C. W. NICHOLS.
Feather Duster.

No. 212,732. Patented Feb. 25, 1879.

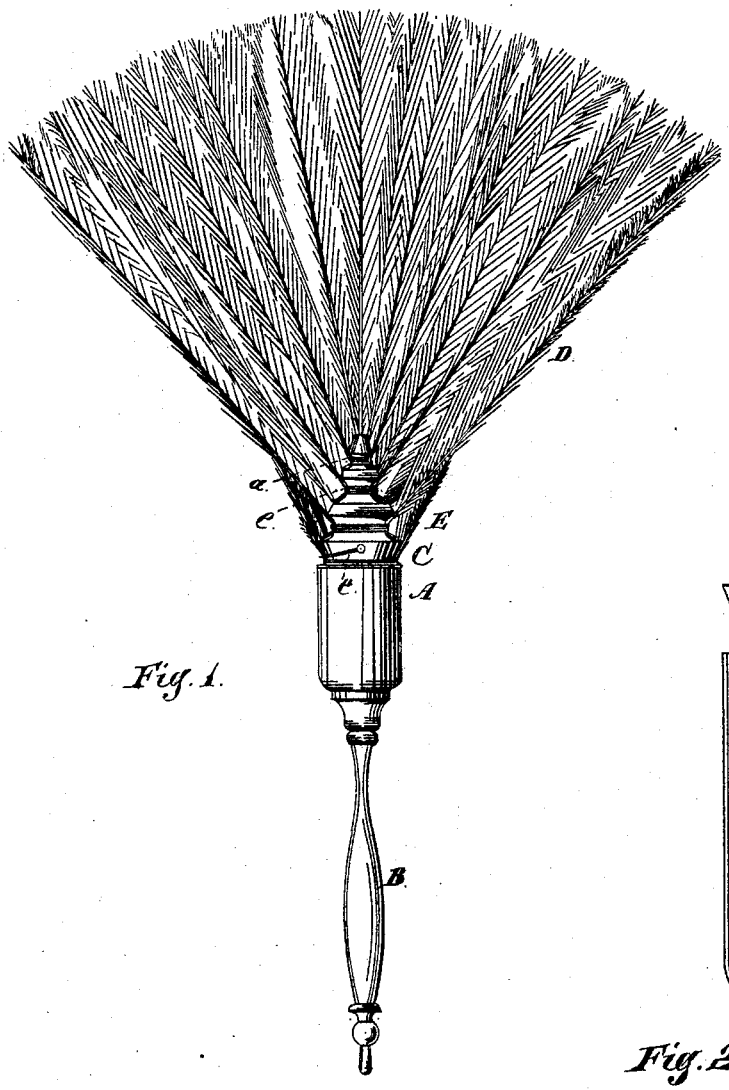

Fig. 1.

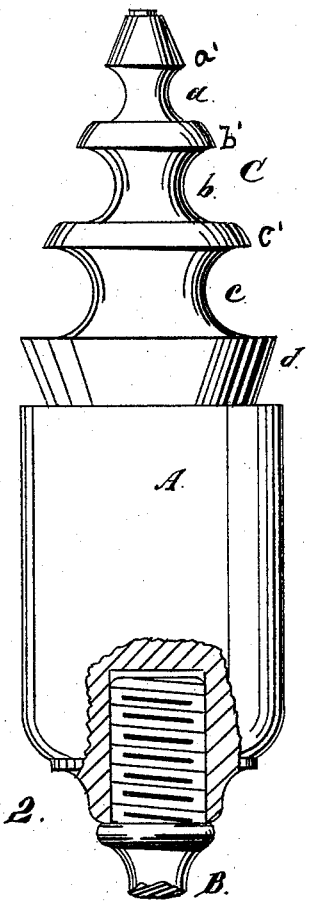

Fig. 2.

Witnesses:
C. W. Bond
S. F. Burns.

Inventor:
Clarence W. Nichols

UNITED STATES PATENT OFFICE.

CLARENCE W. NICHOLS, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN FEATHER-DUSTERS.

Specification forming part of Letters Patent No. **212,732**, dated February 25, 1879; application filed July 3, 1877.

To all whom it may concern:

Be it known that I, CLARENCE W. NICHOLS, of the city of Chicago, Cook county, State of Illinois, have invented new and useful Improvements in Feather-Dusters, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation with the feathers or duster portion partly cut away, and Fig. 2 an elevation of the base of the handle enlarged.

This invention relates to dusters; and consists in a handle or base having tapering extensions, provided with two or more feather-grooves and a skirt-groove, and the combination of parts, as will be hereinafter more fully described.

In the drawings, A represents the base of the handle; B, the handle proper; C, the tapered or conical portion; D, the duster-feathers; E, the feather-skirt; *a*, the first or inner step or groove; *b*, the second; *c*, the third; *d*, the fourth or skirt step or groove, and *e* the winding wire or cord.

The handle B and base A may be made to screw together, as shown, or they may be made of one piece. The tapering part C is provided with grooves, as shown, and the form shown is preferred, as they give the feathers a secure fastening, and cause them to stand out, as desired, for a finished brush; but it is evident that more or less of them may be used, according to the quality and finish of the brush.

This conical or tapered handle base will be found useful for any feather-duster; but it will be found of greater service and aid in producing a superior brush if the feathers are treated by any of the processes patented to me July 3, 1877, No. 192,594.

In attaching the feathers, the wire is fastened in or near the groove *a*. The first course of feathers is then placed in position, wound, and the butts trimmed, so as not to interfere with the next course. The second course is then placed in position, wound, and trimmed, as before. The third course is then placed in position, wound, and trimmed. The feather-skirt E is then placed in position and wound. The groove *d*, in which the skirt E is wound, has less depth and angle than the others, in order to make the skirt lie even and close against the main feathers D, as shown in Fig. 1.

The several sections may be separately wound and fastened, or the wire may be continued from one section to another and fastened at the ends of the complete winding.

When the winding is completed the usual ornamental leather covering is placed over the base A and the wound portion of the feather-skirt E.

By making the section or part C of the handle or base tapering, as shown, and providing it with at least two grooves, in addition to the skirt-groove, a hollow center is avoided, the feathers are firmly secured in place, and the feathers are made to stand out independently, so as to increase the dusting capacity of the brush and improve the individual action of each feather; and by this method of fastening the feathers to the handle they are firmly held in place, and are not liable to fall out, even though the handle should shrink.

It will be seen from Fig. 1 that each feather, by reason of the form of the grooves, has an upward turn or outward turn behind the winding wire in each of the grooves, so as to form a hook to hold it in position and lock it in position, so that it cannot be pulled out.

By winding in these grooves the feathers are all more strongly fastened in place, and the stubs more effectually covered than they can be by the use of an even or plain surface, such as has been heretofore used.

By making the grooves in the form shown the projections *a' b' c'* cause the feathers to stand out, and also gives them a secure locking.

What I claim as new, and desire to secure by Letters Patent, is—

1. The handle or base A of a feather-duster, having a tapering extension or section, C, provided with two or more feather-grooves,

a b, and a skirt-groove, *d*, substantially as specified.

2. In a feather-duster, the combination of the handle A B and tapering section C, provided with circular grooves *a a' b b'*, with the main feathers D, feather-skirt E, and winding wire *e*, for filling the center of the duster, locking the feathers, and causing them to stand out from the handle and from each other, substantially as and for the purpose set forth.

CLARENCE W. NICHOLS.

Witnesses:
O. W. BOND,
L. L. BOND.