

UNITED STATES PATENT OFFICE.

EDWARD M. WILCOX, OF OMAHA, NEBRASKA, ASSIGNOR OF ONE-HALF TO
FRANK A. JONES, OF SAME PLACE.

ENVELOP-SEALING DEVICE.

SPECIFICATION forming part of Letters Patent No. 668,172, dated January 15, 1901.

Application filed July 18, 1900. Serial No. 24,102. (No model.)

To all whom it may concern:

Be it known that I, EDWARD M. WILCOX, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented a new and useful Envelop-Sealing Device, of which the following is a specification.

My present invention relates to a novel sealing device, the object in view being to provide simple and efficient means for effectually sealing mailing-packets of various descriptions, but more particularly for simultaneously moistening and sticking or sealing the gummed flaps of envelopes or similar first-class mail-packets.

One object of the invention, in a somewhat more specific aspect, is to construct a device of this character with a movable sealing member arranged to present the gummed flap of an envelop to a moistening device and to thereafter turn down the flap and seal it to the envelop by the continued movement of the sealing member.

A still further object of the invention is to equip the device with novel moistening mechanism designed to be automatically thrown into or out of operative relation with the sealing member for presentation to the gummed flap or for retention out of the path of movement of the member when the latter is returned to its initial position.

To the accomplishment of the objects stated and others subordinate thereto, all as will hereinafter more fully appear, the invention consists in the construction and arrangement of parts to be more fully described, illustrated in the accompanying drawings, and defined in the appended claims.

In said drawings, Figure 1 is a perspective view of my device complete, showing an envelop in position to be sealed and the moistening-roller depressed into the path of the sealing-plate. Fig. 2 is a side elevation of the subject-matter of Fig. 1 with the sealing-plate elevated to present the sealing-flap of the envelop to the moistening-roller and illustrating in dotted lines the elevated position of the roller and the sealing position of the sealing-plate, and Fig. 3 is a central longitudinal section through the moistening-roller.

Referring to the numerals of reference em-

ployed to designate corresponding parts in the several views, 1 indicates a base, preferably metal, of any desired shape or size, but preferably supported by feet 2 and having its upper surface cut away at the rear end of the base for the accommodation of a movable sealing member or hinged sealing-plate 3. The plate 3 is hinged by hinges 4 to the rear edge of the envelop-supporting platen 5, defined by the raised front portion of the base to present the upper surfaces of the plate and platen in the same horizontal plane when the plate is depressed or turned back, as shown in Fig. 1 of the drawings. At the front end of the platen is mounted a transverse adjustable gage-plate 6, against which the bottom edge of the envelop to be sealed is designed to rest, the adjustment of the gage being effected by any suitable means, but preferably by set-screws 7, screwed into the base and passed through transverse slots 8 in the plate. It will now be seen that when the gage-plate is properly adjusted an envelop 9 may be laid upon the platen 5, with its sealing-flap 10 extended upon the face of the sealing-plate 3, which latter may be swung upon its hinge to the position indicated in dotted lines in Fig. 2 to turn down the sealing-flap upon the body of the envelop, the movement of the plate being facilitated by a projecting handle 11 or other suitable actuating means. Obviously, however, some provision must be made for moistening the flap of the envelop. For the purpose of accomplishing the moistening of the gum by the act of turning down the flap I provide a moistening-roller 12, which is movably mounted in the path of the sealing-plate 3, so that the flap 10 will be presented to said roller and moistened as it is being turned down to the sealed position through the movement of the sealing-plate. The mounting of the roller 12 comprises a swinging roller-frame composed of a pair of roller-supporting arms 13, pierced at their lower ends by the roller-trunnions 14 and swinging from a horizontal frame-supporting bar 15, extending between the upper ends of a pair of posts or standards 16, upstanding from the rear corners of the base 1 beyond the rear free edge of the plate 3. These side arms 13 of the roller-supporting frame are

preferably braced by a transverse brace-bar 17, but this bar is located at a sufficient distance from the roller to permit the lower free ends of the arms to yield slightly when it is desired to withdraw the trunnions 14 for the purpose of detaching the roller. It will now appear that as the sealing-plate 3 is swung upwardly the gummed surface of the sealing-flap 10 will be presented to the moistening-roller 12, which will traverse the plate as the roller-supporting frame is swung upwardly under the impulse of the sealing-plate. It is therefore desirable to provide simple means for retaining the roller in its elevated position, as illustrated in dotted lines in Fig. 2, in order that the sealing-plate may be turned down to the sealing position and to thereafter be swung back to its initial position without interference from the roller; but it is likewise necessary that the return of the roller to its initial position be automatically effected after the sealing-plate has been turned back under the roller to permit a repetition of the sealing operation. To the accomplishment of these ends, I mount upon the rear end of the base 1 at a point between the posts 16 an upstanding pivoted latch-bar 18, provided in its front edge with upper and lower rests 19 and 20, arranged to be engaged by the transverse bar 17 of the roller-supporting frame to retain the latter in its elevated and depressed positions. The latch-bar 18 is additionally provided immediately above its lower pivoted end with a forwardly-extending projection or cam-face 21, designed to be engaged by the free edge of the sealing-plate as the latter is thrown back for the purpose of moving the latch-bar 19 to effect the disengagement of the bar 17 from the rest 19 and to permit the roller-supporting frame to gravitate to its initial position, where it is retained by the engagement of the rest 20 of the latch-bar with the bar 17 of the frame.

In addition to the novel construction recited I have also devised a moistening-roller which I have found to be very effective. The roller comprises a hollow metal tube 22, having its walls numerous perforated and having an integral end wall 23 extended to form an annular flange 24 and provided with an axial trunnion 14. The hollow tube is designed to be filled with water, as shown in Fig. 3 of the drawings, and is covered by an absorbent cylindrical casing or wick-sleeve 25, resting at one end against the flange 24 and confined upon the perforated tube by the annular flange 26 of a screw-cap 27, screwed into the end of the tube 22 opposite the end 23 and provided with a plug-closed vent 28 and with an axial trunnion, 14 aligned with the other trunnion extending from the end 23.

In practice the roller is filled with water, and the screw-cap 27, having been screwed to place for the purpose of closing the tube and retaining the absorbent casing or wick, the lower ends of the bars 13 are sprung slightly to permit the insertion of the roller-trunnions 14.

The sealing member or plate 3 is disposed flush with the envelop-receiving platen 5, and the moistening-roller 12 is retained a slight distance above the sealing-flap by the engagement of the bar 17 with the lower rest 20 of the latch-bar. The parts are thus positioned, as indicated in Fig. 1 of the drawings, and we are ready to begin the operation of moistening and sealing the flap 10 of the envelop 9.

Assuming that the absorbent casing or wick of the roller to be saturated by the exudation of water through the perforated walls of the tube 22, the operator grasps the handle 11 and swings the plate 3 to the position indicated in dotted lines in Fig. 2 of the drawings. This movement of the sealing-plate will first present the gummed surface of the sealing-flap to the saturated surface of the moistening-roller, which latter, as the movement of the plate is continued, will travel over the surface of the plate as the roller-supporting frame is swung upwardly. As the roller has been elevated a sufficient distance to clear the upper edge of the plate 3 when the latter is in its vertical position the bar 17 will be opposed to the upper rest 19 of the latch-bar, and said bar will drop forward to effect an engagement with the roller-supporting frame to retain the latter in the position shown by dotted lines in Fig. 2. The sealing-plate having now passed beyond the moistening-roller is turned down upon the platen and slight pressure is applied for the purpose of causing the sealing-flap 10 to adhere to the body of the envelop, after which the sealing-plate is swung back to its initial position, before reaching which it contacts with the cam-face 21 of the latch-bar, swinging the latter sufficiently to cause its disengagement from the roller-supporting frame, which latter will then drop back to its initial position, where it is sustained by the engagement of the bar 17 with the lower rest 20 of the latch-bar for a repetition of the operation just described.

From the foregoing it will be evident that I have invented a simple and efficient moistening and sealing device which will greatly facilitate the sealing of mailing-packets and other gummed retainers; but while the embodiment of the invention illustrated and described is believed at this time to be preferable, I wish to reserve the right to effect such changes, modifications, and variations as may be comprehended within the spirit of the invention.

What I claim is—

1. In a sealing device, the combination with a movable sealing member arranged to fold the sealing-flap of an envelop, of a moistener operatively related to the sealing member and movable over the face thereof during the movement of said member.
2. In a sealing device, the combination with a movable sealing member, of a moistener movably suspended in the path of said mem-

ber for presentation to the sealing-flap of an envelop supported upon the sealing member.

3. In a sealing device, the combination with a movable sealing member arranged to fold the sealing-flap of an envelop, of a moistener arranged for presentation to the face of the sealing member through the movement thereof, and means for retaining the moistener out of operative relation with the sealing member during the retraction of the latter.

4. In a sealing device, the combination with a sealing member arranged to fold the flap of an envelop, and a movable moistener arranged for presentation to the member during the movement thereof, of means for retaining the moistener out of operative relation during the retraction of the sealing member, and means for automatically restoring the moistener to its initial position for repetition of the operation.

5. In a sealing device, the combination with a movable sealing member arranged to fold the sealing-flap of an envelop and a movable moistener disposed in the path of movement of the sealing member, of means for retaining the moistener out of operative relation with the sealing member during the retraction of the latter, and means operated by the sealing member for restoring the moistener to its initial position.

6. In a sealing device, the combination with a movable sealing member, a moistener disposed in the path of movement thereof, and a swinging frame supporting the moistener, of a latch having means to retain the frame in position to effect the presentation of the moistener to the sealing member or to retain said moistener out of operative relation with said member.

7. In a sealing device, the combination with a movable sealing member arranged to fold the sealing-flap of an envelop, of a moistener disposed in the path thereof, and a latch-bar to retain the moistener in a position removed from the path of the sealing member, said latch-bar being disposed for actuation by the sealing member.

8. In a sealing device, the combination with a movable sealing member and a moistener disposed in the path of movement of said member for presentation thereto, of a swinging frame supporting the moistener, a pivoted latch-bar arranged to retain the frame in an elevated position, and means carried by the latch-bar for effecting its actuation through the movement of the sealing member.

9. In a sealing device, the combination with a movable sealing member arranged to fold the flap of an envelop, of a moistener disposed in the path of movement of said member, a swinging frame supporting said moistener, a pivoted latch-bar provided with a plurality of rests designed to receive a portion of the moistener-supporting frame, and a projection extending from said latch-bar into the path of the sealing member.

10. In an envelop-sealing device, the combination with a base arranged for the support of an envelop, of a hinged sealing member constituting a continuation of the supporting-surface of the base and designed to be swung to a position above the base to fold the flap of an envelop, and a moistening device disposed for presentation to the flap through the movement of the sealing member.

11. In a sealing device, the combination with a base arranged for the support of an envelop and a hinged sealing-plate carried by the base, of a movable moistener disposed in the path of the plate for presentation thereto as the latter is turned down upon the base.

12. In a sealing device, the combination with a base, of a swinging sealing-plate mounted upon the base, a swinging moistener-supporting frame mounted above the base, and a moistener carried by said frame and disposed in the path of movement of the sealing-plate.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

EDWARD M. WILCOX.

Witnesses:

JOHN L. MCCAGUE,
JULIA S. FITCH.