

Dan'l W. Lapham, assignor to Josephine M. Lapham.

Impt in the manufacture of Brushes.

No. 120,523.

Patented Oct. 31, 1871.

Fig. 1.

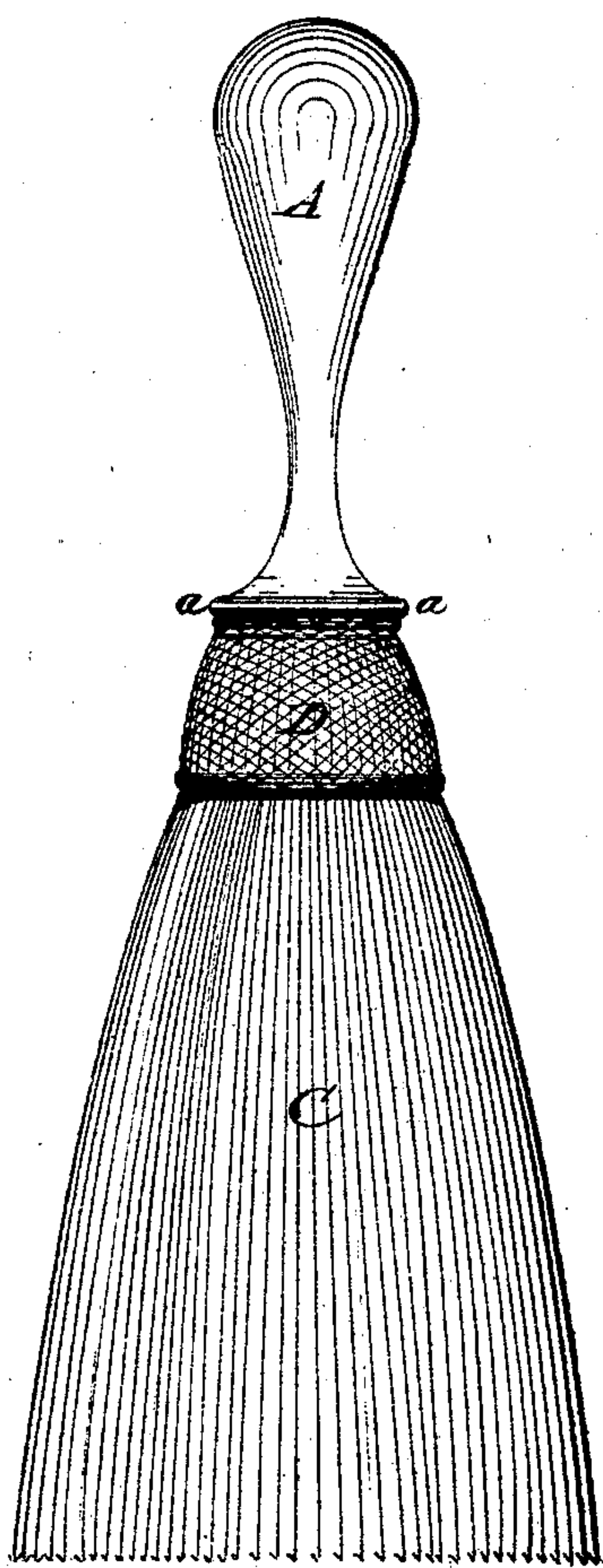
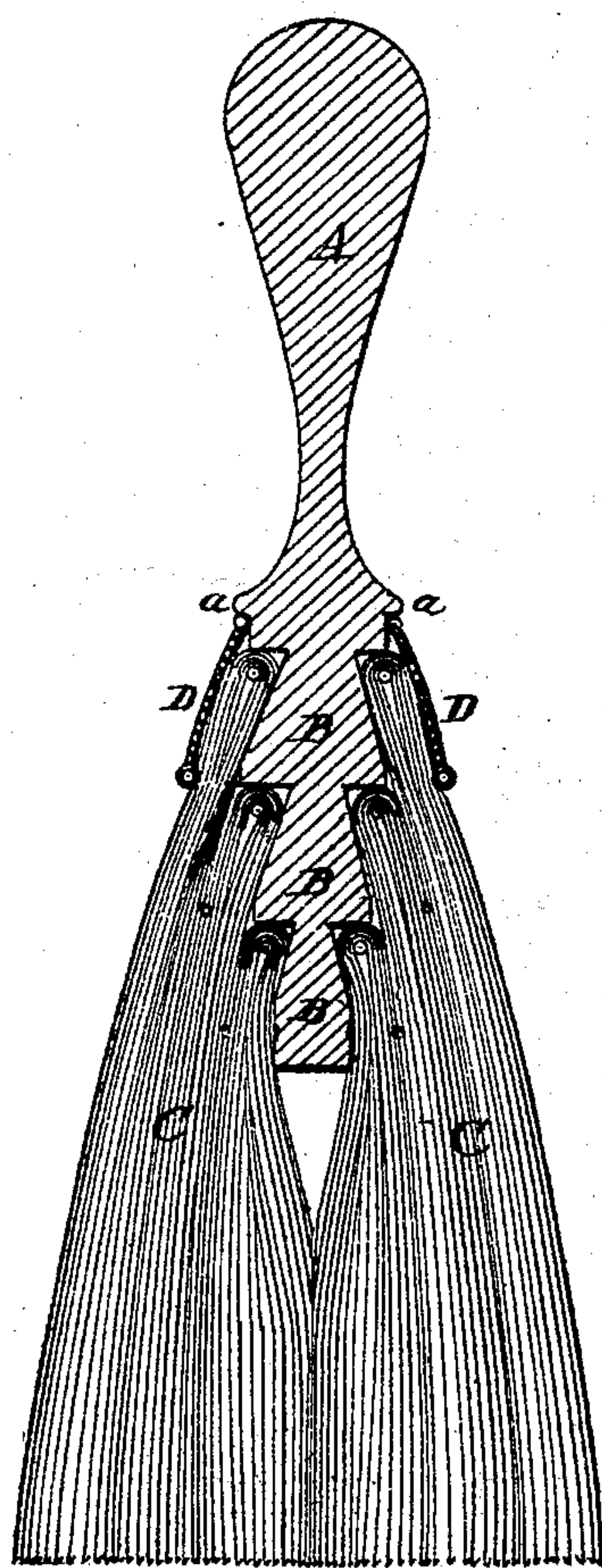


Fig. 2.



Witnesses.

Chas H. Poole  
John B. Young

Inventor.

Dan'l W. Lapham, by  
Prindle and Byers, his

Att'ys.



# UNITED STATES PATENT OFFICE.

DANIEL W. LAPHAM, OF BALTIMORE, MARYLAND, ASSIGNOR TO JOSEPHINE M. LAPHAM, OF SAME PLACE.

## IMPROVEMENT IN BRUSHES.

Specification forming part of Letters Patent No. 120,523, dated October 31, 1871.

*To all whom it may concern:*

Be it known that I, DANIEL W. LAPHAM, of Baltimore, in the county of Baltimore and in the State of Maryland, have invented certain new and useful Improvements in the Manufacture of Brushes; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a perspective view of a brush constructed in accordance with my improved method, and Fig. 2 is a central longitudinal section of the same.

Letters of like name and kind refer to like parts in each of the figures.

The object of my invention is to increase the durability and finish and lessen the expense of brushes in which the bristles are bound upon or around the handle; and it consists in constructing the brush end of the handle with a series of conical faces, to or upon which the bristles are secured, substantially as and for the purpose hereinafter specified.

In brushes as ordinarily constructed an open space is left within the bristles at the end of the handle, which space is but partly concealed when the brush is new, and as the same becomes worn is a source of much annoyance. In addition to the foregoing objection, much difficulty is experienced in properly securing the bristles together and to the handle, so as to enable them to be worn out before becoming disengaged. To obviate these difficulties I construct my handle A with one or more grooves at its brush end, each of which grooves forms a section of a cone, B, the base of which is downward, and its apex joined to the base of the next cone above; or, if the highest, to the lower portion of the handle. The cones B are preferably decreased regularly in size from the uppermost to the lowest. As thus

formed, the bristles C, having twice the length desired, are bound at their centers in layers upon and around the faces of the cones, commencing with the lowest. The upper portions of said bristles are then doubled downward upon or against their lower portions, and a wire wound one or more times around their upper doubled ends, immediately below the first wire or cord, by which means said bristles are firmly secured to or upon the handle, and cannot be removed therefrom by any ordinary usage. After the outer and upper layer is secured in place a woven elastic band, D, is placed over or around its upper end, immediately below an outward-projecting flange or bead, *a*, where it is held by its elasticity, and furnishes a neat and durable covering for said part. The especial advantage of the conical face is, that it prevents the layer of bristles from being withdrawn from the handle without the binding wire or cord is first broken or removed, while the arrangement of the series of faces causes the confined ends of the bristles to occupy less than ordinary space. In addition to the foregoing, for the inner layers of bristles, less length of stock is required, and consequently a saving in cost is effected.

Having thus fully set forth the nature and merits of my invention, what I claim as new, is—

As a new article of manufacture, a brush composed of a handle, A, provided with a series of conical faces, B, for the reception of and in combination with the bristles C, substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of June, 1871.

DANIEL W. LAPHAM.

Witnesses:

W. HUTCHINS,  
J. RICHARDSON.

(22)