

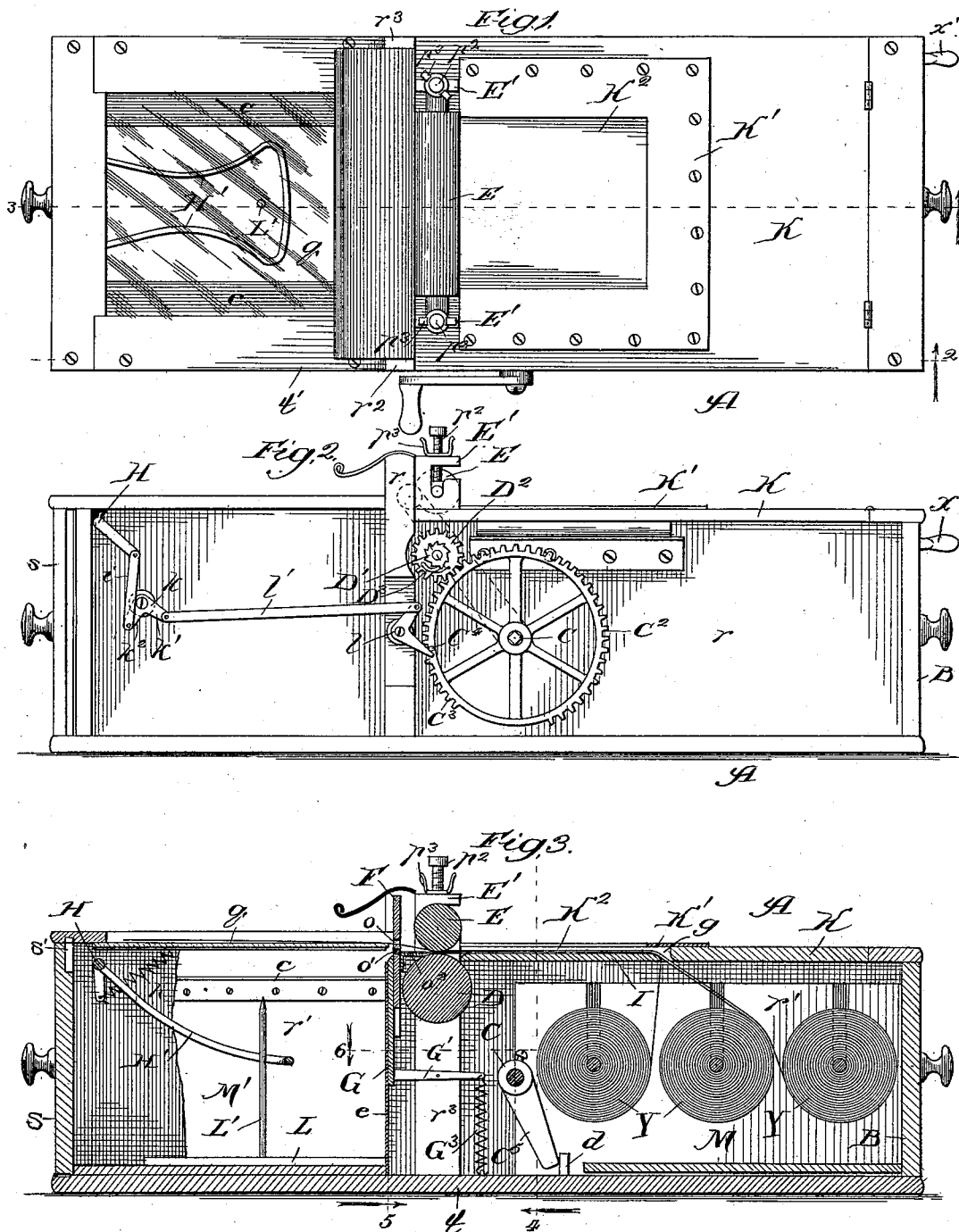
(No Model.)

3 Sheets—Sheet 1.

S. BERENS.
AUTOGRAPHIC REGISTER.

No. 508,080.

Patented Nov. 7, 1893.



Witnesses;

Clifford N. White,
W. N. Williams.

Inventor;

Stanislaus Berens,
By Dyrenforth & Dyrenforth,
Attys

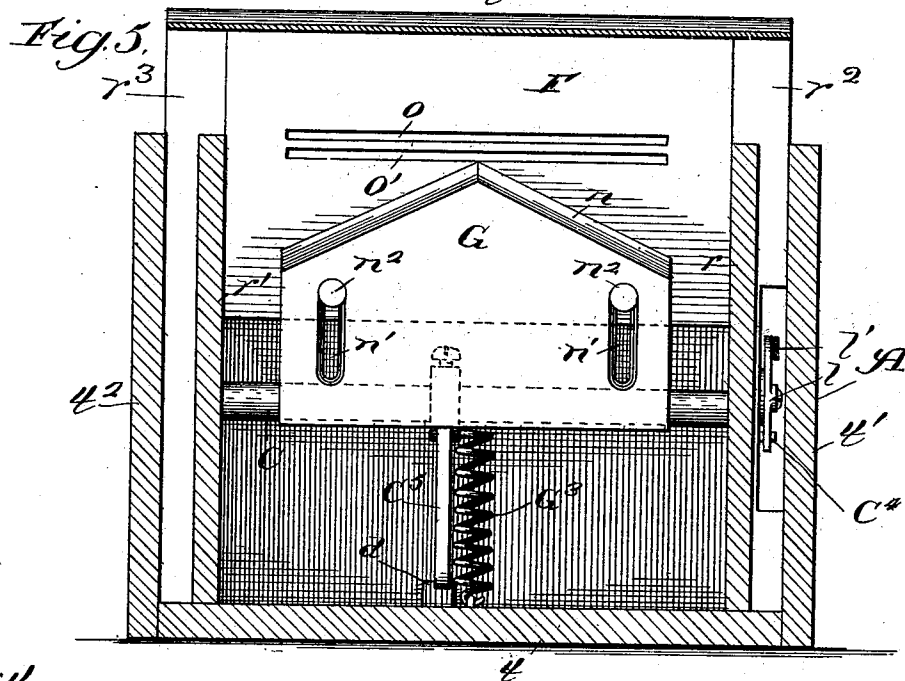
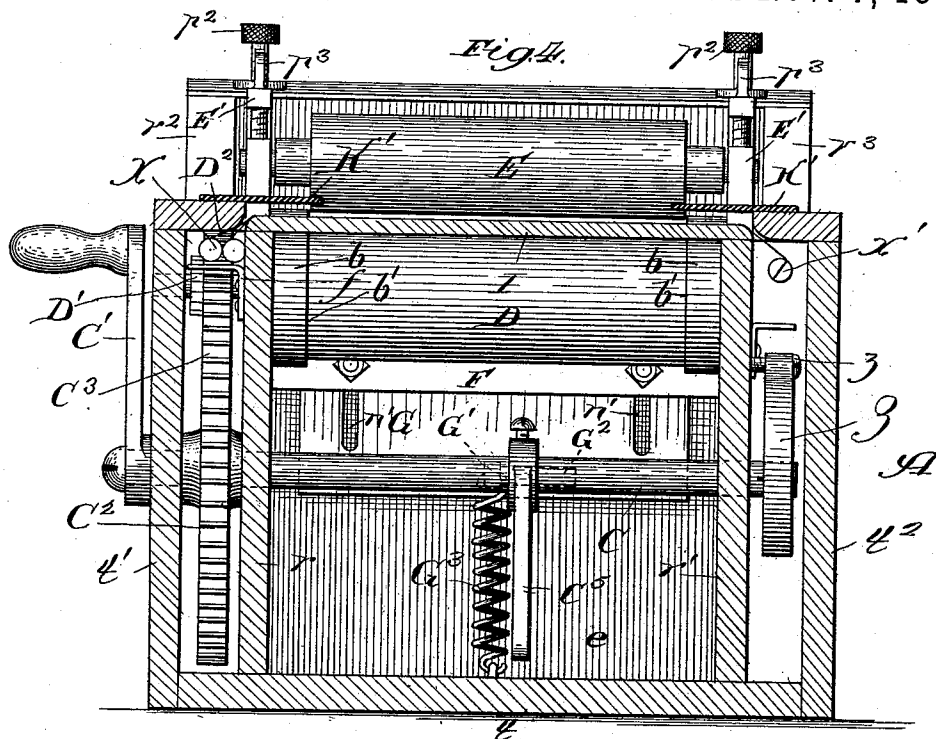
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3 Sheets—Sheet 2.

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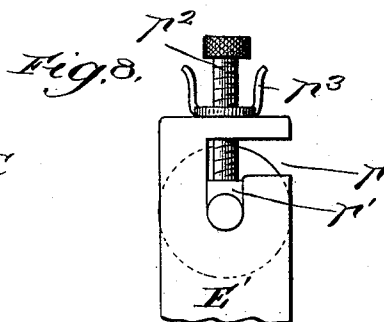
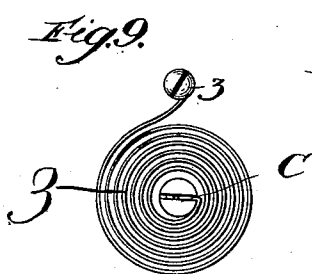
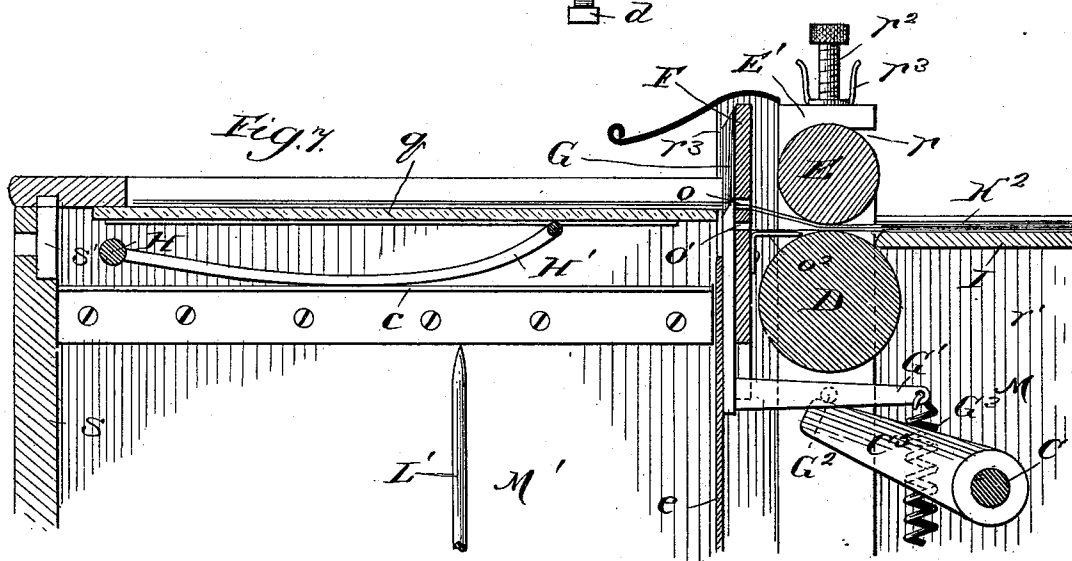
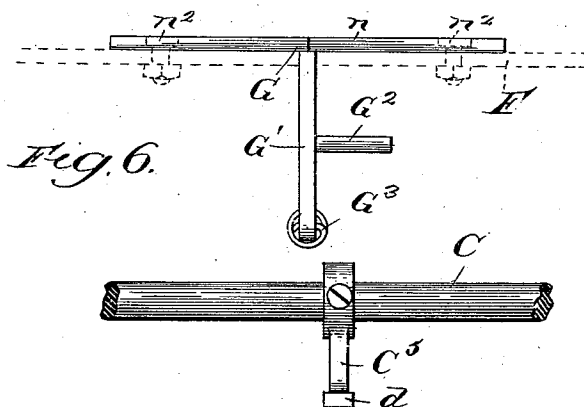
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3 Sheets—Sheet 3.

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UNITED STATES PATENT OFFICE.

STANISLAUS BERENS, OF WESTERN SPRINGS, ASSIGNOR OF ONE-HALF TO
EMANUEL STEIN, OF CHICAGO, ILLINOIS.

AUTOGRAPHIC REGISTER.

SPECIFICATION forming part of Letters Patent No. 508,080, dated November 7, 1893.

Application filed July 16, 1892. Serial No. 440,262. (No model.)

To all whom it may concern:

Be it known that I, STANISLAUS BERENS, a citizen of the United States, residing at Western Springs, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Autographic Registers, of which the following is a specification.

My invention relates to autographic registers of the class more especially employed in retail mercantile stores, to register cash-sales and operate, when desired, as a check upon the sales-clerk and cashier. It is a common practice in retail stores to cause the sales-clerks to make out for each cash sale a bill or memorandum in triplicate, of the goods sold, the customer receiving one copy, and a second copy going to the cashier, the third copy being retained by the sales-clerk who delivers it to the manager, or the employé to whom it is the duty of the cashier to account, whereby the said third copy may be used in verifying the cashier's report.

My object is to provide a manfolding autographic register of the above class, and of an improved construction which gives to the device particular advantages over other devices of the same nature hitherto employed, and adapts it particularly for use in practicing the checking system above outlined.

In the drawings—Figure 1 is a top-plan view of my improved device; Fig. 2, a section taken on line 2 of Fig. 1, and viewed in the direction of the arrow; Fig. 3, a central longitudinal section taken on line 3 of Fig. 1, in the direction of the arrow, part being broken away to display details which would otherwise be hidden; Figs. 4 and 5, enlarged sections taken on lines 4 and 5, respectively, of Fig. 3, and viewed in opposite directions as indicated by the arrows; Fig. 6, an enlarged broken sectional plan view of details, the section being taken on line 6 of Fig. 3; Fig. 7, an enlarged broken section, on the same line as Fig. 3, but showing the moving parts in another position; Fig. 8, a detail elevation of one of the journal-bearings of the upper roller; and Fig. 9, a view showing a detail of the construction.

A is the inclosing case of my improved device formed with the base t , and sides t' t'' . The forward end of the case is open to receive a drawer, B, and the rear end is closed by a

hinged door s . On the door s is a lock s' having a removable key, whereby the said door may be secured in the closed condition. Adjacent to the side t' is a fixed longitudinally extending partition r ; and adjacent to the side t'' is a similar partition r' . Interposed in and forming part of the partitions r r' are standards r^2 r^3 , respectively, and that part of the case between the standards and end s is provided with a fixed cover q , preferably of transparent glass.

C is a transverse shaft in bearings in the partitions r r' and extending beyond the side t' where it carries a crank C' . Fixed upon the shaft between the side t' and partition r is a wheel C^2 formed at its circumference with a segmental rack C^3 , and carrying a laterally extending pin C^4 . Between the partition r' and side t'' is a coiled spring Z fastened at one end by a screw z to the partition r' , and at its opposite end to the shaft C.

D is a transverse roller provided at opposite ends with journals extending through bearings in the partitions r r' . The roller D is enlarged in diameter at its opposite ends, as shown at b b' in Fig. 4, to afford the annular shoulders b' . On the journal which extends beyond the partition r is a fixed ratchet wheel D' , and between the said ratchet wheel and partition r upon the said journal is a pinion D^2 which meshes with the rack C^3 . The pinion D^2 is loose upon the journal of the roller D and carries a spring dog D^3 which engages the teeth of the ratchet D' .

E is a companion roller for the roller D above the latter and journaled at opposite ends in bearings E' on the partitions r r' . The roller E is above and bears against the roller D to be driven thereby, and is of a length equal to the distance between the shoulders b' on the latter. The bearings or journal boxes E' are constructed as shown in Fig. 8, having each an angular slot p terminating in a bearing for the journals, a loose bearing block p' in the slot p resting upon the journal, and a set-screw p^2 bearing against the block p' to tighten the latter against the journals and press the roller E against the roller D. On each set-screw p^2 is a jam nut p^3 , which when tightened against the top of the respective journal box E' tightens the set-screw in

place. Directly back of the rollers D E and extending between the standards r^2 r^3 is a fixed plate F. Extending through the plate F are two slots o o' , adjacent to the bite of the rollers D E, the slot o being above the plane of the upper surface of the glass cover q , and the slot o' below the plane of the under surface of the cover q .

G is a vertically sliding knife provided with the cutting edge n and with vertical slots n' . On the plate F are headed bolts n^2 which extend through the slots n' of the knife G and operate to hold the knife against the plate F and permit the knife to move in the vertical plane a distance equal to the length of its slots n' . Extending forward from the knife G is an arm G' carrying a laterally extending pin G^2 . Fastened at one end to the free end of the arm G' , and at its opposite end to the bottom t of the case is a spring G^3 which operates normally to maintain the knife at the lowest limit of its traverse. On the shaft C is a downward extending arm C^5 , maintained normally by the action of the spring Z against a stop d on the bottom t of the case. As the shaft is turned against the resistance of the spring Z the arm when near the end of its traverse strikes the under side of the pin G^2 and forces the knife upward across the slots o o' which form cutting edges, as hereinafter described. Pivoted upon the standard r^2 is a bell crank lever l , one arm of which extends normally into the path of the pin C^4 on the wheel C^2 , its other arm being pivotally connected to a link or rod l' which at its opposite end is pivotally connected to the arm k' of a bell crank lever k . The bell crank lever k is pivotally mounted upon the side of the partition r .

H is a transverse rock shaft journaled at its opposite ends in the partitions r r' near the rear upper ends of the latter. One end of the rock shaft H extends beyond the partition r , where it is bent to extend parallel with the side of the partition. The end of this bent portion of the rod or shaft H is pivotally connected to a link i , which at its opposite end is pivotally connected to the end of the arm k^2 of the bell crank k . The opposite end of the rod H is bent to extend downward parallel to the side of the partition r' , and a spring h is connected at one end to the under side of the cover of the case, and at its opposite end to the downward extending part of the rod H. At the center of the shaft or rod H and extending forward therefrom is an impaler in the form of a loop or stirrup H' . On the plate F just below the slot o' is a guide plate o^2 which extends forward between the rollers D E almost to the line of contact of the latter. Extending from the roller D forward, the relative distance shown in Fig. 3, is a platform or table I. The table I is secured at opposite edges to the tops of the partitions r r' , and its upper surface is in the horizontal plane of the top of the roller D.

K is a hinged cover for the case having an

opening or recording aperture K^2 over the table I. Around the edges of the said opening in the cover is a plate K' which projects over the edges of the table I, but out of contact with the latter. Between the forward edge of the table I and edge of the cover opening adjacent thereto is a transverse space g affording a guide opening. At the edge of the table I and resting upon a shelf f between the partition r and side t' are two rolls of carbon paper X. From the said rolls the carbon paper passes across the table I to a roller X' . The roller X' extends from the standard r^3 forward between the partition r' and side t^2 through the front end of the case, having its bearings in the said standard and where it passes through the case. The two webs of carbon paper are secured at their free edges to the said roller X' and by turning the roller the carbon paper is wound thereon from the rolls X. At the side of the knife G opposite the plate F is a partition plate e which operates to divide the space between the partitions r r' into two chambers M M' . The drawer B is adapted to contain three rolls Y of paper, and slides into the chamber M. In the chamber M' is a removable and replaceable block or base L carrying a vertically extending receiving wire L' . When placed in the chamber M' the vertical plane of the receiving wire is between the side lengths of the loop H' .

To place the device in operative condition the drawer B provided with the rolls of paper Y is slid into place and the cover K of the box raised on its hinges. The free ends of the webs of paper are drawn across the table I, the lowest web below the lower sheet of carbon paper, the intermediate web between the sheets of carbon paper, and the upper web over the upper sheet of carbon paper. Thence the ends of the web are passed between the rollers D E over the guide o^2 , the lowest web passing through the slot o' to the chamber M' , and the two upper webs through the slot o to the upper surface of the glass cover q .

In operation the memorandum is written with a lead pencil upon the surface of the web exposed at the opening of the cover K. The same memoranda is manifolded by means of the carbon papers and imprinted upon the two lower webs of paper. When the memorandum is completed the crank C' is turned to swing the arm C^5 on the shaft C from the stop d in the direction of the pin G^2 . This turning of the shaft C rotates the wheel C^2 and pinion D^2 . The engagement of the dog D^3 with the ratchet wheel D' causes the roller D, and consequently the roller E, to rotate and feed the webs backward. When the webs have traveled a distance slightly in excess of the length of the opening in the cover K the arm C^5 on the shaft C strikes the pin G^2 on the arm G' of the knife G and forces the latter upward across the slots o o' , and shears off the sheets. When the lower ends

of the openings n' in the knife strike the bolts n^2 the arm C^5 reaches the limit of its traverse, and the shaft C will turn no farther. On releasing the handle of the crank C' the crank, shaft and arm C^5 will be swung back by the action of the spring Z to their initial positions. The dog D^3 in the return movement of the shaft will wipe across the ratchet D' and the rollers D E will remain at rest.

The lower sheet, which, as before stated, passes into the chamber M' slides at its lateral edges upon horizontal guide-plates $c c$ which are fastened to the inner surfaces of the partitions $r r'$. At the moment that the knife passes across the slots $o o'$ the pin C^4 on the wheel C^2 wipes across the arm of the bell-crank lever l , causing the shaft or rod H through the connections $l' k i$ to be rocked against the resistance of the spring h and swing the impaler H' from its normal position, shown in Fig. 7 downward to the position shown in Fig. 3. The impaler strikes the sheet the instant the latter is severed from its web and impales it upon the receiving wire L' . As the said sheet descends its edges leave the guides c . When the pin C^4 disengages the bell crank lever l the impaler H' is returned to its initial position by the spring h . The two upper webs pass across the upper surface of the glass top q , and when the two upper sheets have been severed from the web they rest loosely upon the cover q and may be taken therefrom by the operator. The sheet which is impaled upon the receiving wire L' remains in the chamber or filing compartment M' until the person in authority carrying the key to the lock s' desires to remove it. The other two sheets may, as before stated, be given one to the customer and the other to the cashier. The device may be operated as long as the rolls Y hold out, and the receiving wire L' need not be removed from the case until it is filled. The roller E extends and fits between the shoulders b' of the roller D, and the webs are of a width approximating the length of the roller D. The roller E presses the webs, near their edges, into the angle formed by the shoulders b' , thus producing a creasing of the webs at those points which prevents the webs from slipping upon each other as they pass through the rollers. The set-screws p^2 permit the operator to regulate the pressure of the roller E against the roller D at opposite ends and thus insure the passage of the webs through the rollers in a straight course. By loosening the set-screws p^2 the roller E may be lifted out of its bearings to facilitate the insertion of the webs through the guide openings $o o'$.

When the surfaces of the webs of carbon, or

other manifolding paper employed, become worn at the recording aperture k^2 , the said webs may be wound upon the roller X' from the rolls X to bring new surfaces of the manifolding papers into the said aperture.

While I have shown and described the use of three webs of memorandum paper, it may be required by some users, that no sheet, or only one sheet or more than two sheets, besides the one which goes to the chamber M' , be delivered from the device. I do not therefore limit my device to the employment of any particular number of rolls Y. The device would be just as operative if the cover K were not present, and although without the cover there would be no "aperture" strictly speaking, the term "recording aperture" used in the claims is intended to mean the field or space across which the web passes and at which the memorandum is recorded upon the web. The webs instead of being provided in rolls Y may be suitably folded and packed in the chamber M to pay out when the feed is actuated; the term "web supply" therefore means the rolls Y or their equivalents.

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

1. In an autographic register, the combination with the filing compartment, web feeder, and operating shaft which drives the web feeder, of a stationary plate between the web feeder and filing compartment provided with two separate web guide openings, one leading to the outside of the case, and the other to the filing compartment, and each affording a cutting edge, a knife at the plate, a spring maintaining the knife normally at one side of said openings, a projection on the said shaft operating when the shaft is turned to engage the knife and advance it against the resistance of the spring across the said cutting edges to sever the webs, substantially as and for the purpose set forth.

2. In an autographic register, the combination with the operating shaft, of feed mechanism for the webs, geared to the operating shaft to be driven thereby, and comprising a roller D provided with shoulders b' and a roller E bearing against the roller D and extending between the said shoulders, and adjusting means at opposite ends of the rollers, operative independently to increase or diminish the pressure of the rollers at opposite edges respectively of the webs at will, substantially as and for the purpose set forth.

STANISLAUS BERENS.

In presence of—

M. J. FROST,
M. E. WINN.