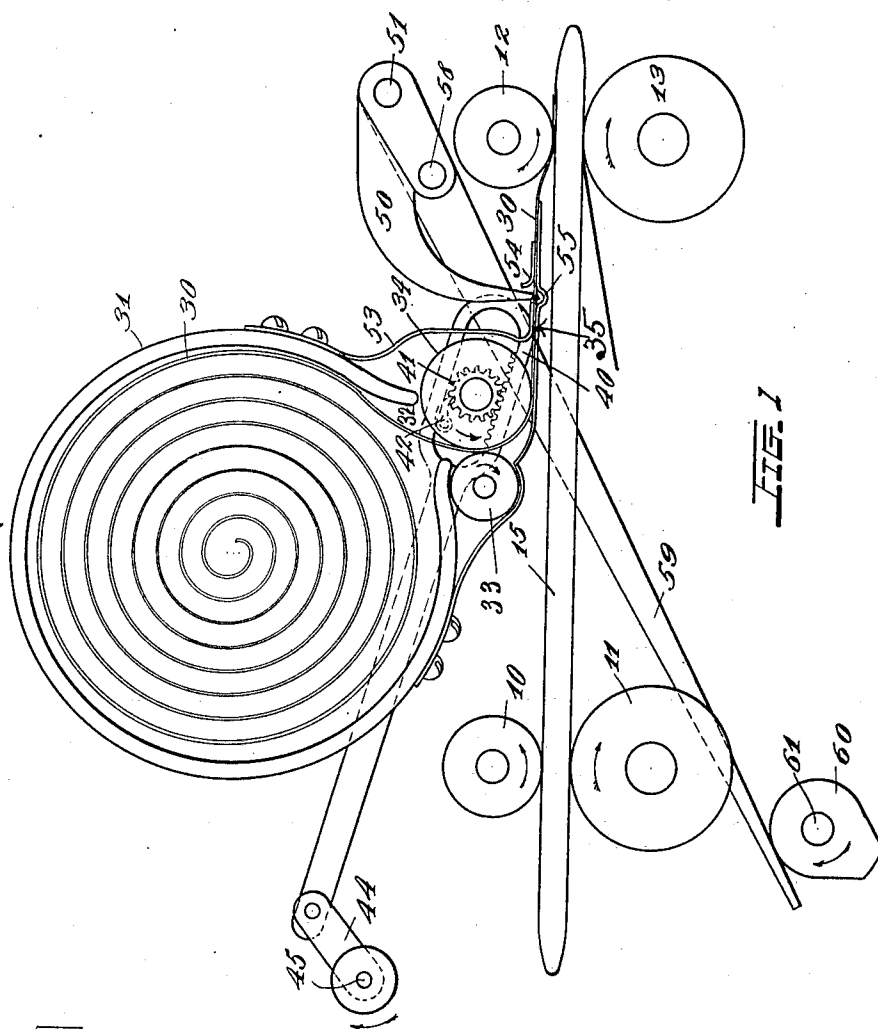


1,051,650.

G. T. TRUNDLE.
STAMP AFFIXER.
APPLICATION FILED AUG. 30, 1911.

Patented Jan. 28, 1913.
2 SHEETS—SHEET 1.



Witnesses.
G. K. Smith
Hugh B. McGill.

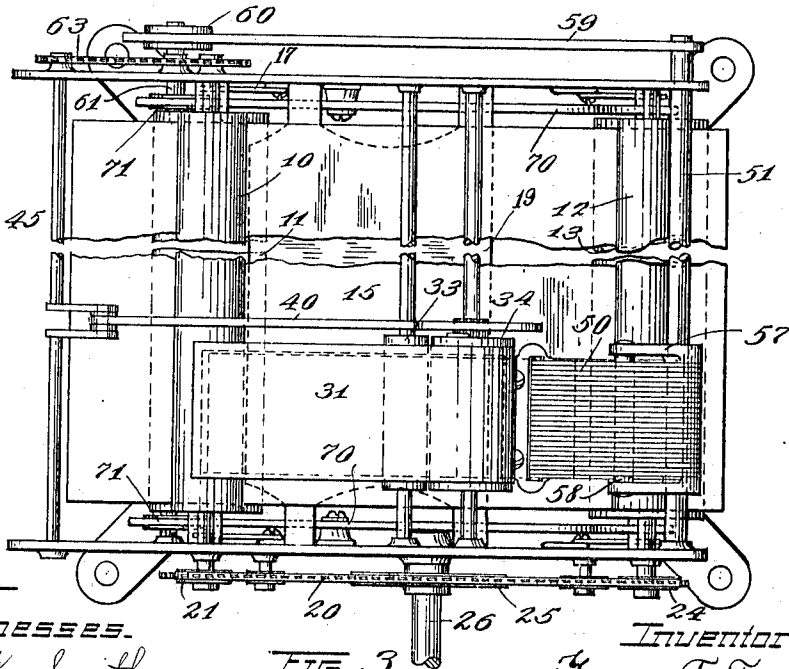
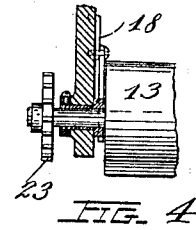
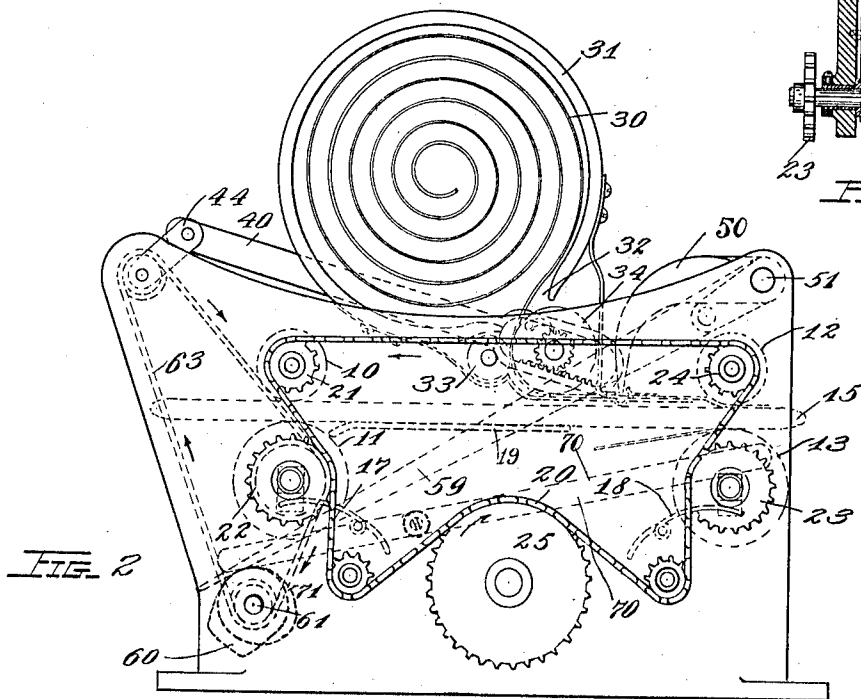
Inventor
George T. Trundle
By Albert H. Baker,
Attorney

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FIG. 3

Inventor
George T. Trundle,
By Albert D. Bates,
Att'y

UNITED STATES PATENT OFFICE.

GEORGE T. TRUNDLE, OF CLEVELAND, OHIO, ASSIGNOR TO THE AMERICAN MULTI-
GRAPH COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

STAMP-AFFIXER.

1,051,650.

Specification of Letters Patent.

Patented Jan. 28, 1913.

Application filed August 30, 1911. Serial No. 646,951.

To all whom it may concern:

Be it known that I, GEORGE T. TRUNDLE, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Stamp-Affixers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

The object of this invention is to provide a very simple and effective mechanism for affixing stamps to envelopes.

My machine is designed to operate with great rapidity on envelopes of various sizes, having inclosures of various thicknesses. It is designed to carry a roll of stamps and automatically affix them as the envelopes are fed, controlling the feed of the stamps by their perforations, so that inequalities in the length of individual stamps will not be troublesome.

The invention consists of the means by which I carry out the above mentioned operations, or any of them, as hereinafter more fully explained and as definitely set out in the claims.

In the drawings, Figure 1 is a side elevation of the envelop and stamp feeding portions of my machine, this figure illustrating the principle of operation; Fig. 2 is a side elevation of a complete machine, embodying such principle; Fig. 3 is a plan of such machine; Fig. 4 is a detail of a portion of one of the envelop feeding rollers, being horizontally sectioned through the journal thereof.

As shown in the drawings, 10 and 11 represent one pair of feeding rollers and 12 and 13 another pair adapted to propel through the machine the envelop to be stamped. This envelop with its inclosures is designated 15. The rolls 10 and 12 are shown as mounted on stationary axes, while rolls 11 and 13 are spring pressed toward rolls 10 and 12 by springs designated 17 and 18, acting on the journal boxes of the rollers. The roll 11 is constantly pressed by its springs 17 into a position to cooperate with roll 10, while roll 13, though constantly under spring pressure, is adapted to be held out of action, by means hereinafter described. The four rolls mentioned are continuously revolved in a direction to feed the envelopes. The means shown in Figs. 2 and 3 for causing such

revolution consist of a sprocket chain 20, 55 engaging sprocket wheels 21, 22, 23 and 24 on the rolls and intermediately engaging the driving sprocket wheel 25 on a driving shaft 26. It is to be understood that any other means may be employed for rotating the 60 rolls mentioned.

The stamps are adapted to be furnished in a continuous roll thereof, designated 30, which occupies a cylindrical case 31. The stamps pass downwardly through an opening 32, in the case, between a pair of feeding rolls 33 and 34. These rolls grip the stamps between them, the rolls being intermittently revolved to feed the stamps. As shown, the means for causing the intermittent rotation 70 consists of a reciprocating rack 40, the teeth of which mesh with a pinion 41, which is loose on the shaft of the roll 34 but cooperates with a pawl, 42, carried on that roll. Accordingly, movement of the rack in one 75 direction rotates the roll 34, and hence the roll 33, while movement in the opposite direction is idle, the pinion 41 clicking under the pawl, and friction (or a detent not shown) holding the rolls against backward 80 rotation. The rack 40 may be conveniently reciprocated by having its end connected with a crank arm 44, on a continuously rotating shaft 45.

50 indicates a series of parallel fingers 85 pivoted on a shaft 51, and adapted to rest on the surface of the stamps 30, being fed from the roll of stamps. The points of these fingers stand between guards 53 and 54 above the stamps and over a depression in a guard 55 below the stamps. The fingers descend by gravity and are adapted to be raised by a yoke 57, pivoted on the shaft 51 and having a transverse bar 58 standing beneath the fingers. On the shaft 51 is an arm 95 59 which cooperates with a cam 60 on a continuously revolving shaft 61. This cam is accordingly adapted to raise the fingers together from the stamps, while, when the cam allows the arm 59 to descend, the fingers may rest lightly by gravity on top of the stamps and are adapted to fall through the perforations thereof into the recess in the guard 55 and thereby prevent the advancement of a stamp behind the fingers 105 and enable the rolls 12 and 13 to pull off the stamp in advance of the fingers. The cam shaft 61 and the shaft 45 may conveniently

be revolved by a sprocket chain 63 engaging sprocket wheels on these shafts and a sprocket wheel on the shaft of the rotating roller 11. The cam shaft 61 is shown as carrying a pair of cams 71 which act on the levers 70, the other ends of which bear down on the journal boxes of the roller 13. The cams 60 and 71 are so related that as the cam 60 releases the fingers 50 to stop the stamps the cam 71 releases the levers 70 to free the roller 13, which thereupon rises into gripping engagement with the envelop and stamp.

It is to be understood that the envelop is moistened adjacent to the corner before the stamp is applied to it. No means is shown in the drawing for accomplishing this as any suitable mechanism may be employed, as, for example, that shown in Patent #971,940, October 4, 1910 to Clarence E. Van Duzer. Whatever moistening device is employed preferably acts on the envelop after it has passed the rollers 10 and 11.

In the operation of my stamp affixer, the envelops are fed, one after another, by hand or suitable mechanism, between the rollers 10 and 11. In this feeding the envelop stands with the flap edge foremost and the flap on the under side. After the top portion of the envelop has passed the rollers 10 and 11, it rides along on the plate 19, and the corner is suitably moistened. Then, as the envelop comes between the rollers 12 and 13 the stamp has been fed down from the stamp case ahead of it and comes onto the top of the envelop adjacent to the roller 12. As this takes place the fingers 50 (which have been lowered onto the stamp by being released by the cam 60) rest on the forward stamp in advance of the perforations, indicated at 35 in Fig. 1. Then, the cams 71 release the levers 70 so that the roller 13 rises into gripping engagement with the envelop. The envelop and stamp are now gripped between the roller 12 (which is rubber) and the roller 13, and the stamp is pulled off from the next stamp, which is stopped by the fingers 50 dropping into the perforations at the rear of the stamp. Thus, the stamp is firmly affixed to the envelop by the roller 12, and the stamped envelop is fed out of the machine.

Having thus described my invention, what I claim is:—

1. In a stamp affixing mechanism, the combination of a holder for a row of stamps and means for propelling the envelop, of a stopping device for the stamps adapted to enter perforations between successive stamps, and rollers adapted to pinch between them a moving envelop and a stamp next in advance of the engaged perforations, and serving to pull the forward stamp off of the stopped row of stamps and press such forward stamp against the envelop.

2. In a device of the character described, the combination of two pairs of feeding rollers, devices for guiding a stamp into engagement with the envelop between the two pairs, and a stopping device adapted to enter the rear perforations of the forward stamp while such forward stamp is gripped against the envelop between the forward pair of feeding rollers.

3. In a device of the character described, the combination of two pairs of feeding rollers positioned to have the envelop pass from one pair to the next, means for feeding a row of stamps to bring the forward one into engagement with the envelop behind and into coöperation with the second pair of rollers, and means for stopping the row of stamps at the rear perforations of the forward stamp while the forward stamp is gripped by such forward pair of rollers.

4. In a stamp affixing device, the combination of two pairs of feeding rollers, means for feeding a row of stamps to bring the forward one into juxtaposition with the envelop behind and into coöperation with the second pair of feeding rollers, a stopping device for such row of stamps adapted to engage in the rear perforations of the forward stamps, means for controlling the stopping device, and means for controlling the second pair of feeding rollers.

5. In a stamp affixing device, the combination, with a pair of rollers adapted to press a stamp onto the envelop, of means for feeding a row of stamps to bring the forward one into juxtaposition with the envelop behind such rollers, and means for stopping the stamps by the rear perforations of the forward one and allowing the feeding rollers to pull off the forward stamp and apply it to the envelop.

6. In a stamp affixing device, the combination, with a pair of rollers adapted to press a stamp onto the envelop, of means for feeding a row of stamps to bring the forward one into juxtaposition with the envelop behind such rollers, means for stopping the stamps by the rear perforations of the forward one while the forward one is gripped by the feeding rollers and allowing the feeding rollers to pull off the forward stamp and apply it to the envelop, and a cam for periodically actuating the stopping means.

7. In a stamp affixing device, the combination of means for periodically feeding a row of stamps, means for stopping such row back of the forward stamp, and rollers for holding the envelop, one of such rollers also engaging the forward stamp and pressing it onto the envelop while the succeeding stamps are stopped.

8. In a device of the character described, the combination of means for periodically feeding a row of stamps, means adapted to

engage in the perforations between the first and second stamps, and a pair of rollers adapted to press the first stamp onto the advancing envelop while the succeeding stamps are thus stopped and thereby pull the first stamp free from the second.

9. In a device of the character described, the combination of means for periodically feeding a row of stamps, means adapted to engage in the perforations between the first and second stamps, a pair of rollers adapted to press the first stamp onto the envelop while the succeeding stamps are thus stopped, and means for periodically controlling the stopping device and the rollers.

10. In a stamp affixing machine, the combination, with a holder for stamps, of a pair of rollers to feed the stamps, means for periodically rotating such rollers in one direction, a guide for the stamps thus fed, a stopping device adapted to enter the perforations between the foremost and next to the foremost stamp, and means for affixing the foremost stamp.

11. In a stamp affixing device, the combination, with a holder for the stamps, of a pair of cooperating feeding rollers therefor, mechanism for rotating such rollers, a guide for stamps fed by such rotation, said guide having a transverse depression, a stopping device adapted to rest on the foremost stamp above such depression and move into the depression through the perforations between the foremost and the next to the foremost stamps, and mechanism for affixing the foremost stamp and pulling it free from the stopped succeeding stamps.

12. In a stamp affixing device, the combination of a case for a roll of stamps, a pair of rollers adjacent to said case, said case having an aperture leading to the rollers, mechanism for rotating said rollers periodically in one direction to feed the stamps in a continuous row, a guide for such fed stamps, a stopping device adapted to engage the next to the foremost stamp, a cam for operating the stopping device, and mechanism for detaching the foremost stamp from the row and affixing it.

13. In a stamp affixing device, the combination of a case for a roll of stamps, a pair of rollers adjacent to said case, said case having an aperture leading to the rollers, mechanism for rotating said rollers periodically in one direction to feed the stamps in a continuous row, a guide for such fed stamps, a stopping device adapted to engage the next to the foremost stamp, and a pair of gripping rollers adapted to engage the envelop and stamp in advance of the stopping device and pull the foremost stamp free from the roll.

14. In a stamp affixing device, the combination of a case for a roll of stamps, a pair of rollers adjacent to said case, said case

having an aperture leading to the rollers, mechanism for rotating said rollers periodically in one direction to feed the stamps in a continuous row, a guide for such fed stamps, a stopping device adapted to engage the next to the foremost stamp, a pair of gripping rollers adapted to engage the envelop and stamp in advance of the stopping device, a cam for controlling the stopping device, and a cam for controlling the grip of the stamp affixing rollers.

15. In a stamp affixing machine, the combination of a case for a roll of stamps, a pair of rollers for feeding such stamps in a continuous row, mechanism for periodically rotating such rollers in a feeding direction, a guide for the fed stamps, a pair of rollers adapted to grip the envelop and the foremost stamp, a stopping device adapted to rest by gravity on the foremost stamp adjacent to the perforations at the rear thereof and drop into such perforations, and mechanism adapted to raise the stopping device from active position.

16. The combination of a stamp guide, means for feeding stamps along the same, a series of fingers adapted to rest lightly on the top of the stamps in the guide and drop by gravity into the perforations at the rear of the foremost stamp, means for engaging and pulling loose the foremost stamp when such fingers are in the perforations and simultaneously affixing such stamp to the envelop, and means for thereafter raising the fingers from the perforations.

17. In a stamp affixing device, the combination of a stamp guide, a pair of stamp feeding rollers, means for periodically rotating them to feed a row of stamps, the foremost stamps traveling along the guide, a series of fingers adapted to rest on the foremost stamp in the guide and drop by gravity into the perforations at the rear thereof, a pair of rollers adapted to engage the envelop and press the foremost stamp thereon and pull such stamp loose from the succeeding stamp stopped by the fingers, and automatic mechanism for releasing the fingers to perform their stopping action and thereafter raising them from such position, and automatic mechanism for moving one of the stamp affixing rollers so that it is active to pull off the foremost stamp and impress it and at other times is held inactive.

18. In a stamp affixing device, the combination of two pairs of feeding rollers, means for continuously rotating them, means for causing the second pair of rollers to periodically approach and recede from each other, means for feeding a row of stamps to bring a stamp into engagement with the envelop between the pairs of rollers, and means for stopping the row of stamps behind the foremost one and holding it stopped while the

foremost stamp is engaged by the forward pair of rollers and pulled off of the row of stamps.

19. In a stamp affixing device, the combination of two pairs of rollers, means for continuously rotating them to feed envelopes through the pairs successively, a case for a roll of stamps, a pair of rollers for feeding stamps in a row from such case, means for periodically rotating said last mentioned rollers, and a stopping device adapted to act in the rear perforations of the forward stamp between the stamp feeding rollers and the forward pair of envelop feeding rollers, while the stamp is gripped against the envelop in the last mentioned rollers.

20. In a stamp affixing device, the combination of two pairs of rollers, means for continuously rotating them to feed envelopes

through the pairs successively, a case for a roll of stamps, a pair of rollers for feeding stamps in a row from such case, means for periodically rotating said last mentioned rollers, a stopping device adapted to act on the stamps between the stamp feeding rollers and the forward pair of envelop feeding rollers and enter the perforations between the foremost stamp and the next to the foremost stamp, a cam for controlling the action of such stopping device, and a cam for controlling the action of the foremost feeding rollers.

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

GEORGE T. TRUNDLE.

Witnesses:

ALBERT H. BATES,
W. DUNLOP.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."