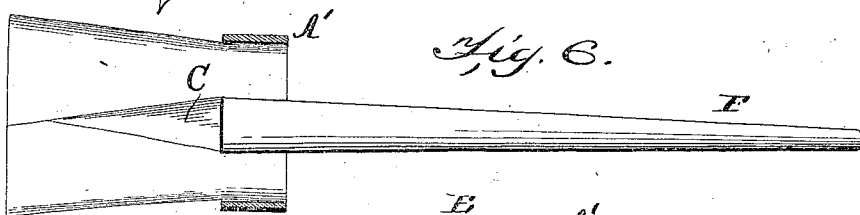
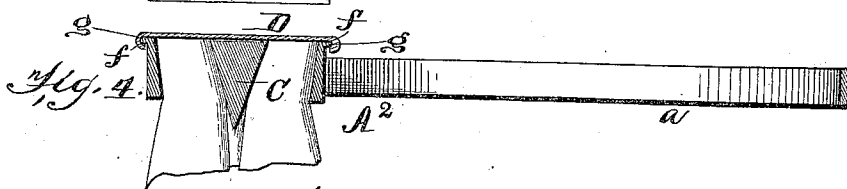
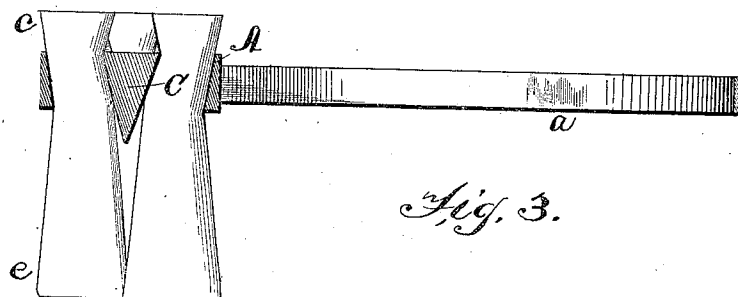
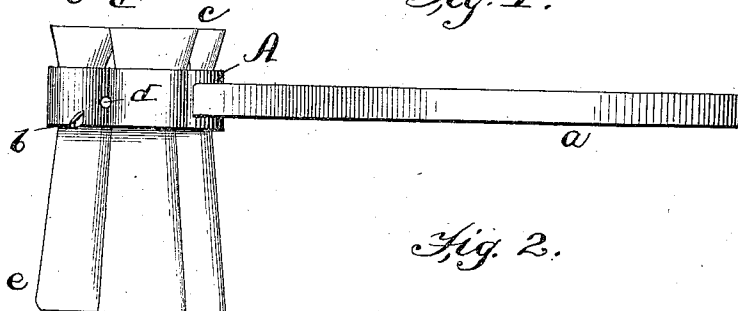
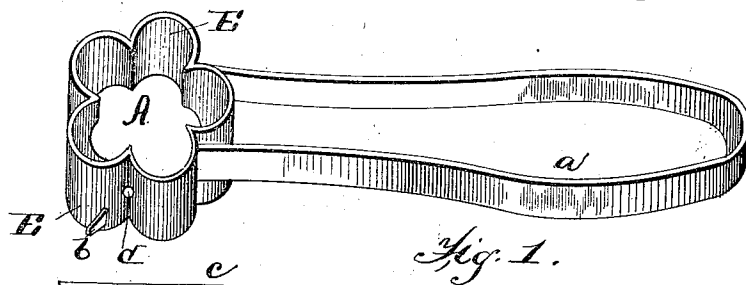


(No Model.)

W. R. DERR.
BRUSH.

No. 544,030.

Patented Aug. 6, 1895.



WITNESSES

W. Johnson
E. L. Brashears

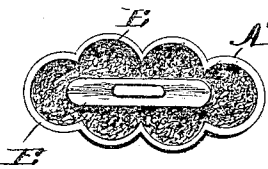


Fig. 6.

INVENTOR

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UNITED STATES PATENT OFFICE.

WILLIAM R. DERR, OF BALTIMORE, MARYLAND.

BRUSH.

SPECIFICATION forming part of Letters Patent No. 544,030, dated August 6, 1895.

Application filed October 3, 1892. Serial No. 447,627. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. DERR, a citizen of the United States, residing at Baltimore city, in the State of Maryland, 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 letters of reference marked thereon, which form a part of this specification.

My invention relates to brushes more especially to blacking and paint brushes, although it is applicable to many other forms.

The object of my invention is to furnish improved frames for the heads and bodies of brushes whereby the construction is facilitated and cheapened.

With this object in view my invention consists in the improved construction, arrangement, and combination of parts hereinafter specified, and afterward specifically pointed out in the claims hereto appended.

In the accompanying drawings, Figure 1 is a perspective view of the metal frame of a dauber blacking-brush made in accordance with my invention. Fig. 2 is a side elevation of a double dauber-brush embodying my invention. Fig. 3 is a longitudinal vertical section through the double dauber-brush shown in Fig. 2. Fig. 4 is a similar view of a single dauber-brush embodying my invention, the outer ends of the bristles being broken away. Fig. 5 is the top plan view of a paint-brush made in accordance with my invention. Fig. 6 is a central longitudinal section through the same.

Like letters of reference mark the same parts wherever they are applied in all the various figures of the drawings.

Referring to the drawings by letters, A is the head of a brush-frame, being shown as of a dauber blacking-brush in Figs. 1 to 4, and as the head of a paint-brush in Figs. 5 and 6. In Figs. 5 and 6 the brush-head is lettered A'. This head may be of a general contour to suit the kind of brush to which it belongs, the dauber-heads being circular in general outline, while the paint-brushes may be either round or oblong or elliptical in general con-

tour. In either or all shapes of heads the specific outline is formed of a suitable number of semicircles or arcs or arches E, as it were, (the purpose of which will be hereinafter described,) there being only a single opening through the head to receive the bristles. The head or ferrule A is open entirely through, or from top to bottom, and all of the semicircles or arcs E open into a common or single bristle-receiving center or opening through the said head or ferrule, as just stated.

In the dauber-brush there is provided a handle *a* of any suitable construction, in this instance attached to and forming an integral part of the head A, the head and handle being cast in one piece, but in the paint-brush this feature is not necessary, and therefore not shown. The dauber-head is also provided with a small projection *b* on one side, which is intended to serve as a scraper for the purpose of removing mud or dirt from the groove around the shoe at the junction of the upper and sole. This feature may, however, be omitted at pleasure.

The manner of constructing my improved brush is as follows: The head being provided of the shape shown plainest in Fig. 1, a sufficient quantity of bristles B is placed therein. A wedge or conical pin C is then inserted in the center of the bunch of bristles from the rough or root end *c* of the bristles, and is driven inward, spreading the bristles in the head until they are so firmly and tightly squeezed therein that no cement is necessary. When this pin is driven tightly up, it will be within the head A, and then a suitable pin or nail (one or more being used) is driven through a hole, as *d*, into the pin or plug, thus preventing its accidental displacement by withdrawal.

To make a double dauber the root or rough ends of the bristles project a short distance and serve as a stiff rough brush to remove mud from the shoes, while the points or outer ends *e* of the bristles project on the opposite side of the head and form a main or dauber end, for the purpose of spreading the blacking on the shoes. In the single dauber the rough or head ends of the bristles are placed at a level or flush with the edge of the head, and are covered with a cap D of thin sheet metal having its edges *f* turned or spun over a flange *g*, circular in shape and attached to

or forming part of the head A, as clearly shown in Fig. 4.

In constructing a paint-brush the head is the same, and the bristles are placed as in the single dauber, they being wedged into position by plug C' in the same way. Instead of having the cap, as in the dauber, the handle F of the paint-brush is part or an extension of the conical plug. (See Fig. 6.)

In a round head, as in the dauber and some paint-brushes, the arcs E of which the head is formed are substantially semicircles, but in the oblong or elliptical outline, as in Fig. 5, they are curves or arcs different from the semicircle. The head may have its inner sides inclined, as clearly shown in Figs. 2, 3, and 4, or straight, as in Fig. 6. When the brush is made up complete, as shown in Figs. 2 and 3, it will have the same outward appearance as though the head were formed of a number of circles, as is the brush-head shown in my Patent No. 476,449, granted June 7, 1892, in which a separate bunch of bristles was inserted in each circle, each bunch of bristles being secured in place by a separate plug; while in this my improved brush there is but one bunch of bristles, which is held in place by a single plug, so that the brush is more quickly and easily put together than is the brush shown by my said patent.

Another advantage arising from my improved brush-head consisting of a ferrule open entirely through, or from top to bottom, and formed of a series of arcs or semicircles opening into each other, is that bristles, in being wedged in place by the central tapering plug, are forced outward against the outwardly-enlarging projections or wedges forming the divisions between the said arcs or semicircles, and as the bristles are thus forced outward into a space which really diminishes (instead of increasing) outwardly, they are held more tightly and securely in place than they would be in an ordinary circular ferrule by the central plug.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A brush head consisting of a ferrule open entirely through or from top to bottom and formed of a series of arcs or semi-circles having inclined inner peripheries and opening into a common center, combined with bristles and with a central tapering plug for securing said bristles in said head, said plug having its larger end toward the part of said head having the greatest internal diameter.

2. A brush comprising a ferrule open entirely through, or from top to bottom, and composed of a series of semi-circles or arcs having inclined inner peripheries and opening into a common center, bristles mounted in said ferrule, and a central tapering plug or wedge for holding said bristles in place, said ferrule having one or more openings, as *d*, for the reception of a nail or pin to secure said plug or wedge in place.

3. A brush comprising a ferrule open entirely through, or from top to bottom, and composed of a series of semi-circles or arcs having inclined inner peripheries and opening into a common center, bristles mounted in said ferrule, a central tapering plug or wedge for holding said bristles in place, said ferrule having one or more openings, as *d*, for the reception of a nail or pin to secure said plug or wedge in place, and a cap above said plug or wedge for covering the ends of said bristles.

4. A brush head consisting of a ferrule open entirely through, or from top to bottom, and formed of a series of arcs or semi-circles opening into a common center, combined with bristles and with a central tapering plug for securing said bristles in said head, substantially as described.

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

WM. R. DERR.

Witnesses:

S. BRASHEARS,

FRANCES ELIZABETH DERR.