

(No Model.)

I. A. AILION.

FAN.

No. 342,555.

Patented May 25, 1886.

Fig 1.

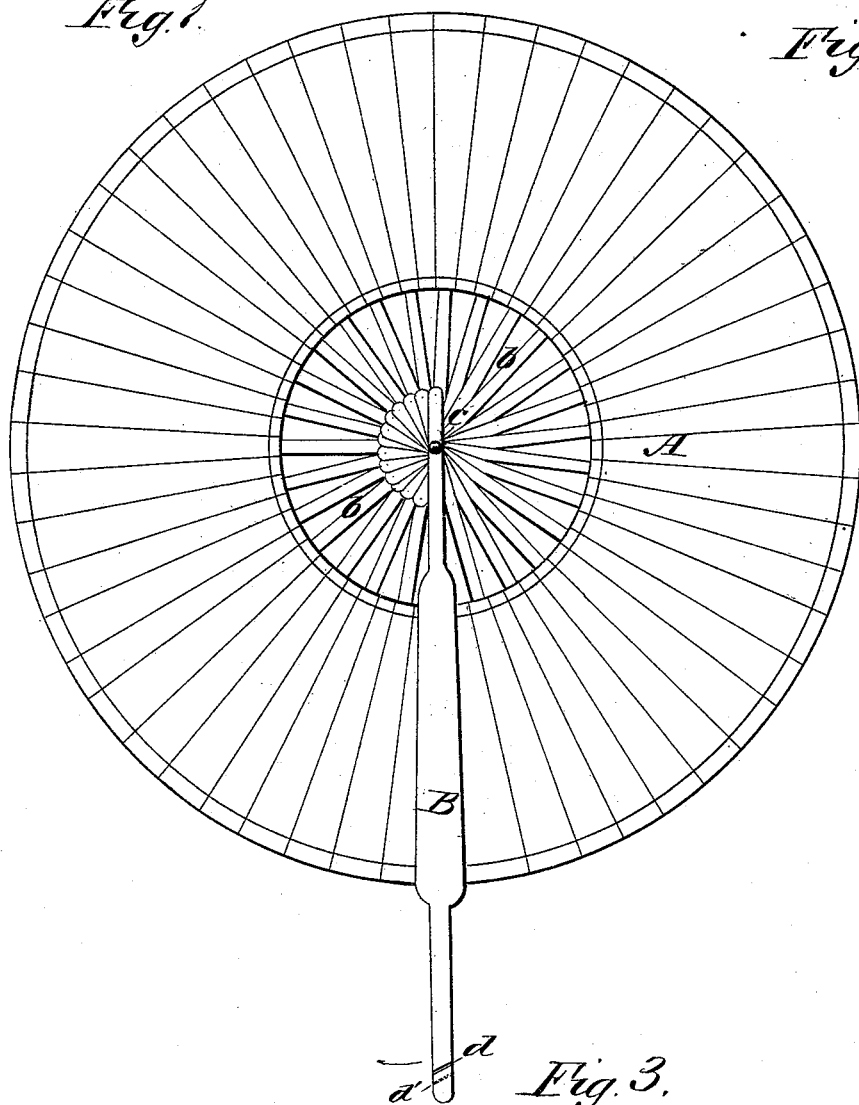


Fig 2.

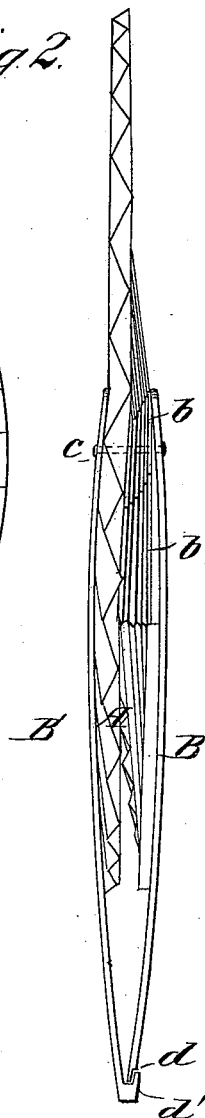


Fig 3.

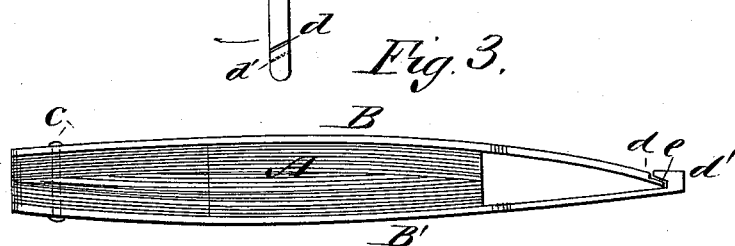


Fig 4.

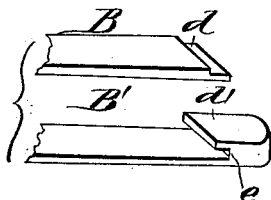
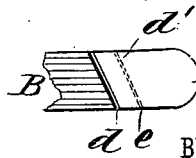


Fig 5.



WITNESSES:

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SPECIFICATION forming part of Letters Patent No. 342,555, dated May 25, 1886.

Application filed March 27, 1886. Serial No. 196,777. (No model.)

To all whom it may concern:

Be it known that I, ISAAC ALFRED AILION, of Hiogo, Japan, have invented certain new and useful Improvements in Fans, of which the following is a full, clear, and exact description.

This invention relates to folding fans in which the handle or frame is composed of two side pieces or sticks united near their upper ends by a pivot, and having the web of the fan, which is a radially split or divided one, attached to them, so that on turning said side pieces or handle-sections, or either of them, about or with the pivot as a center, first in one direction and then in an opposite direction, the web of the fan is opened and closed as required.

The invention consists in a novel construction of the handle-sections or side sticks, substantially as hereinafter described, and pointed out in the claim, whereby great simplicity and efficiency are obtained, and said side sticks or handle-sections also constitute locking devices without the aid of additional means or attachments for holding the fan in its open and closed positions, as hereinafter set forth.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a face view of my improved fan when fully open, and with its handle-sections as locked or secured in such position. Fig. 2 is an edge view of the same, under a like condition or position of its parts. Fig. 3 is an edge view of the fan when folded or closed, and with its handle-section secured to hold it closed. Fig. 4 represents views in perspective of the outer or lower and locking ends of the two handle-sections; and Fig. 5, a view in perspective of the same, showing said ends as engaged or secured the one by the other.

A indicates the circular radially split or divided web, composed in part of ribs *b*, and made of any suitable flexible material. This web is attached on its radial margins to the two side sticks or handle-sections *B B'*, which are united by a pivot or pin, *c*, that occupies a central position to the web when opened, and

that is connected with the web by the ribs *b* thereof, all as in the folding fans of a like description.

The handle-sections *B B'* are made from a single piece of wood, if desired, to form two thin independent strips or sticks of any suitable width on their faces, either or both of which are elastic transversely to their faces in direction of their length, so that they may be sprung from or toward each other at their lower or hand-holding ends. The one, *B*, of these handle-sections is made somewhat shorter at its lower end than the other handle-section, *B'*, and is facially reduced and made tapering or oblique transversely to its width at said end to form an oblique shouldered portion, *d*. The other, *B'*, of the handle-sections is constructed at its lower extended end to form a thickened portion, *d'*, on its one side or face, and is grooved, as at *e*, to receive down within and through it the reduced part of the portion *d* of the handle-section *B*. The upper margin of the thickened portion *d'* and base of the groove *e* are of corresponding obliquity to the shoulder of the portion *d* and its outer terminal margin; or the corresponding obliquity may only apply to the outer terminal margin of the shoulder *d* and base of the groove *e*, or to the shoulder of the portion *d* and upper margin of the thickened portion *d'*. This tongue-and-groove-like construction of the portions *d d'* of oblique configuration on their end bearing parts, provides, without having resort to an attached locking-shield and stud, or to a notched locking-socket, as in other folding fans of the description named, for the two sticks or handle-sections forming in themselves their own locking devices to hold the fan both in its open and closed positions. This is done by simply engaging the oblique shouldered portion *d* of the one handle-section, *B*, with the oblique grooved portion *d'* of the handle-section *B'*, the oblique end bearing-surfaces of said engaging parts *d d'* having a wedge-like action one upon the other, and the side bearing or meeting surfaces of said parts, as controlled by the elasticity of the handle-sections *B B'*, assisting in holding said sections in their locked position.

When the fan is opened, and it is desired to

engage the portions *d d'* with each other, the sticks or handle-sections *B B'* are first made to partly cross each other and sprung in toward each other, so as to admit of the entry of the portion *d* from the right side within the portion *d'*; but this temporary and partial crossing of the handle-sections is not required when engaging the portions *d d'* to lock the handle-sections when the fan is folded or closed.

A folding fan constructed substantially as herein described, essentially differs from that described in Letters Patent No. 244,319, dated July 12, 1881, in which the handle-frame consists in part of a side piece made in one piece with a solid handle having near the web portion of the fan a recessed projecting shoulder and an attached notched plate or shield, and in part of a swinging side piece constructed to enter between said plate or shield and the recessed projecting shoulder portion, and provided with an attached stud arranged to engage with the notch in the shield.

In my fan, constructed as hereinbefore described, the two handle-sections unite to form the hand-holding portion of the fan, and are both constructed at their lower or outer ends, without separate attachments, to engage in a

wedging manner with each other direct, and when the fan is open are restrained from becoming disengaged, in part by their wedge-like fit and elasticity and in part by the hand of the person grasping the handle, but are free to disengage without any "giving" or yielding of the pivot or pin which connects the two sections of the handle. By my construction, also, the two handle-sections being grasped by the hand, the fan will be kept extended, even should the two sections become disengaged.

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

As an improved article of manufacture, a folding fan having its handle formed of two thin pivoted strips, *B B'*, of nearly equal length, the strip *B'* being provided at its lower end with an oblique groove, and the strip *B* having an oblique shoulder portion at its lower end, adapted to enter the groove of the strip *B'*, to lock the two together, whereby both strips *B B'* form a handle to be grasped by the hand, as set forth.

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Witnesses:

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W. C. BONGER.