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PATENTED JULY 17, 1906.

B. C. A. VORSTER.

APPARATUS FOR GUMMING POSTAGE STAMPS ONTO LETTERS, &c.

APPLICATION FILED SEPT. 27, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

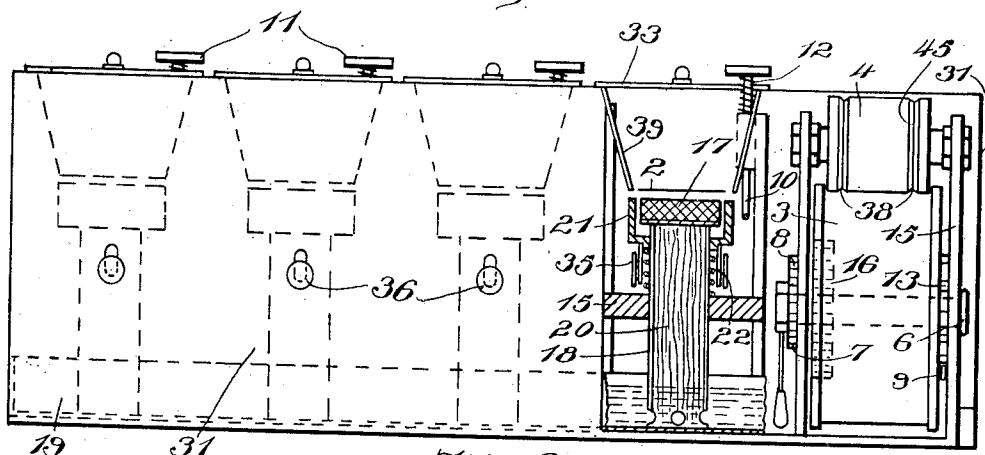
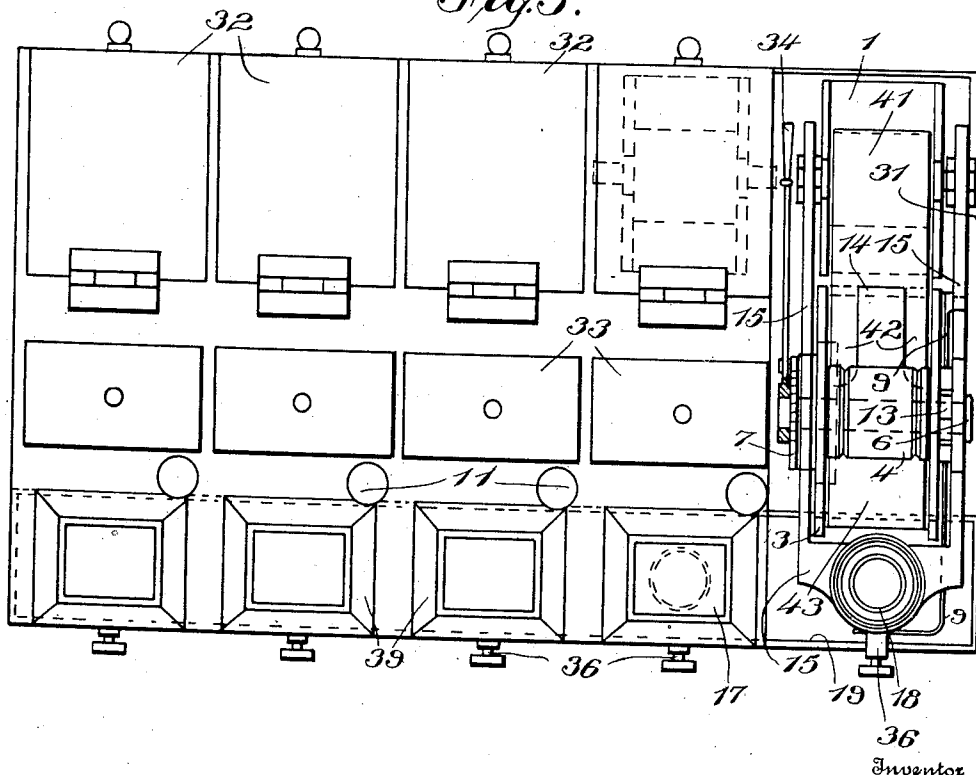


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 2.

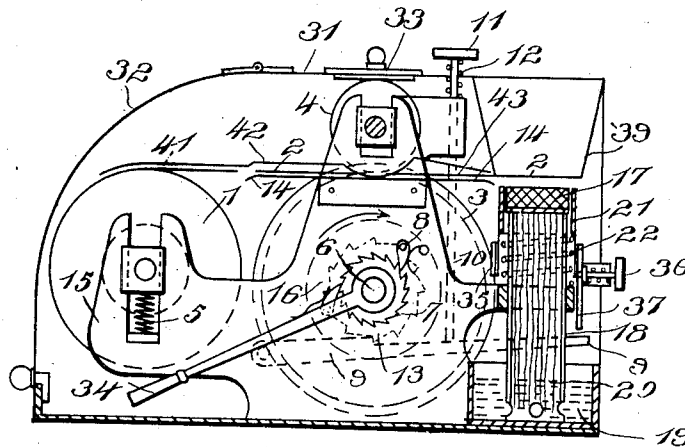


Fig. 4.

Fig. 4^a

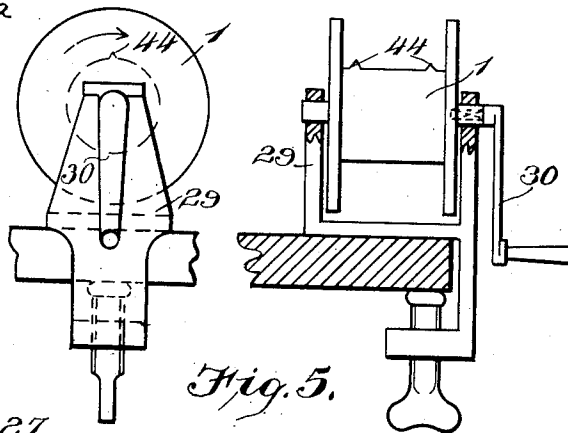
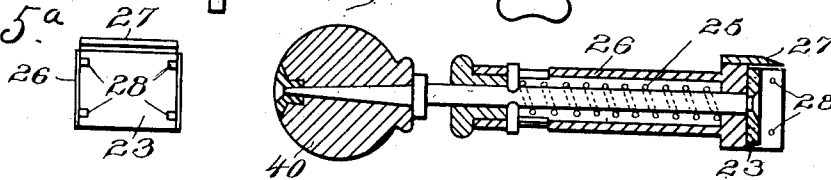


Fig. 5.

Fig. 5^a



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UNITED STATES PATENT OFFICE.

BASTIAAN CAREL AUGUST VORSTER, OF AMSTERDAM, NETHERLANDS.

APPARATUS FOR GUMMING POSTAGE-STAMPS ONTO LETTERS, &c.

No. 826,391.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, BASTIAAN CAREL AUGUST VORSTER, a subject of the Queen of the Netherlands, residing at Amsterdam, Netherlands, have invented certain new and useful Improvements in Apparatus for Gumming Postage-Stamps onto Letters, &c., of which the following is a full, clear, and exact specification.

10 This invention relates to an apparatus for gumming postage-stamps onto letters and the like in order to do away with the present objectionable method of moistening the stamps with the tongue and applying them to
15 the letters by hand, which is at present done even in cases where a large number of letters &c., have to be stamped at one time.

20 The apparatus which forms the object of the present invention can effect the application of the stamps as rapidly as by hand and has the advantage that the stamps do not require to be touched by the hand or the tongue.

25 The apparatus consists mainly of two parts—first, the part wherein a number of stamps are stored and delivered singly, and, secondly, the part comprising the operative device for seizing the delivered stamp and gumming the same on the letter, &c. The
30 stamps are for this purpose coiled upon a reel, from which the strip is led over a drum and is subjected to the weight of a pressing-roller in such a manner that when the drum is rotated the strip is moved forward.

35 The motion of the drum is effected by means of a watch-spring held stationary by a pawl-and-ratchet device in the well-known manner. On releasing the pawl the ratchet turns the distance of one tooth, causing the
40 drum to turn to the required extent for advancing the strip a distance equal to the length or width of one stamp. The end stamp of the strip then arrives over a small felt pad that is continually moistened. A
45 plunger of special construction moved by hand then presses this stamp for a moment against the pad, at the same time separating it from the strip, and then holding it. The plunger, together with the stamp, is then
50 moved by hand to the place where the stamp is to be applied, and the gumming on is simply effected by pressing the plunger down.

55 The apparatus is shown in the accompanying drawings, in which—

Figure 1 shows a front view, partly in section; Fig. 2, a cross-section; Fig. 3, a plan, partly in section, of a casing containing five apparatus for five different kinds of stamps. Figs. 4 and 4^a show a device for coiling the
60 strip of stamps upon a reel in front and side elevation, the latter partly in section. Fig. 5 is a longitudinal section through the instrument for holding, removing, and applying the stamps; and Fig. 5^a is an end view upon
65 its lower face.

The reel 1, on which the strip of stamps is coiled, is mounted in the frame 15 upon springs 5 to press the reel upward against a plate 41. The strip of stamps 2, coiled upon
70 the reel 1, is led between the drum 3 and the pressing-roller 4. The drum 3 is provided with lateral flanges for guiding the strip and is mounted on the axis 6. It is acted upon
75 by a watch-spring 16, which is only indicated by a circle in Fig. 2 for the sake of clearness and which is wound up by means of a lever
34 with the well-known ratchet action, the inner end of the spring being held in the
80 wound-up position by means of the ratchet-wheel 7 and pawl 8.

The drum 3 has fixed to its other side a ratchet-wheel 13, Fig. 1, the pawl of which has the shape of a long lever 9, Fig. 2, adapted to be disengaged by depressing a spring-
85 stud 11, Fig. 2, projecting from the top of the casing, the stud being connected to the lever 9 by a link 10 and being held in the raised position by a spring 12. The strip of stamps
90 2 is passed from the reel through a guide consisting of a plate 14, arranged in front of and behind the drum 3 and pressing-roller 4. Behind the drum this plate is formed so as to
95 constitute a small flat box 42, open at top, while in front of the drum it is formed into a mouthpiece 43, through which the stamps issue. The box 42 and mouthpiece 43 fit as
closely as possible against the drum and pressing-roller and are so formed that the stamp-strip is led straight through between
100 the drum and roller and is held flat thereby. The plate 41, against which the reel 1 is pressed, is resiliently connected to the box 42 and also serves to guide the strip correctly and prevent it from curling upward. The
105 forward feeding of the stamp-strip is effected by the friction between the drum 3 and roller 4, and the feeding is adjusted by two pointed pins 38, projecting from the surface of the drum 3. In the pressing-roller are formed
110

corresponding peripheral grooves 45, Fig. 1. If the roller be raised and the stamp-strip be pushed through the box toward the mouth-piece 43, the correct position of the strip will be that in which the points 38 pass through the perforations existing between the first stamp and the next one. On the rotation of the drum it will consequently guide the first stamp of the advancing strip by means of the points, and the circumference of the drum is so proportioned that when the points 38 arrive uppermost after a complete revolution they again pass through the perforations between two stamps, so that the stamps are not punctured thereby and are always fed forward accurately in the required position.

In front of the drum 3 there is arranged on the bottom of the casing a water-trough 19, from which the water is conveyed by a wick 20 to a small felt pad 17, mounted upon a tube 18 and having approximately the size of a postage-stamp, but made slightly smaller all round. Round the pad 17 is a loose rim 21, supported by a spring 22, so as to enable it to slightly yield downwardly.

Above the pad 17 is arranged a rectangular tapering guide-frame 39 for guiding the stamp-removing instrument. The lever edge of this frame is brought as close as possible to the opening of the mouthpiece 43, through which the stamp-strip advances. Round the lower tubular end of the rim 21 is fitted a loose sleeve 35, having a downward-directed stem 37, that is secured in any desired position by the locking-pin 36. The stem 37 is situated accurately over the lever 9, Fig. 3, the end of which is bent toward the middle of the apparatus, as shown.

The removing and stamping instrument shown in Figs. 5 and 5^a is in the form of a hand plunger or die. The base-plate 23 thereof has the form and size of a postage-stamp and is connected to a movable central stem 24, having a handle 40 at the upper end. The coil-spring 25, contained in the tubular casing 26, presses the stem 24 upward. The casing 26 is formed at its lower enlarged end with two opposite lateral guide-cheeks for the base 23, and at another of its sides it is provided with a sharp cutting edge 27. The side opposite the latter is open, and the two side cheeks have small projecting points 28, serving to hold the postage-stamp for a moment. In order to allow the base 23 to pass these points when it is depressed for gumming down the stamp, the base has in the edge small notches 23', as shown in the sectional view, Fig. 5. The coil-spring 25 is made considerably stiffer than the spring 22.

Fig. 4 shows the device for winding the stamp-strip onto the reel 1. A small frame 29 is for this purpose adapted to be clamped to a table, as shown. The reel-axis is placed in bearings in the frame and is rotated by means of a crank-handle 30. For attaching

the end stamp of the strip small points 44 are provided on the reel.

Several of the above-described apparatus are arranged side by side in a box or casing 31, from which only the studs 11 and 36 project. Hinged flaps 32 and covers 33 are provided for affording ready access to each of the reels 1 and for allowing the pressing-rollers 4 to be removed on introducing the stamp-strip 2 into the guide-frame. The levers 34 for winding up the spring 16 are also rendered accessible through the covers 32.

The action of the above-described apparatus is as follows: Assuming all the springs 16 have been wound up and each reel 1 is provided with a coiled stamp-strip 2, which is engaged with the points 38 on drum 3 and is brought to the edge of the opening of the guide 39, the pressure-rollers 4 being replaced in position and the covers 32 and 33 closed the apparatus is now ready to be used. For stamping a letter or the like with a stamp of a certain value the stud 11 of the apparatus containing the corresponding stamps is depressed, thereby causing rod 10 to descend and to disengage the pawl-lever 9 from the ratchet 13 of the drum 3, which is then advanced by its spring 16 through a distance corresponding to one tooth of the ratchet, the extent of such motion of the periphery of the drum being equal to the width of one stamp, so that by this means the stamp-strip is drawn forward between the drum and the pressing-roller until the first stamp is brought under the opening of the guide 39 and exactly over the moistening-pad 17. The operator should not allow his fingers to rest on the stud 11. A short and slight pressure is required, so that the spring 12 can lift the ratchet-lever 9 immediately into locking position behind the next tooth. The strip of stamps is pressed by the reel 1 against the guide-plate, causing sufficient friction thereby to prevent the drum 3 from a too rapid revolution under the pull of its spring, and therefore the ratchet-lever 9 has ample time to fall into locking position behind the next tooth. The removing and stamping instrument, Fig. 5, is now taken by its handle and is pushed down through the guide 39, with the cutter 27 directed toward the drum and is pressed down upon the postage-stamp. The two guide-cheeks of the casing 26 bear upon the rim 21, pressing it down and against the light spring 22. At the same time the gummed surface of the stamp is pressed by the base 23 against the pad 17, so as to be wetted thereby, while the cutter 27 separates the stamp from the strip 2. The spring 25 has not been compressed during this operation, and the pins 28 have passed beyond the edges of the stamp, being clamped between the base 23 and the pad. When the stamping instrument is now lifted, the wetted stamp lying against the surface of the base

23 will be retained there by the points 28 and is consequently carried away by the instrument to the place where the stamp is to be applied. This is effected by merely pressing down the handle 40 of the instrument with a pressure sufficient to compress spring 25, thereby causing the base 23 to press the wet gummed side of the stamp firmly onto the letter, paper, or other object. For operating rapidly the sleeve 35 is adjusted so low down on the rim 21 that on the downward motion of the latter the stem 37 will come in contact with the lever 9. It is in this case not necessary to press down the stud 11 every time, as the apparatus works automatically, inasmuch as on pressing down the stamping instrument so as to seize the wetted stamp the stem 37 will depress lever 9, so as to release the ratchet of the drum 3, whereupon as the instrument is raised with the wetted stamp the drum will be turned by its spring so as to bring the next stamp over the pad 17 ready for the next stamping operation.

The pressing-roller 4 is made of heavy metal so that its weight may be sufficient to produce enough friction for feeding the stamp-strip between the drum and the roller. The pressing-roller might also be pressed down by springs, which may either be hooked onto its journals or a bridge-shaped piece pivoted to the framing 15 may carry a bent spring pressing upon the top of the roller-bearings. These details are not shown in the drawings for the sake of clearness.

It will be seen from Fig. 5 that the cutter 27 is situated at the longer side of the plate 23 because the stamp-strips are preferably arranged so that the longer sides of the stamps are joined together. The points 28 are therefore situated on the narrow sides, and the width of the feed-drum and pressing-roller correspond to the length of the stamps. Should, however, the design on the stamps be such that they require to be joined together by their shorter sides on the strip, the cutter 27 would be arranged on the shorter side of plate 23 and the points 28 on the longer sides. The dimensions of the feed-drum, roller, and

guide-frame would then be altered accordingly.

Having thus described my invention, what I claim is—

1. An apparatus for moistening and affixing postage-stamps comprising a pad arranged over a water-bath and connected with the same by wicks, means for feeding a strip of stamps toward and over said pad, a spring-supported sleeve surrounding said pad and having a finger to actuate said feeding means, and means adapted to press the stamp on the end of the strip against the moistened pad and to separate it from the strip, and provided with means for supporting the wetted stamp while conveyed to the place where it is to be applied.

2. In an apparatus for moistening and affixing postage-stamps in combination, a moistening-pad 17 adapted to receive and moisten the front stamp of a strip of stamps advanced by a feeding-drum, a spring-supported reel 1 adapted to hold a coiled strip of postage-stamps, and press it with friction against the guide-plate, guides 42, 43 for leading the strip of stamps from the reel to the pad, a spring-actuated feed-drum 3 and pressing-roller 4 arranged between the guides 42 and 43 and adapted to convey the stamp-strip forward, a ratchet-wheel 13 on said drum, a pawl-lever 9 engaging said ratchet-wheel 13, a stem 10 secured to the pawl-lever, a spring-actuated press-button 11 forming an extension of said stem 10, a spring-rim 21 surrounding the pad, a projection 37 on said spring-rim adapted to disengage the pawl-lever when depressed, a hand-plunger adapted to press the stamp down upon the pad and at the same time to separate it from the strip, and to depress said spring-rim 21, so as to act on lever 9, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

BASTIAAN CAREL AUGUST VORSTER.

Witnesses:

THOMAS HERMANN VERHAVE,
AUGUST SIEGFRIED DOCEN.