(No Model.)

# DE LACY E. BALLAM.

## MOP AND BRUSH.

No. 565,588. Patented Aug. 11, 1896.

Fig. 1.

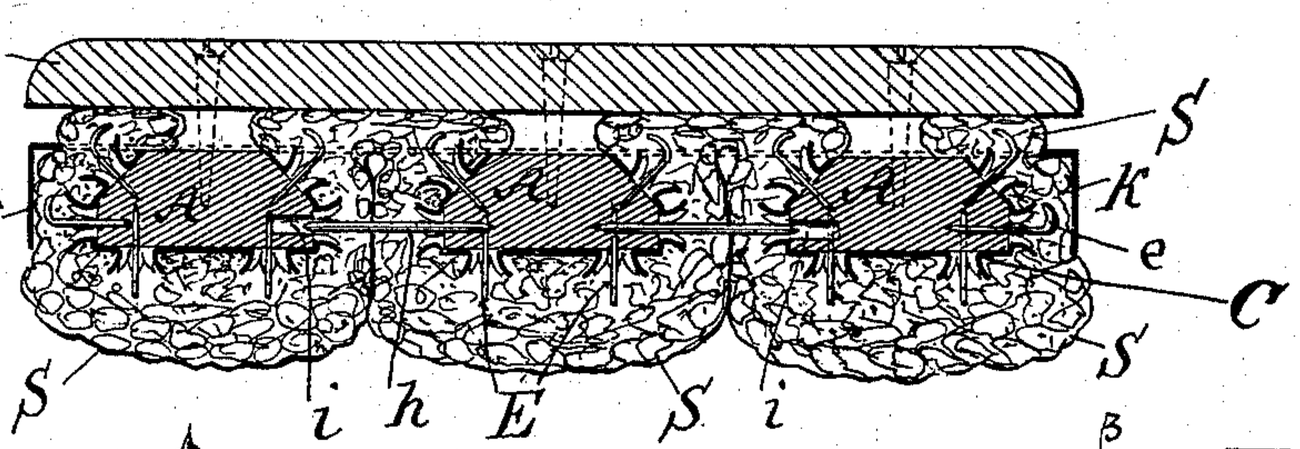



Fig. 5.

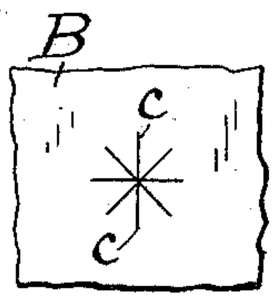
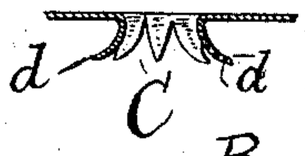



Fig. 6



Fig. 7



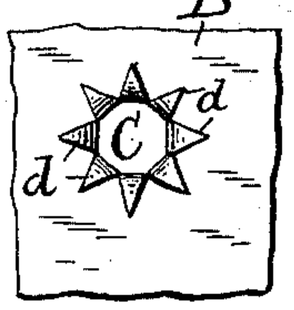




Fig. 8

Fig. 2.

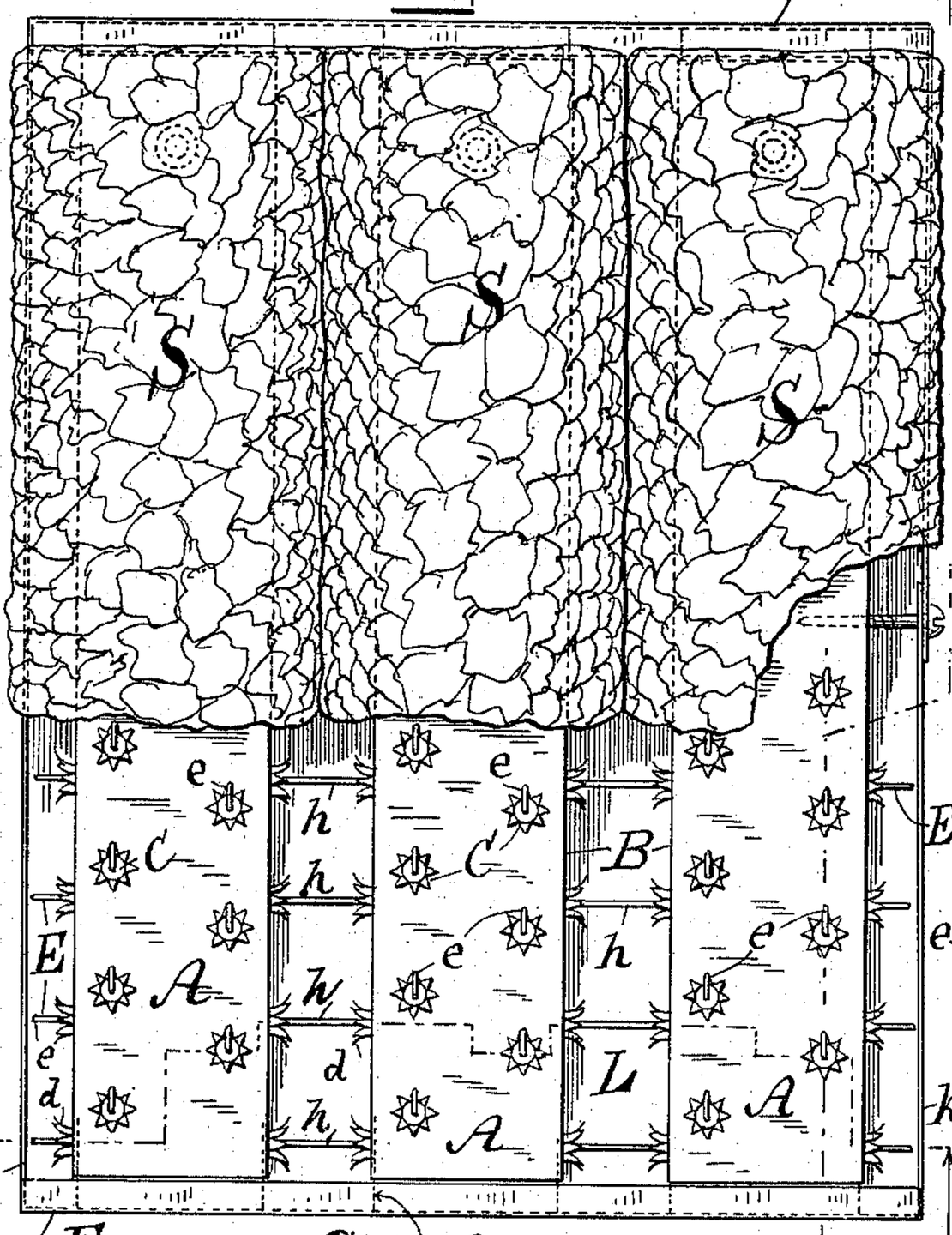



Fig. 3

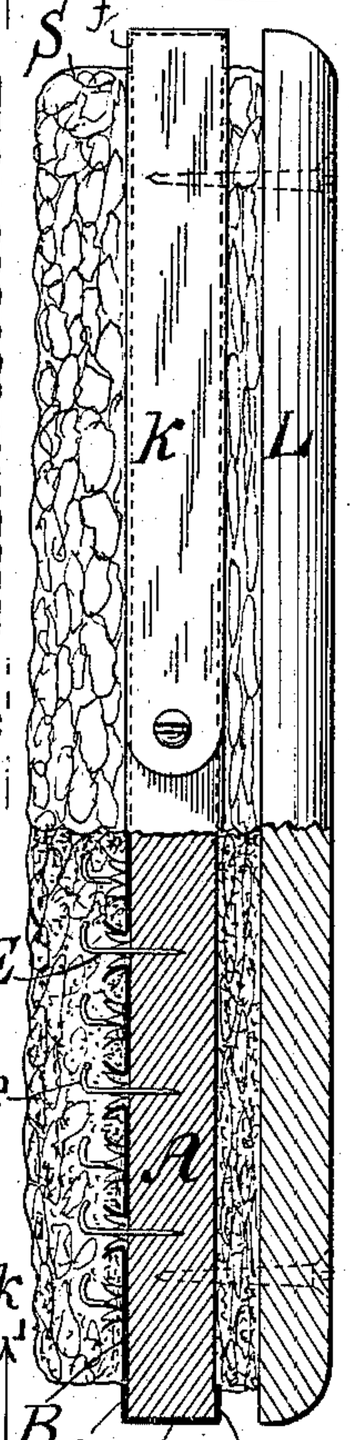
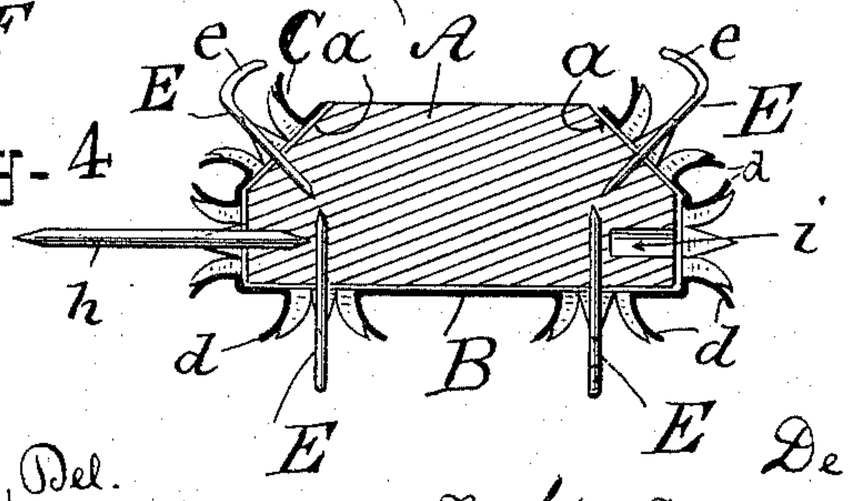



Fig. 4




Witnesses
Chas. Hanimann, Del.
Henry A. Brown.

De Lacy E. Ballam, Inventor
By his Attorney
Walter Brown

# UNITED STATES PATENT OFFICE.

DE LACY E. BALLAM, OF BROOKLYN, NEW YORK, ASSIGNOR TO PATRICK J. GRACE, OF SAME PLACE.

## MOP OR BRUSH.

SPECIFICATION forming part of Letters Patent No. 565,588, dated August 11, 1896.

Application filed November 21, 1895. Serial No. 569,642. (No model.)

*To all whom it may concern:*

Be it known that I, DE LACY E. BALLAM, a citizen of the United States, and a resident of the city of Brooklyn, Kings county, New York, have invented certain new and useful Improvements in Mops and Brushes, of which the following is a specification.

My invention relates to improvements in mops and brushes.

Especially the invention relates to the combination of sponges with backs of wood or metal provided with suitable fastening devices for retaining the sponges firmly in position on the backs without tearing the sponges.

Referring to the drawings which accompany the specification to aid the description, Figure 1 is a cross-section of the brush. Fig. 2 is a plan view of the same, the sponge being partly broken away. Fig. 3 is a longitudinal sectional elevation of the same. Fig. 4 is an enlarged cross-section of one of the slats of which the back is composed. Fig. 5 is a plan view of a piece of sheet metal provided with slits for making one form of hook-fastening. Fig. 6 is a longitudinal section of the same before the prongs are bent. Fig. 7 is a sectional view, and Fig. 8 a plan, of a finished fastening.

In order to effect the combination of sponge and back in such a manner as to prevent the sponge from tearing, I proceed as follows: A slat A, preferably of wood, and having a part of its opposite longitudinal edges beveled, as at *a*, is covered on the face and edges with a sheet B of suitable metal, as tin, the same having been first provided with hook-fastenings C. Said sheet B is secured on the slat A in any suitable manner, as by tacking, and the said fastenings C are preferably formed as follows: The sheet B, being still flat, slits *c* are made in it on radii of small circles. The points between said slits are then turned up and their tips bent over, forming hooks *d d*, Fig. 7. A great number of such fastenings are made in the sheet B, and would of themselves provide a very efficient fastening for the sponge S; but I increase their efficiency by inserting bent wire hooks E into the slat A through the fastenings C, as is plainly shown in Fig. 4. The heads *e* of said hooks E are all turned in the same direction. As seen in Fig. 2, said heads are all parallel to the length of the slats A, but they might also be perpendicular thereto. A number of such slats are preferably employed to make up a brush-back. The ends of said slats are fitted between the flanges *f f* of end pieces F, which are preferably formed of sheet metal. In one edge of each slat A will be set dowels *h*, and in the adjacent edge of the next slat will be holes *i* for the ends of said dowels.

The brush is assembled as follows: One or more of the slats A being in the end pieces F, but the slats being wide apart, a piece of sponge S wide enough to cover the face and edges of the slat, and, if possible, as long as the slat, is pressed on the face and edges of the slat and given a slight movement in a direction at right angles to the heads *e* of hooks E. This movement catches the sponge under all the hooks *d* E, so that it is held at a great number of points, and the movement is too slight to tear the sponge. Now, another slat having been covered with sponge in a similar manner is pressed hard on the first slat, the dowels *h* of one slat being thus pushed through both thicknesses of sponge into the holes *i* of the other slat. At the same time the edges of the slats clamp the sponge, and the bevels *a*, together with the sponge, form a dovetail. In this manner a considerable thickness of sponge is very firmly held between the slats A A and effectually resists any movement of the sponge which would tear it from the hooks *d* E. After all the slats are pressed together, flaps *k*, provided on the end pieces F, are bent over and fastened, as in Fig. 3, thus holding the slats A A in place. Said flaps *k* may be so long that they will cover and form a finish for the sides of the brush, or a strip of metal or wood may be applied for the finish. A cover L is finally fastened on the back of the slats.

After the sponge is in place it is advisable to strike the bottom sharply with a hammer at many points, so as to somewhat flatten down the said hooks and engage them even more firmly on the sponge.

In case a single piece of sponge is not long enough to cover all the slat several pieces may be placed on, each piece being firmly held in the manner described.

Now, having described my improvements, I claim as my invention—

1. The combination, in a brush or mop, of a back composed of a plurality of movable parts, dowels in the edge of one part and recesses for the dowels in the adjacent edge of the other part, and sponge drawn into the spaces between said parts and transfixed by said dowels, substantially as described.

2. A brush or mop consisting of a back made up of a plurality of slats having oppositely-beveled adjacent edges, hook-fastenings on said slats, and sponge clamped between the beveled edges of the slats and caught in the fastenings, substantially as described.

3. A brush or mop consisting of a back composed of a plurality of slats, flange-plates to hold the ends of the slats, beveled edges and hooked fastenings on the slats, and sponge clamped between the beveled edges and caught in the fastenings, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 18th day of November, 1895.

DE LACY E. BALLAM.

Witnesses:
HENRY V. BROWN,
BERNARD J. ISECKE.