No. 687,928. Patented Dec. 3, 1901.

H. TZSCHUCKE & J. K. ENGELMANN.

APPARATUS FOR DAMPING AND AFFIXING STAMPS, LABELS, &c.

(Application filed Mar. 23, 1901.)

(No Model.) 3 Sheets—Sheet 1.

FIG. 1.

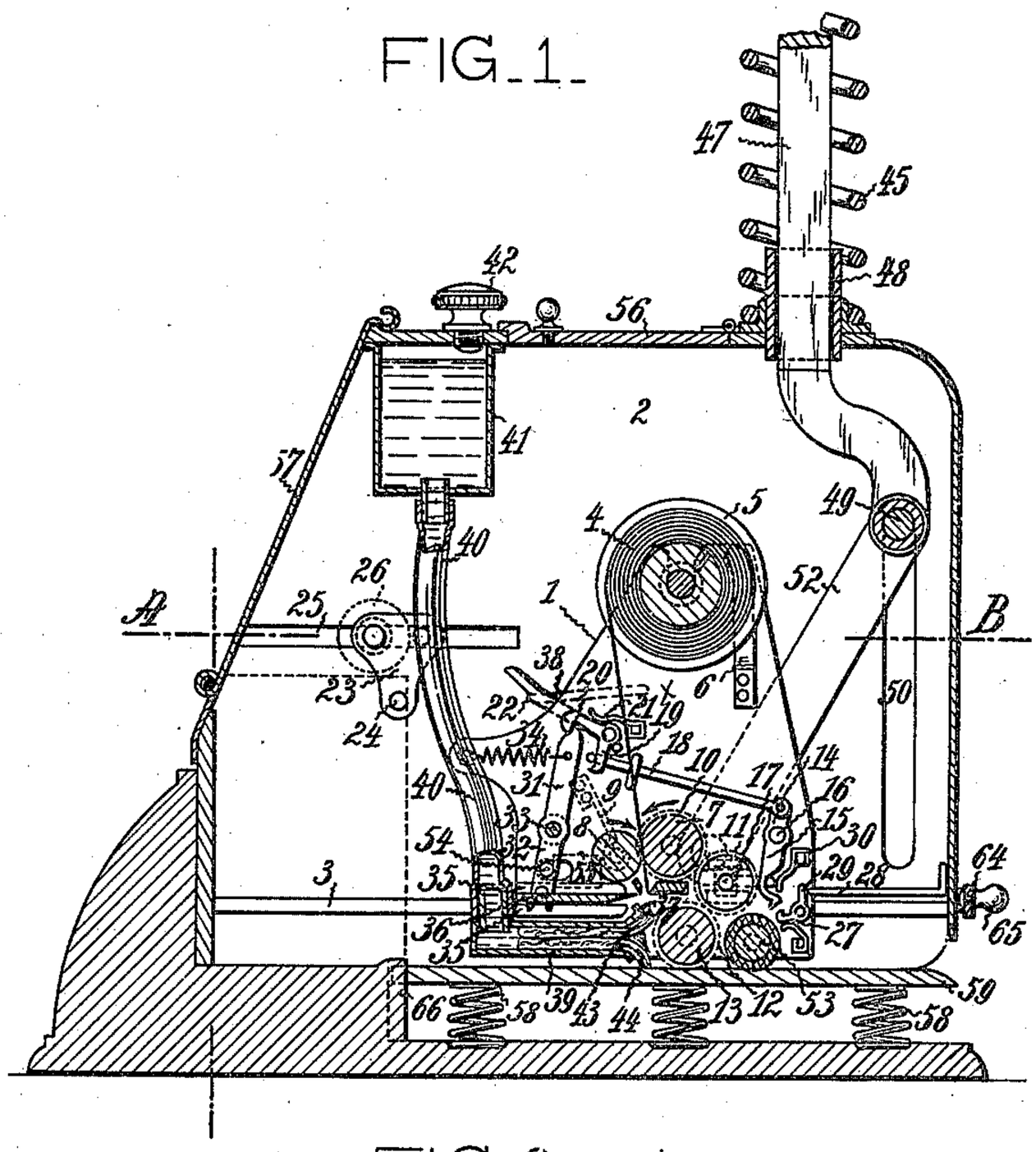
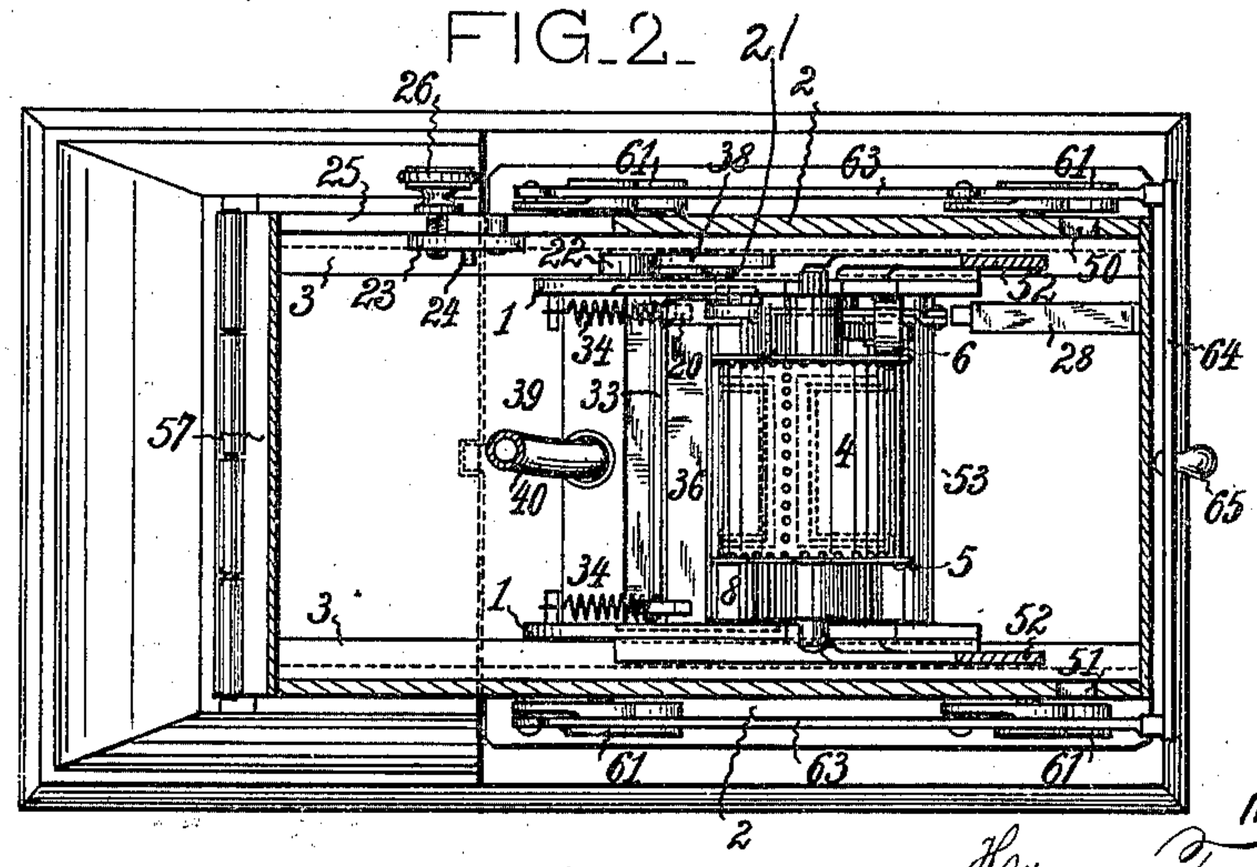


FIG. 2.



INVENTORS.
Hermann Tzschucke
Johannes Karl Engelmann.
BY Richards & Co
ATTORNEYS

WITNESSES:
Ella L. Giles
Otto Munn

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(No Model.) 3 Sheets—Sheet 2.

FIG. 3.

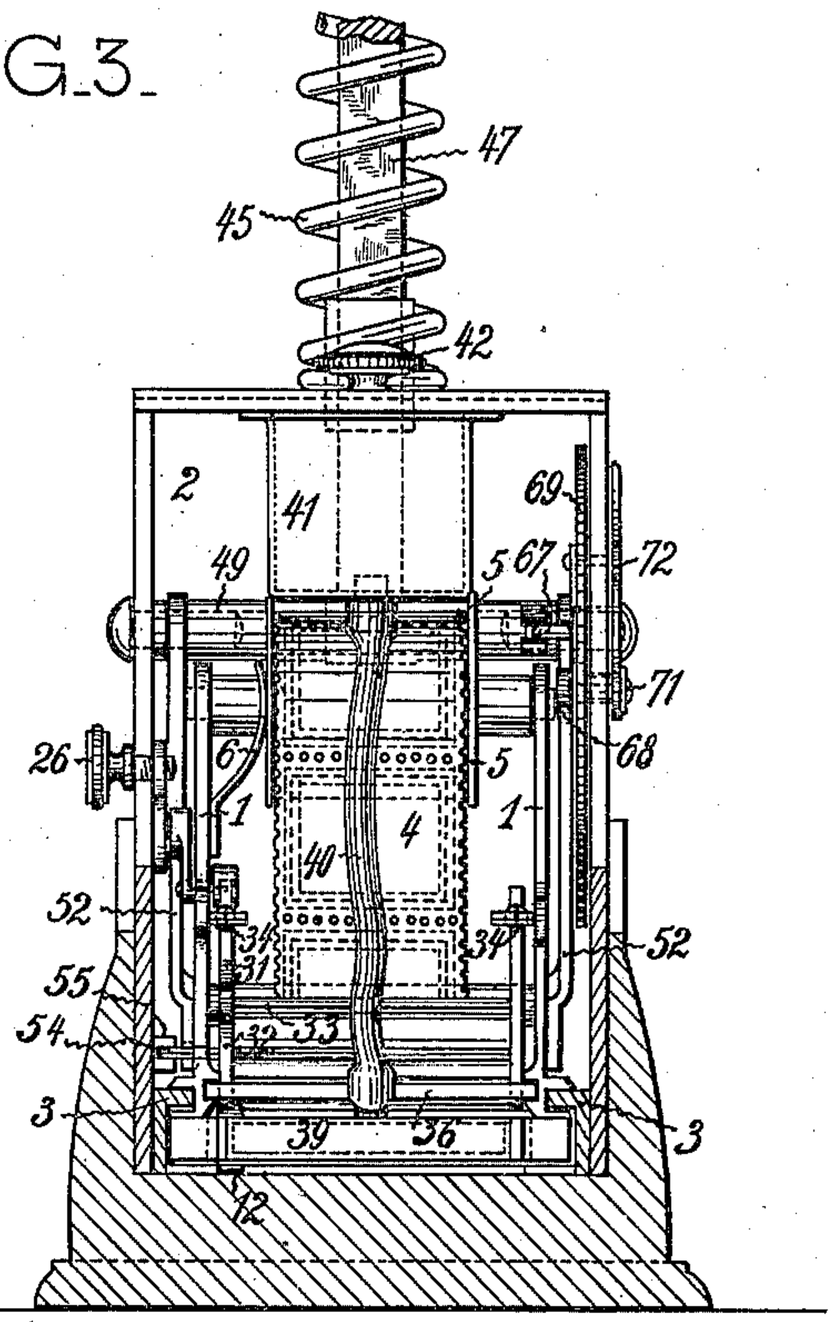
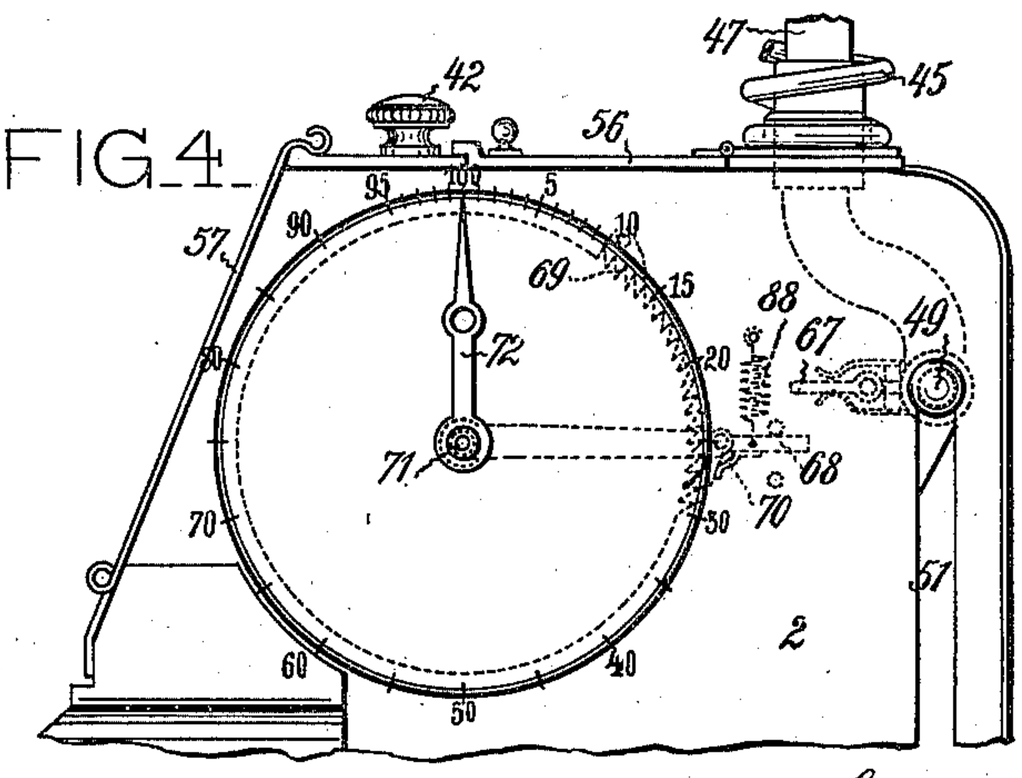


FIG. 4.



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Hermann Tzschucke
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WITNESSES
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[illegible]

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FIG. 7.

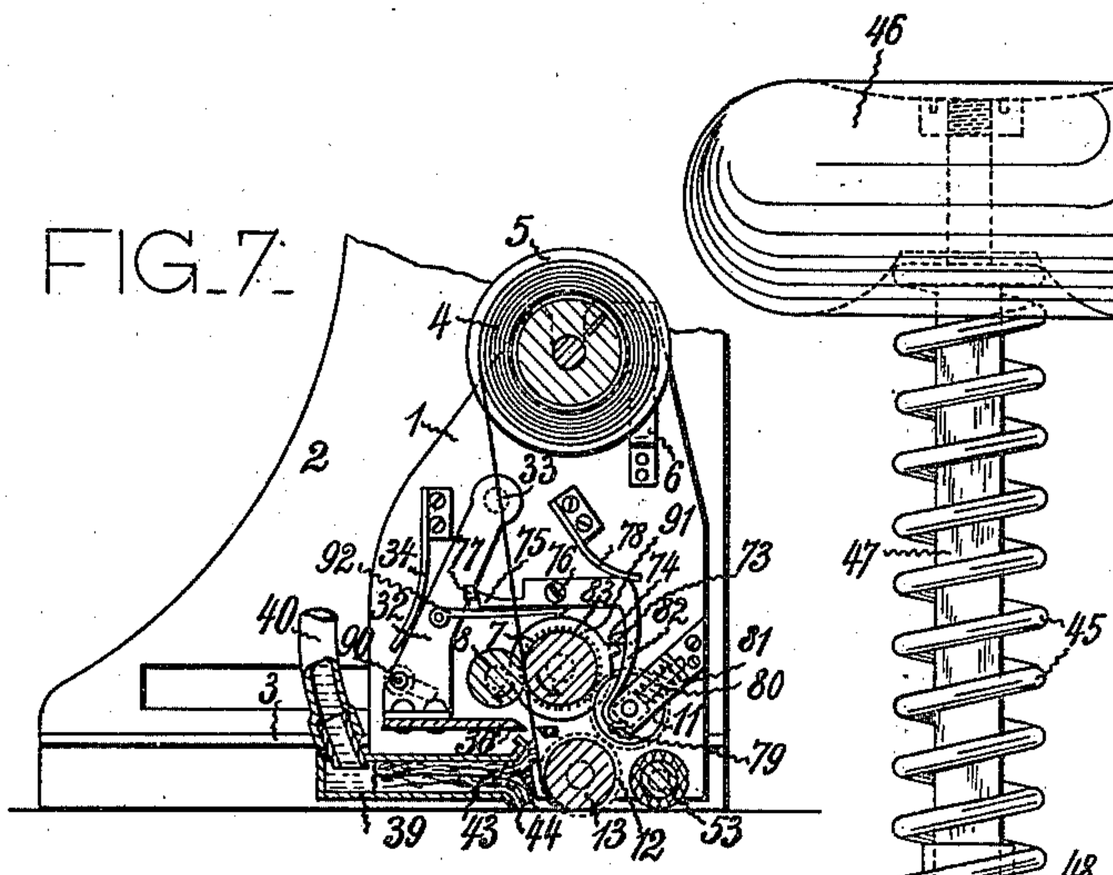
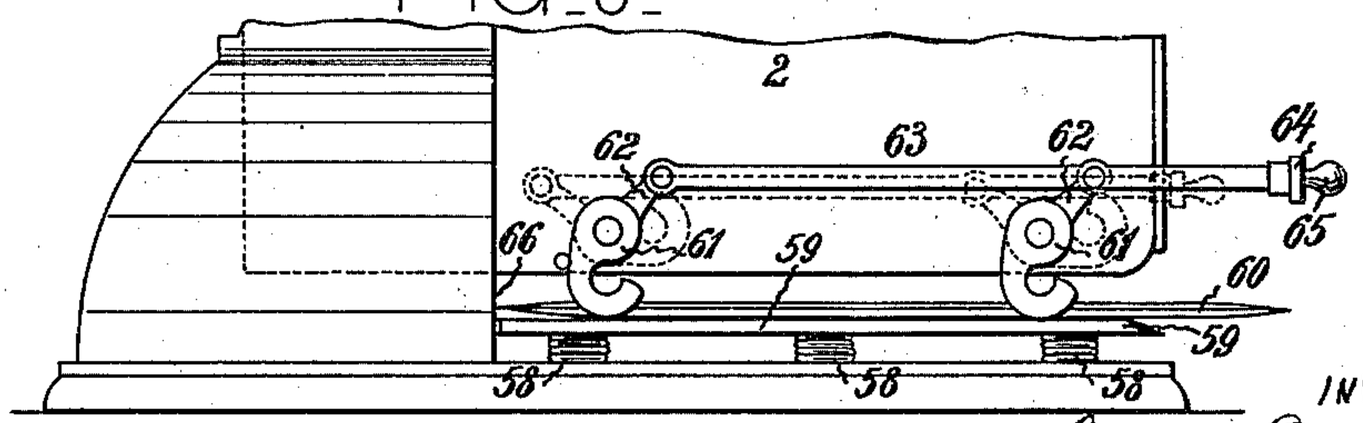


FIG. 5.

FIG. 6.



WITNESSES:
Ella L. Giles

INVENTORS.
Hermann Tzschucke
Johannes Karl Engelmann
BY
Richards & Co
ATTORNEYS

UNITED STATES PATENT OFFICE.

HERMANN TZSCHUCKE AND JOHANNES KARL ENGELMANN, OF DRESDEN, GERMANY; SAID ENGELMANN ASSIGNOR TO SAID TZSCHUCKE.

APPARATUS FOR DAMPING AND AFFIXING STAMPS, LABELS, &c.

SPECIFICATION forming part of Letters Patent No. 687,928, dated December 3, 1901.

Application filed March 23, 1901. Serial No. 52,521. (No model.)

To all whom it may concern:

Be it known that we, HERMANN TZSCHUCKE, residing at 15 Reissigerstrasse, and JOHANNES KARL ENGELMANN, residing at 51 Pillnitzerstrasse, Dresden, in the Kingdom of Saxony and Empire of Germany, subjects of the King of Saxony, have invented new and useful Improvements in Apparatus for Damping and Affixing Stamps, Labels, and the Like, of which the following is a specification.

This invention relates to apparatus designed for damping and affixing stamps, labels, and the like, which are united to form a strip wound upon a drum. The drum carrying the strip of stamps or labels and the feeding, cutting, and damping device are arranged in a casing adapted to be moved to and fro over the envelop, sheet, or the like with the aid of a guide, which renders the motion positive. The forward movement of the casing serves for pulling or feeding the strip a distance corresponding to the length of one stamp or label, for cutting the same, for damping its gummed side, and for rolling it upon the envelop or the like, while in the backward movement the parts of the mechanism are placed again in position for carrying out the next operation, for which purpose appropriate devices may be employed.

The said invention will hereinafter be described as applied to apparatus for damping and affixing stamps, it being understood that the apparatus may be either the same or slightly modified when employed for labels and the like.

In the accompanying drawings the improved apparatus is represented.

Figure 1 is a vertical longitudinal section of this apparatus. Fig. 2 is a horizontal section on the line A B of Fig. 1. Fig. 3 is a vertical transverse section. Fig. 4 shows a side elevation of a counting device. Fig. 5 is a vertical longitudinal section of the apparatus, the upper part of the same being shown in elevation. Fig. 6 is a side view showing details. Fig. 7 represents a vertical longitudinal section of a modified form of the apparatus.

The movable casing 1 is arranged in a casing 2, between parallel guide-bars 3, engaging with corresponding grooves formed in the sides of the casing 1. In the upper part of the casing 1 is removably held the drum 5, carrying the strip of stamps 4. A spring 6, acting as a brake, bears continually against the front of the drum 5. Below this drum and parallel to it we support a pair of feed-rollers 7 8, serving to pull or feed the strip of stamps 4. One of these rollers 7 is held in a fixed bearing, while the bearing 9 for the other roller 8 forms part of a spring, so that this roller will be continually pressed against the roller 7 and can yield. Upon one of the journals of the roller 7 is secured a spur-wheel 10, with which an intermediate wheel 11 may be brought into engagement, which receives its motion from a spur-wheel 12, fixed upon the journal of a roller 13, held in a fixed bearing of the casing 1. When the intermediate wheel 11 is thrown into gear, Fig. 1, the movement of the roller 13 causes the turning of the feed-roller 7. The intermediate wheel 11 is thrown out of gear by means of a lever 14 15, pivoted upon a stationary journal 16 and whose downwardly-extending arm 15 takes hold of the bearing 17 for the journal of the wheel 11, while the upwardly-extending arm 14 is connected by a push-rod 18 with the arm 19 of a bell-crank lever 19 20, so as to yield, the other arm 20 of this lever forming a hook. This lever 20 is pressed downwardly by a spring $21^{\times}$, Fig. 1. The lever 19 20 is firmly connected by a bolt 21, passing through the side of the casing 1, with a lever 22, in whose path is arranged a stop 24, provided on an adjustable block 23, which is held in a slot 25 in the side of the casing 2 so that it cannot turn and may be fixed in position by a clamping-screw 26. As soon as the lever 22 is raised on coming in contact with the stop 24 the intermediate wheel 11 will be thrown out of gear, and the arm 15 of the lever 14 15 is seized at its free end by a stop-lever 27, subjected to the action of a spring, and which is disengaged on the termination of the backward movement of the casing 1 by a stop 28, fixed to the casing 2 and acting upon an angular projection 29 of the stop-lever 27. On the disengagement of this stop-lever the spring 30 commences to act, throw-

ing the wheel 11 into gear again. As simultaneously with the lifting of the lever 22 the hook 20 of the lever 19 20, subjected to the action of the spring 21×, is disengaged, the spring 34, which is under tension and acts upon the arm 31 of a lever 31 32, becomes free and causes this lever to turn about its stationary journal 33. The downwardly-extending arm 32 of the lever 31 32 takes hold of a knife 36, adapted to slide between guide-ledges 35, the said knife being caused to dart forward owing to the tension of the spring 34 and to sever the stamp from the strip while the latter is pressed against a support 37. In the continued movement of the casing 1 the lever 22 is held in the raised position by a prolongation 38 of the same sliding further upon the stop 24, the latter being adjusted in accordance with the length of the stamp.

Below the knife 36, in front of the roller 13, is arranged the damping device. This consists of a receptacle 39, connected by a pipe 40 with a reservoir 41, which is secured above to the top of the casing 2 and furnished with a feed-aperture fitted to be closed by a screw 42. The receptacle 39 is open on the side turned toward the roller 13. From this open side the ends 43 44 of wicks protrude. One end 43 is turned against the gummed side of the stamp and the other end 44 is bent downward against the envelop, sheet, or the like upon which the stamp is to be fixed. Accordingly the former wick serves for damping the back of the stamp, while the latter wick damps the envelop or sheet. The forward movement of the casing 1 takes place by hand with the help of appropriate means, and the backward movement is generally effected by a spring put under tension in the forward movement.

In the constructional form shown in Figs. 1 to 6 is provided a push-rod 47, surrounded by a sufficiently-strong spring 45 and furnished at the top with a knob 46, Fig. 5, the said rod being guided in a sleeve 48, extending through the top of the casing 2. At its lower end the push-rod 47 carries a yoke 49, whose ends are guided in slots 50 51 in the sides of the casing 2. Two rods 52 form the jointed connection between the yoke 49 and the casing 1. The connecting-rods 52 in the initial position of the casing 1 are placed at such an inclination that their lower ends will move forward on pressure being exerted upon the knob 46. On the push-rod 47 being pressed down the casing 1 moves forward. The roller 13 turns and transmits its motion through the intermediate wheel 11 to the feed-rollers 7 8. When the strip of stamps 4 has been pulled the length of a stamp, the lever 22 reaches the stop 24 and is then raised, thereby throwing the intermediate wheel 11 out of gear and releasing the knife 36. In the continued forward movement the severed stamp is pulled by the roller 13 completely past the damping device and is finally rolled upon the envelop or sheet, being, if necessary, supported by a second roller 53, arranged behind it and furnished with a covering of rubber. After the release of the knob 46 the spring 45 begins to act and moves the casing 1 back to its initial position, Fig. 1. In this case the stop-pin 54 on the lower arm 32 of the knife-lever 31 32 is held back by the stop 55, fixed to the casing 2, Fig. 3. By this means the spring 34 is put under tension and the end of the upper arm 31 of the knife-lever passes again behind the stop-lever 20, which has meanwhile returned to its initial position. The intermediate wheel 11 remains disengaged until the casing 1 has again reached its initial position, because only then the lever 14 15 will be disengaged by the stop 28 on the casing 2. In order to enable the drum 5 for the strip of stamps to be exchanged, the interior of the casing 2 is accessible by a flap 56 in the top and a flap 57 in the front wall.

In the constructional form shown the apparatus is provided with a base-plate, the arrangement being such that a space is left for the introduction of the envelop, sheet, or the like to which the stamp is to be affixed. In the case of envelops where the stamps are always put in the same place the said arrangement facilitates and accelerates the work to a very considerable extent. In the said space confined at the rear a supporting-plate 59 is adapted to move vertically parallel to itself and bears upon springs 58. By a device (represented in Fig. 6) this plate 59 may be forced downward to enable the letter 60 to be inserted. On the outside of the casing 2 are pivoted on either side thumb-pieces 61, having arms 62, connected with each other by rods 63. The connecting-rods 63 are prolonged to the front and united by a transverse bar 64, which carries a knob 65 for facilitating the operation. On the knob being pulled the thumb-pieces 61 force the supporting-plates 59 downward, and the letter may be pushed in as far as the stops 66. Then the knob 65 is pulled back and the plate 59 left to the action of the supporting-springs 58.

Owing to the supporting-plate 59 being arranged to yield, the insertion of letters of varying thicknesses is rendered possible without jeopardizing at all the action of the apparatus.

For the purpose of indicating how many stamps of a certain kind put in the apparatus have been used a simple automatic device is provided for counting the stamps removed. This device comprises a stationary index 72 and a number-disk 69, provided at its periphery with ratchet-teeth, Fig. 4. With the ratchet-teeth of this disk engages a spring-pawl 70, secured to a lever 68, adapted to oscillate about the axis 71 of the disk and subjected to the action of a spring 88. The throw of this lever is limited in both directions by fixed stops. On the yoke 49 is arranged a

spring-carrier 67, which in every downward movement carries away the lever 68, and thus effects the turning movement of the number-disk 69 by one tooth.

A simplified constructional form of the improved apparatus, wherein the knife is not put automatically under tension and the intermediate wheel 11 is not thrown automatically into gear, is represented in Fig. 7. In this case the release of the knife 36 and the disengagement of the intermediate wheel 11 take place from the feed-roller 7. With this roller is connected a cam-disk 83, whose nose 74 acts upon the arm 82 of a lever 82 75, adapted to swing about a stationary journal 76. The free end of the arm 75 in the operative position passes behind a corresponding projection 77 on the knife-arm 32 and acts as a stop. The end of the other arm 82 takes under the bearing of the intermediate wheel 11, which, in opposition to the action of a spring 80 bearing against a fixed rest 81, is movably fixed to the wall of the casing. To the nose 74 corresponds a nose 73 on the lever-arm 82. After one rotation of the feed-roller 7 the lever 82 75 thus receives a turning movement by which the arm 75 releases the knife and the arm 82, on the other hand, effects the disengagement of this wheel 11. As soon as this disengagement has taken place the roller 7 stops and the lever 82 75 remains in the disengaged position, so that during the further forward movement of the casing 1 the intermediate wheel 11 remains disengaged. After the termination of the backward movement of the casing 1 in consequence of the action of the spring 45 the knife 36 is moved back to its position of rest, Fig. 7, by hand with the aid of a knob 90, provided on the arm 32 of the knife, so as to enable the same to be taken hold of from the outside. In this movement its spring 34 is put under tension and a pawl 92, taking behind a notch 91 on the cam-disk 83 and pivoted to the arm 32 of the knife, turns the cam-disk 83, and thus the feed-roller 7, to such an extent that the nose 73 on the lever-arm 82 will just slide off the nose 74 on the disk 83. By this means the lever 82 75 becomes free, and under the action of the spring 78 its end 75 takes again behind the projection 77 on the arm 32 of the knife, the wheel 11 being thus thrown into gear again, whereupon the mechanism is ready for further use.

By the arrangement of a fixed stop on the casing 2 the operation of the knob 90 may also be effected automatically in the backward movement of the casing 1.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In apparatus for damping and affixing stamps or labels the combination of a casing adapted to be moved to and fro, a drum receiving a strip of stamps or labels, a roller running upon the envelop or sheet designed to receive the stamp or label, feed-rollers for said strip, an intermediate wheel transmitting the motion from said roller to one of the feed-rollers, means for throwing the same out of gear, a knife, a spring for actuating the same, a trip mechanism for said knife, and a receptacle having an open end and holding two wicks, substantially as set forth.

2. In apparatus for damping and affixing stamps or labels the combination of a casing adapted to be moved to and fro, a drum receiving a strip of stamps or labels, a roller running upon the envelop or sheet designed to receive the stamp or label, feed-rollers for said strip, an intermediate wheel transmitting the motion from said roller to one of the feed-rollers, means for throwing the same out of gear, a knife, a spring and trip mechanism for actuating the knife, a receptacle having an open end and holding two wicks, and fixed stops which in the backward movement of said casing move back the knife and permit the intermediate wheel to be thrown into gear, substantially as set forth.

3. In apparatus for damping and affixing stamps or labels the combination of a casing adapted to be moved to and fro, a drum receiving a strip of stamps or labels, a brake-spring bearing against the drum, a roller running upon the envelop or sheet designed to receive the stamp or label, feed-rollers for said strip, an intermediate wheel transmitting the motion from said roller to one of the feed-rollers, means for throwing the said wheel out of gear, a knife submitted to the action of a spring, a receptacle having an open end and containing two wicks, and a lever holding said knife in position when under tension, substantially as set forth.

4. In apparatus for damping and affixing stamps or labels the combination of a casing adapted to be moved to and fro, a drum receiving a strip of stamps or labels, a brake-spring bearing against the drum, a roller running upon the envelop or sheet designed to receive the stamp or label, feed-rollers for said strip, an intermediate wheel transmitting the motion from said roller to one of the feed-rollers, means for throwing the same out of gear, a knife, a spring and trip mechanism for operating the knife, a receptacle having an open end and containing two wicks and a push-rod submitted to the action of a spring and connected with said casing, substantially as set forth.

5. In apparatus for damping and affixing stamps or labels the combination of a casing adapted to be moved to and fro, a drum receiving a strip of stamps or labels, a brake-spring bearing against the drum, a roller running upon the envelop or sheet receiving the stamp or label, feed-rollers for said strip, an intermediate wheel transmitting the motion from said roller to one of the feed-rollers, means for throwing the same out of gear, a

knife, a spring and trip mechanism for operating the knife, a receptacle having an open end and containing two wicks, and a base-plate over which said casing travels arranged below and supporting said casing and leaving a space above for the insertion of said letter or sheet, substantially as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

HERMANN TZSCHUCKE.
JOHANNES KARL ENGELMANN.

Witnesses:
HERNANDO DE SOTO,
PAUL ARRAS.