E. HAAS.

APPARATUS FOR AFFIXING POSTAGE STAMPS, LABELS, OR THE LIKE, AND FOR SELLING POSTAGE STAMPS.

APPLICATION FILED MAY 2, 1908.

956,526.

Patented May 3, 1910.

3 SHEETS—SHEET 1.

Fig. 14.

Fig. 1.

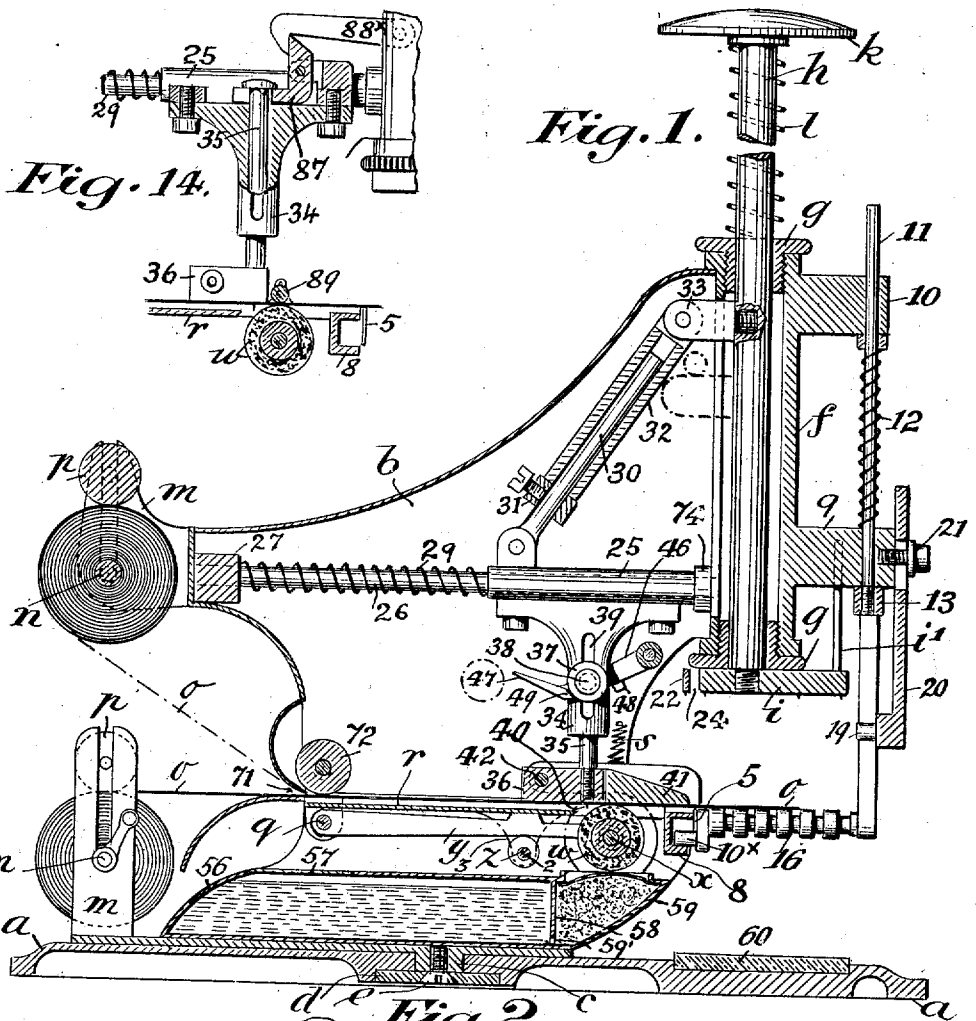
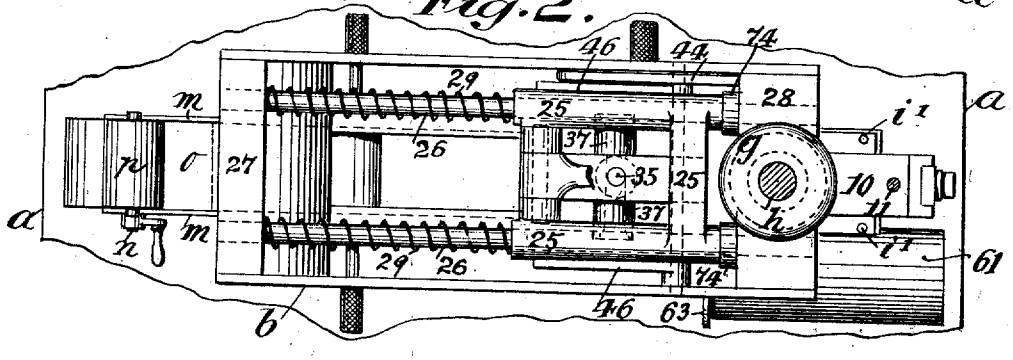


Fig. 2.



Witnesses.
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3 SHEETS—SHEET 2.

Fig. 3.

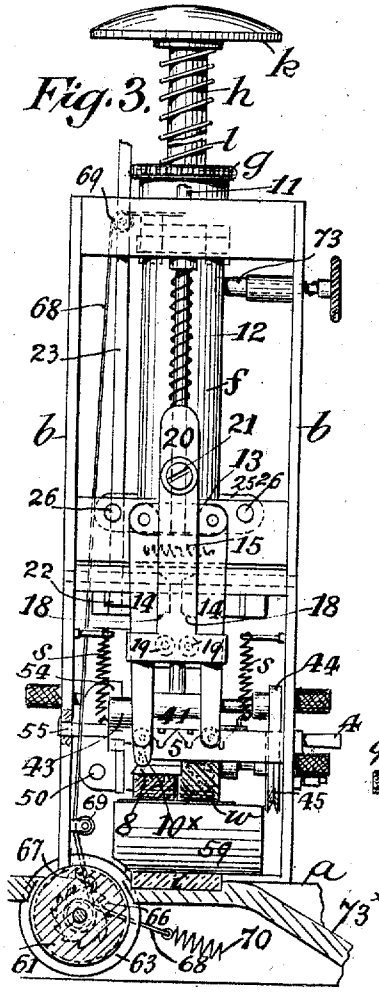


Fig. 4

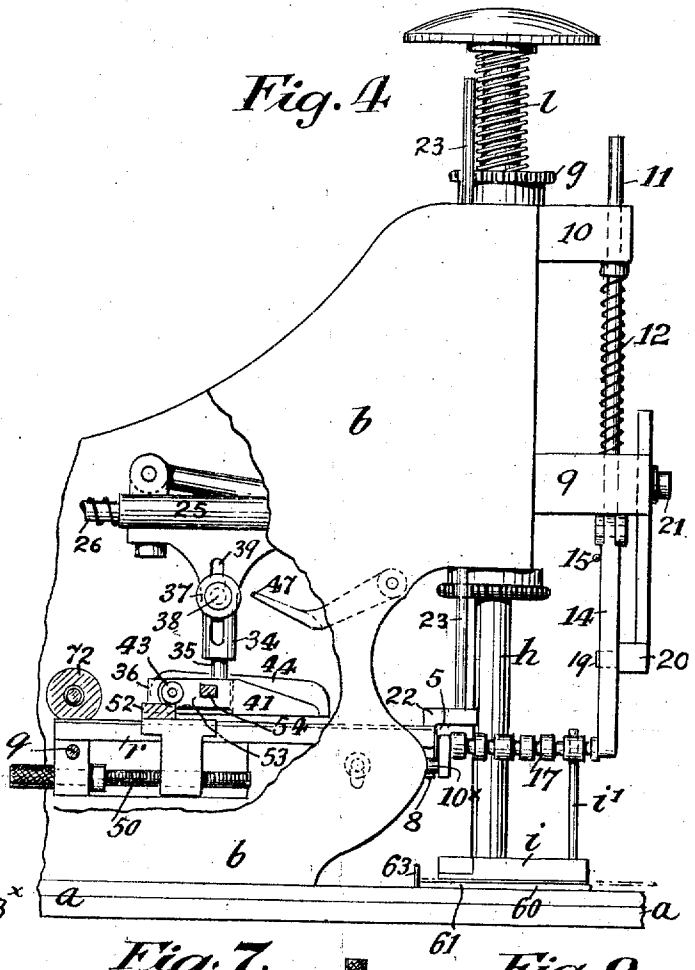


Fig. 5.

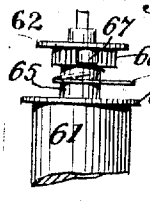


Fig. 6.

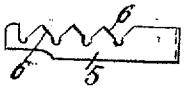


Fig. 7.

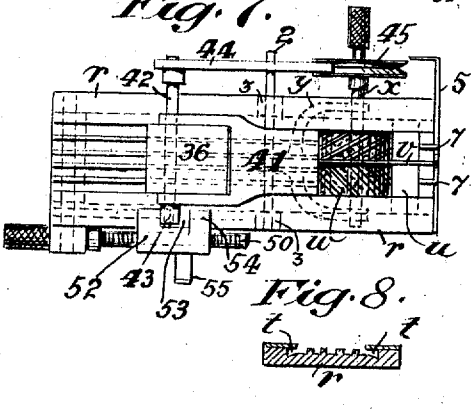
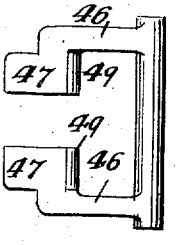


Fig. 8.

Fig. 9.



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3 SHEETS—SHEET 3.

Fig. 12

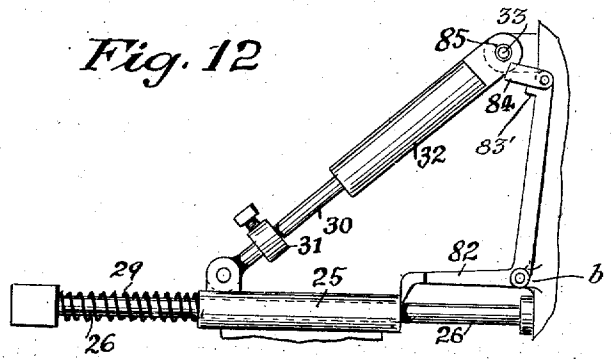


Fig. 13.

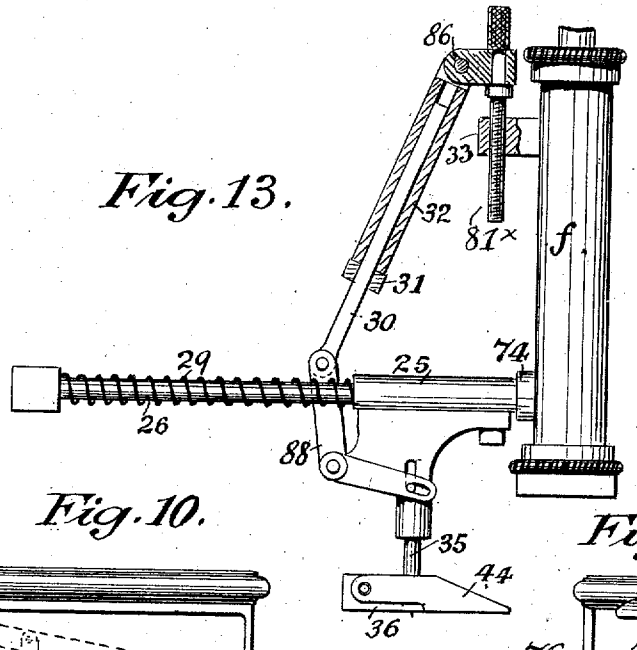


Fig. 10.

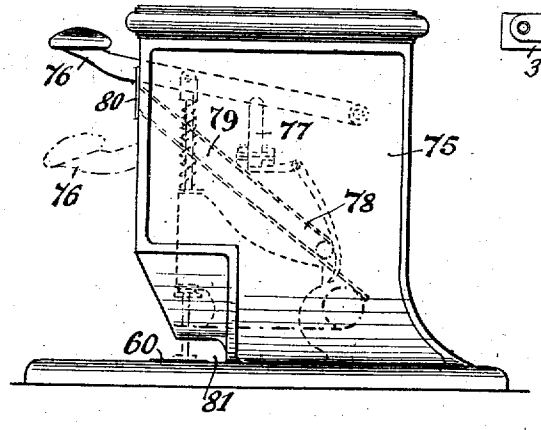
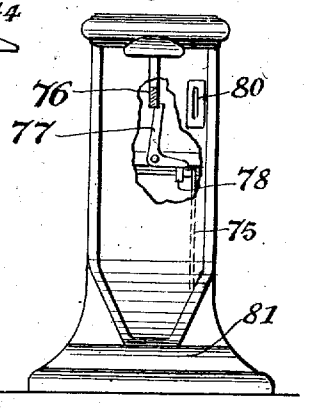


Fig. 11.



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UNITED STATES PATENT OFFICE.

ERNEST HAAS, OF MANCHESTER, ENGLAND.

APPARATUS FOR AFFIXING POSTAGE-STAMPS, LABELS, OR THE LIKE, AND FOR SELLING POSTAGE-STAMPS.

956,526. Specification of Letters Patent. Patented May 3, 1910.

Application filed May 2, 1908. Serial No. 430,628.

To all whom it may concern:

Be it known that I, ERNEST HAAS, a citizen of Switzerland, residing at Manchester, in the county of Lancaster, England, Kingdom of Great Britain, have invented new and useful Improvements in Apparatus for Affixing Postage-Stamps, Labels, or the Like, and for Selling Postage-Stamps, of which the following is a specification.

My invention relates to improvements in that type of apparatus for affixing postage stamps, labels or the like in which the stamps or the like by means of a plunger operated feed are passed over a hinged feed table, over a knife and damping device and are cut off and affixed by the action of the said plunger.

My invention has for its object to provide means whereby the said type of apparatus is rendered more efficient, expeditious and reliable in action and which means are also applicable to apparatus for the sale of postage stamps.

My invention comprises chiefly a variable stamp or the like ribbon feeding device; a stamp or the like ribbon feed table and a damping medium jointly vertically movable and means for bringing the latter in and out of action; a removable water supply receptacle for the said damping medium; a stamp or the like severing knife of special construction; a stamp or the like ribbon presser foot and gripping arms or rollers operating in conjunction with a stamp or the like affixing or delivery plunger; and finally means for removing the envelop or the like with stamp affixed.

I attain these objects by the mechanism illustrated in the accompanying three sheets of drawings, in which—

Figure 1 is a sectional side view, Fig. 2 a plan of Fig. 1 with cover removed, Fig. 3 a front view partly in section, Fig. 4 a side view showing the plunger down and parts operated thereby in their respective positions. Figs. 5, 7 and 9 are plans, Fig. 6 a front view of the knife, and Fig. 8 a cross section of the feed table detached of an apparatus constructed in accordance with my invention. Figs. 10 and 11 are respectively a side and an end view, the latter partly in section, and Figs. 12 and 13 side views, the latter also partly in section of modifications of my invention. Fig. 14 (Sheet I) is a detached sectional side view of a modification of the stamp or the like ribbon feed table.

Similar characters refer to similar parts throughout the several views.

In carrying out my invention and referring to Figs. 1, 2, 3 and 4, I fix to the base *a* of the apparatus a frame *b* preferably turnable on a pivot *c* and secured to the base by a disk *d* and set screw *e*. In the front end of the frame *b* is secured or formed a vertical tube *f* each end of which is screw-threaded for the reception of a milled headed bush *g* in which a plunger *h* is employed having at its bottom end a presser plate *i* furnished with pins and at its top end a knob *k* and supported by a spring *l* interposed between the knob *k* and top bush *g*. To the back end of the said frame I fix one or more brackets *m* in the present instance two, having open bearings in each of which I mount a stamp or the like ribbon bobbin *n* and a pressure roller *p* to rotate thereon. By employing two or more bobbins various kinds of stamps or the like may be used in succession by withdrawing one and inserting the other. Between the said bobbins and the plunger *h* I hinge by means of the pin *q* inside of the frame *b* a feed table *r* held against stops in its horizontal or normal position, say by means of springs *s*, say employed at the front end.

The top of the feed table *r* is longitudinally slotted or grooved, see more particularly Figs. 7 and 8, has side grooves *t* and in front an opening *u* with a division bar *v* which latter prevents the ribbon *o* from passing down the damping roller opening. Below the said opening I employ a recessed damping medium, say a roller *w* fixed to a shaft *x* mounted in a frame *y* fulcrumed to the pin *q* and adapted to be raised into or lowered out of the said opening by means of a crank or cam *z* on a shaft 2 mounted in bearings 3 on the feed table *r* and having one end extending through a slot in the frame *b* and with a handle 4 to turn it. One end of the damping roller shaft *x* projects through a slot in the frame *b* and has a milled knob to permit of turning the roller *w* by hand. The periphery of the damping roller *w* has a right and left hand spiral groove each of which is filled with absorbent

material such as wool so that the periphery is perfectly level and the moisture is thereby spread from the middle to each side and the strip prevented from adhering to the roller.

Against the free end of the table *r* a stationary knife 5 is secured to the frame *b* which has two or more angular vertical cutting edges 6 in continuation of each other according to the width of the ribbon or the like. See more particularly Fig. 6. The front end of the feed table *r* has projections 7 which extend between the said cutting edges and a ledge 8 reaching below the knife 5.

In the lugs 9, 10 on the front of the frame tube *f*, I employ a vertical rod 11 held in its raised or normal position by means of a spring 12. The lower end of this rod has a head 13 to which are fulcrumed two legs 14 preferably tied together by a spring 15 and each furnished at its free end with a grooved arm or roller 16, 17 extending backward to the knife 5 and level with the feed table. The arm or stud of the roller 17 is cranked at its free end and furnished with an anti-friction roller $10^{\times}$ adapted to contact with the ledge 8. The lug 9 forms an abutment for the head 13 to bring the rollers 16 and 17 level with the feed table *r* and the knife 5. Each arm or roller leg 14 has an incline 18 and in the path of the same I employ two anti-friction rollers 19 mounted on a T piece 20 rendered vertically adjustable on the lug 9 by the set screws 21.

The presser plate *i* has two projections *i'* adapted to operate in connection with the arms or rollers 17 as hereinafter described.

At the inner side of the presser plate *i*, a presser foot 22 is employed having a rod 23 vertically slidably mounted in the frame *b* and under the control of the said plunger, a small space 24, Fig. 1, being provided between this presser foot and the presser plate *i* for the knife 5 to enter when the said foot and plate descend.

In connection with the plunger *h* and above the feed table *r*, I arrange a slide 25, say adapted to move horizontally, say on two rods 26 fixed at each end to the cross pieces 27 and 28 respectively, the said slide being under the influence of the springs 29 interposed between the cross piece 27 and the back end of the slide 25. This slide is actuated from the plunger *h* by a loose connection consisting of a rod 30 having an adjustable collar 31 and fulcrumed to the slide 25 and of a tubular arm 32 fulcrumed to a stud 33 on the plunger *h*, the said rod being adapted to slide in the said tubular arm 32 the latter abutting against the said collar and by the adjustment of which the movement of the slide 25 is reduced and timed as may be required.

The slide 25 has a depending socket 34 in which slides a rod 35 carrying at its lower end a feed foot 36 and near its upper end two antifriction rollers 37 on the studs 38 projecting through slots 39 in the socket 34.

The face of the feed foot 36 is furnished with a suitable number of pins 40 for the purpose of entering the perforations of the ribbon *o* and has hinged thereto at its rear end a flap 41, which also may have pins. The pivot 42 of the said flap has at one end an antifriction roller 43 and to the other end is pivoted an arm 44 with free end in frictional contact with a V grooved pulley 45 fixed on the shaft of the damping roller *w*.

In connection with the feed foot 36 I fulcrum to the frame *b* a double arm 46 having at its free ends two cam projections 47 and adapted to rise and to fall against a stop 48 supporting it in its normal position. This lever 46 is adapted to raise the feed foot 36 and is so fulcrumed that when the latter is in its normal position the anti-friction rollers 37 are on the inclines 49 of the cam projections 47.

In connection with the feed-foot 36 I provide means for regulating the feed of the stamp and the like ribbon which consist of a plate 52 on the feed-table *r* or other suitable part of the apparatus having an aperture 53 and a stop 54, the latter causing the anti-friction roller 43 to pass through the said aperture and insuring the pins 40 on the feed foot to enter the ribbon at the correct time. By rendering the plate 52 longitudinally adjustable in relation to the feed foot 36, say by a screw 50 the ribbon feed may be varied at will. In the latter case the plate 52 may have a finger 55 projecting through a slot in the frame side *b*, see Figs. 3 and 7, having a graduated scale to set the feed as may be required.

Below the feed table *r* I employ a reservoir 56 preferably removable and divided in two compartments, one to receive the water and the other which is open, a sponge or the like. The said reservoir may have an opening closable by a lid 57 by means of which it can be charged with water and the partition 58 an opening 59′ to feed the sponge or the like with moisture.

The base *a* below the presser plate *i* is furnished with a rubber pad 60 and at both sides or as in the present instance at one side thereof I may mount in the base *a* a roller 61 having a flange 63 at one end forming a gage for the envelop or the like. The inner shaft end of this roller has secured thereto a disk 62 and carries a loose pulley 65 with a ratchet wheel 66 integral therewith, with which latter gears a pawl 67 fulcrumed to the disk 62, the said roller serving to remove the envelops or the like from underneath the plunger after having had affixed thereto a stamp or the like.

The roller 61 is rotated by a cord 68 or the like passed around the pulley 65 and

guide pulleys 69 while its upper end is secured to the plunger *h* and its lower end connected to a spring 70 which keeps the cord or the like at a tension. On the plunger *h* descending the roller 61 remains stationary while when the plunger rises the said pulley and ratchet wheel become locked which causes the roller 61 to revolve rapidly.

The stamp or the like ribbon *o* is fed through the mouth 71 of the feed table *r* and near the same a tension roller 72 is provided, which also serves to adjust the said ribbon.

The apparatus described operates as follows:—The stamps, labels or the like in ribbon form provided with perforations are wound on the bobbin *n*, the plunger *h* is slightly depressed and locked, say by a bolt 73 mounted in the frame and pushed over the plunger stud 33, the said movement causing the feed foot 36 to lift and remain in a raised position. The reservoir 56 is now withdrawn and filled with water and replaced, the damping roller *w* is lowered by the handle 4 and revolved a few times until it has taken up sufficient moisture after which it is raised to its normal position again by half a turn of the said handle, the free end of the strip or ribbon *o* is then pushed into the month 71 of the feed table *r* and on turning the tension roller 72 is nipped and drawn toward the front of the apparatus until it appears underneath the presser plate *i* and so set, that the first line of perforations is in register with the knife 5. The first stamp or label has passed over the damping roller and thereby been moistened sufficiently and rests on the arms or rollers 16, 17 of the legs 14 ready for affixing, as shown in Fig. 1. The bolt 73 is then withdrawn and the plunger takes up its normal position. The envelop, post card or the like is then placed on the pad 60, the plunger *h* completely depressed and thereby a stamp or label severed and affixed on the envelop or post card in the following manner:—The presser plate *i* and presser foot 22 on descending contact with the stamp or the like upon the arms or rollers 16, 17 and grip the same between them. The arms or rollers and feed table then also descend with the plunger, one end of each of the arms or rollers engaging in the feed table and the ribbon *o* is thereby drawn vertically over the knife and the teeth of the latter entering the perforations of the ribbon a stamp or the like becomes severed, while the presser foot rests upon the ribbon at the inner side of the knife and prevents the ribbon from being drawn forward. The said arms or rollers then begin to open and the feed table rises to its normal position with the presser foot 22 resting on the ribbon. When fully opened the said arms or rollers allow the plunger plate *i* to pass down and affix the stamp or the like to the envelop or the like. While still open the said arms or rollers then rise to their normal position and are kept open by the projections *i'* on the presser plate *i* until the latter has passed them in regaining its normal position. As the feed table *r* descends the damping roller *w* is pressed into the sponge and the feed foot thereon having previously been caused to rise by the cam projection levers 47, 49, falls and the anti-friction bowl 43 on the feed foot 36 then rests on the adjustable plate 52. When releasing the plunger it is raised by the spring *l* to its normal position, the delivery roller 61 is rapidly revolved and the envelop, post card or the like moved from under the plunger and may slide down the incline 73, leaving the pad free for the next operation while at the same time, the slide 25 is pushed forward by the springs 29 causing the anti-friction roller 43 on the feed foot to move along on the adjustable plate and down the slot 53 therein. The pins on the said feed foot entering the perforations of the ribbon, the latter is moved forward, during which time the damping roller is turned by means of the arm 44 and V pulley 45, while the flap exerts a slight pressure on the said ribbon and assists also the turning of the damping roller. The slide in its normal position abuts against stops 74 and the time at which the feed foot engages the ribbon *o* and feeds it can thus be regulated at will by the screw 50. On the forward movement of the feed foot the anti-friction roller thereon passes underneath the cam projections 47 and lifts the respective lever 46 until clear by the roller when it will drop onto a stop 48 into its normal position, in such a manner that the incline 49 is underneath the friction roller, that is to say, the latter resting on the incline 49.

It will thus be seen that stamps, labels or the like can be affixed in a most ready, expeditious and reliable manner by simply depressing and releasing the plunger while at the same time the envelop, post card or the like with stamp affixed is removed.

The apparatus described may also be adapted for the automatic sale of stamps affixed to an envelop or post card or otherwise. For instance, when affixing stamps, see Figs. 10 and 11, the apparatus is inclosed in a box 75 and the plunger *h* is operated by the hand lever 76 normally locked by a lever 77, arranged in connection with a lever 78 over the inner end of the chute 79. The operation is as follows, the coin is inserted into the slot 80 and in sliding down the chute 79 causes the lever 77 to turn on its fulcrum and thus at the same time move the lever 77 from under the hand lever 76 which releases it. On depressing the said hand lever, a stamp is affixed on to the envelop or the

like placed on the pad 60 in the gap 81 of the machine, while when releasing the hand lever the plunger *h* raises it to its normal position and the lever 77 takes up its position under the lever 76 thus again locking the hand lever. In the apparatus previously described as well as this, it may be advisable to stop the ribbon feeding device from operating until the moment the hand lever is depressed. Referring to Fig. 12, this may be done by a bell crank lever 82, 83 fulcrumed to the frame *b*, the arm 83 of which lever has pivoted a pawl 84 having an inclined end which pawl abuts against a stop 83′ and is therefore only movable in an upward direction. The stud 33 of the tubular arm 32 projects therefrom and carries a roller 85 adapted to act upon the pawl 84 on the descent of the plunger. When the plunger is at rest the arm 82 of the lever 82, 83 is situated against the slide 25 and thus locks the same in position as shown, whereas when the plunger is depressed the roller 85 pressing upon the inclined end of the pawl 84, forces the lever arm 83 back and thereby lifts the other arm 82 up and releases the slide 25. When the plunger rises the pawl 84 recedes and thus allows the roller 85 to pass after which the pawl will take up again the position as shown in Fig. 12.

Referring to Fig. 13, to be enabled to considerably increase the ribbon feed without altering the stroke of the plunger, I pivot the tubular arm 32 to a cross head 86 carrying an adjustable screw 81× engaging in the stud 33 on the plunger.

In lieu of raising the feed foot 36 by means of a cam lever 46 as described, I may pivot the connecting rod 30 to one end of a bell crank lever 88 fulcrumed to the slide 25 and the other end of this lever to the rod 35 of the feed foot 36.

Referring to Fig. 14, Sheet I, in some cases I may find it an advantage to accelerate the rise of the feed foot 36 when the feed slide 25 moves outward by fulcruming a lever 87 to the top of the slide 25, one end of which engages the top end of the foot rod 35 while the other end is engaged by a pawl 88 fulcrumed to the stationary part of the machine. The moment the slide 25 moves, the lever 87, is caused to turn on its fulcrum and raise the foot 36 and retain it in its raised position until the slide 25 has moved far enough to disengage the lever from the pawl 88× and on the return of the slide 25 the pawl 88× engages the lever 87 again.

In lieu of the flap 41 shown in Fig. 1, a roller 89 may be mounted on the feed table *r* above the damping roller *w*, as shown in Fig. 14.

I claim:

1. In an apparatus for affixing postage stamps, labels and the like and for selling postage stamps, a plunger operated stamp ribbon feeding device, comprising a hinged feed table, means for vertically moving the said table independently of the frame of the apparatus, a spring influenced feed slide above the said table, a feed foot vertically movable in the said slide, automatic means for raising and lowering the said feed foot and a telescopic rod having an abutment connecting the said plunger and slide loosely together, all combined substantially as and for the purpose set forth.

2. In an apparatus for affixing postage stamps, labels and the like and for selling postage stamps, a plunger operated stamp ribbon feeding device, comprising a hinged feed table, means for vertically moving the said table independently of the frame of the apparatus, a spring influenced feed slide above the said table, a lever fulcrumed in front of the said feed slide with its free end pointing rearward and having cam projections with inclines for raising the said feed foot, all combined substantially as and for the purpose set forth.

3. In an apparatus for affixing postage stamps, labels and the like and for selling postage stamps, a plunger operated stamp ribbon feeding device, comprising a hinged feed table, means for vertically moving the said table independently of the frame of the apparatus, a spring influenced feed slide above the said table, a feed foot vertically movable in the said slide and means for regulating the feed of the stamp ribbon, consisting of a projection on the feed foot, a plate fixed adjustably in relation to the said projection having an aperture through which the said projection can drop, all combined substantially as and for the purpose set forth.

4. In an apparatus for affixing postage stamps, labels and the like and for selling postage stamps, a plunger operated stamp ribbon feeding device, comprising a hinged stamp ribbon feed table having a longitudinally ribbed face and a damping medium opening across the said ribbed face dividing it into two parts, all combined substantially as and for the purpose set forth.

5. In an apparatus for affixing postage stamps, labels and the like and for selling postage stamps, a hinged vertically movable stamp ribbon feed table, springs supporting it, a damping medium carried thereby, and means for raising and lowering the damping medium on the said feed table independently of the movement of the latter, all combined substantially as and for the purpose set forth.

6. In an apparatus for affixing postage stamps, labels and the like and for selling postage stamps, a plunger operated stamp ribbon feeding device, comprising a stamp ribbon feed table having a ribbed face and an opening, a damping medium carried by

the said table to project into the said opening and having a left and a right hand spiral groove in its surface and absorbent material in the said grooves level with the said surface, all combined substantially as and for the purpose set forth.

7. In an apparatus for affixing postage stamps, labels and the like and for selling postage stamps, a plunger operated stamp ribbon feeding device, a stamp ribbon feed table and a damping device comprising a vertically moving damping roller carried by the said table, a receptacle below containing water and absorbent material to be saturated by the said water and means for intermittently rotating the said damping roller in contact with the absorbent material and having moisture imparted thereto by the said absorbent material, all combined substantially as and for the purpose set forth.

8. In an apparatus for affixing postage stamps, labels and the like and for selling postage stamps, a plunger operated stamp ribbon feeding device, a spring supported hinged feed table, a pair of arms normally level with and forming a continuation of the said feed table, adapted to normally support the projecting end of the stamp ribbon and on the descent of the plunger together with the latter grip it and descend with the said table and means for laterally moving apart the said arms and rollers to allow the plunger to pass and means for raising the said arms and rollers into their normal position, all combined substantially as and for the purpose set forth.

9. In an apparatus for affixing postage stamps, labels and the like and for selling postage stamps, a plunger operated stamp ribbon feeding device, a spring supported hinged feed table, a presser foot at the side of the plunger adapted to descend therewith and rest upon the stamp ribbon on the feed table while cutting off a stamp and afterward rise with the plunger, all combined substantially as and for the purpose set forth.

10. In an apparatus for affixing postage stamps, and the like and for selling postage stamps, a plunger operated stamp feeding device, a stationary knife for cutting the stamp ribbon having angular vertical cutting edges in continuation of each other, and means for gripping the projecting end of the stamp ribbon and vertically pressing it upon the said knife, all combined substantially as and for the purpose set forth.

11. In an apparatus for affixing postage stamps, labels and the like, a plunger operated stamp feeding device, a roller mounted in the base of the apparatus upon which the envelop requiring a stamp is placed and a spring influenced cord connected with the plunger for intermittently rotating the said roller when the plunger rises and throws off the envelop with stamp affixed, all combined substantially as and for the purpose set forth.

12. In an apparatus for affixing postage stamps, labels and the like and for selling postage stamps, a plunger operated stamp ribbon feeding device, a stamp affixing mechanism, and automatic means for temporarily locking in position and unlocking the said feeding device before its return movement, comprising a pawl lever operated by the said plunger all combined substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ERNEST HAAS.

Witnesses:
ALFRED BOSSHARDT,
STANLEY E. BRAMALL.