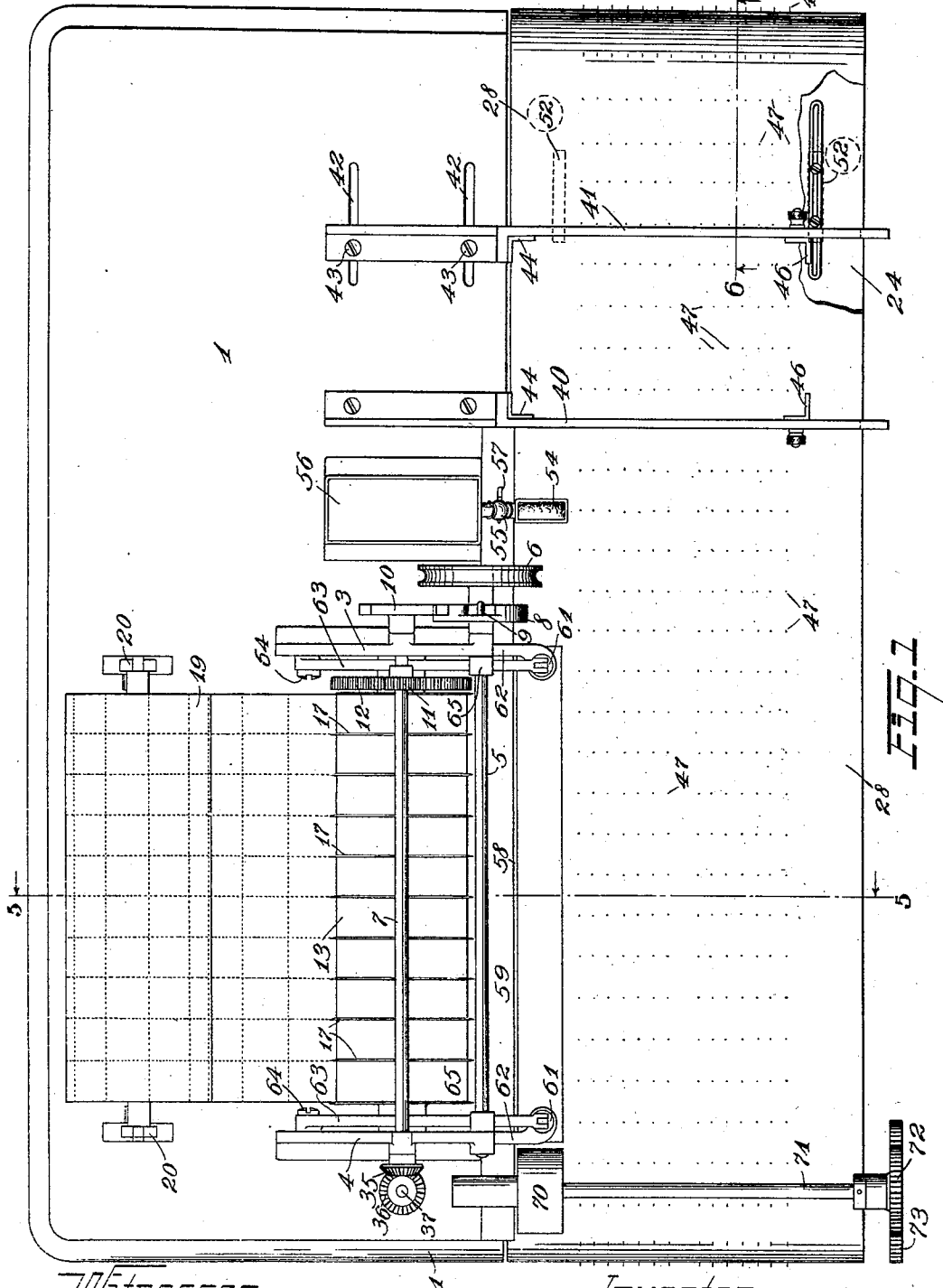


946,327.

W. L. BOWLUS.
STAMP AFFIXING MACHINE.
APPLICATION FILED APR. 19, 1909.

Patented Jan. 11, 1910.

64 SHEETS—SHEET 1.

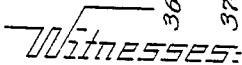


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APPLICATION FILED APR. 19, 1909.

4 SHEETS—SHEET 2.



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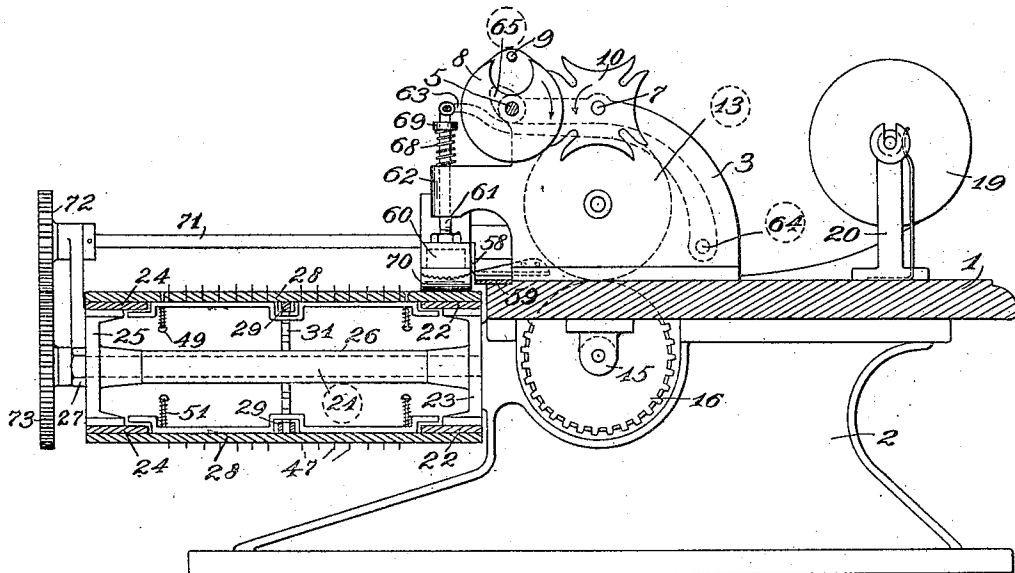


FIG. 3

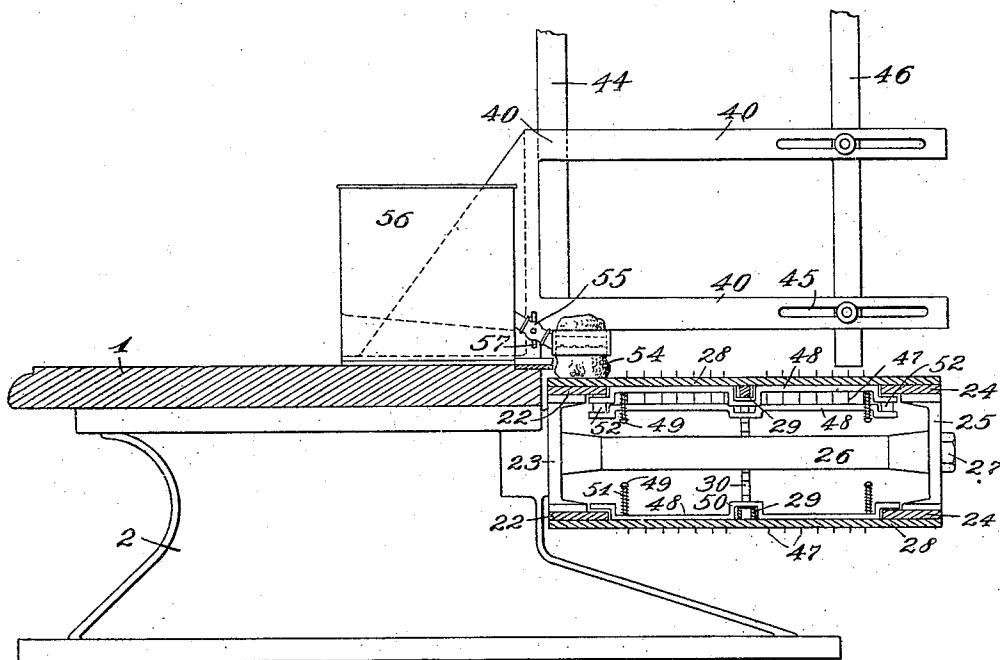


FIG. 4

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4 SHEETS—SHEET 4.

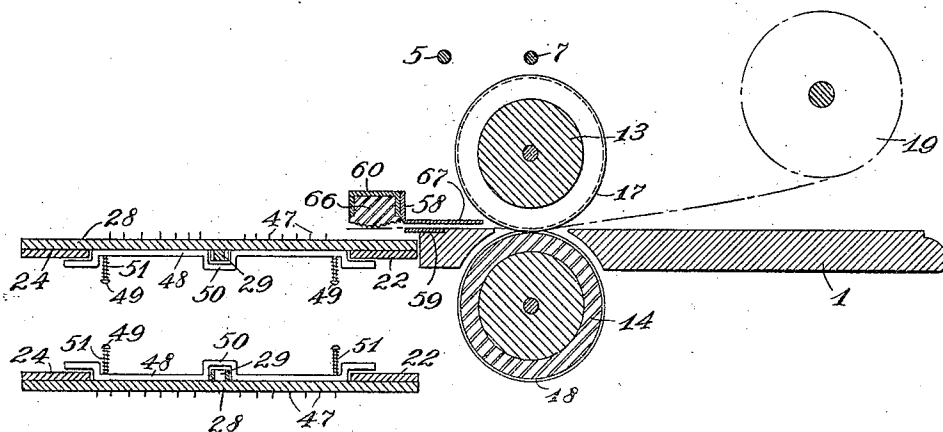


Fig. 5

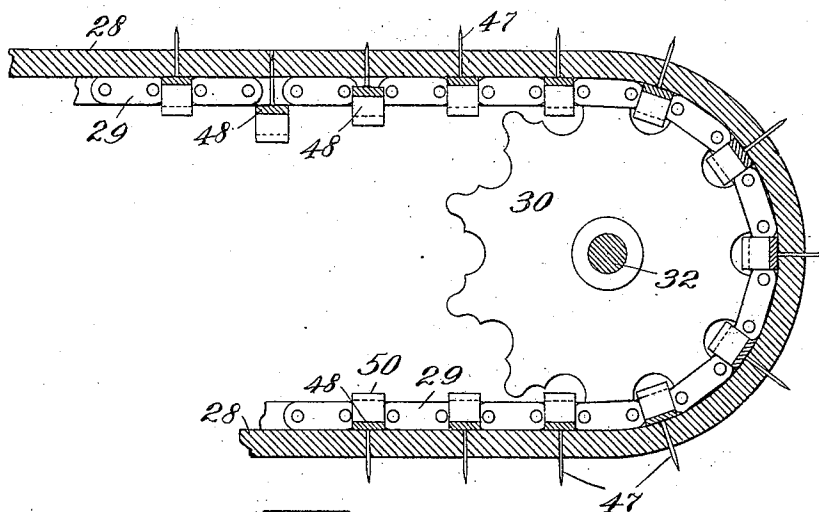


Fig. 6

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UNITED STATES PATENT OFFICE.

WARREN L. BOWLUS, OF SPRINGFIELD, ILLINOIS.

STAMP-AFFIXING MACHINE.

946,327.

Specification of Letters Patent.

Patented Jan. 11, 1910.

Application filed April 19, 1909. Serial No. 490,829.

To all whom it may concern:

Be it known that I, WARREN L. BOWLUS, a citizen of the United States, residing at Springfield, in the county of Sangamon and State of Illinois, have invented a certain new and useful Improvement in Stamp-Affixing Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to machines which are specifically intended for affixing stamps to envelopes, although the principles thereof may be applied to other uses and I desire it to be understood that the appended claims are not intended to be limited to said machines any further than their specific terms require. The machine shown in the drawings, however, is intended for applying stamps to envelopes, postal cards and like articles, and the description is confined to the machine shown.

The object of the invention is the production of a machine which feeds the stamps in a sheet of the desired width and containing the desired number of stamps in a transverse row across the sheet, the drawings showing a sheet having the width of ten stamps. The sheet is fed in a longitudinal direction, means being provided for slitting the sheet along the perforations that are always made in such sheets. The feed of the sheet is intermittent, the parts being so proportioned that the sheet will be fed at each operation of the feeding device a distance equal to the length of a stamp.

Simultaneously with the feeding of the stamps, the envelopes are separated from the bottom of a stack and are fed under the stamps that are being fed, means being provided for moistening the envelopes during their transit. The envelopes are fed from the stack singly and in rapid succession, so that they overlap one another shingle fashion, one envelop projecting from beneath the one immediately above it a distance but slightly greater than the width of a stamp. The feeding of the envelopes is accomplished by means of an endless belt having a series of transverse rows of pins, said pins being adapted to strike into the under side of the lowermost envelop near its rear end. At each feeding operation, as many envelopes are separated and fed as there are stamps in a transverse row across the sheet, and the

envelops are fed a distance equal to the width of the sheet. The feeding operation of the envelops is also intermittent; and, when the envelops and stamps come to rest, a stamp extends over the moistened and exposed end of each envelop. A knife is then operated to shear the sheet of stamps along the transverse row of perforations therein, and each stamp is carried into contact with its respective envelop to which it sticks. At the next operation of the feeding devices the stamped envelops are carried out of the machine beneath a pressing roller, which presses the stamps firmly into place.

The machine is driven from any suitable source of power; and, as it is operated at a comparatively high speed, the envelopes are stamped very rapidly.

Various other features of the invention will be set forth in the following description of the structure shown in the accompanying drawings, in which—

Figure 1 is a plan view of the machine; Fig. 2 is a front elevation thereof; Fig. 3 is a sectional view taken on line 3—3 of Fig. 2 and looking in the direction of the arrows thereon; Fig. 4 is a sectional view taken on the said line 3—3 and looking toward the right; Fig. 5 is a sectional view taken on the line 5—5 of Fig. 1, the view being partly diagrammatic and intended to illustrate the relation of the parts shown; Fig. 6 is an enlarged sectional view taken on line 6—6 of Fig. 1; and Fig. 7 is a diagrammatic view showing the relation of the envelopes as they are being fed, the feeding motion being toward the left.

Taking up a detailed description of the invention by the use of reference characters, 1 represents the main frame or base, having the legs 2 for resting upon a suitable support, and the upright journal brackets 3 and 4. Journaled in these brackets is a longitudinal drive shaft 5, the same being driven in any suitable manner, as by a pulley 6. Also journaled in the brackets 3 and 4, and preferably parallel to the shaft 5, is a shaft 7, the same being driven from the shaft 5 through a well-known Geneva stop device, the disk 8 and pin 9 thereof being secured to the shaft 5 and the slotted star-wheel 10 thereof being secured to the shaft 7. By reference to Fig. 3 it will be seen that at each complete rotation of the

shaft 5 the shaft 7 will be given a quarter turn and will then be positively locked against further travel until the next rotation of the drive shaft. Secured to the shaft 7 is a small pinion 11, which meshes with a large gear 12 on the upper feed-roller 13 for the stamps, said roller being journaled in the brackets 3 and 4 below the shaft 7. Coöperating with the roller 13 is the lower feed-roller 14, said roller being journaled in brackets 15 depending from the frame 1, and being driven by a gear 16 which meshes with the gear 12, said gears being of the same size so that the rollers 13 and 14 will properly roll together.

Secured to the roller 13 and spaced apart thereon distances equal to the width of a stamp, are cutting disks or knives 17, said knives projecting slightly from the periphery of the roller and extending into grooves 18 in the coöperating roller 14. The sheet of stamps, which may be of any practicable length, is wound into a roll 19 upon a suitable reel, the reel being journaled in brackets 20 on the upper part of the base 1. The sheet of stamps is fed between the rollers 13 and 14, and is cut by the knives 17 into strips, the slits formed by the knives coinciding with the longitudinal rows of perforations between the stamps.

Projecting forwardly from the legs 2 of the frame are stud bolts 21, there being two of said bolts shown. Mounted upon the inner ends of these bolts is the inner guide frame for the envelop feeding belt, said frame consisting of a plate 22 that is of a long elliptic shape, the opposite sides of which are connected by spider plates 23 through which the stud bolts pass. On the outer ends of said bolts is the outer guide frame, the same consisting of an elliptically shaped plate 24, corresponding to the plate 22, the sides of which are joined by spider plates 25, corresponding to plates 23. The outer ends of the stud bolts pass through the plates 25, the plates 23 and 25 being separated by a spacing sleeve 26 on the stud bolts, and the outer spider plates being held in position by nuts 27. The two plates 22 and 24 form guides for an endless feeding belt 28, which may be made of any suitable flexible material, such as rubber belting or leather. On its inner side, between the guide frames 22 and 24, the belt 28 has secured to it one or more sprocket chains 29, which chains have driving engagement with a corresponding number of pairs of sprocket wheels 30 and 31. These wheels are secured to shafts 32 and 33 respectively, the shafts being located in the centers of curvature of the plates 22 and 24 at their ends. The inner ends of the shafts 32 and 33 are suitably journaled in the frame of the machine, and the outer ends are journaled in end plates 34 extending across from the upper to the

lower part of the guide plate 24. By the construction just described, when the sprocket-wheel 31 is driven the belt is caused to travel, being guided by the guide plates 22 and 24. While any desired number of sets of sprocket wheels and chains may be employed, I have shown but one set in the drawings.

The sprocket wheel 31 is driven from the shaft 7 through a train of gearing, consisting of a bevel pinion 35 on the shaft 7, a co-operating bevel gear 36 on a vertical shaft 37, a bevel gear 38 on the lower end of said shaft, and a coöperating bevel gear 39 secured to the shaft 33 upon which said sprocket wheel is also secured, as above stated. As the sprocket wheel is driven from the intermittently rotating shaft 7, it is also driven intermittently, and the sizes of the gears are such as to cause the belt to be fed at each of its movements a distance equal to the width of the strip of stamps.

The envelops to be stamped are stacked in a magazine, consisting of a stationary side member 40 that is secured to the frame 1, and an adjustable side member 41 that is also carried on the said frame, but is movable to different positions along slots 42 therein, in which positions it may be secured by screws 43 or equivalent devices, thus adapting the machine for operating on envelops of various sizes. At the inner ends of the members 40 and 41 are angular uprights 44 for engaging with the inner corners of the envelops. Toward their outer ends the members are slotted at 45 to permit adjustment of angular uprights 46 which engage with the outer corners of the envelops. The members 40 and 41 extend over the feeding belt 28, so that the stack of envelops is disposed immediately over the said belt.

The envelops are fed singly from the bottom of the stack by pins 47, said pins being arranged in transverse rows across the belt, and extending through perforations in the latter from the inner side (see Fig. 6). Each row of pins is secured to what I shall call a pin bar 48, the same extending transversely of the belt and being secured thereto by headed pins 49 which project from the belt through the said bars. The ends of the pin bars are bent, as shown in Fig. 5, so as to extend inside the guide plates 22 and 24, and, at their centers, they are given an inward bend at 50 so as to carry them around the sprocket chain 29. Between the pin bars and the heads of their guiding pins 49, I place coiled springs 51, the same tending to push the pins outwardly through the belt. On the under sides of the upper parts of the guide plates 22 and 24 just below the right-hand side of the envelop magazine, I place cam-lugs 52, the same being preferably adjustable back and forth on said guide plates

to suit the width of envelop being operated upon. These lugs lie in the paths of the in-turned ends of the pin bars, and they operate to push the bars back from the belt 28 as the bars pass over them, and to release the bars as soon as they pass beyond the lugs, whereupon the springs 51 throw the bars and the pins outwardly with a sudden impulse and thus force the points of the pins into the lowermost envelop near its rear edge. After being thus engaged by the pins, the belt carries the envelop along with it; but, before it has been carried far, the next pin bar slips off the cam lugs 52 and its pins engage with the next envelop and feed it also. The pin bars are spaced on the belt a distance substantially equal to the width of a stamp, so that the envelops are fed out shingle-fashion, an envelop extending past the one next above a distance equal to the width of a stamp. This is indicated in Fig. 7, in which the envelops are designated 53. At each complete rotation of the drive shaft 5, the ten envelops are fed under the projecting stamps and are stopped in position to receive the latter.

In passing from the magazine to the stamps, the envelops are moistened by a sponge, wick or brush 54 which is supported by a pipe 55 from a reservoir 56, said reservoir being adapted to contain water or other suitable liquid. For regulating the quantity of liquid supplied to the sponge, a valve 57 is placed in the pipe 55.

After the stamps and the envelops have come to rest, the stamps are cut off on a transverse line across the sheet by a knife 58, the same coöperating with a fixed blade 59 on the frame. As shown, the said blade projects slightly past the end of the envelop, so that the envelop is not applied to the extreme end of the latter. Preferably the knife 58 is slightly inclined with respect to the blade so as to produce an easy shearing cut. The knife is secured to the rear face of a horizontal bar 60 which is supported by plungers 61, there being a plunger at each end of the frame. The plungers extend upwardly through stationary brackets 62 and are pivoted to the front ends of lever arms 63, a pin-and-slot connection being provided at the pivots in order to permit the plungers to move in a straight line. The lever arms extend rearwardly beneath the shafts 5 and 7 and are pivoted to the frame at 64. On the drive shaft 5 immediately above the levers are cams 65, the same being adapted to depress the lever arms and the knife at each rotation of the drive shaft. The cams are so positioned on the shaft as to operate the knife after the feeding devices for the stamps and envelops have come to rest. The bar 60 is made hollow on its lower side, as shown in Fig. 5, and within the hollow of the bar is a pad 66 for pressing the severed

stamps against the envelops. This pad is preferably a rubber cushion, although any other suitable material may be used.

In order to prevent the stamps from sticking to the pad by suction, I prefer to slightly round and roughen its under surface, as indicated in Fig. 5. As thus constructed, the pad will first disengage the stamps at their edges and will gradually separate from the stamp so that no suction will be produced. The springy nature of the pad permits it to flatten out, however, when pressure is applied to it by the depression of the arms 63. For guiding the stamps between the knife and stationary blade, I employ a guide plate 67, as shown in Fig. 5. The bar 60 and knife 58 are raised after the cutting operation by springs 68 which bear with their lower ends upon the brackets 62 and with their upper ends against collars 69 on the plungers 61.

For still further pressing the stamps against their envelops and for feeding the latter out of the machine, I employ a feed roller 70 to coöperate with the belt 28, the parts of the envelops having the stamps passing between the roller and belt. The roller is adjacent the rear end of a shaft 71 that is suitably journaled in the machine, said shaft being driven by a gear 72 thereon which meshes with a gear 73 on the forward end of the shaft 33, the gears being of such size as to cause the belt and roller to roll together without slipping.

Various changes in the details shown and described may be made without departing from the spirit of my invention, and I desire it to be understood that the following claims are not intended to be limited to such details any further than is necessitated by the specific terms employed therein. Furthermore, the machine may be employed for affixing practically any kind of stickers on a great variety of articles; and the terms "stamps" and "envelops" as employed in the claims are used in a generic sense, and the claims are not intended to be so restricted thereby as to exclude everything but the ordinary postage stamps and the ordinary envelops used in correspondence.

Having thus described my invention, what I claim is:

1. In a device of the character described, the combination with means for feeding a sheet of stamps, the stamps being arranged in the sheet in a plurality of transverse and longitudinal rows, said means simultaneously feeding all the stamps in a transverse row into position to be applied, of a magazine for envelops, means for feeding said envelops from the magazine singly and for spacing the same in shingle-fashion in position for having the fed stamps applied thereto, and means for affixing the fed stamps to their respective envelops.

2. In a device of the character described,

the combination with means for feeding a plurality of stamps into position to be applied simultaneously, of a magazine for envelopes, means for feeding the envelopes singly from the magazine and for spacing them in position for receiving the fed stamps, and means for applying the fed stamps simultaneously to their respective envelopes.

3. In a device of the character described, the combination with means for feeding a series of stamps, of a magazine for envelopes, means for feeding the envelopes singly and in rapid succession from the said magazine, whereby the envelopes are spread in shingle fashion, and for arresting the envelopes in position for receiving the stamps that have been fed, and mechanism for applying each of the said stamps to its respective envelop, the application of all the stamps in the series being made simultaneously.

4. In a stamp affixing machine, the combination with a holder for a sheet of stamps, the stamps in said sheet being in transverse series across the sheet, means for intermittently feeding the sheet longitudinally a distance equal to one dimension of the stamp and then arresting the feeding movement of the sheet, means for feeding envelopes and for spacing the same in shingle fashion, said feeding means being operated intermittently and simultaneously, and the envelopes being arrested in position for receiving the stamps that have been fed, and mechanism for applying each of the fed stamps to its respective envelop.

5. In a stamp affixing machine, the combination with an intermittently driven shaft, feeding rolls for a sheet of stamps operated from said shaft, said rolls being turned at each operation an amount sufficient to feed the sheet a distance equal to one dimension of a stamp, means connected with the intermittently driven shaft for feeding envelopes in spaced series into position for receiving the fed stamps, and means for severing the said sheet of stamps transversely and for applying each of the stamps thus severed to a respective envelop.

6. In a stamp affixing machine, the combination with a constantly rotating drive shaft, of a driven shaft intermittently rotated from the drive shaft, feeding rolls for a sheet of stamps operated from the intermittently driven shaft, said rolls being turned at each operation an amount sufficient to feed the sheet a distance equal to one dimension of a stamp, means on the said rolls for slitting the sheet into strips having a width equal to the other dimension of the stamp, means connected with the intermittently driven shaft for feeding envelopes in spaced series into position for receiving the fed stamps, and means for severing the said strips of stamps transversely

and for applying each of the stamps thus severed to a respective envelop.

7. In a stamp affixing machine, the combination with a constantly rotating drive shaft, of a driven shaft, means connecting said shafts for turning the driven shaft intermittently and for holding the same against rotation between its movements, feeding rolls for a sheet of stamps driven from said driven shaft, the rolls being rotated at each operation an amount sufficient to feed the sheet of stamps a distance equal to one dimension of a stamp, means on said rolls for slitting the sheet into strips of a width equal to the other dimension of a stamp, means connected with said driven shaft and operated intermittently thereby for feeding envelopes and for arresting the same in position for receiving the fed stamps, the envelopes being spaced in shingle fashion, and means for severing the fed stamps from their strips and for applying the same to their respective envelopes.

8. In a stamp affixing machine, the combination with a constantly rotating drive shaft, of a driven shaft, means connecting said shafts for turning the driven shaft intermittently and for holding the same against rotation between its movements, feeding rolls for a sheet of stamps driven from said driven shaft, the rolls being rotated at each operation an amount sufficient to feed the sheet of stamps a distance equal to one dimension of a stamp, means on said rolls for slitting the sheet into strips of a width equal to the other dimension of a stamp, means connected with said driven shaft and operated intermittently thereby for feeding envelopes and for arresting the same in position for receiving the fed stamps, the envelopes being spaced in shingle fashion, means for severing the fed stamps from their strips and for applying the same to their respective envelopes, and means for moistening the envelopes while moving into position for receiving the stamps.

9. In a stamp affixing machine, the combination with means for feeding a sheet of stamps, the stamps being arranged in said sheet in transverse and longitudinal rows, the said means feeding all of said stamps in a transverse row into position to be applied simultaneously, of a magazine for envelopes, an endless belt so positioned with respect to the magazine as to feed the envelopes singly therefrom and to space the same in shingle-fashion in position to receive the fed stamps, and means for applying the fed stamps simultaneously to the projecting portions of their respective envelopes.

10. In a stamp affixing machine, the combination with means for feeding a sheet of stamps, the stamps being arranged in said sheet in transverse and longitudinal rows, and the said means feeding all of the stamps

in a transverse row into position to be applied simultaneously, of a magazine for envelopes, an endless belt so positioned with respect to the magazine as to feed the envelopes singly therefrom and in rapid succession whereby the envelopes are caused to overlap shingle-fashion in position for receiving the fed stamps, means for applying the fed stamps to the projecting portions of their respective envelopes, and means for moistening the envelopes during their transit from the magazine.

11. In a stamp affixing machine, the combination with a magazine for containing envelopes, of an endless belt beneath the magazine, a series of devices carried by said belt for engaging with and feeding the lowermost envelop in the magazine, the said series being so spaced on the belt as to engage the envelopes successively and in rapid succession whereby the envelopes are fed from the magazine in shingle-fashion, means for feeding a sheet of stamps so as to cause a series of stamps to be projected into position for application to the envelopes, and mechanism for separating the stamps from one another and for applying the same simultaneously to their respective envelopes.

12. In a stamp affixing machine, the combination with a magazine for containing envelopes, of an endless belt beneath the magazine, a series of devices carried by said belt for engaging with and feeding the lowermost envelop in the magazine, the said series being so spaced on the belt as to engage the envelopes successively and in rapid succession whereby the envelopes are fed from the magazine in shingle-fashion, means for feeding a sheet of stamps so as to cause a series of stamps to be projected into position for application to the envelopes, means for moistening the envelopes during their transit from the magazine, and mechanism for separating the stamps from one another and for applying the same simultaneously to their respective envelopes.

13. In a stamp affixing machine, the combination with an endless feeding belt, means for driving said belt intermittently for a definite distance and for then arresting the movement of the belt, a magazine for envelopes arranged over the belt toward one end of the latter, a series of feeding devices carried by the belt for engaging with the lowermost envelop in the magazine and for feeding the envelopes from the latter, the said series being so spaced on the belt as to feed the envelopes in overlapping relation, means for feeding a sheet of stamps at right angles to the line of movement of the belt, the feeding means for the stamps being operated intermittently so as to feed the sheet a distance equal to one dimension of the stamp and for projecting the fed stamps over the exposed portions of the envelopes,

and means for separating the stamps from one another and for applying all of the fed stamps simultaneously to the envelopes that have been fed into position for receiving the same.

14. In a stamp affixing machine, the combination with an endless feeding belt, means for driving said belt intermittently for a definite distance and for then arresting the movement of the belt, a magazine for envelopes arranged over the belt toward one end of the latter, a series of feeding devices carried by the belt for engaging with the lowermost envelop in the magazine and for feeding the envelopes from the latter, the said series being so spaced on the belt as to feed the envelopes in overlapping relation, means for feeding a sheet of stamps at right angles to the line of movement of the belt, the feeding means for the stamps being operated intermittently so as to feed the sheet a distance equal to one dimension of the stamp and for projecting the fed stamps over the exposed portions of the envelopes, means for separating the stamps from one another and for applying all of the fed stamps simultaneously to the envelopes that have been fed into position for receiving the same, and means for moistening the envelopes during their transit from the magazine.

15. In a stamp affixing machine, the combination with an endless feeding belt, of a series of pin bars carried by said belt, a series of feeding pins projecting from each of said bars through the belt, springs for normally holding the bars in position for projecting the ends of the pins outside the belt, a magazine for envelopes disposed over the belt with the lowermost envelop in position to be engaged by the pins on any bar, means for feeding the belt, devices for retracting the pin bars and the pins just before they reach the magazine and for then releasing the bar whereby the pins on the latter are projected against the lowermost envelop so as to penetrate and feed the latter, and means for applying stamps to the envelopes after they have been removed from the magazine.

16. In a stamp affixing machine, the combination with an endless feeding belt, of a series of pin bars carried by said belt, a series of feeding pins projecting from each of said bars through the belt, springs for normally holding the bars in position for projecting the ends of the pins outside the belt, a magazine for envelopes disposed over the belt with the lowermost envelop in position to be engaged by the pins on any bar, means for feeding the belt, devices for retracting the pin bars and the pins just before they reach the magazine and for then releasing the bar whereby the pins on the latter are projected against the lowermost envelop so as to penetrate and feed the lat-

ter, means for moistening the envelopes during their transit from the magazine, and means for applying stamps to the envelopes after they have been removed from the magazine.

17. In a stamp affixing machine, the combination with an endless feed belt, of a series of sets of feeding pins carried by the belt and normally projecting beyond the latter, a magazine for envelopes so positioned with respect to the belt that the projecting pins engage with the adjacent envelopes in the magazine, means for feeding said belt, and mechanism for retracting in succession the sets of feeding pins just before they reach the magazine and for then releasing the sets successively whereby the pins on each set when released will be thrown outwardly into engagement with the adjacent envelope in the magazine, whereby the envelopes are fed successively, the said sets of pins being so spaced on the belt as to cause the envelopes to overlap shingle-fashion, and means for applying stamps to the exposed portions of the envelopes on the belt.

18. In a stamp affixing machine, the combination with an endless feed belt, of a series of sets of feeding pins carried by the belt and normally projecting beyond the latter, a magazine for envelopes so positioned with respect to the belt that the projecting pins engage with the adjacent envelope in the magazine, means for feeding said belt, and mechanism for retracting in succession the sets of feeding pins just before they reach the magazine and for then releasing the sets successively whereby the pins on each set when released will be thrown outwardly into engagement with the adjacent envelope in the magazine, whereby the envelopes are fed successively, the said sets of pins being so spaced on the belt as to cause the envelopes to overlap shingle-fashion, means for moistening the envelopes during their transit from the magazine, and means for applying stamps to the exposed portions of the envelopes on the belt.

19. In a stamp affixing machine, the combination with an endless belt, of means for feeding the same intermittently and for then arresting the belt, of a series of sets of feeding pins carried by said belt, springs for normally holding the pins projected beyond the belt, a magazine for envelopes placed over said belt, the lowermost envelop in the magazine being in position to be engaged by the pins, means for retracting the pins in each set as they approach the magazine and for releasing the pins when they are below the rear portions of the envelopes whereby the pins are thrown outwardly by their springs so as to penetrate the envelopes, the series of sets of pins being so spaced on the belt as to cause the different sets of pins to successively engage with the envelopes in the

magazine and feed the latter in overlapping shingle-fashion, and means for applying a stamp to each of the envelopes after the motion of the feed belt has been arrested.

20. In a stamp affixing machine, the combination with an endless belt, of means for feeding the same intermittently and for then arresting the belt, of a series of sets of feeding pins carried by said belt, springs for normally holding the pins projected beyond the belt, a magazine for envelopes placed over said belt, the lowermost envelop in the magazine being in position to be engaged by the pins, means for retracting the pins in each set as they approach the magazine and for releasing the pins when they are below the rear portions of the envelopes whereby the pins are thrown outwardly by their springs so as to penetrate the envelopes, the series of sets of pins being so spaced on the belt as to cause the different sets of pins to successively engage with the envelopes in the magazine and feed the latter in overlapping shingle-fashion, a device for moistening the envelopes after they are fed from the magazine, and means for applying a stamp to each of the envelopes after the motion of the feed belt has been arrested.

21. In a stamp affixing machine, the combination with a holder for a sheet of stamps, of means for feeding said sheet and for slitting the same along the rows of perforations in the sheet so as to convert the sheet into a series of strips having the width of a stamp, means for causing the feeding mechanism for the stamps to operate intermittently and to feed the sheet at each operation a distance equal to the length of a stamp, an endless feed belt for envelopes, a magazine for envelopes arranged over said belt, a series of feeding devices carried by the belt and so spaced thereon as to successively engage with the lowermost envelop in the bottom of the magazine and feed the envelopes outwardly in overlapped shingle-fashion, means for feeding the said belt intermittently and simultaneously with the operation of the feeding devices for the stamps, means for moistening a portion of the exposed surface of each envelop during its transit, the belt being fed such a distance at each operation as to bring an envelop under each of the fed stamps, a knife for severing the several strips of stamps transversely, means for operating said knife, and means for pressing the severed stamps onto the moistened portions of the envelopes.

22. In a stamp affixing machine, the combination with a holder for a sheet of stamps, of means for feeding said sheet and for slitting the same along the rows of perforations therein so as to convert the sheet into a series of strips having the width of a stamp, means for causing the feeding mechanism for the stamps to operate intermittently and to feed the sheet at each operation a distance equal

to the length of a stamp, an endless feed belt for envelopes, a magazine for envelopes arranged over said belt, a series of sets of spring-pressed feeding pins carried by the belt, said pins normally projecting outside the belt into position for engaging with the lowermost envelop in the bottom of the magazine, means for retracting the sets of feeding pins successively just before they reach the magazine and for releasing the same when the pins are below the magazine whereby the springs are projected into the lowermost envelopes, the sets of pins being so spaced as to cause the envelopes to overlap shingle-fashion while being fed, means for feeding the said belt intermittently and simultaneously with the operation of the feeding devices for the stamps, means for moistening a portion of the exposed surface of each envelop during its transit, the belt being fed such a distance at each operation as to bring an envelop under each of the fed stamps, a knife for severing the several strips of stamps transversely, means for operating said knife, and means for pressing the severed stamps onto the moistened portions of the envelopes.

23. In a stamp affixing machine, a constantly rotating drive shaft, a driven shaft, means connecting the shafts so as to turn the driven shaft intermittently and to then lock the same against further movement until the next rotation of the drive shaft, means connected with the driven shaft for feeding a sheet of stamps and for slitting the same into strips each having a width equal to the width of a stamp, means connected with the said driven shaft for feeding envelopes into position for having the fed stamps applied thereto, a knife for separating the stamps from their strips, a pad movable with said knife for pressing the stamps against the envelopes, a pivoted arm, means connecting the knife and pad with the said arm, and a cam on the drive shaft for operating the knife and pad at each operation of the drive shaft.

24. In a stamp affixing machine, a constantly rotating drive shaft, a driven shaft, a Geneva stop device connecting the shafts so as to turn the driven shaft intermittently and to then lock the same against further movement until the next rotation of the drive shaft, means connected with the driven shaft for feeding stamps, means connected with the said driven shaft for feeding envelopes into position for having the fed stamps applied thereto, a knife for separating the stamps, a pad movable with said knife for pressing the stamps against the envelopes, a pivoted arm, means connecting the knife and pad with the said arm, and a cam on the drive shaft for operating the knife and pad at each operation of the drive shaft.

25. In a stamp affixing machine, the combination with a constantly rotating drive

shaft, of a driven shaft, a Geneva stop device connecting the said shafts whereby the driven shaft is turned intermittently, feed rollers geared to said driven shaft for feeding a sheet of stamps, cutting disks mounted on one of said rollers for slitting the sheet of stamps into strips having the width of a stamp, a feeding belt for envelopes also geared with the driven shaft and operating intermittently with the stamp feeding rollers, means on said feeding belt for engaging with the envelopes and for feeding the latter in spaced shingle-fashion under the fed stamps and in position for having the latter applied thereto, a knife for severing the strips of stamps transversely of the sheet, a pad movable with said knife for pressing the severed stamps against their respective envelopes, said pad being convexed for the purpose specified, pivoted arms, spring pressed rods connecting said arms with the knife and pad, and cams on the drive shaft for operating the knife and the pad at each rotation of the drive shaft.

26. In a stamp affixing machine, the combination with a feeding belt for envelopes, of a magazine for containing said envelopes disposed over the feeding belt, frames on the interior of the belt adjacent each edge thereof for guiding the belt in its movement, a series of sets of pins carried by the belt and spaced on said belt distances substantially equal to the width of a postage stamp, springs for normally holding the pins outwardly from the belt into position for engagement with the lowermost envelop in the magazine, cams on the frames for retracting the pins just before they reach the said magazine and for releasing the same when they are beneath the magazine whereby the pins are thrown outwardly by their springs and caused to penetrate the lowermost envelop in the magazine, the sets of pins following each other in rapid succession whereby the envelopes are spaced shingle-fashion, means for moistening the envelopes while traveling on the belt, and means for applying stamps to the moistened portions of the envelopes.

27. In a stamp affixing machine, the combination with a feeding belt for envelopes, of means for feeding said belt intermittently and for holding the same against movement between the feeding operations, a magazine for containing said envelopes disposed over the feeding belt, frames on the interior of the belt adjacent each edge thereof for guiding the belt in its movement, a series of sets of pins carried by the belt and spaced on said belt distances substantially equal to the width of a postage stamp, springs for normally holding the pins outwardly from the belt into position for engagement with the lowermost envelop in the magazine, cams on the frames for retracting the pins just before

they reach the said magazine and for releasing the same when they are beneath the magazine whereby the pins are thrown outwardly by their springs and caused to penetrate the lowermost envelop in the magazine, the sets of pins following each other in rapid succession whereby the envelops are spaced shingle-fashion, means for moistening the envelops while traveling on the belt, and means for applying stamps to the moistened

portions of the envelops, the stamps being applied while the movement of the belt is arrested.

In testimony whereof, I hereunto affix my signature in the presence of two witnesses. 15

WARREN L. BOWLUS.

Witnesses:

AGNES E. FLEMING,

CHARLES E. BODE.