

H. H. DANIELS.
 STAMP AFFIXING MACHINE.
 APPLICATION FILED MAY 7, 1917.

1,346,484.

Patented July 13, 1920.

2 SHEETS—SHEET 1.

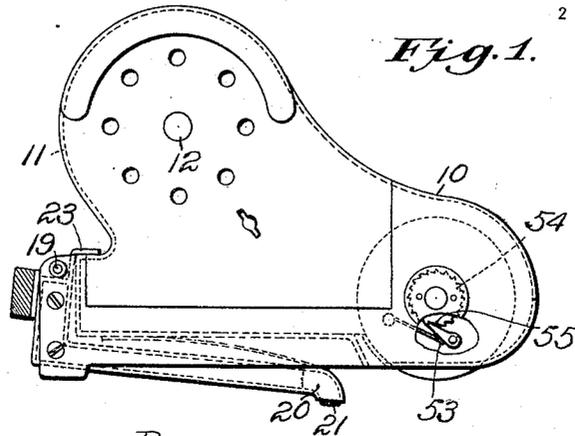


Fig. 1.

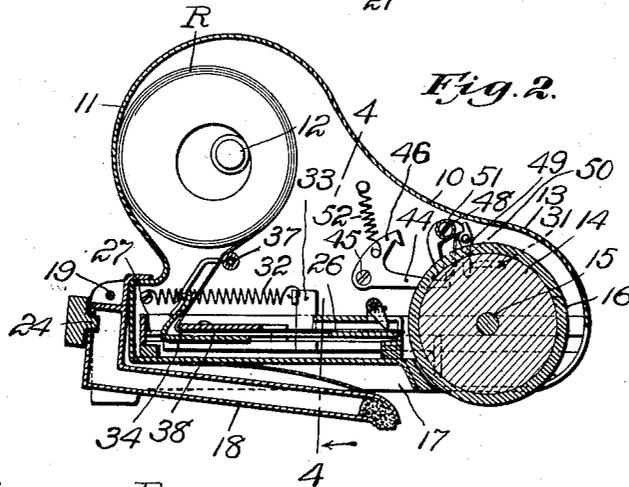


Fig. 2.

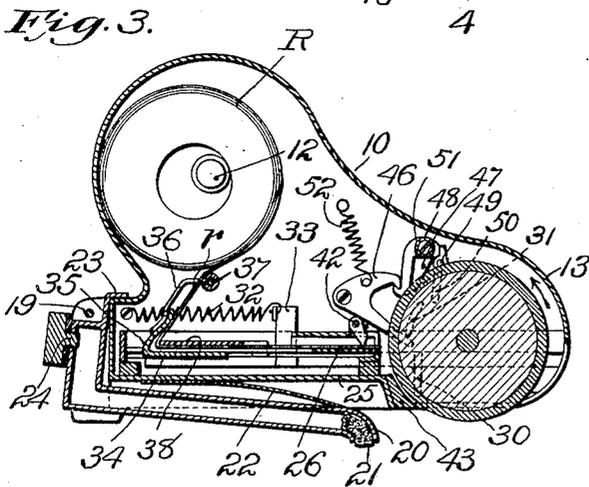


Fig. 3.

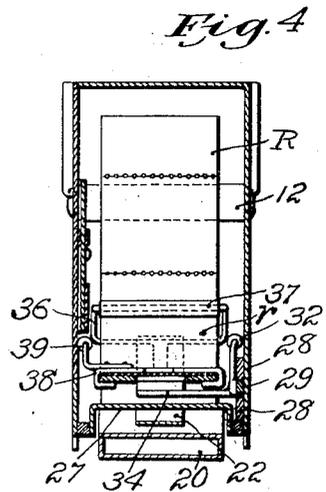


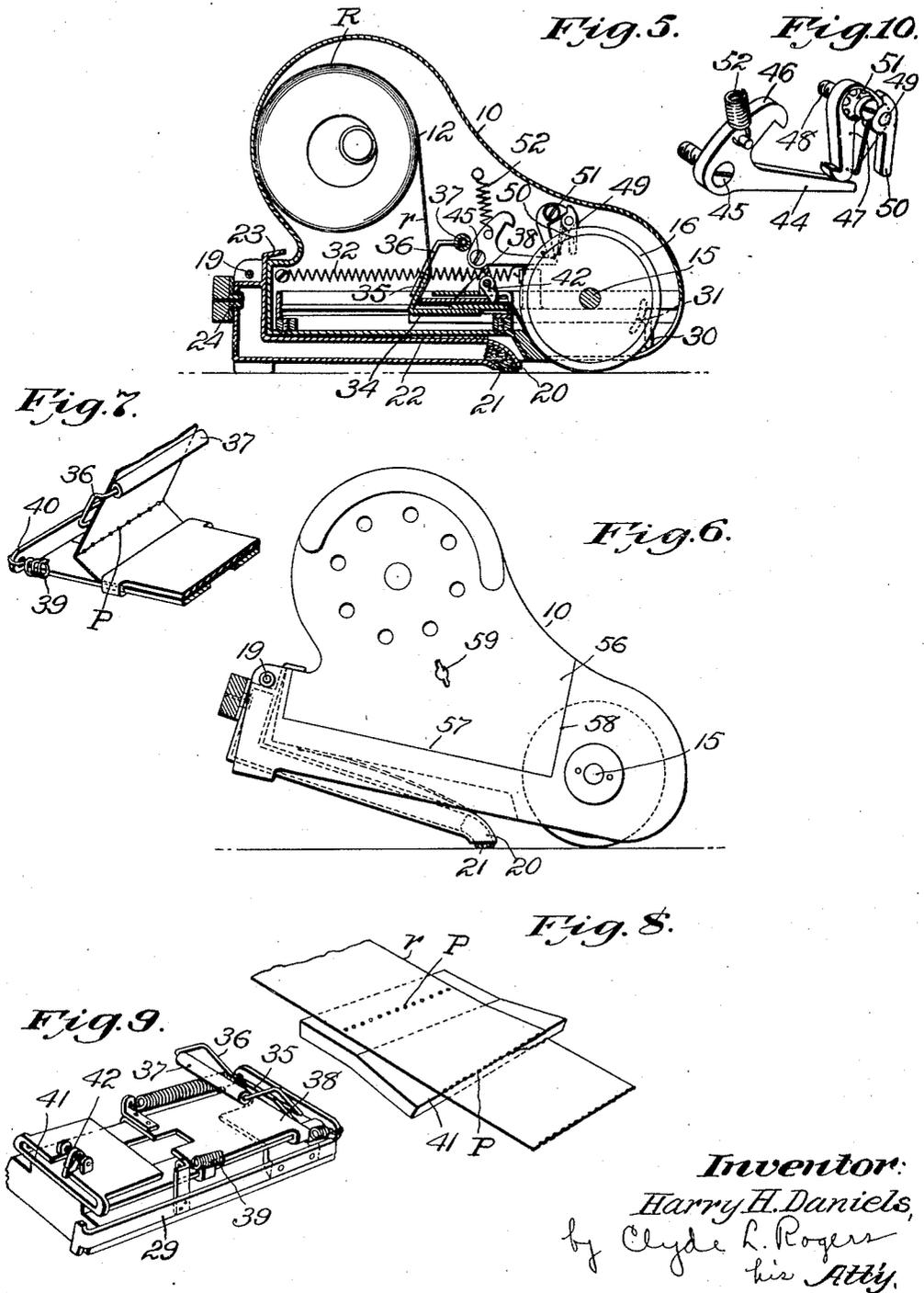
Fig. 4.

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UNITED STATES PATENT OFFICE.

HARRY H. DANIELS, OF WINTHROP, MASSACHUSETTS, ASSIGNOR TO THE SERVICE MACHINES COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

STAMP-AFFIXING MACHINE.

1,346,484.

Specification of Letters Patent.

Patented July 13, 1920.

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To all whom it may concern:

Be it known that I, HARRY H. DANIELS, a citizen of the United States, and resident of Winthrop, county of Suffolk, Commonwealth of Massachusetts, have invented an Improvement in Stamp-Affixing Machines, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts in each of the several views.

This invention relates to stamp affixing machines of a type adapted to hold a supply of stamps such as postage stamps provided in ribbon form and made up into a roll, and to feed out and apply the same as required for use. The present type of machine is also one adapted to apply moisture to the surface to receive the stamp just in advance of the laying of the stamp thereon, and is equipped with a roller for applying the stamp to the moistened surface, which roller is also the instrumentality operative for feeding the stamps from the roll to the applying point. A prime object of the invention is to provide a device of this character exceedingly simple in construction but efficient and reliable in operation and having no fragile or delicate parts apt to get out of operation or cause trouble in use. One important feature of the invention consists in improved means for feeding the stamps from the roll to the applying point, this consisting in a slidable plate adapted to grip the stamp ribbon frictionally on the perforation line, into an angular corner where the stamp is held frictionally as the plate is slid forward positively by suitable operating means preferably operated by the applying roll, thus dispensing with delicate and fragile spring fingers which have heretofore been usually employed for engaging the perforations in the stamp ribbon to feed the same forward. According to a further feature of the invention I provide a water container equipped with a moisture applying wick to engage the stamp receiving surface some little distance in advance of the applying roll and yieldable relatively to said roll upon

engagement with the stamp receiving surface so that in use it is not necessary for the operator to bring the surfaces of the applying roll and the wick into precisely the plane of the receiving surface before the device can be used to apply the stamp. A further object is to provide improved simplified means for locking the applying roll against further movement after a stamp has been fed out and applied thereby, such means also preferably including provision whereby the roll is automatically released for another operation as soon as lifted from the stamp receiving surface. The foregoing and other objects and advantages of the invention will more fully appear from the following detailed description, and the distinctive features of novelty will be pointed out in the appended claims.

Referring to the drawings:

Figure 1 is a side elevation showing a machine constructed in accordance with my invention;

Fig. 2 is a central lengthwise vertical section of the machine;

Fig. 3 is a view similar to Fig. 2 showing another position of certain parts of the mechanism;

Fig. 4 is a transverse vertical section on line 4-4 of Fig. 2;

Fig. 5 is a lengthwise vertical section showing still another position of the operating parts;

Fig. 6 is a side view of the machine showing the manner of using the machine;

Fig. 7 is a fragmentary detail in perspective showing a portion of the feeding slide;

Fig. 8 is a fragmentary perspective showing the manner of operation of the cutting-off blade;

Fig. 9 is a perspective view of the feeding slide and cooperating elements; and

Fig. 10 is a detail perspective showing the device for locking the roll at the end of an operative movement.

The housing 10 of the machine is formed with an enlarged upward rearward portion adapted to receive a roll of stamps R, the central pin or roll 12 being shown for

supporting and guiding the stamp roll. The housing also has a forward lower projection 13 incasing a stamp applying roll 14 which is supported on pivots 15 of the housing, this stamp applying roll according to the present invention being relatively large so as to get an adequate bearing and afford sufficient impulse for feeding out the stamps without undue pressure being applied against the stamp receiving surface. The periphery of the stamp roll is preferably covered with a layer 16 of rubber or other frictional material to get a better friction hold of the stamp receiving surface. The lower rear portion of the housing is formed with a shallow downwardly facing recess 17 in which is fitted a water tank 18, this extending to the rear of the housing where it has an upward projection pivoted at 19 by a pin which may have a sliding fit through ears at the sides of the housing to removably hold the tank assembled in the housing. The forward portion of the tank has a downwardly projecting nose 20 in which is fitted a wick 21 spaced a little distance to the rear of the roll 14. The tank is normally tilted downward so that this wick presenting nose is some little below the plane of the roll 14, by a leaf spring 22 fixed to the base of the housing and pressing downwardly upon the top of the forwardly projecting portion of the tank; this tending to tilt the tank downward as far as permitted by clips 23 at the rearward top portion thereof which engage a ledge on the housing. The tank is provided at its rear upper portion with an opening for filling the same closed by a plug screw 24.

The housing has mounted to extend horizontally therein and spaced above the base floor 25 thereof a lengthwise extending plate 26, this reaching from a point near the rear face of the roll 14 back to a short distance from the rear of the housing, the major rear portion of this plate being bifurcated with a central lengthwise extending slot 27 of substantial width. Guided to slide horizontally in one side of the housing and near the base thereof between guide ways 28 is a slide bar 29, this bar extending toward the front of the machine where it has a transversely extending lug 30 engageable by an arcuate projection 31 carried by and extending out from an end of the roll 14. The slide bar 29 is normally held at its rearward limit of movement by a tension coil spring 32 anchored to the housing and engaging an upward projection 33 of said bar. The lug 30 is in this rearward position of the bar located so that it is engaged by the projection 31 at the beginning of an operative movement of the roll, to draw the slide outward, continuing in engagement with the lug 30 until the slide bar has been

drawn fully outward with enough movement to feed out a stamp as to be later more fully explained. The slide bar 29 at its rear portion has an inward lateral projection 34 with an upward extension 35 through the slot 27 of the stationary plate 26, this upward extension being bent inward at an acute angle with reference to the plate 26 as seen in Figs. 2 and 3. The upper end of this extension 35 has fixed thereto spaced apart arms 36 extending upward and forwardly, and having journaled at their extremities a roller 37. Fitted to slide on the top of the stationary plate 26 is a secondary slide member in the form of a plate 38. This plate has engaged therewith a tension coil spring 39 anchored at its other end to an inner upturned extension of the plate 26 as seen at 40. The stamp ribbon *r* from the stamp roll R is led downward and guided at the inner side of the roll 37 downward and inward around the inner edge of the plate 38 and thus by the action of the spring 39 pressed up toward the corner formed by the inturned upward extension 35 of the slide bar projection or plate 34. Thence the stamp ribbon is led along the top of the plate 26 as a floor or base support and between the same and the secondary slide plate 38 to the front of the plate 26 which as stated is adjacent the rear face of the roll 14. At the forward end of this plate 26 is a cutting edge 41 extending diagonally upward at a small incline from the plane of one side of the plate 26 to provide for a cutting or shearing off of the individual stamps at the termination of a feeding movement, *i. e.*, after the slide bar 29 has completed a forward movement. Pivoted over the plate 26 near the forward end thereof is a pawl 42 extending downward and forwardly with a nipping edge adapted to grip the stamp ribbon quite close to the cutting off point to hold the same from any backward movement which would otherwise occur upon retraction of the slide bar 29 and the slide 38 under the action of the springs 32 and 39. It may now be understood that when the roll 14 is pressed on to a stamp receiving surface and the device moved to the left as shown in Figs. 1 and 2, the projection 31 engaging the lug 30 of the slide bar will move it forward against the springs 32 and 39, and the spring 39 holding the secondary plate 38 drawn up into the acute angle corner at 35, will grip the stamp ribbon into said corner as the slide bar is moved forward so that the stamp ribbon will be moved forward, the front edge thereof passing downward and being guided around the roll 14 by a guide piece 43 carried by the housing for this purpose. Then as the bar 29 reaches its limit of forward movement, it is held at

such forward limit for an interval, this being accomplished by the extended arcuate form of the projection 31. The purpose of this is to afford a dwell with the stamp ribbon clamped by the plate 38, so that on the continued movement of the roll 14, the forward edge of the stamp fed out being now caught between the bottom of the roll 14 and the stamp receiving surface; the stamp will be sheared off by engagement with the diagonally disposed cutting edge 41, this occurring before the succeeding portion of the stamp ribbon is released from the feeding device and the clamp plate 38; it being understood that the cutting edge 41 is so located that at each feed movement a perforation line of the stamp ribbon will be in alinement therewith. Thereupon the projection 31 on its continued upward movement passes out of engagement with the lug 30 permitting the slide bar 29 to move back under the action of the springs 32, 39. The stamp ribbon will be prevented from any backward movement at this time, being instantly caught by the pawl 42 to clamp the same against the bottom of the plate 26. On the return movement of the slide bar 29 another stamp length is fed downward from the stamp roll R. The rolls of stamps as supplied commercially for use, are found to have the perforation lines P more or less inaccurately located thereon, *i. e.*, the individual stamps vary to some little extent in width. One important feature of my invention has to do with improved means for insuring the feeding out from the roll R or just the exact width of a stamp up to the perforation line regardless of variations in the position of such perforation line within considerable limits. It will be observed that the roll 37 and the clamp corner 35 are some little to the rear of the forward edge of the stamp roll from which the ribbon is fed and hence the feeding movement for drawing the ribbon from the roll takes place on the retracting movement of the slide bar so that all that is left to do on the forward movement of the slide bar is to move forward the length of stamp ribbon sliding on the fixed plate 26 and over the cutting edge 41. By reference to Figs. 2 and 3 it will be observed that the spring drawn plate 38 at the end of the retracting movement of the slide bar 29 does not come quite up into the corner 35. This is for the reason that the full feeding movement from the roll R as effected by the entire retracting slide bar movement is sufficient to feed out a stamp of the maximum width ever likely to be encountered. Thus as stamps of any less than this maximum width are engaged, the plate 38 being separately acted on by the spring 39, will draw down the stamp ribbon until it encounters

a perforation line therein, which in practice brings it nearly but not quite up into the corner 35, whereupon the stamp ribbon yielding on this weakened perforation line bends abruptly making a corner into which the edge of the plate 38 engages and encounters sufficient resistance owing to the proximity of the corner 35, so that further backward movement of the plate 38 is arrested and the feeding out movement from the ribbon R is thus determined at the perforation line even though there may be some little variations in the spacing between such perforation lines. As the slide bar 29 begins its next forward movement the stamp is of course pressed back and clamped tightly between the edge of the plate 38 and the corner extension 35, but this does not result in any further feeding out of the stamp ribbon from the roll, on account of the relatively rearward position of the corner 35 at the beginning of such movement.

For obtaining access to the interior of the housing 10 to permit insertion of stamp rolls, or for attention to the parts, the major portion of one of the side plates may be removably locked to the housing, such side plate portion being indicated at 56 fitted to the housing along the lines 57, 58 and having a key hole 59 to receive a key for engaging a suitable lock not shown. In accordance with my invention means is provided whereby the roll 14 is locked automatically from further movement after each operation of feeding out and applying a stamp. For this purpose a locking arm 44 is pivoted at 45 to the housing and extends into position to lock the roll by engaging with the projection 31 at the completion of an operative movement as seen in Fig. 3. To hold the arm 44 thus in locking position it has formed therewith a transversely extending arm 46 equipped with a hook at its end engageable with a cooperative hook on a locking pawl or dog 47 pivoted to the housing at 48. The pawl 47 has pivoted thereto at 49 some little distance from its own pivot a finger 50 normally held out some little distance from the pawl 47 itself by a small spring. The pawl 47 also has operative thereon a friction device shown as a spring clip or washer 51 which may be mounted on the pivot 48, tending to retard the swinging of said pawl. The arm 46 is engaged by a tension spring 52 anchored to the housing. By reference to Fig. 3 it will be noted that the finger 50 normally extends within the range of the projection 31, and that its swinging movement to the right, will cause a corresponding swinging of the pawl 47, since a projecting tail of the finger 50 engages an abutment on said pawl 47, while the finger 50 is free to yield for limited swinging to the

left independently of the pawl 47. The roll 14 is equipped with a pivoted spring pressed pawl 53 engageable with a ratchet wheel 54 fixed to the housing, and this ratchet wheel is formed with one wide faced tooth 55, this wide faced tooth being at the bottom of the ratchet wheel as seen in Fig. 1 and where the pawl 53 will engage the same at the completion of an operative movement. It may now be understood that the arm 44 extending into the path of the projection 31 at the completion of operative movement locks the roll from any further movement since the locking pawl 47 has its hook end engaging the end of the arm 46. As soon as the stamp is applied, however, and the roll 14 lifted from the stamp receiving surface, the roll will turn back some little under the action of the spring 52 which is then extended, and thereupon the projection 31 engaging the inner side of the finger 50 will swing it and thus the pawl 47 out of locking engagement with the arm 46, and the friction member or washer 51 will hold the arm 47 in the position to which it is moved, until it is again shifted positively as now to be described. As the roll 14 swings the completion of an operative movement, the projection 31 engages the finger 50 on its outer side, *i. e.*, as seen in Fig. 2, and said finger then yields so as to permit the projection 31 to pass. Thereupon the continued movement of the projection 31 will swing the arm 47 inward, *i. e.*, to the left as seen in Fig. 3, in position so that it will catch the arm 46 when it next swings downward by the engagement of the projection 31 with the arm 44 at the completion of an operative movement to lock the roll from moving farther. Thus the roll is self-locked at the end of each operative movement so that only one stamp can be applied at each application of the roll to the receiving surface, but as soon as the device is lifted off of the receiving surface, the roll is again unlocked so that it is again ready for use.

The wick 21 which as stated is normally held spring pressed downward by the spring 22 has some little range of backward yielding movement as provided by the recess 17 in the bottom of the housing so that even though the device be applied to the stamp receiving surface more or less carelessly, it may be pressed down so that both the wick 21 and the bottom of the roll 14 will properly engage the receiving surface, thus dispensing with the requirement for particular care in applying the device at just the correct angle which has been an objection hitherto in machines of this type. I am aware that the invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and I therefore desire the present embodiment to be considered in all respects as illustrative

and not restrictive, reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

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

1. A stamp affixing machine, comprising a magazine stamp holder, having a stamp applying element associated therewith, constructed and arranged to apply stamps by drawing the same over a receiving surface in frictional contact therewith, and a moisture supplying element spaced from said stamp applying element, one of said elements having a yielding mounting permitting both of said elements to be pressed to a stamp receiving surface in varying angular positions of the machine.

2. A stamp affixing machine, comprising a magazine stamp holder, a stamp applying element, constructed and arranged to apply stamps by drawing the same over a receiving surface in frictional contact therewith, having means associated therewith for feeding out stamps from said holder, and a moisture supplying element mounted in advance of said stamp applying element in the direction of operative movement, said elements having a yielding mounting with respect to each other whereby both said elements may be pressed to a stamp receiving surface in varying angular positions of the machine.

3. A stamp affixing machine, comprising a magazine stamp holder, an applying roll, constructed and arranged to apply stamps by drawing the same over a receiving surface in frictional contact therewith, having means associated therewith for feeding out stamps from said holder, and a holder for water having a discharge outlet positioned in advance of said roll in the direction of operative movement, and yieldingly mounted whereby both said roll and said discharge outlet may be pressed to a receiving surface in varying angular positions of the machine.

4. A stamp affixing machine, comprising a portable housing adapted to be held in the hand and pressed upon a stamp-receiving surface, a magazine stamp holder, an applying roll constructed and arranged to apply stamps by drawing the same over the receiving surface in frictional contact therewith, and a water tank equipped with an applying wick yieldingly mounted in advance of said roll in the direction of operative movement, the yielding of said wick permitting both it and said roll to engage simultaneously the stamp-receiving surface in varying angular positions of said housing.

5. A stamp affixing machine, comprising a magazine stamp holder, an applying roll, constructed and arranged to apply stamps by drawing the same over a receiving surface in frictional contact therewith, and a

water tank swingingly mounted with a moisture applying wick having means for holding it yieldingly spaced from said roll and in advance thereof in the direction of operative movement for the purpose stated.

6. A stamp affixing machine, comprising a magazine stamp holder, an applying roll, constructed and arranged to apply stamps by drawing the same over a receiving surface in frictional contact therewith, and means for clamping frictionally a stamp ribbon in the machine and feeding the same to said roll at an applying point.

7. A stamp affixing machine, comprising a magazine stamp holder, and means for clamping frictionally a stamp ribbon in the machine and feeding the same to an applying point, said means having provision for feeding out automatically variable extents of the stamp ribbon at each operation according to the distance between perforation lines, and for gripping the ribbon on the perforation line regardless of variations in the spacing thereof.

8. A stamp affixing machine, comprising a magazine stamp holder, an applying roll, constructed and arranged to apply stamps by drawing the same over a receiving surface in frictional contact therewith and means operated by said roll for clamping the stamps with a frictional hold and feeding them to an applying point.

9. A stamp affixing machine, comprising a magazine stamp holder, an applying roll, a feeding slide having means associated therewith to be operated by said roll for feeding stamps forward to said roll, and equipped also with means for yieldingly retracting the same, and means associated with said slide for frictionally gripping a stamp ribbon to feed the same forward.

10. A stamp affixing machine, comprising a magazine stamp holder, an applying roll, and a slide for feeding stamps from said magazine to an applying point, said slide having associated therewith means for operation by said roll to move the same forward and having spring means for retracting the same, said slide having a secondary slide associated therewith for frictionally gripping a stamp ribbon on its perforation lines.

11. A stamp affixing machine, comprising a magazine stamp holder, an applying element, and a reciprocatory slide for feeding the stamps to said applying element, said slide equipped with means for drawing the stamps from said magazine and bending them at the perforation line, and having means associated therewith for gripping the stamps frictionally at the bend on such perforation line to feed them forward.

12. A stamp affixing machine, comprising a holder for a roll of stamps, a stamp applying element, and a slide movable to draw the stamps from such roll and deliver them to an

applying point, said slide formed with an angular projection constituting a corner and having means associated therewith for pressing the stamps toward such corner to bend them at an angle on their perforation lines, said slide having also associated therewith spring means for retracting the same to draw a stamp ribbon from a roll in said holder.

13. A stamp affixing machine, comprising a magazine stamp holder, an applying roll, a reciprocating slide for drawing a stamp ribbon from said holder and feeding it to said roll, a member having a cutting edge mounted adjacent said roll, and a pivoted pawl mounted to engage a stamp ribbon just to the rear of such cutting-off edge to prevent drawing back thereof on the slide reciprocating movement.

14. A stamp affixing machine, comprising a magazine stamp holder, an applying roll, a slide mounted for reciprocation to and from said roll constructed and arranged to draw the stamps from a supply in said holder and deliver them against said roll to an applying point, a cutting device mounted adjacent said applying roll in the path of stamp feed, and a pivoted pawl mounted adjacent said cutting device and to the rear thereof adapted to grip the stamp ribbon to prevent drawing back thereof by said slide on its reciprocating movement.

15. A stamp affixing machine, comprising a magazine stamp holder, an applying element, and a slide mounted for reciprocation, adjacent said holder and in position to receive a stamp ribbon therefrom, to deliver stamps from said holder to said applying element equipped with stamp gripping means and arranged to draw the stamps from said holder on a retracting movement thereof and to feed the stamps forward to said applying element on a forward movement thereof.

16. A stamp affixing machine, comprising a holder for a roll of stamps, an applying roll, and a slide mounted for reciprocation to feed a stamp ribbon from said holder to said applying roll, said slide having associated therewith means for yieldingly retracting the same and also equipped with means for moving it forward operated by said applying roll, said slide having stamp gripping means cooperative therewith and arranged to draw the stamp ribbon from said holder on its retracting movement and to feed the stamps forward to said applying roll on its forward movement.

17. A stamp affixing machine, comprising a magazine stamp holder, an applying roll, means operated thereby for delivering the stamps from said holder to said roll, and means cooperative with said roll for automatically stopping the operation thereof after the feeding out of a stamp, said means

having provision to be self-releasing upon the disengagement of the applying roll from the stamp receiving surface.

18. A stamp affixing machine, comprising a magazine stamp holder, an applying roll, means connected for operation by said roll to feed a stamp ribbon from said holder to an applying point, means for severing predetermined extents of said stamp ribbon at each operation, and a device arranged for

control by said applying roll to stop the operation thereof at the end of a definite operative movement, said device having provision to be self-releasing upon the disengagement of said applying roll from a stamp receiving surface.

In testimony whereof, I have signed my name to this specification.

HARRY H. DANIELS.