No. 698,880. Patented Apr. 29, 1902.

E. K. WARREN & A. A. ACKERMAN.

FEATHER DUSTER.

(Application filed Feb. 20, 1901.)

(No Model.)

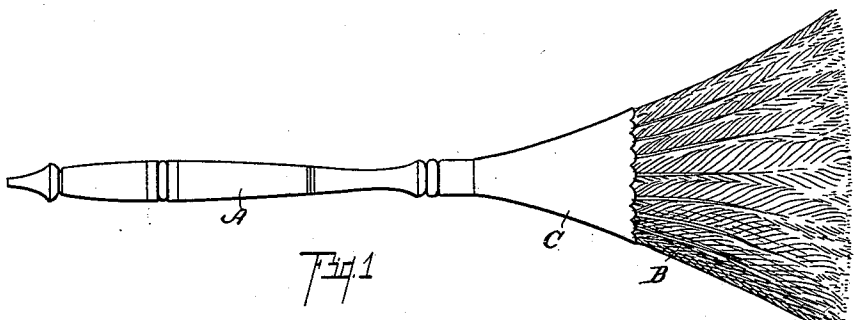


Fig. 1

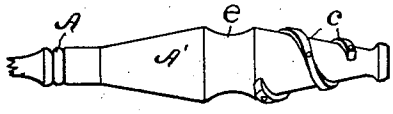


Fig. 2

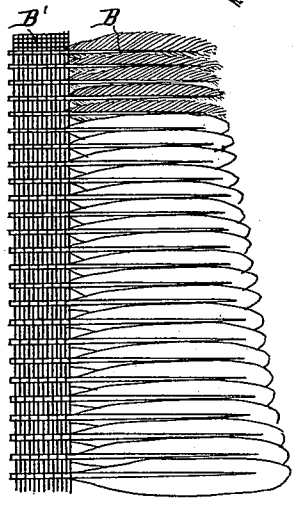


Fig. 3

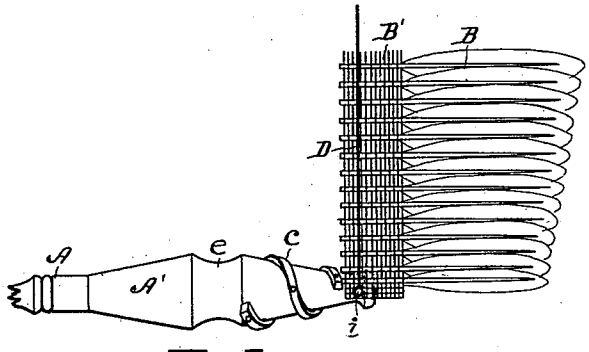


Fig. 4

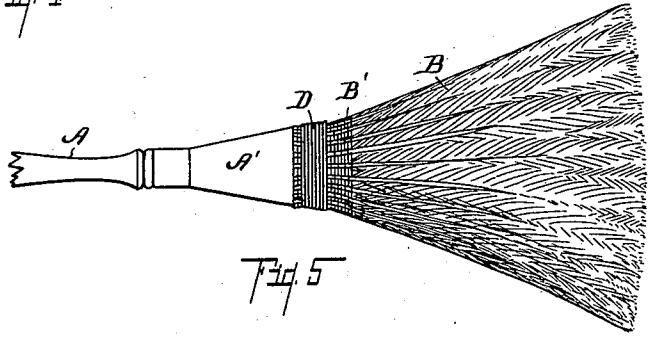


Fig. 5

Witnesses:

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UNITED STATES PATENT OFFICE.

EDWARD K. WARREN AND ALBERT A. ACKERMAN, OF THREEOAKS, MICHIGAN.

FEATHER-DUSTER.

SPECIFICATION forming part of Letters Patent No. 698,880, dated April 29, 1902.

Application filed February 20, 1901. Serial No. 48,041. (No model.)

To all whom it may concern:

Be it known that we, EDWARD K. WARREN and ALBERT A. ACKERMAN, citizens of the United States, residing at the village of Threeoaks, in the county of Berrien and State of Michigan, have invented certain new and useful Improvements in Feather Dusters, of which the following is a specification.

This invention relates to improvements in feather dusters.

The objects of the invention are to simplify and cheapen the manufacture of feather dusters and to produce a superior article when completed.

It is also an object to properly utilize the long and short feathers in such manner as to give the best results.

Further objects will appear from the detailed description to follow.

We accomplish the objects of our invention by the devices and means described in this specification.

The invention is clearly defined, and pointed out in the claims.

We show a structure embodying the features of our invention in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a view of the completed feather duster. Fig. 2 is an enlarged view of the handle and head to which the feathers are secured. Fig. 3 is a detail view of the web of feathers to be applied to the head. Fig. 4 shows the head with the web of feathers in process of application, showing the method of constructing the duster. Fig. 5 shows the head of the completed duster without the shield for the butts of the feathers.

In the drawings similar letters of reference refer to similar parts throughout the several views.

Referring to the lettered parts of the drawings, A is the handle, and A′ is the head to which the feathers are attached. This is enlarged at the center and tapered toward the handle and toward the outer end, the tip being slightly enlarged, and a broad groove *e* is around the center. A spiral *c* is around the forward conical portion. This can be made by tacking on a strip of bamboo or tough wood, or the same might be formed integral with the head by providing a proper lathe for turning the same. The idea is to form a spiral in this connection. The feathers B are woven into a web B′, the feathers first having the quills cut off and the butts clipped in a proper manner. Short feathers are placed at one end and the longer ones at the opposite end and grades are provided in between. In applying the same to the head the end of the web having the shorter feathers is put at the outer end of the head A′, a tack being driven into the same and a wire D being secured to the tack. The web is then wound onto the spiral and securely retained in position by the wire D and terminated by the web having the longer feathers winding into the shallow groove *e*, where it is securely retained by a number of turns of the wire, as appears in Fig. 5. A shield of leather C is then secured to the same and extends down over and covers the butt-ends of the feathers.

We have described our improved duster specifically in the form we believe to be most practical. We are aware, however, that it is capable of considerable variation without departing from our invention.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a feather duster, the combination of a handle with an elongated head having a spiral rib thereon; a web of feathers, the butts of which are woven in a fabric, the feathers being shorter at the inner end of the web, the web being wound on the spiral from the inner end out; and a retaining means to retain the web, as specified.

2. In a feather duster, the combination of handle with an elongated head having a spiral rib thereon; a web of feathers, the feathers being shorter at the inner end of the web, the web being wound on the spiral from the inner end out; and a retaining-wire wound onto the web to retain it in position, as specified.

In witness whereof we have hereunto set our hands and seals in the presence of two witnesses.

EDWARD K. WARREN. [L. S.]
ALBERT A. ACKERMAN. [L. S.]

Witnesses:
DELLA C. WARREN,
MORRIS G. MCGAWN.