

C. H. WILSON & J. BENGOUGH.

AUTOGRAPHIC REGISTER.

APPLICATION FILED NOV. 30, 1908.

992,317.

Patented May 16, 1911.

3 SHEETS—SHEET 1.

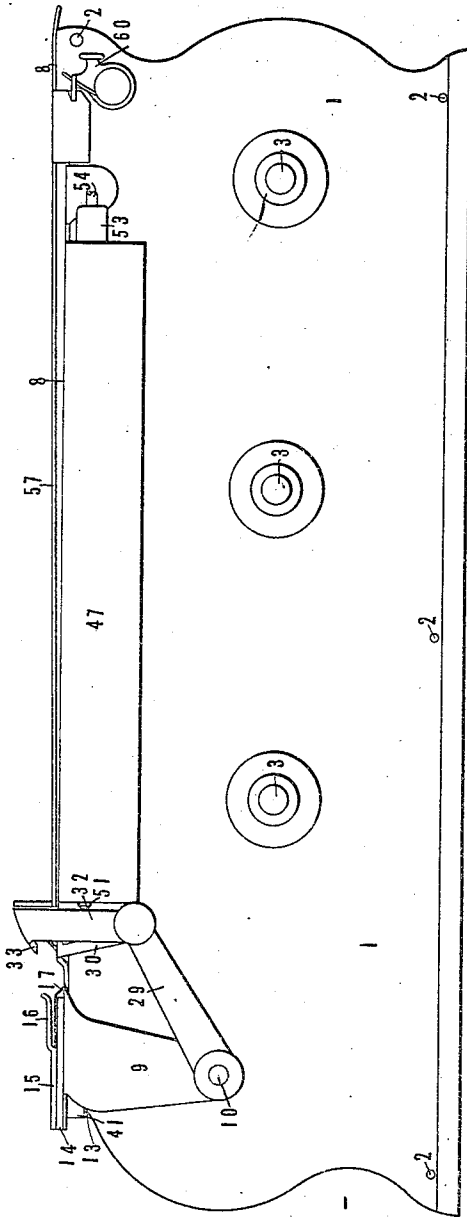


Fig. 1 -

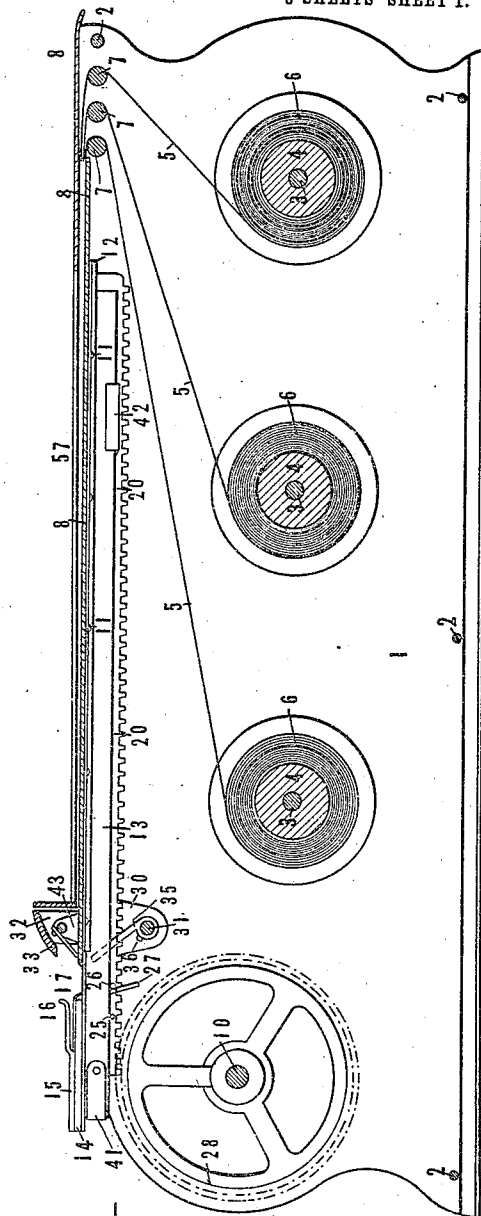


Fig. 2 -

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3 SHEETS-SHEET 2.

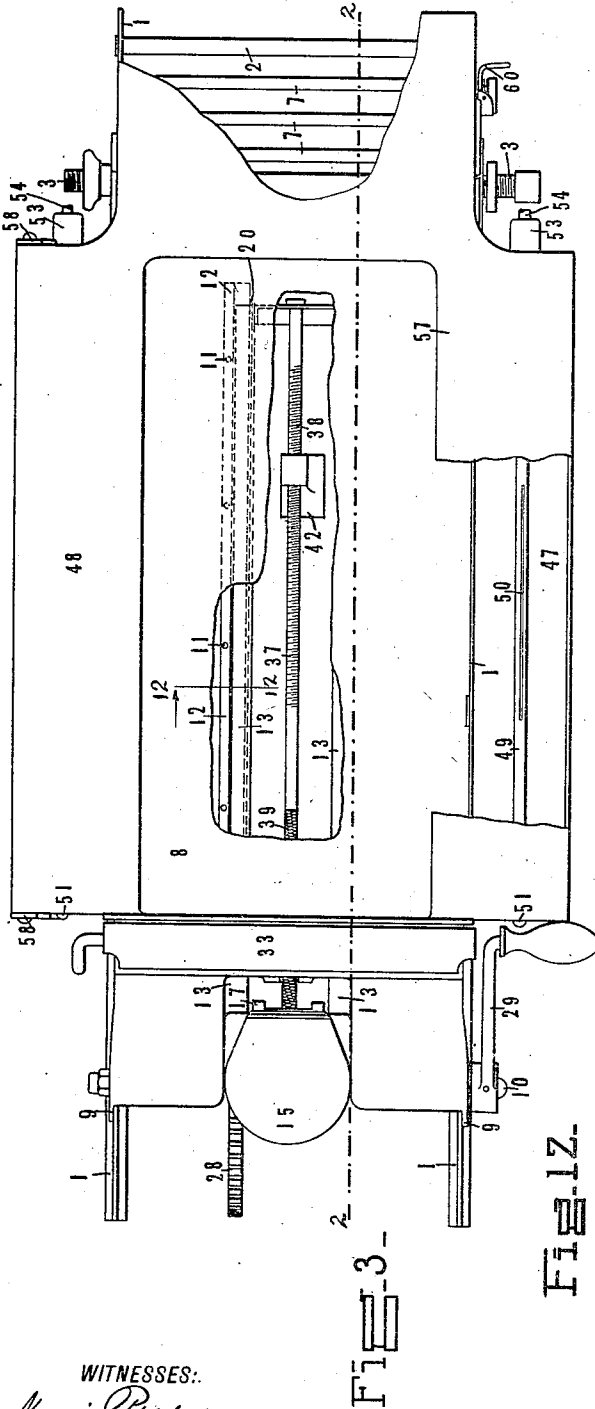
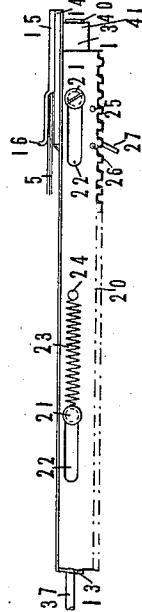
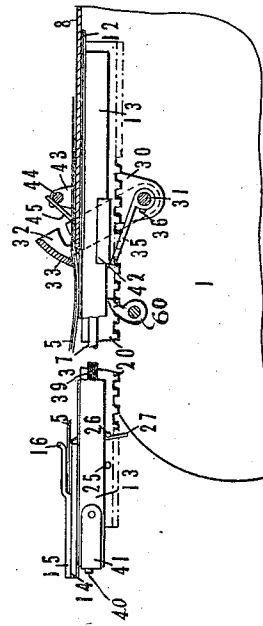
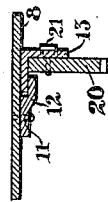


Fig. 5-

Fig. 4-

Fig. 12-



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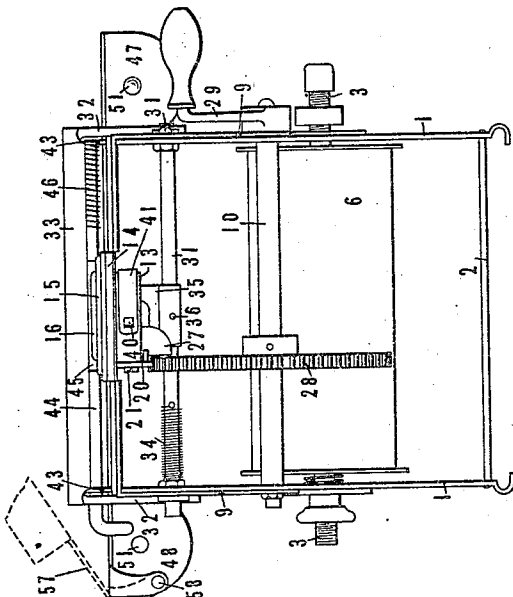
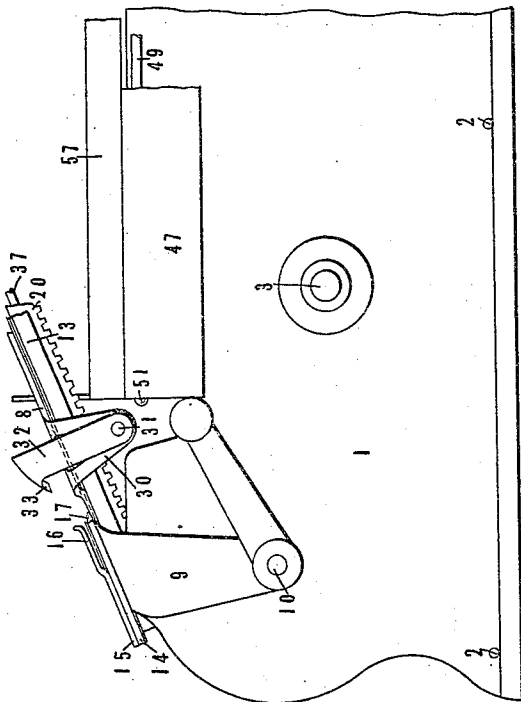
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3 SHEETS-SHEET 3.

992,317.



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Fig-7-

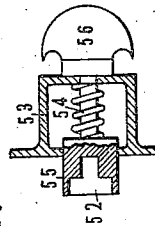


Fig-11-

Fig-6-

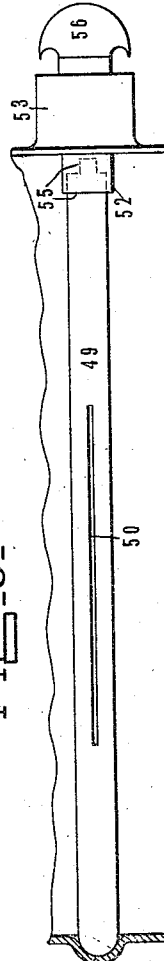


Fig-10-

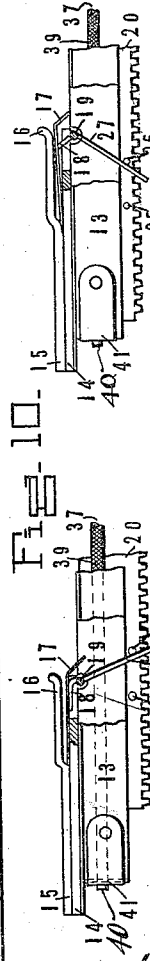


Fig-9

Fig-8-

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UNITED STATES PATENT OFFICE.

CHARLES H. WILSON, OF NEW YORK, AND JAMES BENGOUGH, OF NIAGARA FALLS, NEW YORK, ASSIGNORS TO THE CARTER-CRUME COMPANY, LIMITED, OF NIAGARA FALLS, NEW YORK, A CORPORATION OF CANADA.

AUTOGRAPHIC REGISTER.

992,317.

Specification of Letters Patent. Patented May 16, 1911.

Application filed November 30, 1908. Serial No. 465,160.

To all whom it may concern:

Be it known that we, CHARLES H. WILSON and JAMES BENGOUGH, residing at New York and Niagara Falls, respectively, in the counties of New York and Niagara, respectively, and State of New York, have invented certain new and useful Improvements in Autographic Registers, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to autographic registers and particularly to that class of machines wherein several webs of paper are fed over a writing tablet, carbon paper or other transferring means being interposed between the webs, whereby several impressions may be made from a single writing.

One of the objects of the invention is to provide a machine in which the printed matter upon the several webs will always remain in exact register.

Another object is to provide improved means for feeding the webs across the writing tablet.

Another object is to provide a machine of the above character such that the interior of the same is more readily accessible than has been the case in similar machines as hitherto constructed.

Another object is to provide a new and improved manner of supporting the carbon rolls.

A further object is to provide a manifold-ing machine which may be operated with a minimum of care and attention on the part of the operator.

Other objects will be in part obvious and in part pointed out hereinafter.

The invention, accordingly, consists of the features of construction, combinations of elements and arrangement of parts which will be exemplified in the construction hereinafter described and the scope of the application of which will be indicated in the appended claims.

Referring now to the drawing, wherein is illustrated one of the various possible embodiments of our invention, Figure 1 is a view thereof in side elevation; Fig. 2 is a vertical sectional view taken lengthwise of the machine on line 2—2, Fig. 3; Fig. 3 is

a top plan view of the machine, certain parts thereof being shown broken away better to illustrate the construction; Fig. 4 is a view partly in section and partly in elevation of a portion of the machine showing positions of certain of the parts when the slide is in an extended position; Fig. 5 is a similar view showing the manner of supporting the rack-bar upon the slide; Fig. 6 is an end view of the machine; Fig. 7 is a view in side elevation of a portion of the machine showing the manner in which the writing tablet may be lifted to permit of access to the interior of the machine; Fig. 8 is a detail view showing the means for gripping the webs in normal position; Fig. 9 is a similar view showing the gripping means in position to clamp the webs; Fig. 10 is a plan view showing the means for supporting the rolls of carbon or transfer paper; Fig. 11 is a vertical sectional view through a portion of the carbon holder showing the means of rotating the carbon roll; Fig. 12 is a detail view in cross section of the guides 12 and slide 13.

Similar reference characters refer to similar parts throughout the several views of the drawings.

Referring now to the drawings, the casing of the machine comprises side members 1—1 suitably fastened together as by means of the rods 2. Within the casing are spindles 3, which are removably supported in any suitable manner in the side member 1, said spindles being adapted to support spools 4 upon which the webs 5 of paper are rolled. The webs 5 from rolls 6 are led rearward and upward and passed over guide rods 7, from which they are adapted to be fed over a writing tablet 8. Tablet 8, in the present instance, at its front end is provided with a pair of depending ears 9, which are mounted for rotation upon a shaft 10 extending transversely of the casing and journaled on the side walls thereof. By means of this construction tablet 8 may be swung upward as shown in Fig. 7 of the drawings, to permit of a convenient and ready access to the interior of the casing as when it is necessary to replenish the supply of webs.

Secured to the underside of the writing tablet 8, as by means of rivets or screws 11, are guides, one of which is shown at 12. These guides are adapted to support a slide

13 formed by side members suitably connected at their front and rear ends. This slide may be projected outward from the casing to feed the webs over the writing tablet, as will hereinafter be explained. Mounted upon the front end of slide 13 are plates 14 and 15, which are separated at their rearward ends to provide a stationary gripping jaw 16. A movable gripping jaw is constituted by a spring member 17, secured between said plates, and cooperating with this spring member is a bell-crank lever 18 pivotally mounted upon the pin 19 carried by slide 13.

20 denotes a rack-bar supported upon the slide, as by means of pins or screws 21, which extend through elongated slots 22 in the rack-bar. Rack-bar 20 is therefore movable longitudinally with respect to slide 13 and is held in normal position by means of a retractile spring 23 extending between a pin 24 upon the rack-bar and one of screws or pins 21 which extend through slots 22 of the rack-bar. Rack-bar 20 at its outer end, in the present instance, is provided with a pair of spaced pins 25 and 26 respectively between which extends a leg 27 of the bell-crank lever 18 so that when the rack-bar is moved forwardly independently of the slide, bell-crank lever 18 will be swung upon its pivot to move the jaw 17 into engagement with the fixed jaw 16, such movement of the rack-bar being effected by means of a pinion 28 mounted upon shaft 10. It will be understood that when pinion 28 is rotated as by means of a handle 29 fixed upon shaft 10 and located exteriorly of the machine, the rack-bar 20 will first be moved endwise to operate the grippers upon the slide 13 and that after the said grippers have grasped the ends of the webs, slide 13 will be moved outwardly, thereby feeding or drawing the webs over the writing tablet. The spring 23 is not sufficiently strong to move the slide forwardly with the rack, as the tension of the webs exerts considerable backward pull on the slide. When, however, the slide reaches the end of its forward movement and the handle 29 is raised, the spring will draw the rack rearwardly the length of the slots 22 and the bell crank lever 18 will be swung to move the jaw 17 out of engagement with the fixed jaw 16, thus releasing the webs. The handle 29 is then turned to return the parts to their rearward position with respect to the casing.

Journalled in ears 30 which will extend downwardly from the writing tablet at either side thereof, is a shaft 31 and mounted for rotation upon this shaft are the side arms 32 of a tearing blade 33 which is normally held in the position shown in Figs. 1 and 2 by means of a spring 34 secured to one of ears 30 and to shaft 31. An arm 35 is secured to shaft 31 as by means of a set

screw 36, said arm extending upwardly and forwardly as shown in Fig. 2 of the drawings.

Journalled in the front and rear portions of the slide and extending longitudinally thereof is a rod 37, said rod being threaded for a portion of its length as at 38 and having the remaining portions thereof preferably roughened as indicated at 39, providing a gripping surface whereby the same may be easily turned by the operator. The outer end of this rod is provided with a squared portion 40, which engages the walls of a similarly formed opening in the free end of a leaf spring 41 secured to the slide, as shown in Fig. 6 of the drawings.

Threaded upon rod 37 is an abutment 42 which, when the slide is thrown outwardly, engages with arm 35 and swings the same and the tearing blade 33 to the position shown in Fig. 4 of the drawings, thus enabling the operator to readily separate the slips from the webs. Tablet 8 is provided with upstanding lugs 43, and journalled in these lugs is a spindle 44. This spindle carries a tension plate 45 which is normally pressed into engagement with the webs passing over the writing tablet by means of a coil spring 46 which encircles spindle 44 and is secured respectively to said spindle and one of the lugs 43.

47 and 48 indicate holders for the carbon rolls and are secured to either side of the casing. The carbon paper is fed transversely of the writing tablet, a roll of carbon paper being mounted upon a spindle, such as shown at 49 in Fig. 10 of the drawings. The free ends of the carbon sheets after being passed between the superimposed webs, are inserted in the slot 50 of the spindle located in the holder upon the opposite side of the casing, so that the used carbon paper may be wound upon said spindle, said paper being wound from one spindle to the other as will be understood.

Referring now particularly to the construction of the carbon holders, an end of each of the spindles 49 is inserted in an indentation 51 in the end of the carbon box, the opposite end of spindle being inserted in a socket 52, which works in a sleeve 53 formed upon the carbon holder. This socket is held in the position shown in Fig. 10 by means of the spring 54. The spindle is cut out at one end so as to provide a flat sided tongue as indicated at 55, and the base of the socket is provided with a correspondingly shaped groove, so that when handle 56 is rotated the spindle will be rotated to feed the carbon across the writing tablet. When the carbon roll is placed in the machine, one end of the spindle is inserted in the indentation 51 and socket 52 drawn back, so as to bring the inner end flush with the inside of the carbon box. The spindle is

dropped down on a line with the socket and the socket turned until the said tongue rests within the corresponding groove of the socket. It will be understood of course,

5 that the construction of the carbon boxes on each side of the machine will be identical.

The margin frame 57 is pivoted as at 58 to one of the carbon holders and may be swung upward as indicated in Fig. 6. A
10 spring catch 60 holds the margin frame in normal position.

Having thus described the construction of the machine, the manner of using same may now be understood. In loading the machine,
15 the margin frame 57 is first swung upwardly upon its pivotal support whereupon the writing tablet is swung upward to permit of access to the interior of the casing. Spindles 3 may then be removed and the
20 spools 4 inserted thereon and the spindles then positioned in their proper places in the casing. The webs are then threaded over rods 7 as shown, and then passed over the writing tablet which has been previously
25 moved to its normal position. The carbon sheets will then be inserted between the superimposed webs. After an entry has been made upon the portion of the web resting upon the writing plate, the handle 29
30 is grasped by the operator and pinion 28 rotated thereby. The rotation of pinion 28 first moves rack 20 outwardly a slight distance and said rack, through its connection with the movable jaw 17, causes said jaw
35 to clamp the ends of the webs against the fixed jaw 16. During the further rotated movement of pinion 28, the slide 13 is projected without the casing, thereby drawing the portion of the web containing the
40 entries from the writing tablet and positioning fresh webs thereon. The outward movement of the slide 13 causes abutment 42 to engage with arm 35, whereby the tearing blade will be swung in engagement
45 with the webs as shown in Fig. 4. The abutment then engages with a fixed stop 60 which limits the outward movement of the slide and determines the length of the sheets which are to be separated from the webs
50 along the line meshed by the tearing blade. When handle 29 is released, rack 20 is movable rearwardly by spring 23, thereby releasing the free ends of the webs, whereby they may be grasped by the operator and
55 separated from the unused webs by means of the tearing blade.

As above described, the length of the sheets which are to be torn off may be regulated by adjusting the abutment 42 forwardly or rearwardly with respect to the
60 slide, by means of the threaded rod 37.

It will be accordingly seen that we have provided a construction, well adapted to attain, among others, the several ends and
65 objects of the invention in a simple and effi-

cient manner. The webs are grasped and released in an entirely automatic manner and in such a way as to keep them at all times in perfect registry. Another advantage accruing herein resides in the fact
70 that the writing tablet being hingedly connected with the casing, enables it and the associated mechanism to be swung upward, thereby affording a ready access to the interior.

As many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from
80 the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense. It is also to be understood that the language used in the follow-
85 ing claims is intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention which, as a matter of language, might be said to fall therebe-
90 tween.

Having described our invention, what we claim as new and desire to secure by Letters Patent is:

1. In an autographic register, the combination with a casing adapted to hold webs, a writing tablet carried by said casing at the upper portion thereof across which said webs are drawn in superimposed relation, a slide movably mounted within the casing,
100 web gripping members carried by said slide, one thereof being resilient, means movably mounted upon said slide, means for driving said first means, and a pivotally mounted member connecting said first means with
105 said resilient gripping member whereby said latter member is actuated to grip and release the web when said slide is projected without the casing.

2. In an autographic register, the combination with a casing adapted to hold webs, a writing tablet carried by said casing at the upper portion thereof across which said webs are drawn in superimposed relation, a slide movably mounted within the casing,
115 means mounted upon said slide and having a limited endwise movement with respect thereto, gripping means upon said slide comprising a fixed and a movable jaw, and a pivotally mounted connecting member positioned
120 between said first means and said movable jaw whereby when the slide is projected without the casing the webs will be grasped and fed over said tablet.

3. In an autographic register, the combination with a casing adapted to hold the webs, a writing tablet carried by the casing at the upper portion thereof, a slide movably mounted within the casing having resilient means for gripping the webs and
130

feeding them across the writing tablet, means for moving said slide, and pivoted means actuated by said last-named means adapted automatically to cause said gripping means to grasp the webs and to release the same.

4. In an autographic register, the combination with a casing adapted to hold a plurality of rolls of webs, spindles upon which said rolls are mounted, a tablet carried by said casing at its upper portion, across which said webs are drawn in superimposed relation, a slide mounted on suitable guides beneath said tablet, web gripping means carried by said slide, a rack movably mounted upon said slide, a pinion meshing with said rack, and means connecting said rack with the gripping means upon the slide, whereby said latter means is actuated to grip and release the web when said slide is projected without the casing.

5. In an autographic register, the combination with a casing adapted to hold a plurality of rolls of webs, a tablet mounted on the upper portion of said casing, across which the webs are drawn in superimposed relation, a slide mounted beneath said tablet, a rack mounted upon said slide and having a limited endwise movement with respect thereto, gripping means upon said slide comprising a fixed and movable jaw, and a connection between said rack and said movable jaw whereby, when the slide is projected without the casing, the webs will be grasped and fed over said tablet.

6. In an autographic register, the combination with a casing adapted to hold a plurality of rolls of webs, spindles carried by the side walls of said casing, upon which said rolls are mounted, a tablet positioned upon the upper portion of said casing, a slide mounted in suitable guides upon the lower portion of said tablet, a rack carried by said slide and having a limited endwise movement with respect thereto, a spring tending to hold said rack in its rearmost position with respect to said slide, a pinion meshing with said rack, gripping means comprising a fixed and a movable jaw mounted upon said slide and connected to said rack, said jaws being adapted to be clamped to grasp the paper by the endwise movement of said rack with respect to the slide when the said parts are projected without the casing whereby the webs are drawn across the tablet, said spring being adapted to move the rack rearwardly with respect to the slide, to thereby separate said jaws when a predetermined amount of length of web has been fed across the tablet.

7. In an autographic register, the combination with a casing adapted to hold the rolls of webs, spindles carried by said casing upon which said rolls are mounted, a tablet mounted upon the upper portion of said cas-

ing across which said webs are drawn in superimposed relation, a slide carried by guides beneath said tablet, a pair of gripping jaws mounted upon said slide, one of said jaws being movable with respect to the other, a rack-bar carried by said slide and having a limited endwise movement with respect thereto, a pinion meshing with the teeth of said rack-bar, and means connecting said rack-bar with the movable gripping jaw.

8. In an autographic register, the combination with a casing adapted to hold the rolls of webs, of spindles carried by the casing upon which said rolls are mounted, a tablet mounted upon the upper portion of said casing across which said webs are adapted to be drawn in superimposed relation, a slide positioned on suitable guides beneath said tablet, a pair of gripper jaws carried by said slide adapted to be operated to grip the webs and feed them over said tablet, a rack-bar carried by said slide and having a limited endwise movement relative thereto, means for connecting said rack-bar with one of said gripper-jaws, a retractile spring connecting said slide and said rack-bar, whereby the latter is held normally in its rearmost position with respect thereto, the pinion meshing with said rack, and means for rotating said pinion to cause said rack-bar to first operate said gripper-jaws and clasp the web, then to project said slide without the casing, whereby the webs are fed over the tablet, said rack-bar being adapted to move rearward independently of the rearward movement of said slide, thereby to allow said gripper-jaws to separate and release the webs.

9. In an autographic register, the combination with a casing adapted to hold a plurality of rolls of webs, spindles removably positioned in the side walls of the casing upon which the rolls are supported, a tablet positioned upon the upper portion of the casing, a slide mounted on suitable guides beneath said tablet, gripping means for the webs upon said slide, means for moving said slide, means for actuating the gripping means, a shaft mounted upon said casing and having means thereon adapted to drive said slide moving means, said shaft providing a hinged connection between the writing tablet and the casing, whereby the former may be swung upward to permit of access to the interior of the casing.

10. In an autographic register, the combination of a casing adapted to hold a plurality of rolls of webs, means for supporting said rolls within the casing, a writing tablet upon the upper portion of the casing across which the webs are adapted to be drawn in superimposed relation, means carried by said tablet for gripping and drawing the webs across the same, a shaft journaled in

said casing and provided with means for operating said gripping and drawing means, said shaft providing a hinged connection between the tablet and the casing, whereby the former may be swung to permit of access to the interior of the casing.

11. In an autographic register, the combination of a casing adapted to hold a plurality of rolls of webs, spindles upon which said rolls are mounted, a tablet hinged by means of a shaft to said casing and adapted to be swung upward therefrom to expose said rolls, a slide carried by said tablet, gripping means for the webs carried by said slide, a rack carried by the slide, a pinion meshing with the rack, and mounted upon said shaft and means for rotating said shaft to move said slide.

12. In an autographic register, the combination of a casing adapted to hold a plurality of rolls of webs, spindles removably supported upon said casing adapted to carry said rolls, a writing tablet hinged to said casing and adapted to be swung upward therefrom to expose said rolls, a slide carried by said tablet beneath the same, gripping means for the webs mounted upon said slide, a rack-bar carried by said slide, a pinion meshing with the teeth of said rack-bar, a shaft upon which said pinion is mounted and an operating handle attached to said shaft, said shaft being also the means by which said tablet is hinged to said casing.

13. In an autographic register, the combination with a casing adapted to hold a plurality of rolls of webs, a writing tablet upon the upper portion of said casing, a slide carried by said writing tablet, gripping means upon said slide, a rack carried by said slide, a pinion meshing with said rack, a shaft carrying said pinion, means for rotating said pinion whereby said slide may be projected exteriorly of the casing, and means for pivotally connecting the writing tablet concentrically of the axis of said pinion, whereby said tablet may be swung upward with respect to said casing without disengaging the said rack and pinion.

14. In an autographic register, the combination with a casing adapted to hold a plurality of rolls of webs, spindles located within said casing and interposed in the support of said rolls, a writing tablet across which said webs are drawn in superimposed relation, a slide carried by said tablet beneath the same and adapted to be moved with respect thereto, gripping means for the webs located upon said slide, a rack carried by said slide, a pinion meshing with said rack, a shaft upon which said pinion is mounted, and ears depending from said writing tablet and pivotally mounted upon said shaft whereby said tablet may be swung upward with respect to said casing without disengaging said rack and pinion.

15. In an autographic register, the combination of a casing adapted to hold a plurality of rolls of webs, spindles located within said casing and interposed in the support of said rolls, a writing tablet across which said webs are drawn in a superimposed relation, a slide carried by said tablet beneath the same and adapted to be moved with respect thereto, gripping means for the webs located upon said slide, a rack carried by said slide and movable endwise thereon, a pinion meshing with said rack, a shaft carrying said pinion, and means interposed between said rack and said gripping means whereby, when said pinion is rotated, the initial movement of said rack with respect to said slide will cause said gripping means to grip the webs and draw the same over said tablet.

In witness whereof we affix our signatures, in the presence of two witnesses.

CHARLES H. WILSON.

JAMES BENGOUGH.

Witnesses to the signature of Charles H. Wilson:

W. H. KIDDER,

ROYAL W. FRANCE.

Witnesses to the signature of James Bengough:

WALTER GRAY,

W. L. BOODGER.