UNITED STATES PATENT OFFICE.

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STAMP-AFFIXING APPARATUS.


To all whom it may concern:

Be it known that I, JOHN SCHIMMEL, JR., a citizen of the United States, and a resident of Olean, in the county of Cattaraugus and State of New York, have invented a new and Improved Stamp-Affixing Apparatus, of which the following is a full, clear, and exact description.

My invention relates to apparatus for affixing adhesive stamps to such objects as mail-matter, and has for its principal objects the provision of effective means for accomplishing this end with a minimum of manual intervention.

It consists in the various features and combinations hereinafter described and claimed.

Reference is to be had to the accompanying drawings: forming a part of this specification, in which reference characters designate like parts in the several views.

Figure 1 is an end elevation of one embodiment of my invention, parts being in section. Fig. 2 is a side elevation thereof. Fig. 3 is a vertical sectional detail of the feed-wheel, associated elements being shown in dotted lines. Fig. 4 is a detail in end elevation of the blade, guide-plate, and a cooperating arm of the feed-wheel. Fig. 5 is a top plan view of the apparatus. Fig. 6 is a vertical section on the line 6-6 of Fig. 5. Fig. 7 is a perspective view of the retaining members and their support, parts being broken away. Fig. 8 is a similar view of the blade, guide, and its support. Fig. 9 shows in perspective the presser-block with its pawl and the adjacent portions of the blade-support; and Fig. 10 is a central vertical section through the reservoir, taken in the plane of the trunnion.

10 designates a base, near one side of which is fixed a pedestal 11, having rising above it opposite walls 12, 12. The upper face of the pedestal is concave to receive a laterally curved blade 13, which may be held in position by a set-screw 14, threaded through one of the walls 12. Mounted upon the base opposite side from the pedestal is a member 15, from the end which adjacent to the pedestal rises a standard 16, having projecting from it a horizontal arm 17. This arm has at its outer extremity near the end of the pedestal an opening to receive a stem 18, projecting upwardly from a presser-block 19. The top of the stem carries a handle 20, and between this and the arm 17 is a spiral spring 21, serving to hold the block normally in its raised position. From each side of the block is an extension 22, having portions operating within the walls 12, and thus guiding the block in its movement. The inner edge of the presser-block between the extensions 22 cooperates with the edge of the blade to make the cut. It is held to its work by spring arms 23, fixed to the walls 12 and contacting with rounded faces 24, formed upon the outer sides of the extensions.

Situated above the blade is a plate 25, conforming to it in curvature and having bent edges 26, extending into slots 26 in the inner sides of the walls 12. At the outer end of the plate is an arm 27, having a divided end portion 28. This receives an annular groove in a screw 29, which is inserted into one of the walls. By turning this screw the plate may be adjusted with regard to the edge of the blade and then fixed in position by a screw 30, threaded through the wall 12. Through the center of the plate from its outer extremity is an opening 31, which permits cooperation of a feed device or wheel 32 with the blade. This wheel is shown as journaled in bearings 33, carried by the top of the walls 12 and having peripheral projections 34, to which are pivoted arms 35. The ends of these arms are preferably reduced and extend through the opening 31 into contact with the blade, against which they are yieldingly held by springs 36, secured to the wheel and pressing against the arms. The feed-wheel is preferably rotated upon the upward movement of the presser-block by a pawl 37, normally held downwardly against a stop 38 by a spring 39. This pawl engages the teeth of a ratchet-wheel 40, fast upon the end of one of the feed-wheel journals outside its bearing.

Secured to the under side of the arm 17 is a bracket having separated arms 41, 41, depending at each side of the presser-block. Hinged at the bottom of these arms are retaining members 42, which are normally held in a horizontal position in the path of the block and below the cutting edge of the blade by springs 43, fastened to the bracket arms and contacting with fingers 44. As the under side of the block strikes the retaining members these springs yield and permit the members to separate, they assuming substantially vertical positions at each side of the block. Carried by the bracket-arms at
their outer sides in alinement with the blade is a connecting member or wall 44, which furnishes a stop-face.

Rising from the outer end of the member 15 is a standard 45, in an opening in which may turn a trunnion 46, which projects from the side of a reservoir 47, a nut 48 upon the opposite side of the standard retaining the trunnion in place. At the upper portion of the reservoir is shown a funnel 48, while the opposite end of said reservoir is contracted to furnish a neck 49, preferably elongated laterally. Within this neck is a sleeve 50, conveniently of some such elastic material as rubber, which has a thickened portion 51 exerting its expansive force against the neck to retain the sleeve in place. Mounted in the lower portion of the sleeve and extending outside the neck is a piece of absorbent material 82, conveniently sponge. The discharge area of the sleeve through the absorbent material may be decreased by a screw 53, threaded through the side of the neck and contacting at its inner end with a plate 54, which presses against the outside of the sleeve. The end of the neck and its absorbent material normally lie below the upper surface of the base; it occupying a position within an opening 55 through said base. Beneath this opening in a hollow or recess in the base is preferably placed a pan 56 to receive any drip which may occur from the reservoir. The downward movement of the reservoir-neck may be limited by a projection 57 at one side of the reservoir, which contacts with a stop 58, carried by the standard 45. The reservoir is yieldably held in this downward position by a spring 59, mounted upon the standard and contacting with the projection 57.

The base of the apparatus serves as a support for the object which is to be stamped, and to determine the proper position for the object a gage-pin 60 rises from the base at the outer side of the presser-block. To limit the thickness of objects which may be introduced, a rod 61 is shown as extending from the standard 45 over the base at the outer side of the reservoir.

In use the reservoir is filled with water through the funnel, and the stamps to be applied, divided from the sheets in which they come into continuous strips, are placed upon the upper surface of the blade between it and the guide-plate and beneath the opening in said plate. The letter or other object to be stamped is then inserted between the base and the rod 61 and pressed inwardly until it rests against the gage, 60 and against the adjacent end of the pedestal. In doing this the absorbent material of the reservoir contacts with it, and as said reservoir turns slightly upon its trunnion the spring 59 presses the absorbent material against the object, effectively moistening it. This discharge of water from the reservoir may be increased or diminished by turning out or in the screw 53 until the proper feed is attained. The matter to be operated upon having been thus positioned, the presser-block in rising from its previous stroke brings its pawl into cooperation with the ratchet-wheel, turning the feed-wheel. One of the arms of this wheel will be in engagement with the stamp through the guide-plate opening and will advance the strip over the plate until said arm strikes the end of the opening, when it will be disengaged, the feed ceasing. The stamp to be affixed is now projected beyond the end of the blade, with its perforated connection to the next stamp of the series just above the cutting edge. It is held in a curved position by the curvature of the blade and plate, so that as the block is depressed by the handle upon its stem the stamp offers some resistance to displacement and at the same time is subjected to a shearing cut, the edge of the block first operating upon each of the outer edges, the cut converging gradually from each side toward the center. As the stamp is thus severed it falls upon the members 42, which retain it in a horizontal position above the moistened face of the object and upon which it is held against outward displacement by the wall 44. The movement of the presser-block continuing opens the retaining members and carrying the stamp before it presses it upon the object, to which it adheres. Upon the upward movement of the presser-block under the influence of its spring the next stamp is advanced, as has been previously described, and the operation may be repeated upon a second object.

When one strip of stamps has been used, another strip is introduced with its forward edge abutting against that preceding it, so that it is engaged by the feed-wheel arms for advancement in proper relation to the edge of the blade. It should be noted that the arms resting upon the stamps preparatory to feeding them upon the upward movement of the presser-block assist the guide-plate in holding the strip against movement during the cutting operation. If it is found that the feed does not bring the stamps into proper relation with the edge of the blade, this may be adjusted by turning the screw 29 to bring the end of the opening 31 nearer to or farther from the cutting edge, thus causing the feed-arms to be freed from their engagement at a different time. By loosening the screws securing the blade it may be readily removed for sharpening or to permit of polishing its upper surface, so that the stamps may move smoothly over it, or to allow its adjustment to secure proper coaction with the presser-block.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A stamp-attaching apparatus comprising...
a laterally-curved blade and a presser cooperating with the blade.

2. A stamp-affixing apparatus comprising a laterally-curved blade, a presser cooperating with the blade, and means for forcing the presser toward the blade.

3. A stamp-affixing apparatus comprising a laterally-curved blade, a presser cooperating with the blade, and means for forcing the presser toward the blade, said blade being mounted for adjustment toward and from the presser.

4. A stamp-affixing apparatus comprising a laterally-curved blade, a guide curved to conform with the blade and extending therealong, and a presser cooperating with the blade.

5. A stamp-affixing apparatus comprising a laterally-curved blade, a curved guide extending along the blade, a presser cooperating with the blade, and means for moving the guide toward and from the presser.

6. A stamp-affixing apparatus comprising a blade, a guide extending along the blade, a presser cooperating with the blade, means for moving the guide toward and from the presser, and independent means for fixing said guide in position.

7. A stamp-affixing apparatus comprising a laterally-curved blade, a guide extending along and conforming to the blade, and a presser cooperating with the blade.

8. A stamp-affixing apparatus comprising a laterally-curved blade, a concave guide extending along the blade and having an opening, a feed device operating in the opening, and a presser cooperating with the blade.

9. A stamp-affixing apparatus comprising a laterally-curved blade, a concave guide extending along the blade and having an opening, a feed device having yieldable arms operating in the opening, and a presser cooperating with the blade.

10. A stamp-affixing apparatus comprising a laterally-curved blade, a concave guide extending along the blade and having an opening, a feed-wheel operating in the opening, a presser cooperating with the blade, and means for actuating the feed-wheel from the presser.

11. A stamp-affixing apparatus comprising a laterally-curved blade, a concave guide extending along the blade and having an opening, a feed-wheel operating in the opening, a presser cooperating with the blade, and ratchet mechanism connecting the feed-wheel and presser.

12. A stamp-affixing apparatus comprising dividing means movable retaining members situated at one side of the dividing means, and spaced apart from each other, and a presser movable between and independently of the retaining members.

13. A stamp-affixing apparatus comprising dividing means, pivotally-mounted retaining members situated at one side of the dividing means and spaced apart from each other, and a presser movable between and independently of the retaining members and a spring for retaining said retaining members in a definite position with respect to the presser.

14. A stamp-affixing apparatus comprising dividing means, pivotally-mounted retaining members situated at one side of the dividing means and spaced apart from each other, a presser movable between and independently of the retaining members and a spring for retaining said retaining members in a definite position with respect to the presser.

15. A stamp-affixing apparatus comprising dividing means, a presser, members mounted independently of the presser below the dividing means and projecting at each side into the path of the presser, springs for normally maintaining the retaining members in position and means whereby the presser may swing said retaining members form without its path of movement.

16. A stamp-affixing apparatus comprising dividing means, a presser, retaining members mounted independently of the presser below the dividing means and projecting at each side into the path of the presser, means for normally maintaining the retaining members in the path of the presser, and means whereby the presser may swing said retaining members out of its path.

17. A stamp-affixing apparatus comprising a reservoir having a discharge-neck, an elastic sleeve situated in the neck and having a thickened engaging portion, and absorbent material carried by the sleeve, and means for compressing the sleeve.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN SCHIMMEL, Jr.

Witnesses:

THOS. S. LARKIN,
J. H. THOMPSON.