

(No Model.)

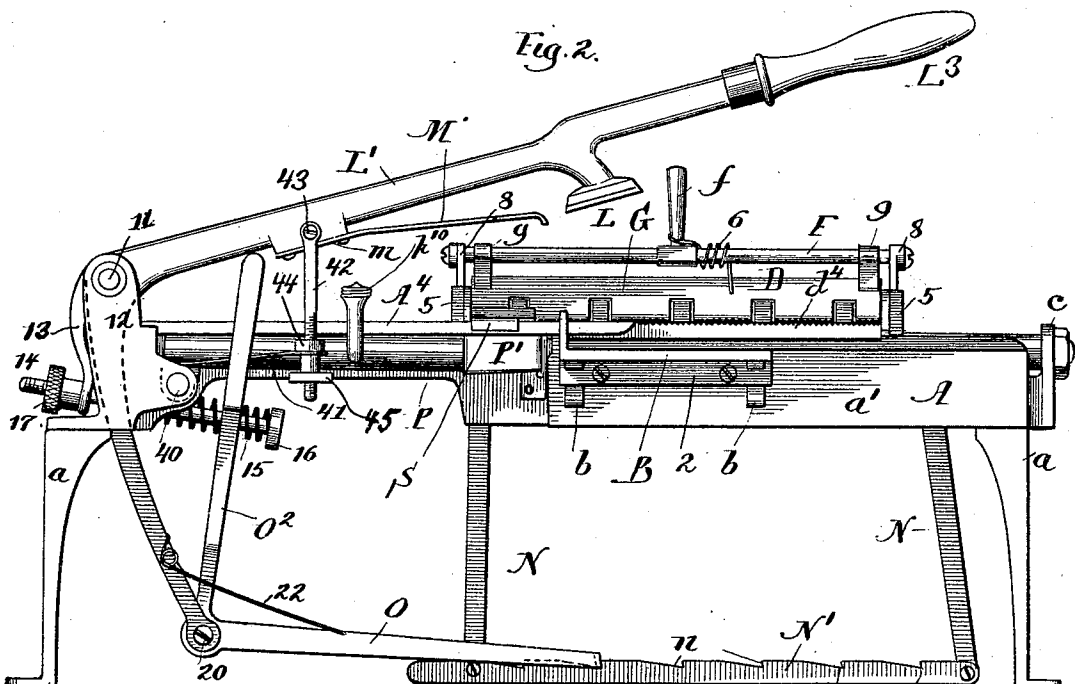
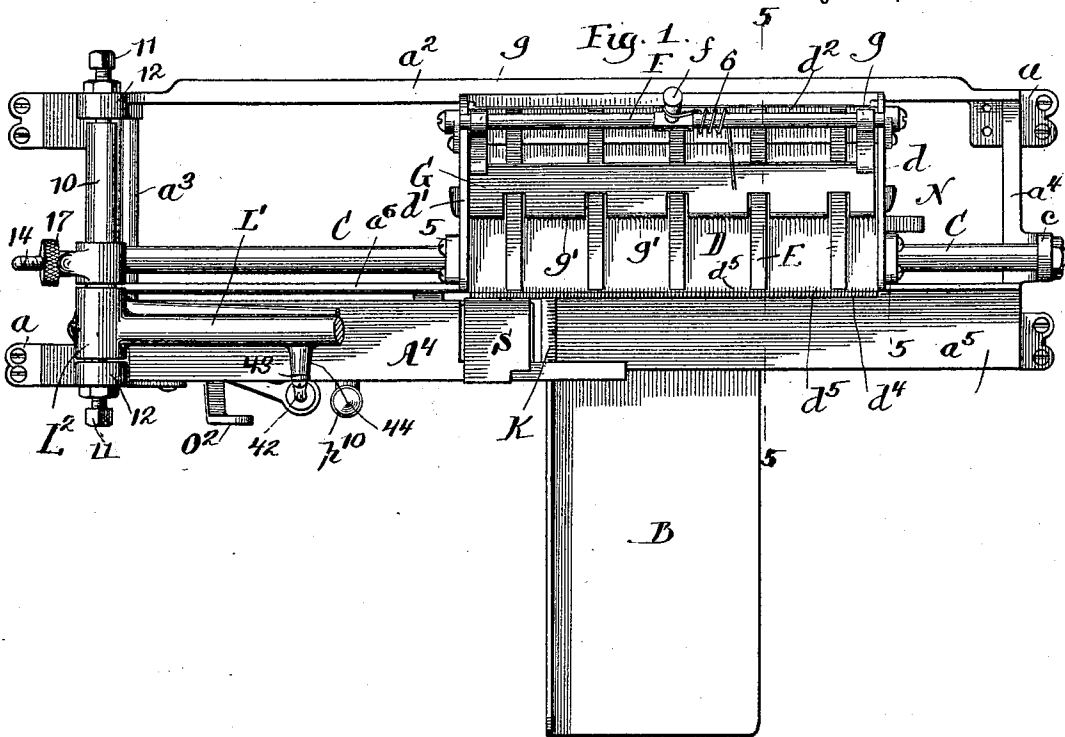
2 Sheets—Sheet 1.

E. C. PHILLIPS.

APPARATUS FOR AFFIXING STAMPS, LABELS, &c.

No. 520,497.

Patented May 29, 1894.



Witnesses:

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Fig. 3.

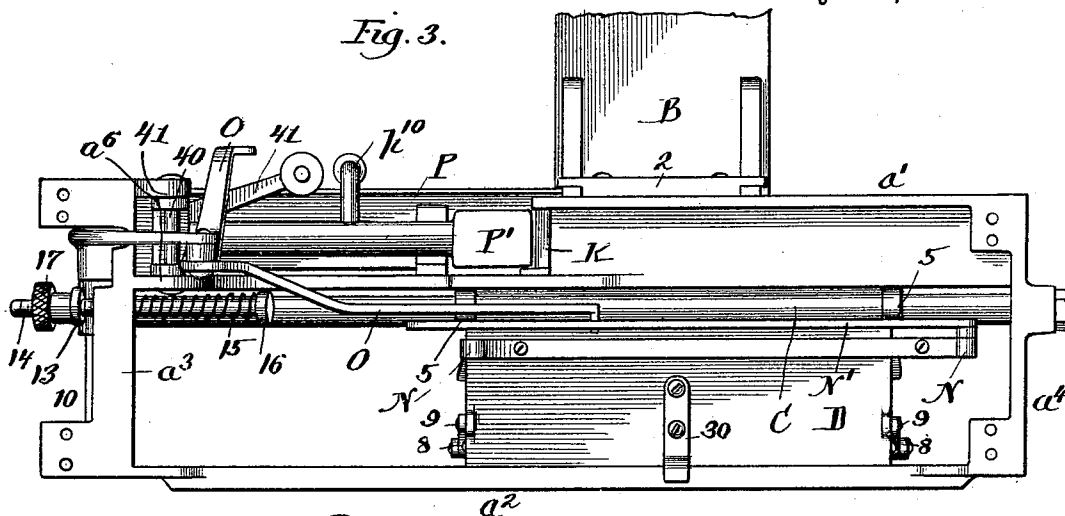


Fig. 4.

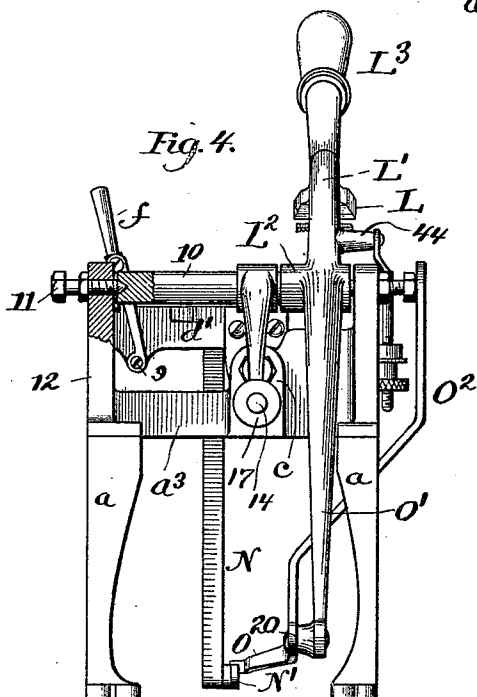


Fig. 5.

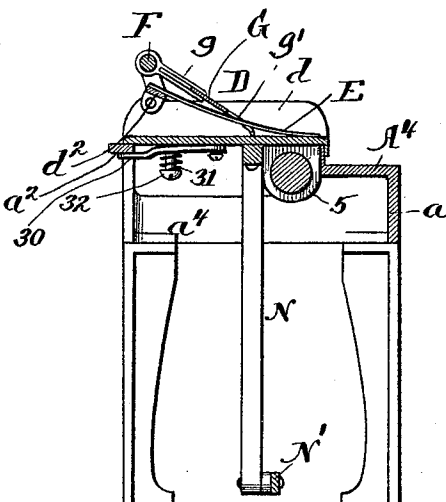
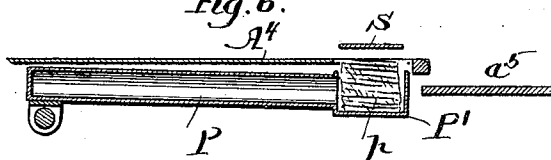


Fig. 6.



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UNITED STATES PATENT OFFICE.

ELWOOD C. PHILLIPS, OF CHICAGO, ILLINOIS.

APPARATUS FOR AFFIXING STAMPS, LABELS, &c.

SPECIFICATION forming part of Letters Patent No. 520,497, dated May 29, 1894.

Application filed April 20, 1893. Serial No. 471,141. (No model.)

To all whom it may concern:

Be it known that I, ELWOOD C. PHILLIPS, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Apparatus for Affixing Stamps, Labels, &c., of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My present invention has for its object to provide improved apparatus whereby postage stamps, labels and the like arranged in sheet form, can be readily separated so that the individual stamps or labels can be quickly and securely attached to the letters or like articles for which they are designed; and more particularly does my invention relate to improvements in the type of stamp affixing apparatus set forth in an application filed in the United States Patent Office by Robert Russell February 1, 1893.

The object of the present invention is to simplify and improve the apparatus in various particulars and this object I have accomplished by the novel features of construction hereinafter described, illustrated in the accompanying drawings and particularly defined in the claims at the end of this specification.

Figure 1 is a plan view of the apparatus embodying my invention. Fig. 2 is a view in side elevation. Fig. 3 is an inverted plan view, parts being omitted. Fig. 4 is an end view. Fig. 5 is a view in vertical transverse section on line 5—5 of Fig. 1. Fig. 6 is a detail view in vertical longitudinal section through the moistening mechanism and part of the table adjacent thereto.

A designates the main frame of the machine which is supported in any convenient manner, as by legs or standards a , the main frame of the machine comprising the side bars a' and a^2 united by the end bars a^3 and a^4 and the side bar a' is preferably furnished with the expanded upper portion a^5 which will co-operate with the table B in sustaining the letters or like articles upon which the stamps are to be affixed. Preferably, the table B is detachably connected to the main frame A for convenience in packing the parts for shipment or the like and in order to en-

able the table B to be conveniently attached to the main frame, this table is furnished at its inner end with the depending arms b that will be slipped downward between the side a' of the main frame and a bar or plate 2 that is held at a slight distance from the face of the side bar a' . From end to end of the main frame extends a carriage rod C, this rod having its ends fixed in lugs c that rise from the cross bars a^3 and a^4 of the main frame. Upon the rod C is mounted in manner free to slide, the stamp carriage D, suitably perforated hangers 5 serving to connect the carriage D with the rod C, and the outer portion of the carriage D rests upon the upper edge of the side bar a^2 of the main frame (see Figs. 1 and 5). The carriage D is preferably formed with the end flanges d and d' to which is connected the bar d^2 that carries the presser arms E, these presser arms extending forward to approximately the front edge of the carriage D and serving to hold the sheet of stamps to be severed, firmly against the carriage and preventing the backward movement of the stamps as will presently more fully appear.

Across the rear end of the carriage D extends the shifting bar F, to the ends of which are fixed the arms 8 that are pivotally connected as at 9 to the sides of the carriage D. Upon the bar F are pivotally mounted the arms g that carry the plate G, the front edge of which plate is furnished with feed fingers g' having serrated edges. The plate G is provided with cut-away spaces, in order to enable this plate to straddle the presser arms E. The front edge of the table D is preferably provided with a row of teeth or serrations d^4 which enable the individual stamps to be more readily severed from the sheet and by preference also, a second row of serrations d^5 is arranged back of the row d^4 and separated therefrom by a groove to better guard the sheet of stamps against the possibility of being drawn backward as the feed fingers g' are withdrawn after the sheet of stamps has been advanced the proper distance by these fingers to present a row of stamps to be severed. In order to hold the feed fingers down upon the stamps during the forward movement of the fingers, and in order also to retract the feed fingers, a spring 6 is employed, the body of this spring being coiled about the shifting

bar F and one of its ends bearing upon the plate G and the opposite end bearing against the front side of an arm f that projects rigidly from the shifting bar F. It will thus be seen that as the arm f is forced forward, in order to advance the feed fingers g' , the spring 6 will be wound more tightly, because one of the ends of this spring is in engagement with the arm f while the opposite end is resting upon and is resisted by the plate G, and consequently, the spring 6 will tend not only to depress the plate G, but also to force backward the arm f and the shifting bar F when the pressure of the operator's hand is removed therefrom.

The purpose of the carriage D of the feed mechanism above described, is to effect the longitudinal and transverse feed of the stamps in order to enable them to be successively severed from the sheet and it will be seen that if a sheet of stamps is placed upon the upper face of the carriage D it can be advanced the distance between the rows of perforations of the sheets, so as to bring the first row of stamps beyond the front edge of the carriage D, by simply moving forward the shifting bar F by the medium of the handle f . This feeding of the stamps is effected by the feed fingers g' engaging the perforations in the row of stamps and thus pushing the stamps out beneath the free ends of the presser arms until the row of perforations comes above the teeth or serrations d^4 at the front edge of the carriage D. These teeth then engage the row of perforations and in conjunction with the presser arms E serve to prevent the backward movement of the sheet of stamps as the shifting bar F and the feed fingers are retracted. Consequently the row of stamps will project beyond the edge of the carriage D and in position to be severed by the plunger in manner to be presently defined.

At right angles to the front edge of the carriage D extends a fixed cutter bar K preferably furnished with teeth similar to the teeth upon the front edge of the carriage D and serving also to co-operate in enabling the plunger to more readily sever the individual stamps from the sheet. The cutter bar K is conveniently attached to the front of the main frame. The plunger L which co-operated with the cutter bar K and the front edge of the carriage D in severing the individual stamps from the sheet is mounted upon an arm L' that is fixed upon the rock shaft 10, the outer end of this arm being furnished with a handle L^3 whereby the plunger can be conveniently operated. The plunger L is arranged to descend in close proximity to the front edge of the carriage D and of the cutter bar K, so that whenever an individual stamp is beneath the plunger, it will be severed by the plunger and the cutter bar and carriage edge and will be depressed by the plunger on to the face of the envelope or other article resting upon the table B beneath the path of the plunger. The rock shaft 10 where-

by the plunger is carried, is preferably mounted upon adjustable bearings, so that this shaft can be shifted when required, to compensate for any wear that may occur and thus maintain the plunger in such position that it will always descend in close proximity to the front cutting edge of the carriage D. Preferably, the rock shaft 10 has its ends formed with conical seats to receive the ends of the bearing screws 11, these screws passing through threaded perforations of the brackets 12 that rise from the main frame and enable the shaft to be laterally adjusted when necessary (see Fig. 4).

In order to restore the plunger L to its raised position after it has been depressed, the rock shaft 10 has affixed thereto, a depending arm 13 through which passes an adjusting rod 14 that carries the retracting spring 15, this spring bearing against the head 16 of the rod and against the inner face of the end bar a^3 of the main frame through which the rod 14 freely passes. The holes formed in the depending arm 13 and through the end bar a^3 of the main frame will be somewhat larger in diameter than the rod 14 in order to permit a slight vibration of this rod as the plunger arm is operated. It will thus be seen that the coil 15 tends to draw the depending arm 13 inward to the position seen in Fig. 2 and consequently, hold the plunger L and its arm L' in raised position.

By means of an adjusting nut 17 carried upon the threaded outer end of the rod 14, the tension of the coil spring 15 can be adjusted in order to apply the proper force for the raising of the plunger L and for the feed of the carriage D, as will presently more fully appear. Adjacent the edge of the plunger L extends a presser arm M formed of spring metal and attached as at m to the under side of the plunger arm L' . The free edge of the presser arm M extends slightly below the plane of the plunger L and serves to press the stamp against the upper face of the cutter bar K in order to securely hold the stamp during the cutting operation.

In order to effect a step by step feed of the stamps beneath the plunger, after a row of stamps has been thrust beyond the front edge of the carriage D in manner hereinbefore described, I prefer to employ the feed mechanism shown in the accompanying drawings. That is to say, to the under-side of the carriage D are attached the depending arms N to the bottom ends of which is connected the rack bar N' , the upper face of this rack bar being furnished with teeth n arranged at distances apart corresponding to the rows of perforations between the stamps. Upon the upper edge of this rack bar N' rides the angular free end of the feed arm or pawl O that is pivotally connected as at 20 to the lower end of the arm O' depending from the hub L^2 of the plunger arm L' , so that as the plunger arm L' is oscillated, a corresponding movement will be imparted to the feed pawl

O. To the rear end of the feed pawl O, is connected (or formed in piece therewith), a releasing arm O^2 by which the pawl O can be thrown out of engagement with the rack bar N' when the carriage D is to be returned to its starting point, as will presently more fully appear. A spring 22 serves to hold the feed pawl O in normal engagement with the teeth of the rack bar N' .

From the construction of parts as thus far defined, it will be seen that as a sheet of stamps is placed upon the face of the carriage D, the first row of stamps can be caused to project beyond the carriage by the operation of the shifting bar F and feed fingers g' in manner hereinbefore described. If, now, it be assumed that the carriage D is at the starting point, which will be its position when it is brought as near as possible to the end bar a^3 of the main frame, the angular end of the feed pawl O will be in engagement with the first tooth 23 of the rack bar N' . If, now, the handle L^3 of the plunger arm is depressed to the limit of its downward movement, the angular end of the feed pawl O will ride backward over the edge of the rack bar N' until it passes behind the tooth 24 of the rack bar. At the time that the plunger L is being thus forced downward, the first stamp of the row that projects beyond the edge of the carriage D will be beneath the plunger L, and as the plunger is thus forced downward, it will co-operate with the front edge of the carriage and with the cutter bar K in severing the first stamp from the sheet and after the stamp is thus severed, the continued downward movement of the plunger will press the stamp against the envelope or like article upon the table B. As the plunger is thus forced downward, the spring presser arm M will engage the projecting row of stamps and press the same against the cutter bar K as the first stamp is being severed. If, now, the plunger arm L be released, the coil spring 15 will cause this arm to be drawn to the raised position shown in Fig. 2 and will force forward the feed pawl O causing it to advance the rack bar N' and consequently, the carriage D, the proper distance to bring the next stamp of the projected row beneath the path of the plunger L, and this operation will continue until all the stamps of the row have been severed. When the row of stamps has thus been severed, the releasing arm O^2 will be turned backward in order to throw the feed pawl O out of engagement with the rack bar N' , and the carriage D will be moved backward by hand to the starting point, after which the shifting bar F will be operated, in order to thrust forward a new row of stamps beyond the front edge of the carriage D and in position to be brought beneath the plunger L. In order to prevent the carriage D moving farther than is necessary, that is to say, to prevent the carriage from slipping too far under the force of the feed pawl O, I prefer to attach to the under side of the carriage D, a friction plate 30, the free

edge of which presses against the under side of the bar a^2 of the main frame (see Fig. 5), this friction plate 30 being forced against the under side of the bar a^2 by a coil spring 31 that is carried upon a headed pin 32 that passes through the friction plate 31.

In order to enable the gummed faces of the stamps to be moistened before the plunger presses the stamps against the envelopes to which they are to be attached, I have provided the improved construction of moistening mechanism next to be described. Upon a hollow arm P Fig. 6 is carried a pad holder P' , the top of which is open to permit suitable pads p to project therefrom. The hollow arm P of the pad holder is preferably furnished with a small tube p^{10} through which water can be introduced from time to time into the pad holder in order to maintain the pads p in sufficient damp condition. The arm P of the pad holder P' is pivotally mounted upon a shaft 40 that is held in the lug 41 and the rear portion of the bar a^6 that extends beneath the main frame, this rear end of the arm P being forked as shown, to receive the shaft 40. To the forked end of the arm P is connected a spring 41 through the forward end of which passes a link 42 that is pivotally connected as at 43 to a stud 44 projecting from the side of the plunger arm L' , and preferably the lower end of the link 42 is screw-threaded and provided with the nuts 44 and 45 between which the end of the spring 41 will be held. It will thus be seen that when the plunger arm L' is depressed in manner hereinbefore described, a corresponding downward movement will be imparted through the medium of the link 42 and spring 41 to the arm P and the pad holder P' and when the plunger arm L' is released and is forced to its raised position, the pad holder P' will be drawn upward and the pad p will be forced against the under surface of the stamp next after the last severed, by the downward movement of the plunger.

My purpose in employing a spring 41 is to allow a yielding pressure to be exerted by the pads of the under surface of the stamp and the object of the adjusting screws upon the link 42 is to enable the bearing force of the moistening pad to be determined with exactness. It will be observed that the main frame is provided with a portion A^4 that is raised slightly above the level of the table B and in line with the upper face of the cutter bar K; the purpose of this portion A^4 of the main frame being to sustain the projected row of stamps. It will also be seen that above the pad holder P extends a plate S, this plate being fixed at a point higher than the upper face of the cutter bar K and of the portion A^4 of the main frame, in order to permit the projected row of stamps to pass freely beneath this plate S. It is against the under face of the plate S that the stamps will be pressed when the pad p of the pad holder applies the moisture to their gummed faces.

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

1. In apparatus of the class described, the combination with the main frame and with the plunger, of a reciprocating carriage arranged to travel in proximity to the path of the plunger and having its front provided with a cutting edge to co-operate with the plunger in severing the stamps or like articles, substantially as described.

2. In apparatus of the class described, the combination with the main frame and with the plunger of a reciprocating carriage arranged to travel in proximity to the path of the plunger and having its front provided with a cutting edge and a fixed cutter extending at right angles to the front edge of the carriage and in proximity to the path of the plunger to co-operate with the plunger in severing the stamps or like articles, substantially as described.

3. In apparatus of the class described, the combination with the main frame of a reciprocating carriage, a feed bar for advancing the perforated sheets across the carriage, said carriage having its front edge provided with serrations and pressure devices to aid in retaining the sheet against backward movement, substantially as described.

4. In apparatus of the class described, the combination with the main frame of a reciprocating carriage provided with an upper face whereon the sheet will be placed, a series of presser arms to bear upon the sheet and extending in proximity to the front edge of the carriage, a reciprocating feed bar and means for shifting said bar across the upper surface of the carriage for advancing the sheet, substantially as described.

5. In apparatus of the class described, the combination with the main frame of a reciprocating carriage mounted in manner free to slide upon the main frame and a spring actuated friction plate or check to guard the carriage against excess movement and a set-screw

for adjusting the pressure of said plate or check, substantially as described.

6. In apparatus of the class described the combination with the main frame and with a movable carriage sustained by said main frame of a pivoted plunger arm and means connected to the plunger arm for actuating the movable carriage, a shaft whereon said plunger arm is carried, a downward extension suitably connected with said plunger arm, a spring in engagement with said extension for retracting said plunger arm and an adjusting rod passing through said extension and through said spring, substantially as described.

7. In apparatus of the class described, the combination with the main frame having a cut-away space and a plate above said space and with a plunger arm of a pad holder, an arm for operating said pad holder, and a spring connected to said plunger arm and to the arm that operates said pad holder, substantially as described.

8. In apparatus of the class described, the combination with the main frame having a cut-away space and a plate above said cut-away space outside of the path of the plunger and suitable means for feeding the stamps beneath said plate of a plunger and plunger arm, a pad holder and an arm for operating said pad holder adjustably connected to said plunger arm, substantially as described.

9. In apparatus of the class described, the combination with the main frame having a cut-away space and with suitable means for feeding the stamps above said space of a plunger and a plunger arm, a pad-holder and a hollow arm for operating said pad-holder suitably connected with said plunger arm, said hollow arm communicating with said pad-holder and serving as a water reservoir, substantially as described.

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