No. 729,515. PATENTED MAY 26, 1903.

A. STEELE.

BRUSH.

APPLICATION FILED OCT. 21, 1902.

NO MODEL.

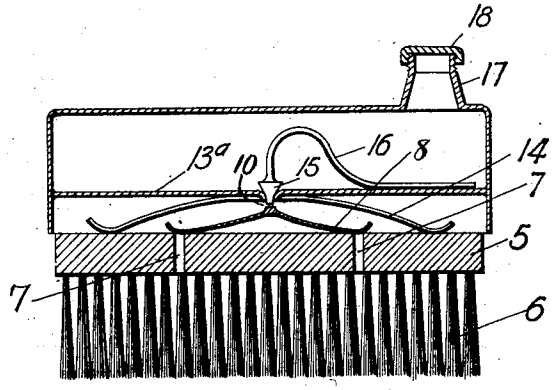

Fig. 2.

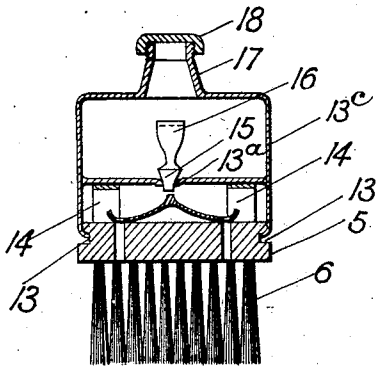

Fig. 3.

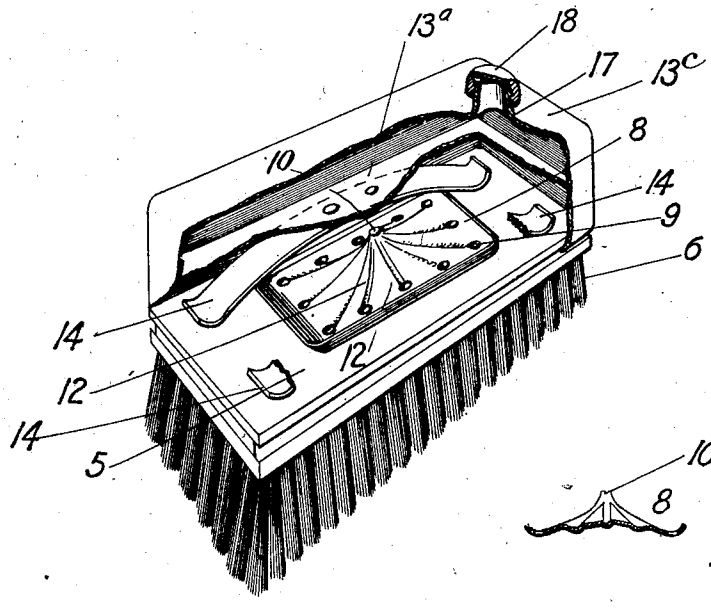

Fig. 1.

Fig. 4.

WITNESSES

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No. 729,515. Patented May 26, 1903.

UNITED STATES PATENT OFFICE.

ALFRED STEELE, OF DENVER, COLORADO.

BRUSH.

SPECIFICATION forming part of Letters Patent No. 729,515, dated May 26, 1903.

Application filed October 21, 1902. Serial No. 128,119. (No model.)

To all whom it may concern:

Be it known that I, ALFRED STEELE, a citizen of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Brushes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in brushes; and it consists of a brush having a perforated back, with which is connected a receptacle adapted to hold a quantity of liquid, the said receptacle being movably connected with the back of the brush and spring-supported, whereby a valve normally closes an opening in the receptacle to prevent the liquid from escaping, the arrangement being such that as the bristle portion of the brush is applied to the surface or the part to be cleaned and the necessary pressure applied the valve will be opened, allowing the liquid to escape to the back proper of the brush, whence it passes through the perforations in said back to the bristle portion or scrubbing-face of the brush.

My improved device is more especially intended for cleaning printing-type by the use of gasolene. It must be understood, however, that it may be used in other relations and that any desired liquid may be employed.

The invention will now be described in detail, reference being made to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a perspective view of my improved brush, the receptacle connected with its back being partly broken away. Fig. 2 is a longitudinal section, and Fig. 3 a cross-section, of the device. Fig. 4 is a sectional detail view of a perforated plate attached to the back of the brush.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate the brush-back, and 6 the bristle portion, the bristles being set into the back in the usual or any suitable manner. The back of the brush is provided with perforations 7. To this back is attached a plate 8, having openings 9 registering with the openings 7 of the brush-back. The upper surface of the plate slopes downwardly from a central point 10, and from this point lead grooves 12 to the various perforations 9. The outer edges of the plate 8 are turned upwardly, forming a sort of liquid-receptacle to prevent the liquid from spreading over the back of the brush beyond the plate. The sides of the brush are provided with grooves 13, adapted to receive the lower edges of the side walls of the receptacle 13^c, the said edges being bent inwardly into the said grooves to hold the receptacle in place. The grooves are of sufficient depth to permit a limited downward movement of the receptacle when sufficient force or downward pressure is applied. The receptacle is held normally at its upward limit of movement by two bow-shaped leaf-springs 14, whose upper central portions are attached to the bottom 13^a of the receptacle. The extremities of these springs loosely engage the upper surface of the back of the brush and slide freely thereon when the receptacle is pressed downwardly. The walls of the receptacle 13^c project below the bottom 13^a and close the space on the outside between the upper surface of the back of the brush and the bottom 13^a of the receptacle. The springs 14 and the perforated plate 8 are located in this space.

In the central part of the bottom 13^a is formed an opening 13^c, normally closed by a valve 15, attached to the free extremity of a leaf-spring 16, whose opposite extremity is made fast to the upper surface of the bottom 13^a. The valve 15 is cone-shaped, and it occupies a position directly above the point 10 of the perforated plate 8. The top of the receptacle 13^c is provided with a filling-nozzle 17, closed by a screw-cap 18.

Before using the device the screw-cap is removed and the receptacle is filled with liquid, as gasolene. The screw-cap is then placed in position and the device is ready for use. The bristles are then applied to the device or surface to be cleaned, as type, and as the ordinary downward pressure or force is applied by the hand of the user the receptacle is moved downwardly on the back of the brush

until the lower extremity of the valve 15 is brought into contact with the point 10 of the perforated plate 8, with the result that the valve is forced upwardly a short distance, allowing the liquid to flow through the opening 13^c to the plate 8. The liquid then follows the channels or grooves 12 of the plate to the perforations 9 and passes thence through these perforations and the openings 7 in the back of the brush to the bristles 6. In this manner the liquid is automatically fed from the receptacle to the bristles as long as the brush is in use. As soon as the pressure ceases to act the receptacle returns to its normal position and the valve closes, cutting off the flow of liquid.

Having thus described my invention, what I claim is—

1. A brush comprising a back, a bristle portion attached to the back, the back having perforations and provided with grooves in its opposite sides, a receptacle attached to the back of the brush and vertically movable therein, the said receptacle having inwardly-turned edges adapted to engage the groove, the latter being of sufficient depth to allow the receptacle a limited vertical movement on the brush-back, a spring located between the bottom of the receptacle and the back of the brush and normally holding the receptacle at its upward limit of movement, the bottom of the receptacle having an opening, a spring-held valve normally closing said opening, and a device located between the back of the brush and the bottom of the receptacle and adapted to open the valve as the receptacle is forced downwardly a limited distance.

2. In a brush, the combination with a back and bristles attached thereto, the back being perforated, of a liquid-containing reservoir attached to the back of the brush and vertically movable thereon, leaf-springs interposed between the back of the brush and the bottom of the receptacle, a spring-held valve normally closing an opening in the bottom of the receptacle, and means interposed between the bottom of the receptacle and the back of the brush for opening the valve as pressure is applied, said means comprising a perforated plate located between the bottom of the receptacle and the back of the brush, the perforations of the plate registering with the perforations in the back of the brush, and the center of the plate terminating in a projection adapted to open the valve in the bottom of the receptacle as the latter is forced downwardly.

3. In a brush, the combination with a perforated back, of a spring-supported, liquid-containing receptacle attached to the back of the brush and vertically movable thereon, the bottom of the receptacle having an opening communicating with a space between the bottom of the receptacle and the back of the brush, a spring-held valve normally closing said opening, and a perforated plate located between the bottom of the receptacle and the back of the brush, the perforations of the plate registering with the perforations in the back of the brush, and the center of the plate terminating in a projection adapted to open the valve in the bottom of the receptacle as the latter is forced downwardly, substantially as described.

4. The combination with a brush having a perforated back, of a receptacle having an opening in its bottom and walls projecting below the bottom, the said walls on two sides being turned inwardly, the brush-back on the said sides being grooved to receive the said inwardly-turned edges of the receptacle-walls, the grooves being of sufficient depth to allow the receptacle to move downwardly when pressure is applied, bow-shaped springs attached to the bottom of the receptacle and engaging the back of the brush, a spring-held valve normally closing the opening in the bottom of the receptacle, and suitable means interposed between the bottom of the receptacle and the back of the brush for opening the valve as the receptacle is moved downwardly.

In testimony whereof I affix my signature in presence of two witnesses.

ALFRED STEELE.

Witnesses:
A. J. O'BRIEN,
DENA NELSON.