E. J. BARKER.

AUTOGRAPHIC REGISTER.

APPLICATION FILED JAN. 2, 1909.

1,046,426.

Patented Dec. 10, 1912.

4 SHEETS—SHEET 1.

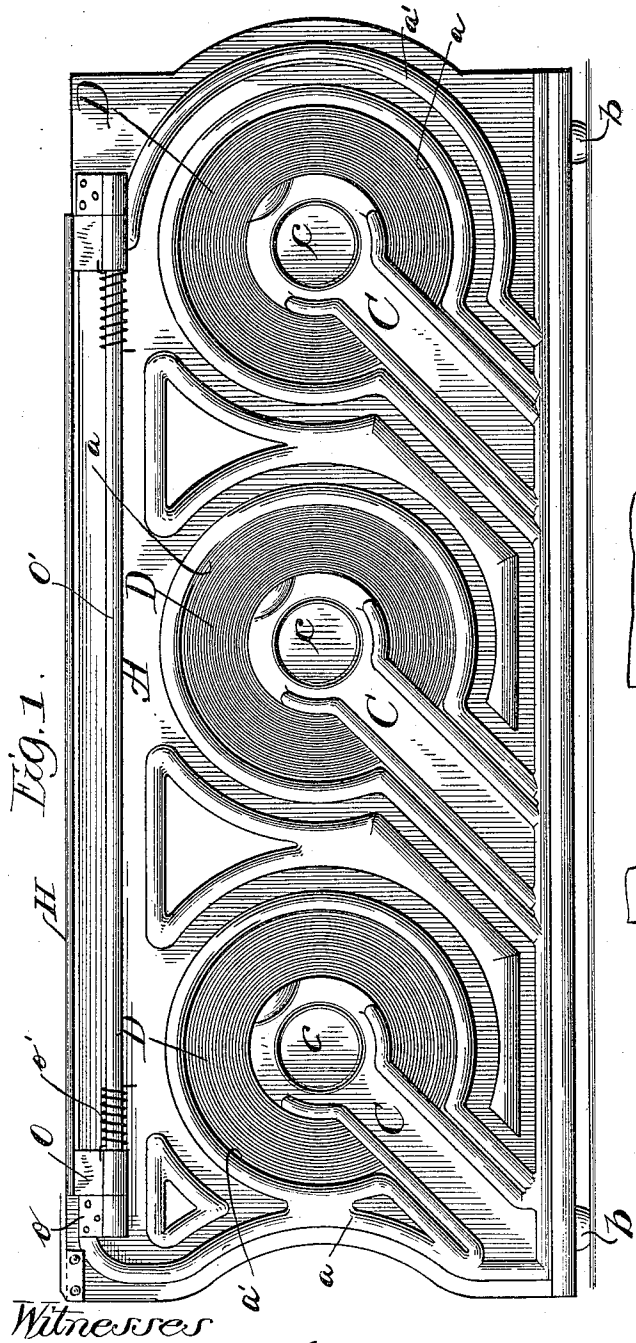

Fig. 1.

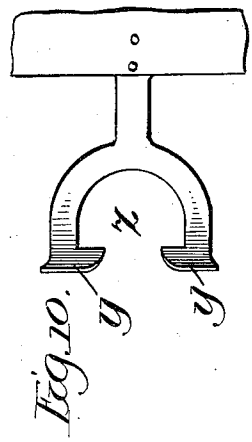

Fig. 10.

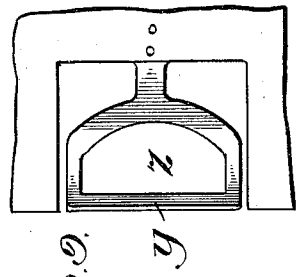

Fig. 9.

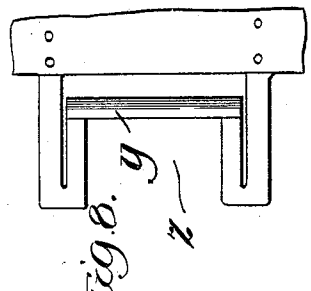

Fig. 6.

Witnesses
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4 SHEETS—SHEET 2.

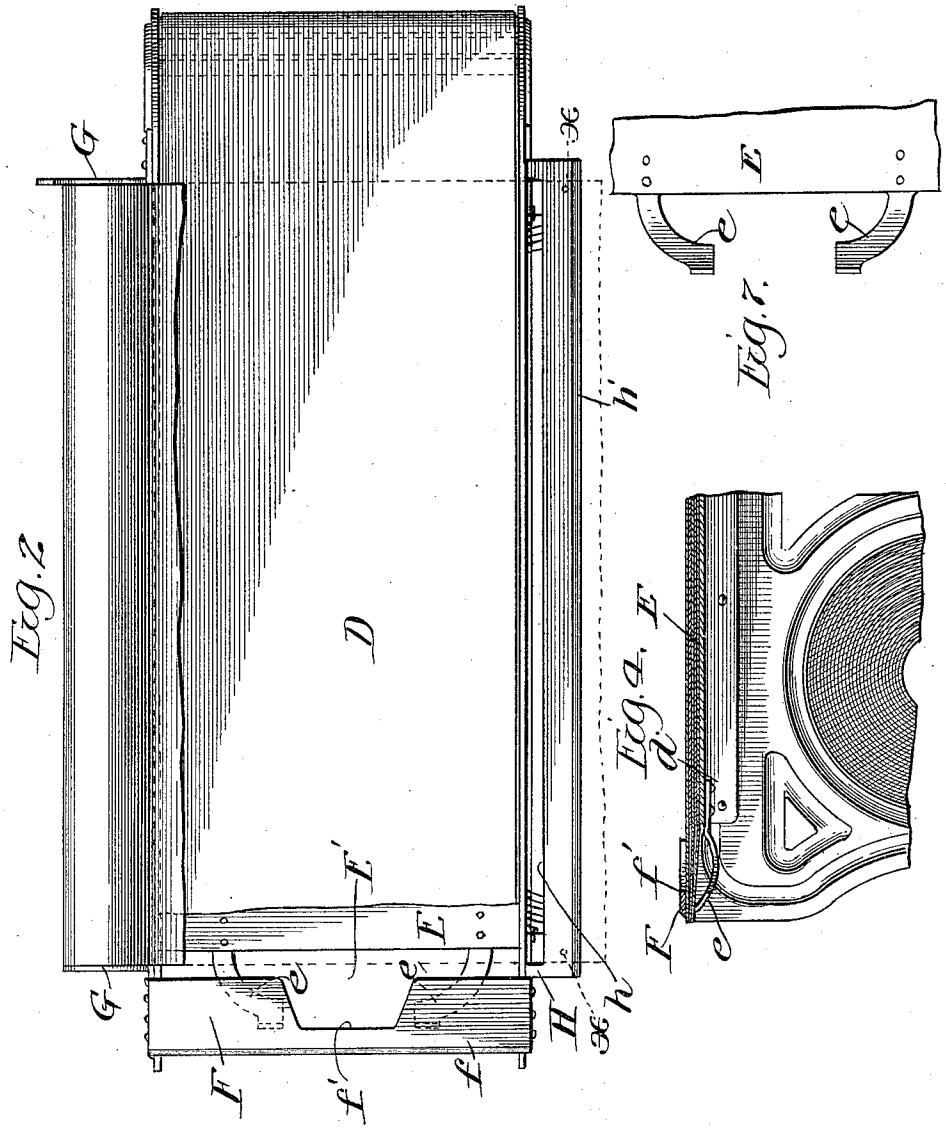

Fig. 2.

Fig. 7.

Fig. a.

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4 SHEETS—SHEET 3.

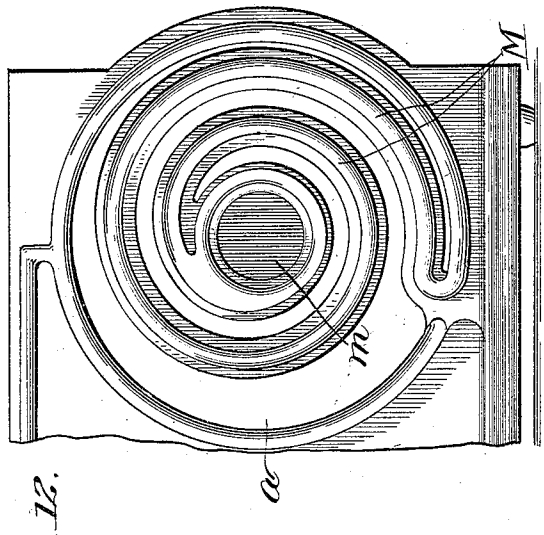

Fig. 12.

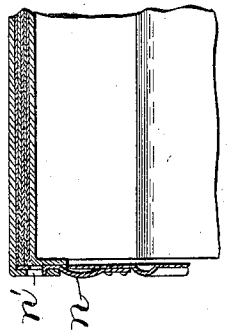

Fig. 15.

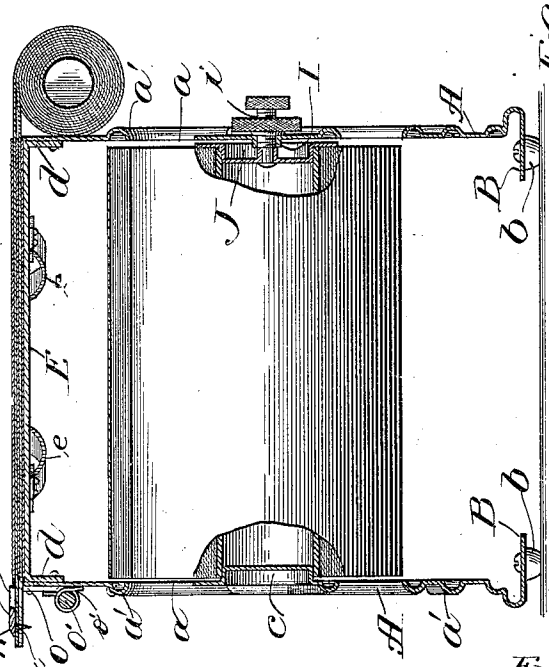

Fig. 5.

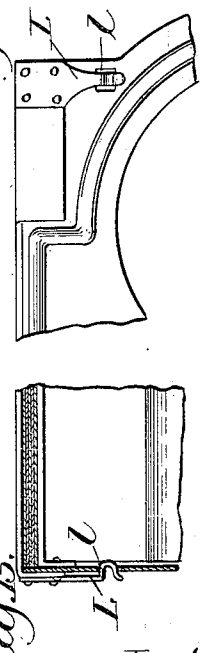

Fig. 14.

Fig. 13.

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4 SHEETS—SHEET 4.

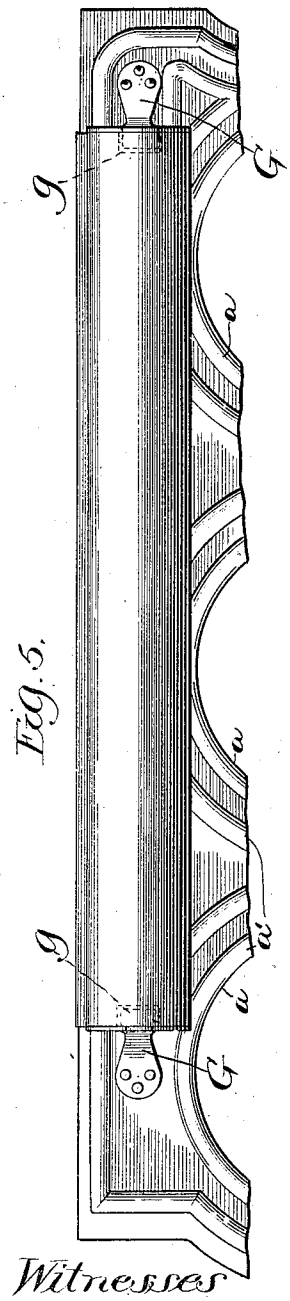

Fig. 5.

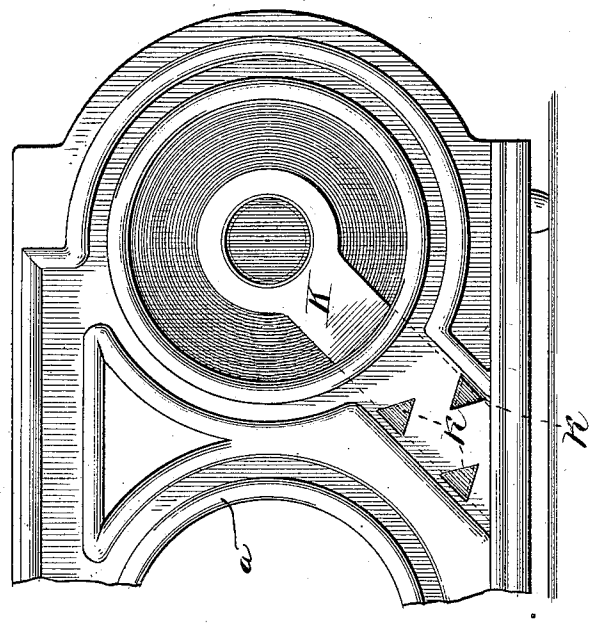

Fig. II.

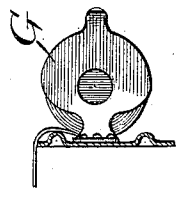

Fig. 6.

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UNITED STATES PATENT OFFICE.

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AUTOGRAPHIC REGISTER.

1,046,426. Specification of Letters Patent. Patented Dec. 10, 1912.

Application filed January 2, 1909. Serial No. 470,359.

To all whom it may concern:

Be it known that I, ENGLAND J. BARKER, a citizen of the United States, and a resident of Morgan Park, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Autographic Registers, of which the following is a clear, full, and exact description.

My invention relates to autographic registers, and particularly to those in which the record-strips are fed from continuous rolls of paper over a platen and then written upon, and when withdrawn from the register are pulled out through a throat or passage which is so constructed as to prevent the accidental reversal of the strips and consequent buckling of the same upon the platen and is provided with a straight edge upon which said strips can be torn off.

The object of my invention is to construct the case of the register, together with essential elements of the same, out of sheet metal, and thereby avoid the expense of making said elements separate and then assembling them together.

Another object is to greatly simplify the construction of said elements, and to thereby greatly cheapen the cost of the same, without effecting the efficiency of the device.

This I accomplish by the means hereinafter fully described and as particularly pointed out in the claims.

In the drawings:—Figure 1 is a side elevation of an autographic register embodying my invention. Fig. 2 is a top plan view of the same. Fig. 3 is a transverse vertical section. Fig. 4 is a longitudinal section of a fragment of said register including the exit end of the same. Fig. 5 is a side elevation of the upper part of the register opposite that shown in Fig. 1. Fig. 6 is a detail view of the spring bearing lug for the roll of manifolding material. Fig. 7 is a plan view of a fragmental portion of the exit end or throat of the platen showing the integral pressure springs for preventing the reverse movement of the record strips. Figs. 8, 9 and 10 are top plan views showing modified forms of said springs. Figs. 11 and 12 are each side elevations of the rear end of the register showing modified constructions of the means for centering and journaling the record-strips. Figs. 13 and 14 are respectively a transverse section and a fragmental side elevation of a modified form of register showing in detail the manner of locking a cover plate in position. Fig. 15 is a transverse section (similar to Fig. 13) of a modified form of lock.

Referring to the drawings it will be apparent that my invention consists in forming the framework of the register and many of its attached elements of sheet metal stamped out in the desired shape. The side frames A of the register, preferably, correspond in shape and are provided with a plurality of symmetrically disposed openings *a a;* the whole side being edged with a convex beading *a'*, substantially as shown, for the purpose of giving additional strength to it. The lower longitudinal edge of the side frames are preferably bent inwardly toward each other to form a base flange B to which suitable feet *b* of rubber or other cushioning material are secured.

Extending into the openings *a*, preferably from points near the lower longitudinal edge of the side-plates, are suitable spring arms C, C, their upper ends which terminate in said openings being disk shaped and provided with concentric circular depressions that form suitable journaling bosses *c* for the several rolls of record paper D D. The shanks of these spring arms extend diametrically into downwardly inclined offsets from said openings, while their lower ends merge into the lower beaded portion of the side frame. The side frames A extend the entire height of the register where their upper edges are secured to the longitudinal downturned angles *d* of the top-plate E that forms a platen or writing bed. This top-plate E preferably extends from the rear to the front end of the register and at this latter end is provided with a cut away portion E' the boundaries of the sides of which are outlined by the end portions of side frames A and said cut away portion is bridged by a suitable transverse bar F the ends of which are secured to said side frames. Projecting into this opening, and preferably made separate from the writing bed or top-plate, are suitable arc-shaped spring arms *e*, *e*, that extend toward each other, and, in this instance, are made concave and have their free ends normally pressing up against the underside of the bar F, substantially as shown in Fig. 4. This bar F is provided with a forward beveled cutting-edge *f*, and the central portion thereof is provided with a recess of suitable dimensions, *f'*. This construction permits of the record paper being grasped by

the fingers, beneath the bar F, between the ends of the spring-arms *e*, *e*, and through said opening *f'*, and pulled out; the finger inserted into the recess *f'*, during this operation, will slip over the cutting edge of the bar so quickly, as to have the effect of a continuous pull on the record strip. Thus when said record strip is drawn out from the forward end of the register, there will not be any necessity of releasing any mechanism and the reverse movement of the record strips will be prevented excepting when the spring arms *e*, *e*, are moved away from the transverse bar F. One of said side frames is provided, substantially as shown in Figs. 5 and 6, with a pair of spring brackets G, G, that have their outer enlarged portions projecting at right angles to said side frame and provided with oppositely projecting bosses *g*, *g*, for the purpose of centering and journaling a roll of manifolding material, such as carbon paper. The opposite side-frame of the register is, preferably, provided with a longitudinally elongated movable cutting plate H, overhanging its upper edge, the upper surface of which is raised slightly above the plane of the top-plate or platen of the register and is provided with an elongated slot *h* cut longitudinally therein. Lugs O, O, having hinge knuckles on their lower edges project downwardly from this plate and are secured to hinge plates *o*, *o*, on the side frame by an elongated pintle-rod O' so that when the carbon paper is initially threaded through the slot *h* the plate may be moved away from the adjacent side of the register on said pintle rod and thus widen the slot for the more convenient insertion of the manifolding paper. The cutting plate H is kept normally pressed upward by means of coil-springs *o'*, *o'*, surrounding the pintle to which one end is secured and the opposite end thereof made fast to the lugs O. The carbon paper after passing over the top-plate is adapted to be inserted down through slot *h* and is impaled upon small pins *x* to prevent its accidental movement and it may then be torn off along the outer cutting edge *h'* of said plate.

In order to properly adjust the journaling mechanism for the rolls of record paper, should they be of different widths, the side frames of the register, opposite the spring-journaling boss *c*, is, preferably, provided with an internally screw-threaded inwardly projecting boss, through which a screw-threaded bolt *i*, having a milled head, is tapped. A disk-shaped journaling boss J is mounted, so as to rotate freely, on the inner end of said bolt, and between the milled head of the bolt and the adjacent side-frame of the register, said bolt is provided with a suitable locknut, preferably of the same shape but of greater diameter than said head. Thus the boss J can be adjusted toward or away from the opposite journaling boss of the record roll and locked in any desired position.

In Figs. 8, 9, and 10 of the drawings, I show modified forms of spring-clamps for the advanced end of the record-strips. The construction of each of these clamps is such that a portion *y* thereof normally presses upwardly and is in contact with the underside of the transverse bridge-bar F, while an open space *z* is always left to permit the fingers of the operator to readily grasp said strips to draw the same out of the register.

The modified form of record-roll journaling device illustrated in Fig. 11, consists of inserting a separate elongated spring metal arm K (having an integral journaling boss on its upper end) between suitable spurs *k* stamped out from the sheet metal of the side-frame of the register, and then bending said spurs so as to lap over the edges of and confine the same, substantially as shown. By such a construction it is possible to utilize a much more elastic metal than if said arms were stamped out of the sheet metal of which the framework of the register is made.

In Fig. 12 I have shown another modified form of spring arm for journaling the rolls of record paper, wherein an involute spring M is stamped out of the sheet metal forming the side-frame. The innermost involution of this spring terminates in an enlarged integral journaling boss *m* that is positioned in the center of the opening *a* of the side-frame, and throughout its length the involutions of the spring are provided with a longitudinally disposed embossed bead which may if desired, be similar to and may constitute a continuation of the bead *a'* employed throughout the other parts of the register.

In all of the above constructions the register is preferably made without a cover plate or other means for keeping the record-strips smooth on the writing bed of the device. If, however, it is found that such is desirable, I have devised the means shown in Figs. 13, 14, and 15 to provide for this contingency. This coverplate is, preferably, also made of sheet metal, and is stamped into the desired shape and has its central portion cut away to provide the usual writing space. It may be hinged or otherwise secured to the register frame at either end while at its opposite end it is provided with a spring-latch or pawl L, the extremity of which is preferably bent outwardly to form a finger grasp. This pawl fits into a recess *l* cut in the upper portion of the frame and will readily snap into place when the cover plate is closed down over the writing bed. In Fig. 15 the relative positions of the spring-latch and recess are reversed, the latch *n* being placed on the

side plate of the frame while the recess n' is cut in the downwardly turned flange of the cover plate adjacent thereto.

What I claim as new is:—

1. An autographic register comprising supporting side-frames of sheet metal, a separate sheet metal top-plate secured to the upper edges of said side-frames, a spring member integral with and extending from one of said side-frames and having a boss on which a roll of record paper is journaled, and means for journaling the opposite end of the roll of paper.

2. An autographic register comprising supporting side-frames of sheet metal, a separate sheet metal top-plate secured to the upper edges of said side-frames, having a cut-away portion in its forward edge, a spring member integral with and extending from one of said side-frames and having a boss on which a roll of record paper is journaled, and means for journaling the opposite end of the roll of paper.

3. An autographic register comprising supporting side-frames of sheet metal, a separate sheet metal top-plate secured to the upper edges of said side-frames, having a cut-away portion in its forward edge, a transverse bar bridging said cut-away portion, a spring member integral with and extending from one of said side-frames and having a boss on which a roll of record paper is journaled, and means for journaling the opposite end of the roll of paper.

4. An autographic register comprising sheet metal side-frames, a spring member integral with and extending from one of said side frames in which a roll of record paper is journaled, a separate metal top-plate secured to the upper edges of said side-frames having a cut-away portion in its forward edge, a transverse bar bridging said cut-away portion, a spring member exerting pressure against the underside of said bar between which and said bar the record strip is adapted to pass after transit over said top-plate, and means for journaling the opposite end of the roll of paper.

5. An autographic register comprising sheet metal side-frames, a journal on one of said side frames, a spring member integral with and extending from the opposite frame and normally pressing toward said journal, a reel for record paper mounted between said journal and the end of said spring member, and a sheet metal top-plate secured to the upper edges of said side-frames.

6. An autographic register comprising sheet metal side-frames, one of which is provided with an opening, an integral spring member extending radially into said opening and provided with a journaling boss on its free end, a journaling boss on the other frame opposite said spring member, a reel for record paper mounted between said journaling bosses, and a sheet metal top-plate secured to the upper edges of said side-frames.

7. An autographic register comprising sheet metal side-frames, a journal on one side of said frames, a spring member integral with and extending from the opposite frame and normally pressing toward said journal, a reel for record paper mounted between said journal, and the end of said spring member, and a sheet metal top-plate secured to the upper edges of said side-frames and having a cut-away portion in its forward edge.

8. An autographic register comprising sheet metal side-frames, one of which is provided with a substantially circular opening, a spring member integral with said side plate and extending radially into said opening, and provided with a journaling boss on its free end, a journaling boss on the other frame opposite said spring member, a reel for record paper mounted between said journaling bosses, and a sheet metal top-plate secured to the upper edges of said side frames and having a cut away portion in its forward edge.

9. An autographic register comprising sheet metal side-frames, a journal on one of said side-frames, a spring member integral with and extending from the opposite frame and normally pressing toward said journal, a reel for record paper mounted between said journal and the end of said spring member, a sheet metal top-plate having a cut-away forward edge, and a transverse bar bridging said cut-away portion.

10. An autographic register comprising sheet metal side-frames, one of which is provided with a substantially circular opening, a spring member integral with said side plate and extending radially into said opening and provided with a journaling boss on its free end, a journaling boss on the other frame opposite said spring member, a reel for record paper mounted between said journaling bosses, a sheet metal top-plate having a cut away forward edge, and a transverse bar bridging said cut-away portion.

11. An autographic register comprising sheet metal side-frames, a journal on one of said side-frames, a spring member integral with and extending from the opposite frame and normally pressing toward said journal, a reel for record paper mounted between said journal and the end of said spring member, a sheet metal top-plate having a cut-away forward edge, a transverse bar bridging said cut-away portion, and a spring member exerting pressure against the underside of said bar between which and said bar the record strip is adapted to pass after transit over said top-plate.

12. An autographic register comprising sheet metal side-frames, one of which is pro-

vided with a substantially circular opening, a spring member integral with said side plate and extending radially into said opening and provided with a journaling boss on its free end, a journaling boss on the other frame opposite said elastic member, a reel for record paper mounted between said journaling bosses, a sheet metal top-plate having a cut-away forward edge, a transverse bar bridging said cut-away portion, and a spring member exerting pressure against the underside of said bar between which and said bar the record strip is adapted to pass after transit over said top-plate.

13. An autographic register comprising sheet metal side-frames, a sheet metal top-plate forming a writing bed secured to the upper edges of said side-frames, lugs formed of spring metal plates bent laterally and projecting laterally from the upper edge of one of said side-frames on which a roll of manifolding material is journaled, and a longitudinally elongated movable plate having a cutting edge hinged to and projecting from the opposite side frame and having a longitudinal slot therein through which the manifolding material is threaded.

14. An autographic register comprising sheet-metal side-frames, a sheet-metal top-plate forming a writing-bed secured to the upper edges of said side-frames, transverse means for journaling rolls of record paper between said side-frames from which journaling means the ends of the paper pass over said writing-bed, lugs formed of spring metal plates bent laterally and projecting from one of said side-frames on which a roll of manifolding material is journaled whose end extends across said writing-bed between said record strips, and a movable hinged plate provided with a cutting edge extending along and projecting from the opposite side-frame and having a longitudinally elongated slot therein through which said manifolding material is threaded after passing over said writing-bed.

15. An autographic register comprising sheet metal side-frames, a sheet metal top-plate forming a writing bed secured to the upper edges of said side frames, lugs formed of spring metal plates bent laterally and projecting laterally from the upper edge of one of said side-frames on which lugs a roll of manifolding material is journaled, a longitudinally elongated cutting edge projecting from the opposite side-frame, and impaling pins projecting from the under surface of said cutting edge.

16. An autographic register comprising sheet metal side-frames, a sheet metal top-plate forming a writing bed secured to the upper edges of said side-frames, rolls of record paper journaled in said side frames and having their ends extending over said writing bed, lugs formed of spring metal plates bent laterally and projecting laterally from one of said side frames, a roll of manifolding material journaled on said lugs and extending across said writing bed between said record strips, a plate provided with a cutting edge extending along and projecting from the opposite side-frame and having a longitudinally elongated slot therein through which the manifolding material is threaded after passing over said writing bed, and impaling pins projecting from the under surface of said plate upon which the end of the manifolding material is impaled.

17. In an autographic register having a platen across which the manifolding material moves transversely, a separate longitudinally elongated frame of sheet-metal secured to and projecting beyond the plane of the side of the register and provided with an elongated opening next the platen and having a cutting edge.

18. In an autographic register having a platen across which the manifolding material moves transversely, a separate longitudinally elongated frame of sheet-metal secured to and projecting beyond the plane of the side of the register and provided with an elongated opening next the platen and having a cutting edge, and impaling pins projecting from the underside thereof.

19. An autographic register having a platen across which the manifolding material moves transversely, tension lugs formed of spring metal plates bent laterally projecting from one side of said register, adapted to journal a roll of manifolding material, a separate longitudinally elongated frame of sheet-metal secured to and projecting beyond the plane of the side of the register and provided with an opening next the platen and having a cutting edge.

20. An autographic register having a platen across which the manifolding material moves transversely, tension lugs formed of spring metal plates bent laterally projecting from one side of said register, adapted to journal a roll of manifolding material, a separate longitudinally elongated frame of sheet-metal secured to and projecting beyond the plane of the side of the register and provided with an opening next the platen and having a cutting edge, and impaling pins projecting from the underside thereof.

21. In an autographic register having a platen across which the manifolding material moves transversely, a separate longitudinally elongated frame of sheet-metal hinged to and projecting beyond the plane of the side of the register and provided with an elongated opening next the platen and having a cutting edge.

22. In an autographic register having a platen across which the manifolding material moves transversely, a separate longi-

tudinally elongated frame of sheet-metal hinged to and projecting beyond the plane of the side of the register and provided with an elongated opening next the platen and having a cutting edge, and impaling pins projecting from the underside thereof.

23. An autographic register having a platen across which the manifolding material moves transversely, tension lugs formed of spring metal plates bent laterally projecting from one side of said register, adapted to journal a roll of manifolding material, a separate longitudinally elongated frame of sheet-metal hinged to and projecting beyond the plane of the side of the register and provided with an opening next the platen and having a cutting edge.

24. An autographic register having a platen across which the manifolding material moves transversely, tension lugs formed of spring metal plates bent laterally projecting from one side of said register, adapted to journal a roll of manifolding material, a separate longitudinally elongated frame of sheet-metal hinged to and projecting beyond the plane of the side of the register and provided with an opening next the platen and having a cutting edge, and impaling pins projecting from the underside thereof.

25. An autographic register comprising a platen, sheet metal side plates supporting the same, one of which is cut away to provide an inclined resilient arm, the free end of which is adapted to provide bearings for journaling and centering the adjacent end of a reel for record paper.

26. An autographic register comprising a platen, a sheet metal side-plate supporting the same which is cut away so as to provide a series of correspondingly inclined resilient arms, the free ends of which are adapted to provide bearings for the adjacent ends of reels for record paper.

27. An autographic register comprising a platen, a sheet metal side-plate supporting the same and having a series of circular openings therein and provided with an equal number of inclined resilient arms which extend into said openings and have their free ends adapted to provide bearings within the circumferences of said openings upon which the adjacent ends of the reels for record paper are journaled.

In testimony whereof I have hereunto set my hand and seal this 30th day of November, A. D. 1908.

ENGLAND J. BARKER. [L. S.]

Witnesses:
FRANK D. THOMASON,
E. K. LUNDY.