

A. E. WOOLF.
Made Feathers.

No. 136,891.

Patented March 18, 1873.

Fig:4,

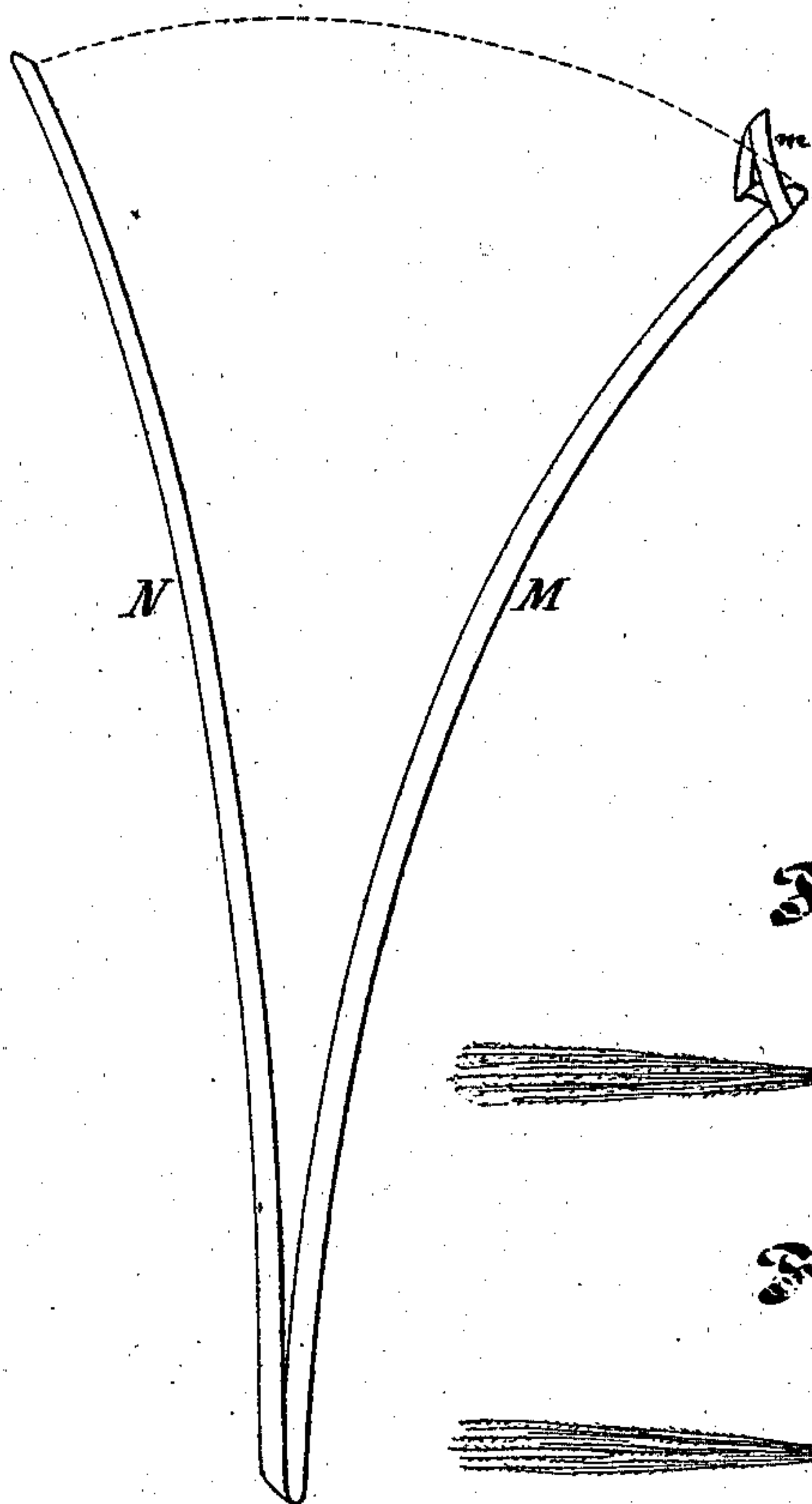


Fig:5,

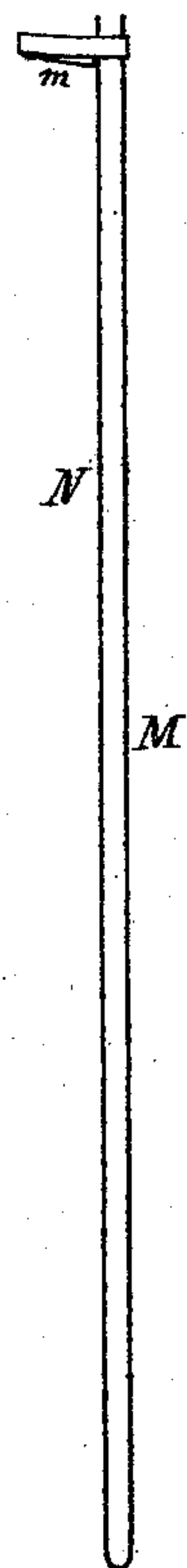


Fig:1,

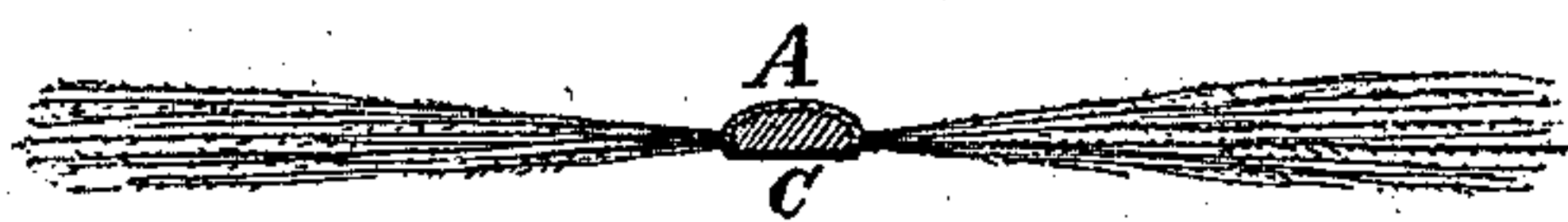
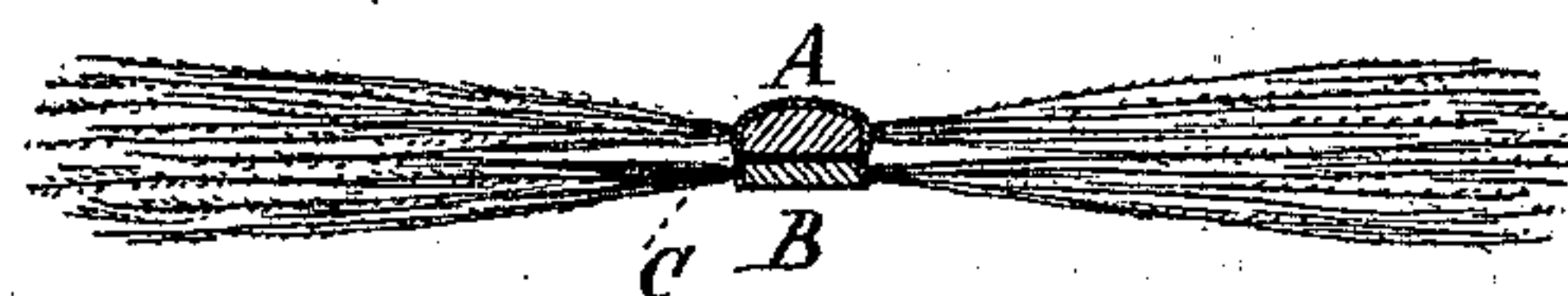


Fig:2,



Fig:3,



Witnesses:

Arnold Horvath.

Wm C. Day

Inventor:

Albert E Woolf

by his attorney

Thomas D. Stetson

UNITED STATES PATENT OFFICE.

ALBERT E. WOOLF, OF NEW YORK, N. Y.

IMPROVEMENT IN MADE FEATHERS.

Specification forming part of Letters Patent No. **136,891**, dated March 18, 1873.

To all whom it may concern:

Be it known that I, ALBERT E. WOOLF, of New York city, in the State of New York, have invented certain Improvements relating to Artificial Feathers, of which the following is a specification:

It has been frequently practiced to manufacture a single feather with a rich profusion of feathery filaments by splicing together two lean, cheap feathers. A natural rich ostrich feather commands in the market ten times the price of two lean ones, or those in which the filaments are only half as numerous. The objectionable appearance presented by the silk with which the stems of the double feathers heretofore known were bound together has prevented their general introduction. They have only supplied a limited demand from parties who were unable to afford a better article.

I have devised means of producing rich feathers by peculiarly applying together the two parts without presenting any unsightly feature. I cement the stems together. I have by repeated experiments succeeded in producing by this means feathers which seem likely to make this an important article of manufacture.

The following is a description of what I consider the best means of carrying out the invention.

The accompanying drawing forms a part of this specification.

Figure 1 is a cross-section of a lean feather with one side shaved and coated with cement. Fig. 2 is a cross-section of another lean feather shaved on both sides, and with one side coated with cement. Fig. 3 is a cross-section of the two after being skillfully and cleanly applied together and the cement allowed to harden, causing the two to adhere and form a single feather.

The additional figures show a peculiar spring-clasp, suitable for applying the two cement-coated halves together.

Fig. 4 shows the spring-clasp open. It is a little in perspective. Fig. 5 is a side view of the spring-clasp closed.

Similar letters of reference indicate like parts in all the figures.

Each finished feather is composed of two natural feathers, which may be scantily supplied with filaments, and the stems of which I will designate, respectively, by A B. The stem of the outside feather A is shaved on the under side, to remove the natural hard and shiny coating. The stem of the inside feather B is shaved both on the inside and outside. The surfaces which are to be brought together are then coated with glue, or with a solution of shellac and alcohol, or with an analogous cement, giving the preference always to a cement which will endure stormy weather. The cement is marked C. M and N are two parts of a folded strip of brass or other thin elastic material, provided with a means for conveniently locking the divergent ends together, as indicated by the sub-spring *m*.

The inner face of each part M and N may be surfaced with velvet, leather, or analogous soft material, to bear kindly on the feather.

Applying together the large ends of my properly-prepared stems A and B, I introduce them in the bight of the springs M N, and then slowly draw the divergent ends of the springs M N together, meanwhile carefully guiding the stems A and B so that they shall apply their prepared and cemented faces truly and accurately upon each other, without smearing any of the cement upon the filaments. If the inner feather B is a little shorter than the outer feather A, the effect is just as good. The springs M N being longer than the longest feathers, when the entire length of the feather is gently but firmly compressed together by the springs, the divergent ends are locked by the catch *m*, and the whole is laid upon a shelf, and the next is treated. After one hour, more or less, the springs M N may be opened by disengaging the sub-spring *m*, and the finished feather being taken out, the same apparatus is ready to be used again.

I can produce my improved spliced feathers with nearly all the perfection in appear-

ance of the richest feathers, which command from three to four dollars apiece. The poor feathers which may be available for the purpose may be purchased for less than three dollars a dozen.

I claim—

As a new article of manufacture, the within-described feather A B C, composed of two natural feathers prepared and cemented to-

gether, substantially in the manner herein set forth.

In testimony whereof I have hereunto set my hand this 3d day of December, 1872, in the presence of two subscribing witnesses.

ALBERT E. WOOLF.

Witnesses:

THOMAS D. STETSON,
WILLIAM C. DEY.