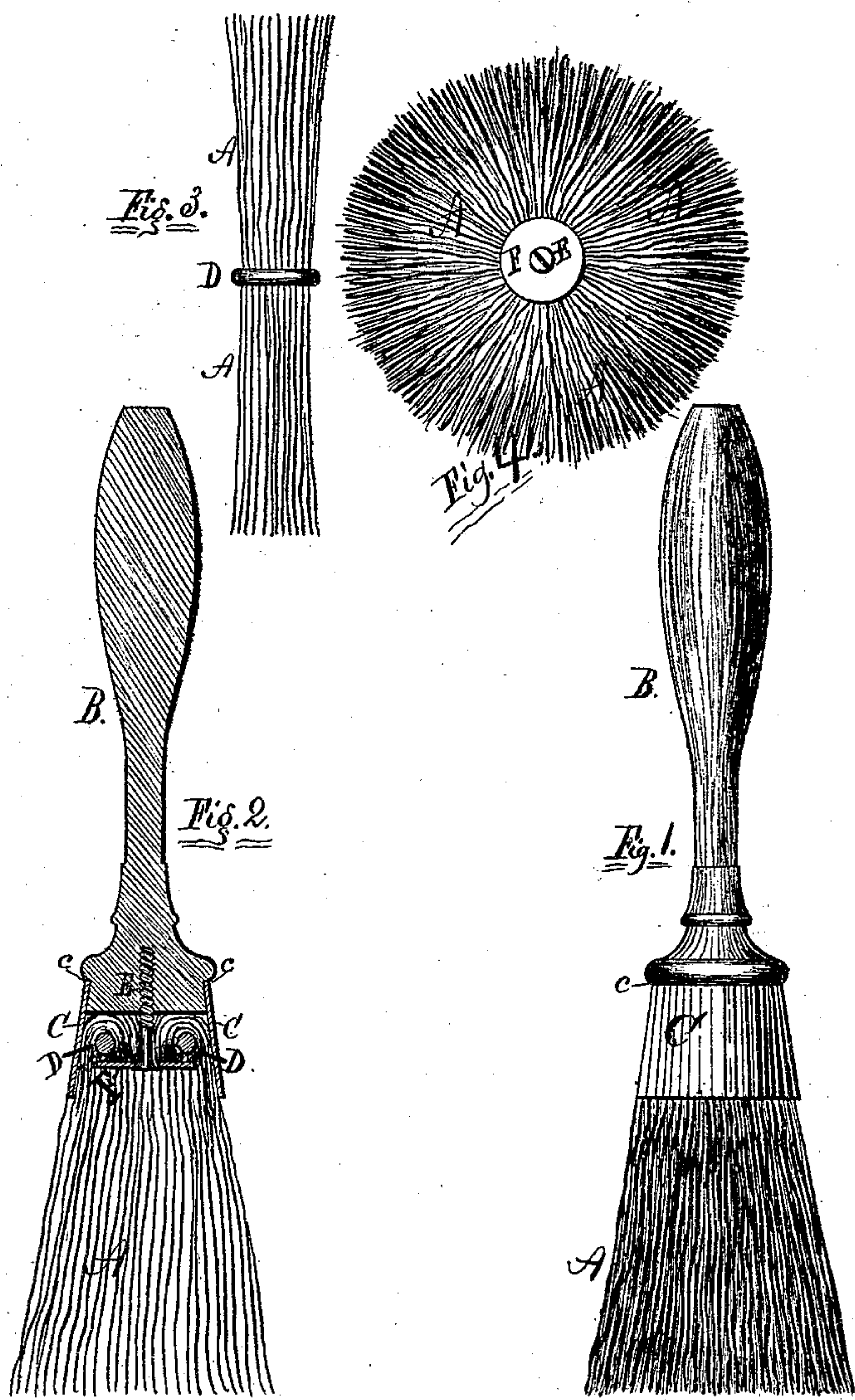


Witherell & Crandall,

Dust Brush.

No. 104,092.

Patented Jun. 7. 1870.



Witnesses:

Platt R. Richards  
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Inventors,

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by W. B. Richards,  
att'y.

# United States Patent Office.

LOREN R. WITHERELL AND AMASA B. CRANDALL, OF GALESBURG,  
ILLINOIS.

Letters Patent No. 104,092, dated June 7, 1870.

## IMPROVED DUSTING-BRUSH.

The Schedule referred to in these Letters Patent and making part of the same.

We, LOREN R. WITHERELL, of Galesburg, county of Knox and State of Illinois, and AMASA B. CRANDALL, of same place, have invented certain Improvements in Fiber Dusters, of which the following is a specification.

### *Nature and Objects of the Invention.*

The nature of our invention relates to improvements in the manufacture of dusters of sea-grass or other fibrous material, the object being to furnish a duster for all uses, at once cheap, beautiful, lasting, and efficacious.

### *Description of the Accompanying Drawing.*

Figure 1 is an elevation of a brush or duster embodying our invention.

Figure 2 is a vertical central section of fig. 1.

Figures 3 and 4 are detached views.

### *General Description.*

A represents the fibers of sea-grass or other fibrous material.

B represents the handle, which is simply flat on the end where the fibers are attached.

C is the ferrule, constructed in the usual manner, and fitted to the end of the handle B, extending upward to shoulder c.

D is a ring, its exterior circumference a little smaller than the interior circumference of the ferrule C.

E is a screw.

F is a washer.

The method of constructing our brush is as follows:

We use, ordinarily, sea-grass fibers; any other suitable material may be used, however. These fibers we color of any desired tint, and comb and clean them free from broken pieces and other sources of roughness. We now take a bunch of these fibers and slip them through a ring, D, as shown at fig. 3.

We now part the fibers in the center at each end,

and bring them down into the position shown at fig. 4.

The metallic ferrule C, which is conical-shaped, is now placed in position, with its small end on the handle B. We now place the washer F in position over the ring D, as shown at fig. 4, and put the screw E in position through the washer F and ring D. With the washer outward and the point of the screw E forward, we now press the central part of the bunch of fiber into the ferrule C, and enter the end of the screw E into the end of the handle B, when, with a screw-driver, it may be screwed in until the head, drawing against the washer F, will bring down the fibers and bind and secure them firmly against the end of the handle B and against the inside of the ferrule C, thus at the same time holding the fibers securely in place and also the ferrule C.

By this method of manufacture we produce a duster without the use of glue, or other similar material liable to become loose when wet, or otherwise, and also secure the fibers firmly in position, without projecting tongues on the end of the handle, which add to the cost of production. We, at the same time, furnish a cheaper duster than heretofore known.

In case the pure sea-grass is thought too rough for some purposes, it may be mixed with other fiber until the desired softness and pliability are reached.

### *Claim.*

We claim a duster or brush, with ring D, washer F, and screw E, in combination with handle B, ferrule C, and fibrous material A, constructed in the manner described, and for the purpose specified.

LOREN R. WITHERELL.  
AMASA B. CRANDALL.

Witnesses:

H. H. PATTEE,  
SAMUEL KERR.