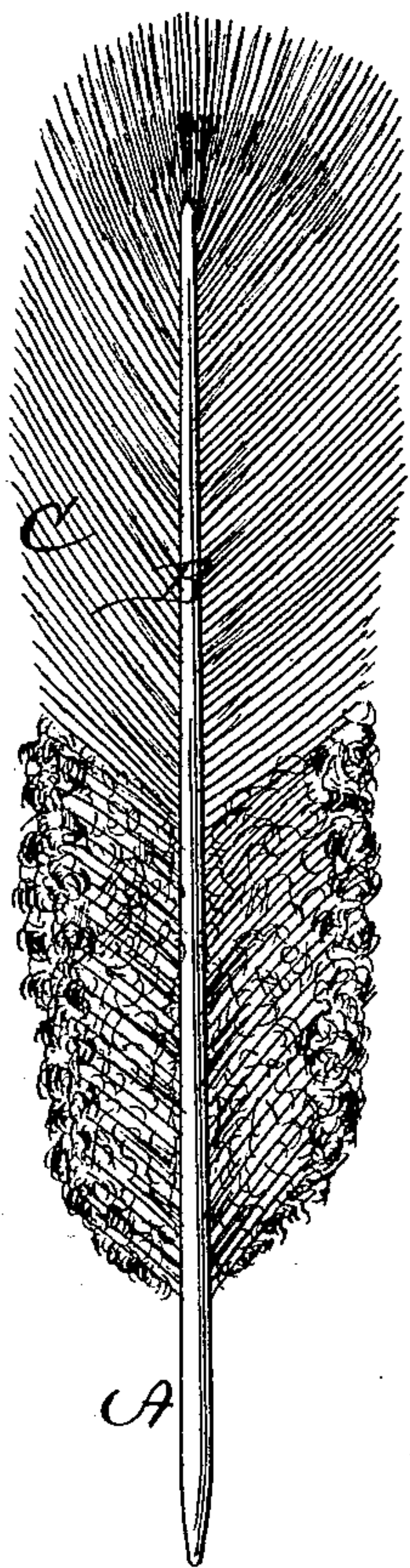


J. L. LITTLE.  
Feather-Duster.

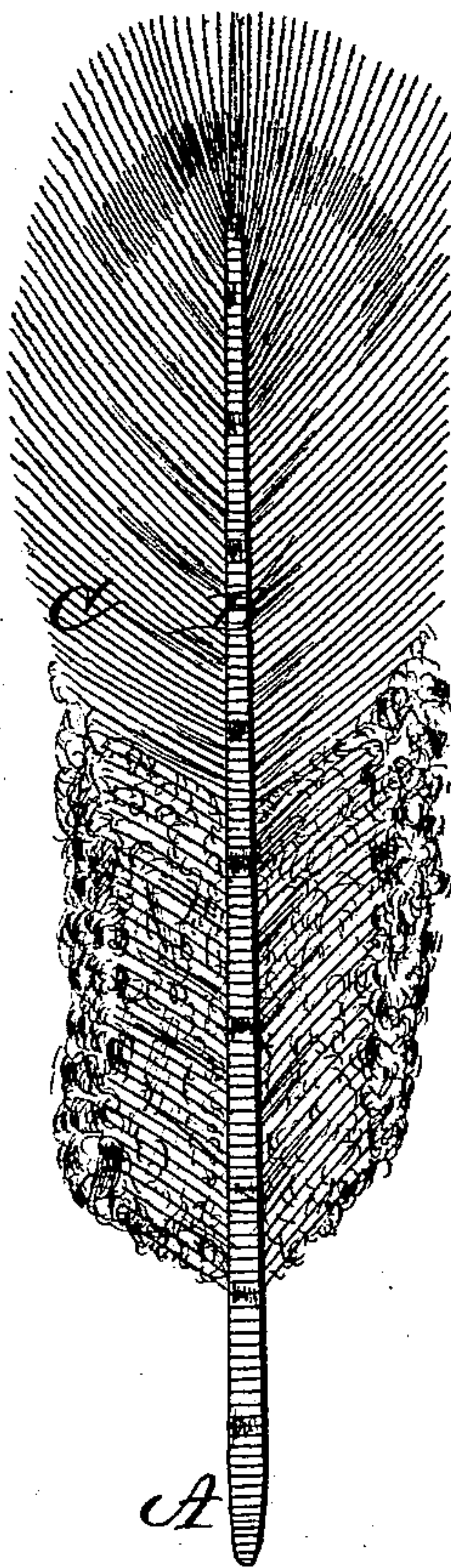
No. 169,276.

Patented Oct. 26, 1875.

*Fig. 1.*



*Fig. 2.*



WITNESSES.

*P. C. Dieterich*

*W. C. McArthur*

INVENTOR:

*John L. Little*

*per. J. F. Alexander*

ATTORNEY.

# UNITED STATES PATENT OFFICE.

JOHN L. LITTLE, OF MUNCIE, INDIANA.

## IMPROVEMENT IN FEATHER DUSTERS.

Specification forming part of Letters Patent No. **169,276**, dated October 26, 1871; application filed January 16, 1875.

*To all whom it may concern:*

Be it known that I, JOHN L. LITTLE, of Muncie, in the county of Delaware and State of Indiana, have invented certain new and useful Improvements in Rendering the Stems of Feathers Elastic for Brushes and Dusters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The object of my invention is to render feathers more elastic, flexible, and serviceable for brushes and dusters; and it consists in crushing the stiff part or stem of the feathers, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe the means by which the same may be carried out, referring to the annexed drawing, in which—

Figure 1 is a side view of a feather before the stem is crushed, and Fig. 2 is a side view of the same after the stem is crushed.

A represents the quill or barrel; B, the shaft, and C the vane, beard, or webs of a feather.

In the natural state of feathers the barrel and shaft, or stem, as above termed, is very stiff, and hence they are very hard to work up in brushes and dusters, and when so worked up they are not as elastic and serviceable as they should be.

To render them more elastic, flexible, and serviceable I crush the barrel and shaft, which may be done by passing feathers between rollers, or by hammering or squeezing them, or by any other suitable means.

I do not, however, limit myself to the particular mode of crushing or breaking, as it is obvious that this may be done in a great variety of ways.

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

As a new article of manufacture, a brush made of feathers, whose stems have been crushed for the purpose of rendering them elastic.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN L. LITTLE.

Witnesses:

A. J. SLINGER,  
J. S. ELLIS.