller will print such arbitrary words or symbols at the proper point upon the web D, or immediately above the records which have been placed upon the web D, through the spaces r in the indicating-plate.

The operation of the device is as follows, supposing the webs or rolls D, D', and D² have been put in place and the end of web D² connected to the storing-roll E', the ends of webs D and D' being between the feed-rollers E and G and the parts being in the position shown in Fig. 2, with the printing-roller K depressed and held by the spring-latch m and the lever f^3 in its downward position, as shown: A check having been formed by a pencil or other writing implement upon the web D and the same having been duplicated by means of the carbon-paper p upon the webs D' and D², thus forming three duplicate checks, two of which it is desired to remove from the machine, leaving the third one to remain therein, the lever f^3 is lifted from the position shown in Fig. 2, and by means of the bent pawl f^3 , passing through the slot f^6 , communicates motion to the gear F', and through gear F' and pinions e^2 , h' , and e^{10} revolving the feed-roll E, bed-roll H, and storing-roll E', thus causing the ends of webs D and D' to be fed beneath the printing-roller K and the web D² to be wound upon the

storing-roller E'. The revolution of the bed-roller H imparts motion to the printing-roller K through the friction-collar n , the roller K being revolved against the tension of spring n' and acting to print the heading of the check upon the end of web D. When the stud or pin o upon roller K comes in contact with the spring-latch m , it moves said latch from engagement with the lever k and permits the spring k^3 to lift the lever k and the printing-roller K, which is released from contact with the friction-collar n and under the tension of spring n' is caused to revolve backward and assume its normal position. In the meantime the checks on the end of the webs D and D' have been projected from slot s and the check on the end of web D² drawn toward the storing-roll E' by the continued movement of the lever f^3 to the limit of its motion. The cutting devices are now operated to sever the checks on the ends of webs D and D', one of which is given to the purchaser and the other to the cashier, while the checks on the web D² remain in the machine until taken out for the purpose of comparison with the checks of the cashier. The lever f^3 is now returned to its initial position, and by reason of the fact that the pawl f^5 is pivoted thereto no motion is imparted to the parts of the device. The feeding of the checks, as above described, has brought blank portions of the webs D, D', and D² beneath the opening B², and the printing-roller K having been depressed by moving down the trunnion k^4 , which causes spring-latch m to engage the lever k , the machine is set for another operation. It will of course be understood that the printing-roller K is at each revolution brought into contact with the inking-roller P.

It will be noted that by my improved construction, the printing device being normally held out of operative position and being brought at the will of the operator into operative position and released automatically after a single impression is made, I am enabled to form under a single heading a check of any required length, so that a short check may be made where there are but few entries thereon and a long check for a large number of entries. In this way I effect a great saving of paper and avoid the crowding of entries on a check, which I consider features of great importance in the art.

Having fully described my invention and its mode of operation, I claim as new and desire to protect by Letters Patent of the United States—

1. In an autographic register, the combination with a vertically-movable printing-roller, of a spring normally holding said roller out of operative position, a latch to retain said roller in operative position, and means to release said latch upon the rotation of the roller, substantially as described.

2. In an autographic register, the combination with the web feed and printing device, of connected mechanism to actuate the web feed

and printing device, with which the printing device is normally disconnected, means under the control of the operator to connect said printing device with the actuating mechanism, and automatic means to disconnect said printing device after a single impression, whereby a check of any length may be formed under a single impression of the printing device, substantially as described.

3. In an autographic register, the combination with a spring-sustained printing-roller, a bed-roller and frictional driving connections between the same, of a latch to retain the printing-roller and bed-roller in frictional contact with each other, and means to release the latch and permit a movement of the printing-roller away from the bed-roller upon the rotation of the printing-roller, substantially as described.

4. In an autographic register, the combination with a printing-roller, and a swinging spring-actuated lever supporting the same, of a latch arranged to engage said lever to hold the printing-roller in a depressed position and means to release said latch after a single rotation of the roller, substantially as described.

5. In an autographic register, the combination with a vertically-movable printing device, of a spring normally holding said printing device out of operative position, a latch to retain said printing device in operative position, and automatic means to release said latch and allow the printing device to be raised by the spring, after a single impression has been made, substantially as described.

6. In an autographic register the combination with a printing-roller of a spring-controlled support for the same, a latch to retain the roller in a depressed position, means to rotate said roller in one direction while depressed, means for releasing the latch, and a spring arranged to rotate the roller in an opposite direction when released by the latch, substantially as described.

7. In an autographic register, the combination with a pivoted tablet or table provided with a slot along one edge arranged to receive the sheet of carbon-paper, of a pivoted clamping-bar upon its other edge arranged to clamp the carbon-paper in position, substantially as described.

8. In an autographic register, the combination with the cover having a check-exposing opening, and an apertured indicating-plate located adjacent to said opening, the apertures in said plate arranged to position certain records upon the check, the apertured plate having arbitrary words or symbols adjacent to the apertures therein, of a suitable printing device having corresponding words or symbols, and connected mechanism to feed the web and actuate the printing device, to print the arbitrary words upon the check above the records placed on said check through the apertures in the indicating-plate, and means to release said printing device

from the actuating mechanism after a single impression, substantially as described.

9. In an autographic register, the combination with a storing-roller, a laterally-yielding bearing for one end of said roller, a shaft supporting the other end of said roller and removably connected therewith, arranged to rotate the same, a pinion loosely mounted upon said shaft, a friction-disk fixed on said shaft, and a spring surrounding said shaft and bearing against said pinion, substantially as described.

10. In an autographic register, the combination with a printing device and mechanism to actuate the same, the said printing device

normally sustained out of its operative position with its actuating mechanism, of means under the control of the operator to connect said printing device with its actuating mechanism, and means to automatically disconnect said printing device from its actuating mechanism and return the same to its normal position after a single impression, substantially as described.

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

HENRY C. BIETTE.

Witnesses:

A. O. ORNE,

A. E. WHYTE.