

A. R. DAVIS.  
Feather-Duster.

No. 226,601.

Patented April 20, 1880.

Fig. 3.

Fig. 1.

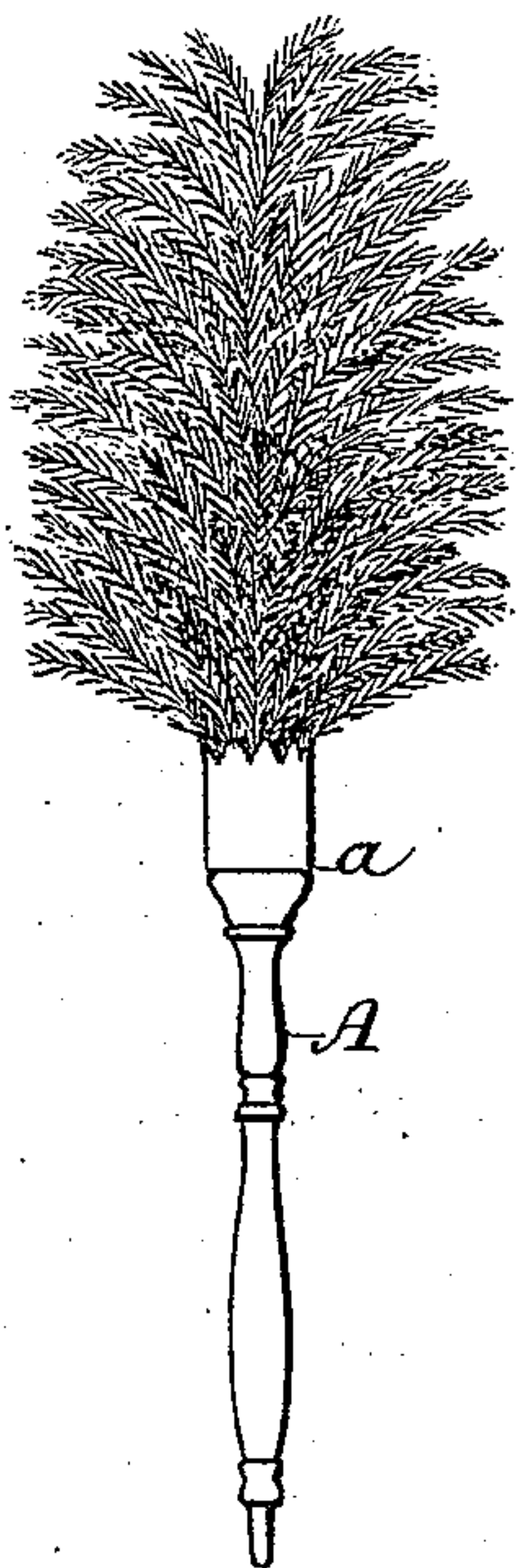


Fig. 4.

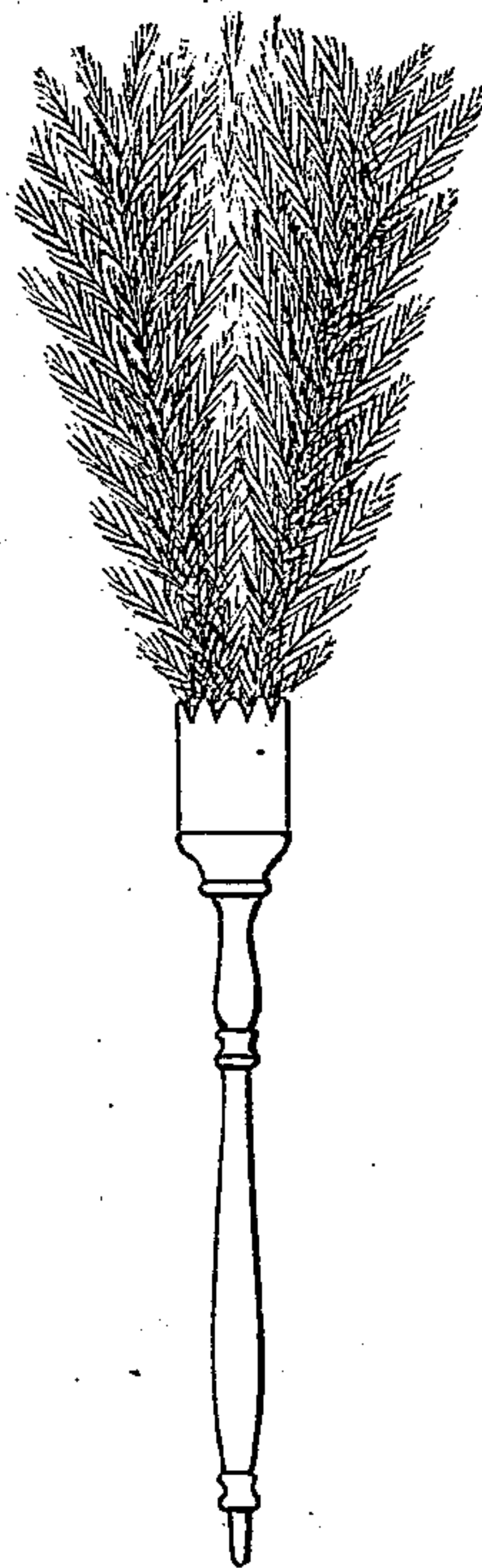


Fig. 6.

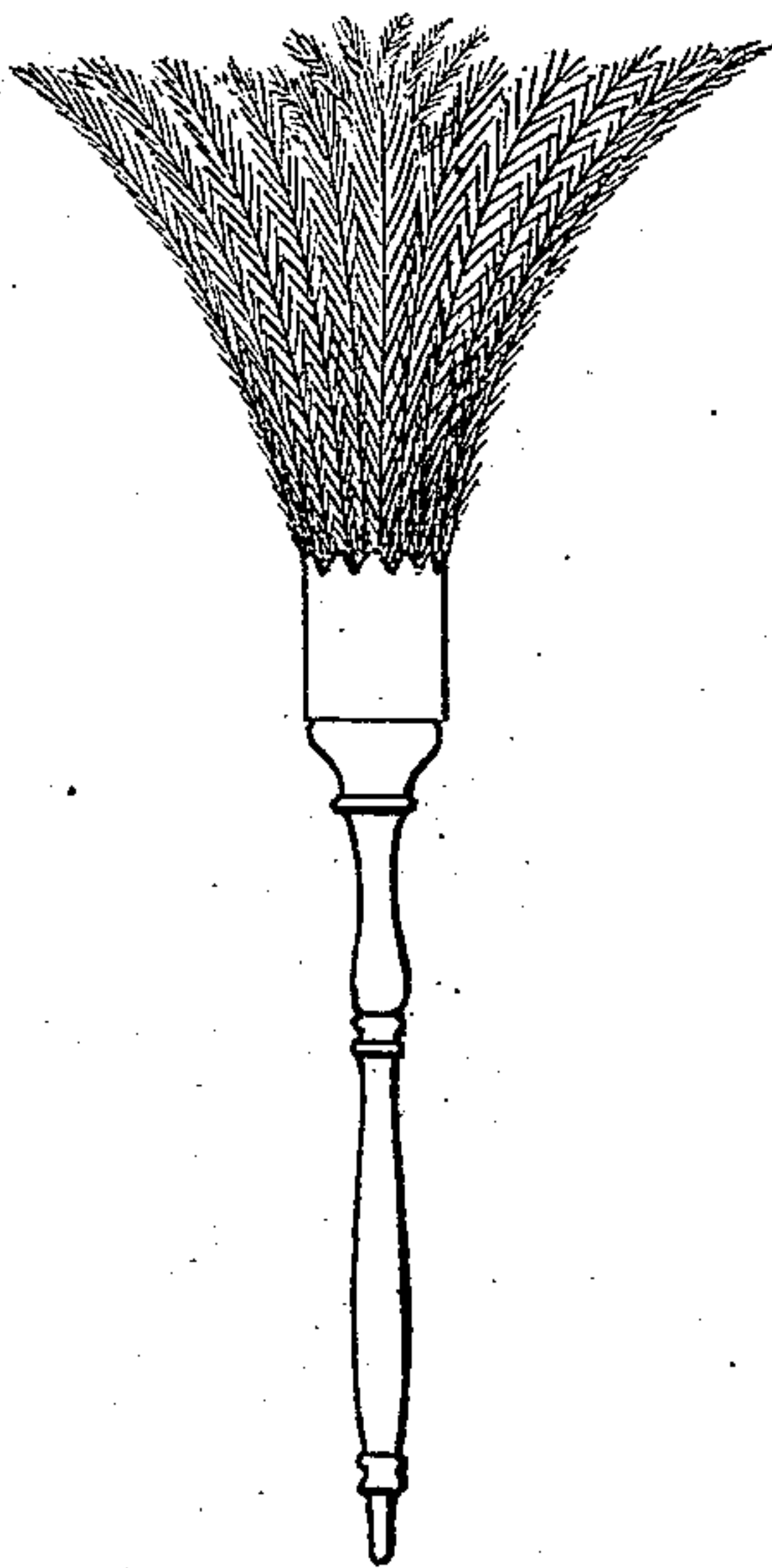


Fig. 2.

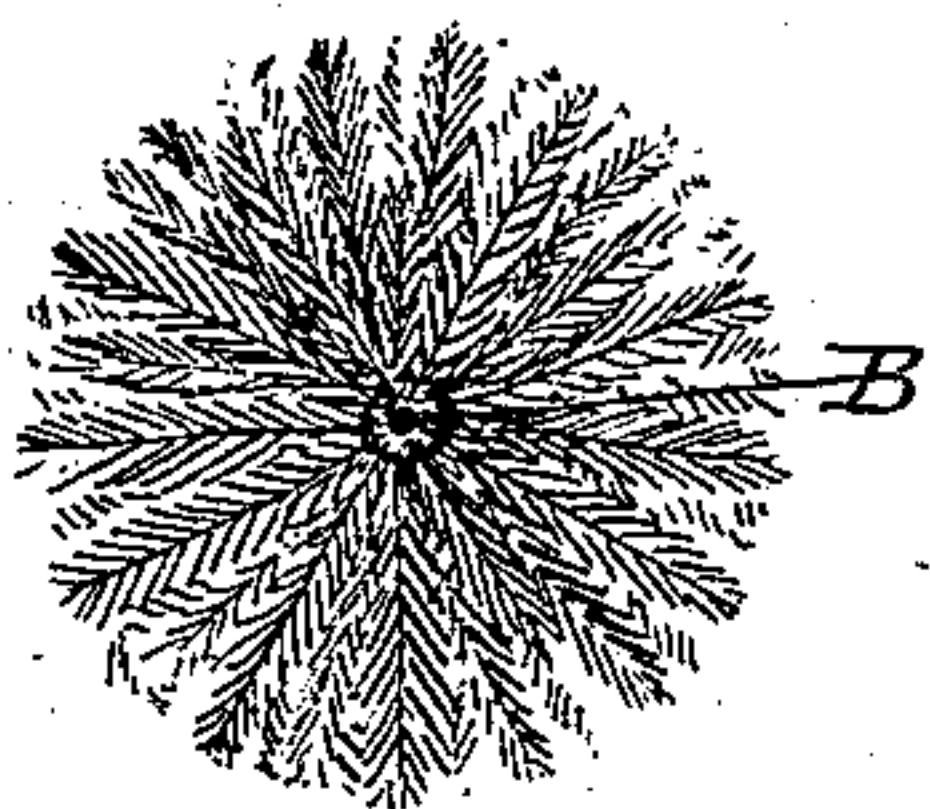


Fig. 5.

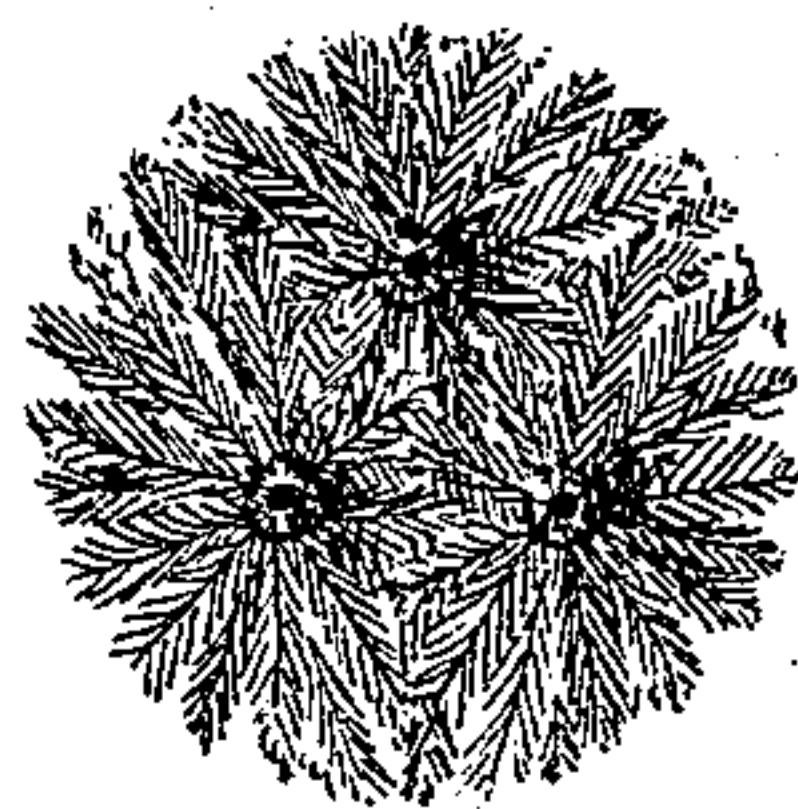
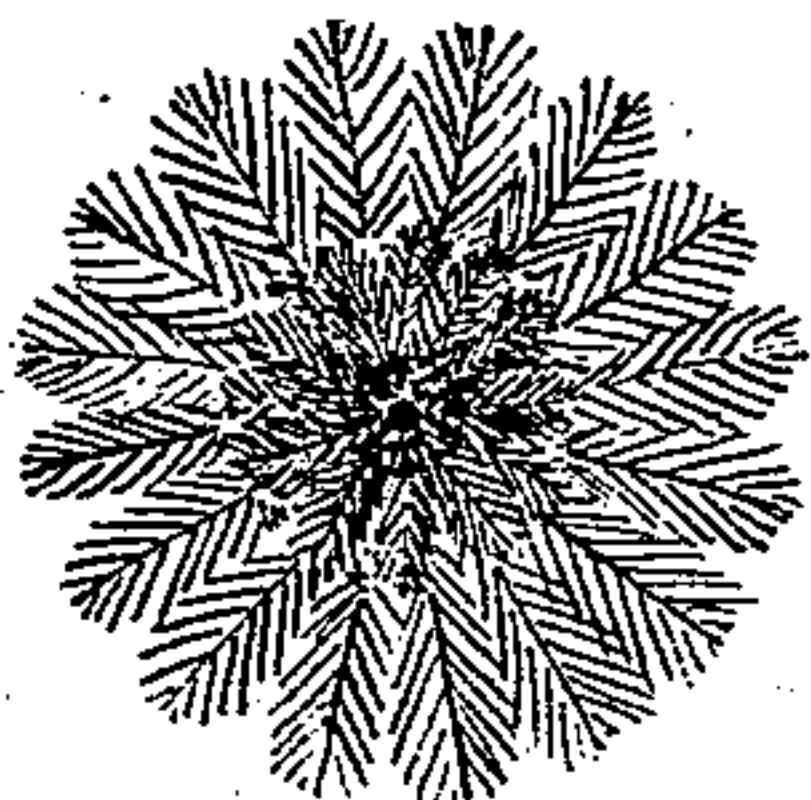


Fig. 7.



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# UNITED STATES PATENT OFFICE.

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## FEATHER DUSTER.

SPECIFICATION forming part of Letters Patent No. 226,601, dated April 20, 1880.

Application filed February 2, 1880.

*To all whom it may concern:*

Be it known that I, ABBOTT R. DAVIS, of the city of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Feather Dusters; and I do hereby declare that the following specification, taken in connection with the drawings furnished and forming a part of the same, is a clear, true, and complete description of my invention.

The main object of my invention is to attain the greatest possible area of dusting-surface in a duster composed of any given weight of feathers; and in the attainment of that end I employ means which enable the production of a better duster with a given weight of feathers than has been attained by the use of the same quantity of feathers in a duster constructed by any of the heretofore-practiced methods. In other words, I attain, by reason of my invention, a better duster, composed mainly of short and comparatively inexpensive feathers, than has been heretofore produced by the same weight of longer feathers, and when said longer feathers are made into a duster in accordance with my invention a more desirable article is produced than with feathers of equal length and weight in dusters as heretofore made.

My invention consists of a feather duster having a suitable handle and containing one or more springy and self-supporting stems mounted in said handle and covered throughout their length in regular succession with overlapping feathers. The best results are attainable with stems which are truly tapered from base to tip.

As dusters have heretofore been made, the longer the feathers therein the greater the area of dusting-surface both at the sides and end of the duster, and the shorter the feathers are so is said area proportionately reduced, and for that reason various methods of construction have heretofore been devised and patented for combining long feathers with shorter feathers in the same duster, thereby attaining an area of dusting-surface equal to that attained by the use of long feathers only. Instances of such dusters are found in that class which embody long outer feathers and shorter inner

feathers mounted in a central block, which is secured to the handle by means of a flexible stem or spiral spring, and also in that class which embody the same kind of long outer feathers and inner shorter feathers, mounted either singly or in groups on the ends of flexible stems (usually of twisted wire) the butts of which are inserted into the handle, and also in that class in which the inner feathers are mounted in groups upon wire stems, each of which has a spring-coil and is mounted in the handle, and also in that class in which the inner feathers are mounted upon a cord in groups, which, being incapable of self-support, require an outer layer or layers of long perfect feathers to maintain them in proper position.

My feather dusters, as preferably made, differ from any heretofore known to me, in that the flexible stems used therein are tapered from their bases (which have the proper bulk to afford the requisite strength) to a more or less delicate tip. This tapering feature in the stem is important, for I thereby attain in the mass of feathers secured thereto the flexible and wavy characteristics of a single feather; and another novel feature consists in the stems covered with feathers from base to tip, and, still further, in having an extensive side area of dusting-surface composed of the ends of feathers, in contradistinction to their sides, which obviously admits of their use with good effect in side strokes, as well as with end strokes, that being a matter of practical importance in many classes of dusters.

To more particularly describe my invention I will refer to the accompanying drawings, in which—

Figure 1 represents, in side view, a duster embodying my invention and having a single stem. Figs. 2 and 3 represent the duster, Fig. 1, respectively in cross and vertical section. Figs. 4 and 5 represent, in side view and cross-section respectively, a three-stem duster embodying my invention. Figs. 6 and 7 represent, in side view and cross-section respectively, a duster embodying my invention, having a single feather-covered stem surrounded by long feathers.

The handle A of the duster is provided with



a head, *a*, which, for a single-stem duster like that shown in Figs. 1, 2, and 3, is preferably concave at the end and provided with a single central hole for the reception of the stem, and for an external finish the usual band or cap is usually employed.

The stem B, Figs. 2 and 3, is preferably composed of whalebone; but other tough and springy material may be used instead. It is essential that the stem be tapered from base to tip, this latter being as small and delicate as is consistent with the character of feathers to be used therewith. For attaining a symmetrical outline the feathers should be practically uniform in length and wired or otherwise bound in layers of uniform quantity, commencing at the tip, and overlapping until the stem is covered with the projecting feathers to such a point near the base of the stem as will afford ample length of stem for insertion into the handle, the hole in the latter being large enough to receive the stem and such of the feather quills or butts as are last bound thereto, after dipping the same into suitable adhesive cement or glue, which firmly secures to the handle the stem, the base-feathers, and the binding cord or wire.

It will be seen that the tapered stem will admit, when the duster is in use, of a wavy movement of the entire mass of feathers closely approximating to the movement of the mass of long heavy feathers in large first-class dusters.

For utilizing short soft feathers I employ stems of various lengths, and, instead of the round ball-shaped dusters usually made of such feathers, I am enabled to attain with the long tapered stem an unusual area of dusting-surface which is parallel with the handle, thus enabling such a duster to be used with a side stroke in dusting mirrors, pictures, their frames, and other articles requiring special care in dusting.

As a rule, in using long feathers a short stem is preferred—say one nearly equal to the length of the shortest of the long feathers, commencing with the shortest at the tip and applying at each layer or course slightly-longer feathers, the longest being bound at the base of the stem, their quills being inserted with the stem into the hole in the handle.

The tapered flexible stem with feathers thus applied may be worked into dusters of various forms, according to the special service intended—as, for instance, in Figs. 4 and 5 I show a duster composed of three of these feather-clad stems, and in Figs. 6 and 7 a single central stem clad with short feathers is shown surrounded with a series of longer feathers mounted directly in the head of the handle.

For aiding the cord or wire in fastening the feathers to the tapered stems, I generally use suitable adhesive matter applied carefully to the bases or quills of the feathers as the winding progresses. In some cases I apply a short length of small rubber tubing to the tip of the stem and commence making the duster by inserting a few of the quills of straight feathers into the tube and in contact with the stem, which secures a closed center at the end of the duster. The shorter stems on which heavy feathers are mounted may be corrugated or roughened for attaining a firm fastening of the feathers thereon.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A feather duster containing one or more springy and self-supporting stems mounted in a suitable handle and covered throughout their length in regular succession with overlapping feathers, substantially as described.

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