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PATENTED FEB. 3, 1903.

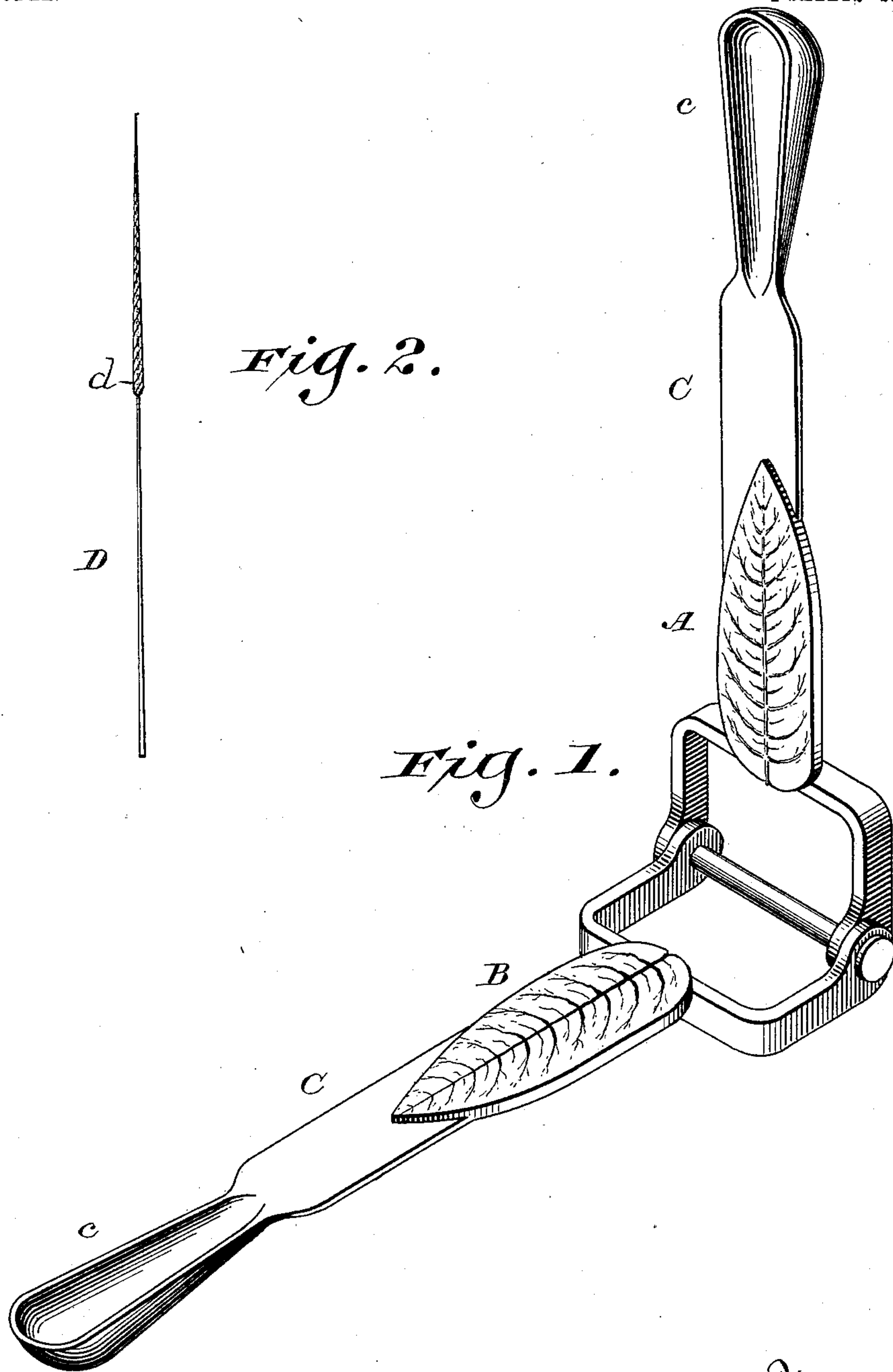
C. E. AKELEY.

ARTIFICIAL FOLIAGE AND PROCESS OF MAKING SAME.

APPLICATION FILED OCT. 2, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:
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2 SHEETS—SHEET 2.

Fig. 4.

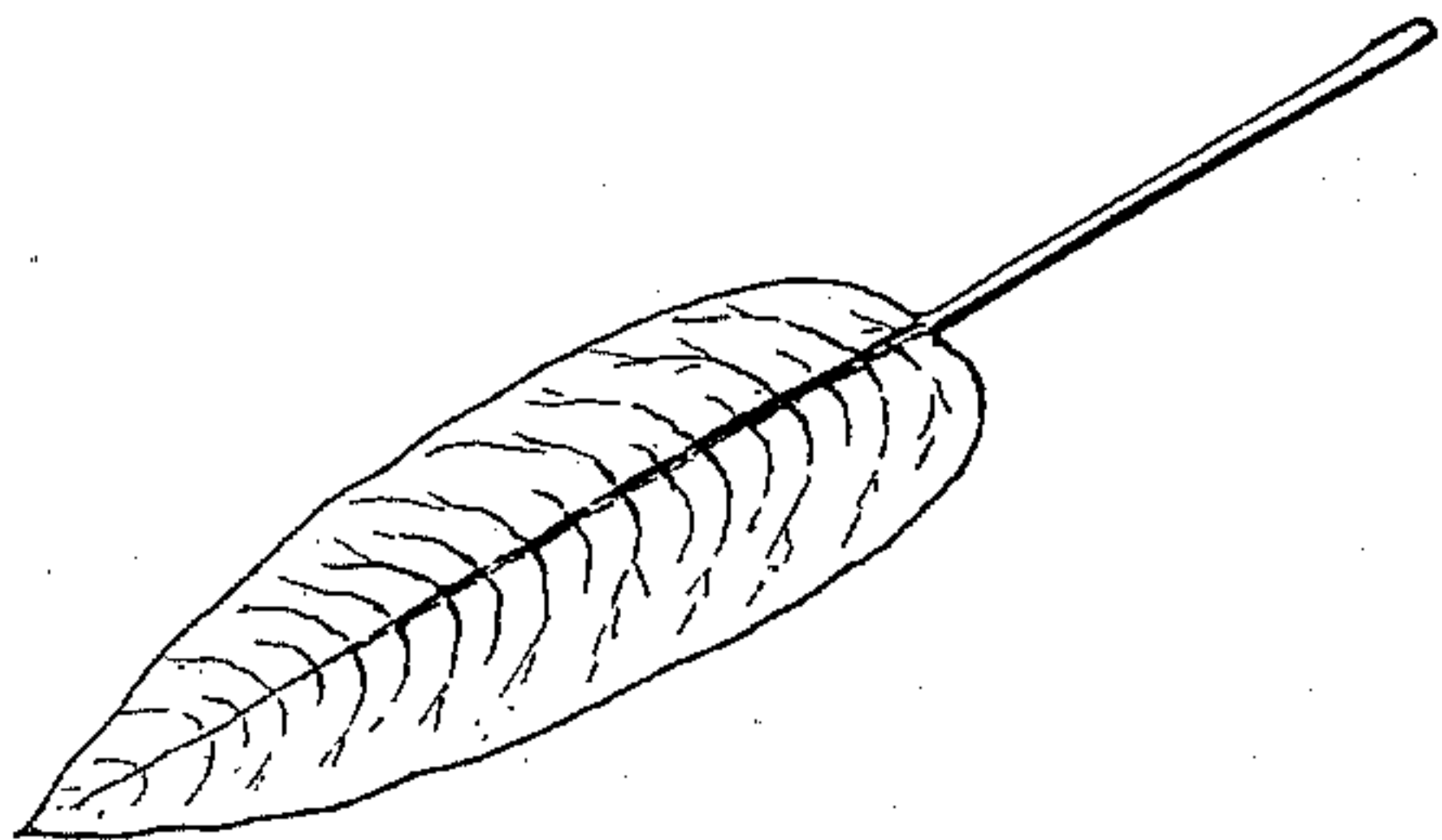
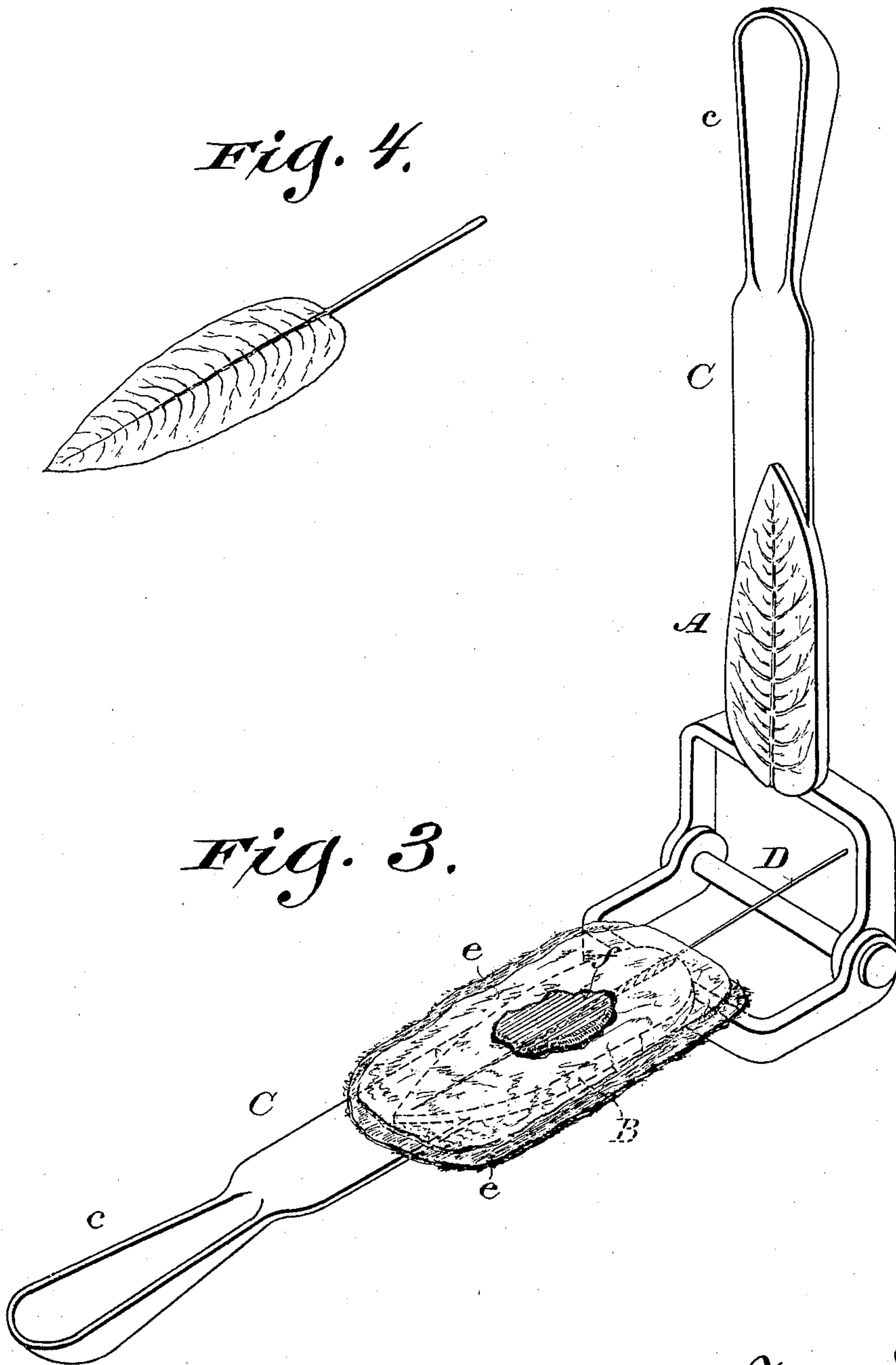


Fig. 3.



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UNITED STATES PATENT OFFICE.

CARL E. AKELEY, OF CHICAGO, ILLINOIS.

ARTIFICIAL FOLIAGE AND PROCESS OF MAKING SAME.

SPECIFICATION forming part of Letters Patent No. 719,632, dated February 3, 1903.

Application filed October 2, 1902. Serial No. 125,617. (No specimens.)

To all whom it may concern:

Be it known that I, CARL E. AKELEY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Artificial Foliage and the Process of Making the Same, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

The main objects of my invention are to increase the durability and improve the appearance and quality of artificial foliage and to facilitate making the same.

It consists, essentially, of leaves possessing the characteristics and of the method or process of making the same hereinafter particularly described, and pointed out in the claims.

In the accompanying drawings like letters designate the same parts in the several figures.

Figure 1 represents a mold suitable for carrying out my invention in making one particular variety of leaves, and Fig. 2 shows a base or foundation for a leaf to be made by my process. Fig. 3 illustrates one method of arranging the constituents of a leaf preparatory to molding the same, and Fig. 4 shows a finished leaf.

In carrying out my process I first prepare a mold consisting of two parts or dies corresponding with the upper and lower surfaces of the leaf to be produced. In making the mold from a drawing I first form the die for the under side of the leaf from a block of stereotype or other suitable metal shaped to correspond with the contour of the leaf, the veining of the leaf being engraved or impressed therein. I then impress a sheet of moistened stereotype or blotting paper or other pliable material into the grooves or depressions of the die thus formed and after it is dry or set form a cast of stereotype or other metal thereon. This cast forms the upper die or part of the mold and has slightly-raised portions corresponding with the grooves or depressions in the other die.

When a leaf of the desired kind is obtainable, I make a plaster cast of the upper surface of the leaf and from that make a wax cast. The wax cast is coated with plumbago

and placed in a bath and electroplated with copper. This copper film is backed with stereotype or other suitable metal and becomes the upper die or part of the mold. From this upper die a cast is made of stereotype metal, and the veining which appears thereon is gouged out or cut deeper. This cast serves as the lower die or part of the mold.

The two dies (designated A and B, respectively, in Fig. 1 of the accompanying drawings) are formed on or attached to the arms C C or parts of a mold, so as to be brought forcibly together face to face. The arms C C or opposing parts of the mold may be conveniently hinged together at one end and formed with handles *c c* at the other end, as shown in the drawings. For making foliage according to my process with a mold thus prepared the working faces of the dies are oiled to prevent the wax or other plastic material from adhering thereto.

As a foundation for the stem I preferably use a tapered wire D, a part of which is wrapped with waxed strips of cloth or other fibrous material, as shown at *d* in Fig. 2. A wire thus prepared is placed, as shown in Fig. 3, between two thin sheets or layers *e e*, of cotton wadding or other loosely-matted fibrous material, on the lower die B. Melted wax or other suitable plastic material in a fluid or semifluid state is poured upon or applied, as shown at *f*, to the middle of the wadding or fibrous material in sufficient quantity to produce the leaf, and the dies are then brought together, forcing the wax or plastic material into and through the wadding or fibrous material and compressing them together into the desired thickness and shape.

Instead of applying the wax or plastic material to the loose fibrous foundation after it is placed in the mold, as above stated, one or more sheets or layers of the wadding or fibrous material may be dipped into or otherwise coated with the wax or other plastic material and, while the wax or plastic material is soft, placed between the dies and compressed with a stem prepared as above explained.

In case a single sheet or layer of the wadding or fibrous material is used the stem is

placed below it in the middle groove of the lower die. If two sheets or layers of the wadding or fibrous material are used, the stem is placed between them. I prefer, however, to
 5 pour the melted wax upon or apply the plastic material in a fluid or semifluid condition to the middle or central portion of the wadding or fibrous foundation after it is placed in the mold or upon the lower die, as shown
 10 in Fig. 3, and then by bringing the dies together force the wax or plastic material outwardly in all directions into and through the fibrous foundation as it is compressed between the dies. In this way I am enabled
 15 with more ease and certainty to avoid air-bubbles and to produce perfect work. After the wax or plastic material has set and the leaf is removed from the mold the surplus material squeezed out from the dies beyond
 20 their molding-faces is trimmed off, and the proper contour is given to the leaf, as shown in Fig. 4.

Leaves of different colors or shades on their upper and under sides may be made by ap-
 25 plying wax or other plastic material of the required colors or shades to the two sheets or layers of fibrous material forming the foundation for each leaf, or a different shade or color with the dusty appearance which some
 30 leaves have on the under side may be produced by applying dry coloring-matter to the oiled surface of the lower die of the mold. For dry colors the molding-surface of the mold may be coated with lard-oil or magilp.
 35 Variegated or party-colored leaves may be made by applying wax or plastic material of different colors or shades to the wadding or fibrous material with a brush or otherwise. In a melted or semifluid condition the plastic
 40 material will run together and cause the colors to blend, thus producing very pleasing and natural effects.

I do not wish to be understood as limiting myself to the use of the particular kinds of
 45 fibrous or plastic materials hereinbefore mentioned as suitable for the purpose of my invention, as others may be successfully employed with like or similar results.

Leaves made according to my process here-
 50 inbefore set forth are superior to wax leaves made according to the ordinary well-known methods and can be produced much more perfectly, easily, and cheaply. They are
 55 tougher, more durable, and much less liable to injury by extreme changes in temperature.

They will not crack and fall to pieces like ordinary wax leaves.

I claim—

1. The process of making artificial foliage which consists in applying to one or more
 60 sheets or layers of loosely-matted fibrous material, a suitable plastic material such as wax, in a fluid or semifluid condition, and while such plastic material is soft, compressing and molding it with said fibrous material
 65 to the desired thickness and form, substantially as set forth.

2. The process of making artificial foliage, which consists in applying to one or more
 70 layers of loose fibrous material, a plastic material in a fluid or semifluid condition, and while such plastic material is soft, compressing it with said fibrous material between dies corresponding with the upper and lower sur-
 75 faces of the leaf to be imitated, substantially as set forth.

3. The process of making artificial foliage which consists in applying to one or more
 sheets or layers of loosely-matted fibrous material, a suitable plastic material such as
 80 wax, in a fluid state, wrapping a stem with like or similar fibrous material saturated or coated with plastic material, and compressing the fibrous material of the stem and body of the foliage with the plastic material while
 83 soft, to the desired thickness and form between suitable dies, substantially as set forth.

4. The process of making artificial foliage which consists in applying to two loose layers
 90 of fibrous material, plastic material of different shades or colors corresponding with the shades or colors of the upper and under sides of the leaves to be produced, and compressing the two layers of fibrous material with the plastic material together into the desired
 95 form, substantially as set forth.

5. Artificial foliage consisting of a body or layer of loosely-matted fibrous material saturated or permeated with plastic material and compressed into the desired form and to
 100 the proper thickness, with a tapering stem wrapped with fibrous material which is also saturated with plastic material, substantially as set forth.

In witness whereof I hereto affix my signa-
 105 ture in presence of two witnesses.

CARL E. AKELEY.

Witnesses:

CHAS. L. GOSS,

GERTRUDE HUNT.