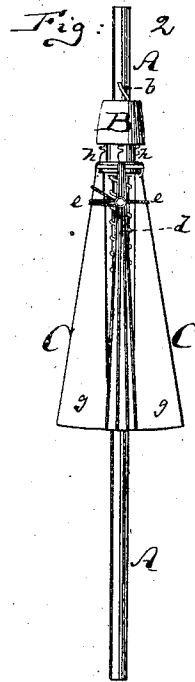
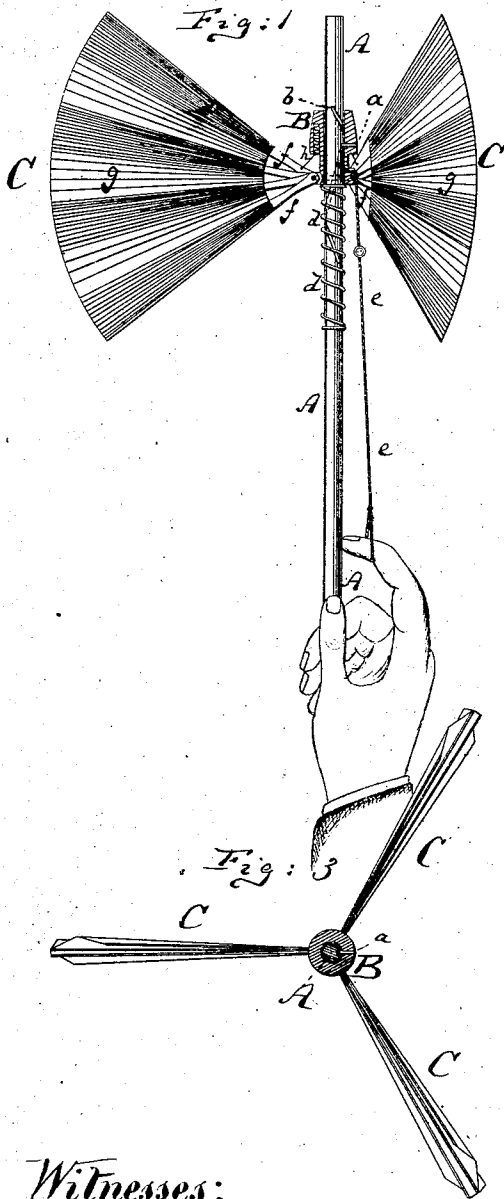


E. SCHMIDT.

Fan.

No. 159,224.

Patented Jan. 26, 1875.



Witnesses:

A. Moraga.
E. Webb

Inventor:

Ernst Schmidt
by his attorney
A. V. Briesey

UNITED STATES PATENT OFFICE.

ERNST SCHMIDT, OF NEW YORK, N. Y.

IMPROVEMENT IN FANS.

Specification forming part of Letters Patent No. **159,224**, dated January 26, 1875; application filed November 17, 1874.

To all whom it may concern:

Be it known that I, ERNST SCHMIDT, of New York, in the county of New York and State of New York, have invented a new and Improved Ladies' Fan, of which the following is a specification:

Figure 1 is a side view, partly in section, of my improved ladies' fan, showing the same extended. Fig. 2 is a side view thereof, showing it contracted; and Fig. 3 a top view, partly in section, of the same.

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

This invention relates to a new oscillating fan, which is applicable to a central rod or to the stem of a parasol or other apparatus, in such a way that the lady can, with one finger of the hand that holds the rod or stem, or with other like convenience, operate the fan in the desired manner.

The invention consists in applying a series of extensible fan-blades to a collar that is longitudinally movable on the supporting rod or stem, but so that when lengthwise displaced it will also, at the same time, be turned to impart to the wings the necessary motion for disturbing the air.

In the accompanying drawing, the letter A represents the stem of a parasol or other suitable rod. B is a sleeve or collar placed loosely around the stem, so that it can be moved up and down thereon. A pin, *a*, extends from the sleeve B into a spiral groove, *b*, which is formed in the rod A, or vice versa, so that the sleeve B, whenever it is moved up or down on the rod, must also necessarily turn thereon as its pin *a* moves in the spiral groove *b*. A suitable spring, *d*, preferably a spiral spring, embracing the rod A, crowds the collar B into one terminal position, and a suitable cord, *e*, or other means, may be attached to the collar B for drawing said collar against the spring *d*. Thus, when the parts are arranged in the relative positions shown in Figs. 1 and 2, the wearer need only draw the string *e* down, which can be conveniently done by one finger of the hand that holds the rod A, thereby contracting the spring *d*, and then, by releasing the string slightly, the spring *d* will propel the collar up again, &c., the reciprocating

movement thus imparted to the collar being at the same time converted into a partial rotary movement, as already described. To the reciprocating rotary collar B are pivoted the radial ribs *f* of a series of fans, C C. Each fan consists of a suitable number of ribs, *f*, that are connected by a piece of fabric, *g*, constituting the body of the fan. The inner ends of the rod *f* of each fan are united by one pivot to the collar B, as shown, and by this pivot-connection each fan is made contractible and extensible, they being shown extended in Fig. 1 and contracted in Fig. 2. When extended, they are swung up into a horizontal position—*i. e.*, at about right angles to the rod A—as shown, and serve, when the above-described motion is imparted to the collar B, to agitate the air in the required manner for fanning the person that uses the instrument. When not to be used, the fans are contracted and swung down along the rod, A, as in Fig. 2, and the string *e* can then be used to tie the fans around the rod, as shown. A suitable number of fans, C, may be arranged around the collar, three being illustrated in Fig. 3. Small springs, *h*, may be used for connecting the upper part of every fan with the upper part of the collar B, so that each fan may be drawn and held up into the horizontal position by such spring *h* as soon as such fan is released by the untying of the string *e*.

As an attachment to ladies' parasols, fans of this description are intended to be particularly useful, because they will enable ladies to fan themselves while walking in the street, or also when sitting in a vehicle or room with the parasol in hand.

I claim as my invention—

The combination of the rod A, carrying the spring *d*, with the collar B, pin *a*, groove *b*, and with the string *e* and fan-blades *c*, all combined and arranged as described, so that the alternate action of the string and spring will impart rectilinear reciprocating motion to the sleeve and fan, the groove *b* causing the sleeve to turn during said motion, as set forth.

ERNST SCHMIDT.

Witnesses:

F. V. BRIESEN,
E. C. WEBB.