No. 749,638. PATENTED JAN. 12, 1904.

M. STEINER.

FAN ATTACHMENT FOR SEWING MACHINES.

APPLICATION FILED AUG. 24, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

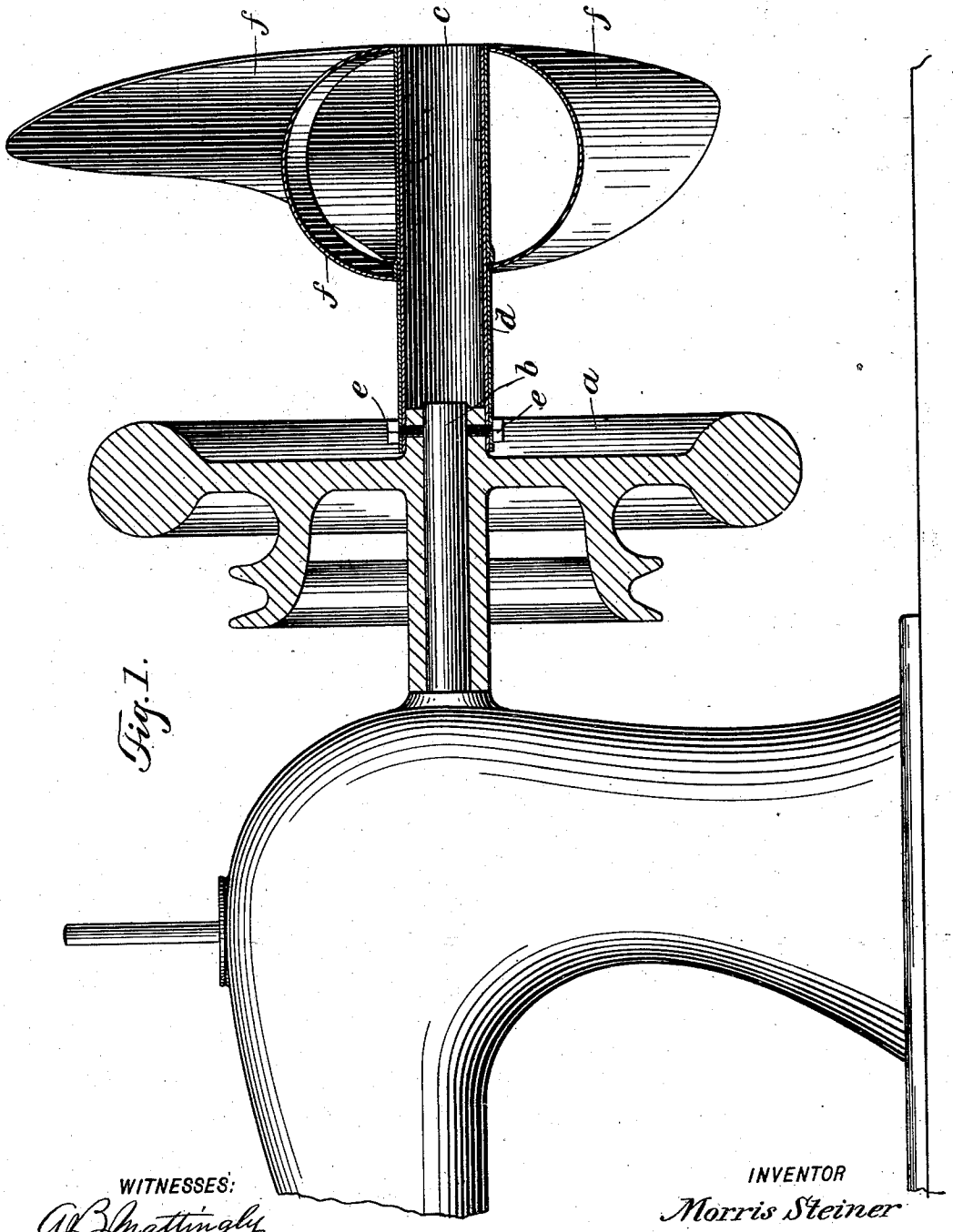


Fig. 1.

WITNESSES:

A. B. Mattingly

Isaac B. Owens

INVENTOR

Morris Steiner

BY Munn & Co

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 749,638. PATENTED JAN. 12, 1904.

M. STEINER.

FAN ATTACHMENT FOR SEWING MACHINES.

APPLICATION FILED AUG. 24, 1903.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.

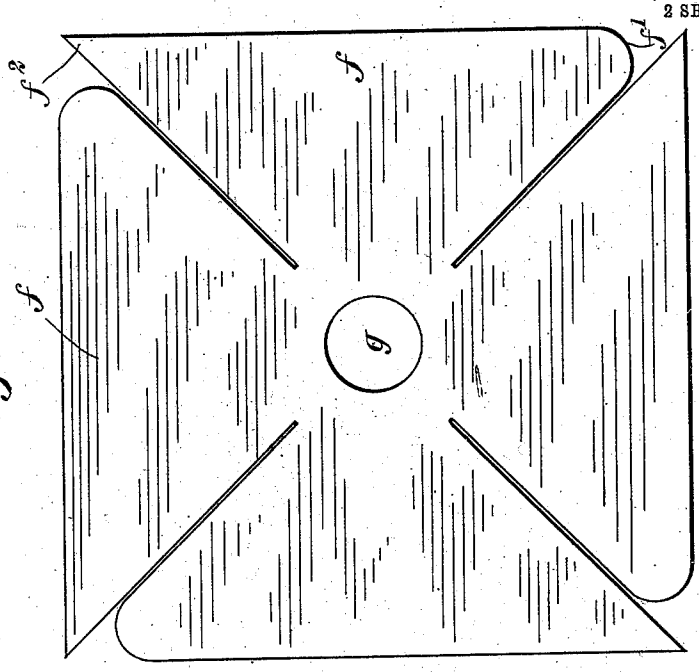
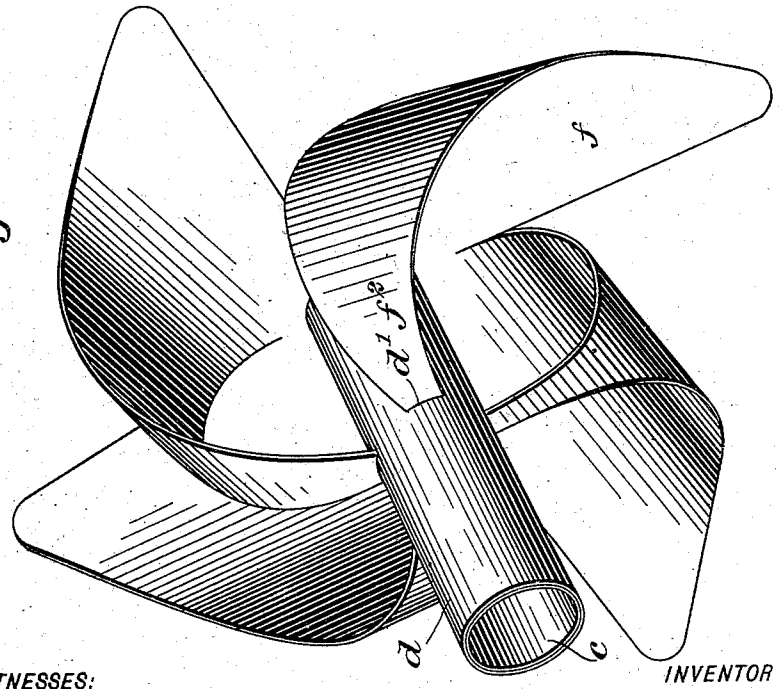


Fig. 2.



WITNESSES:

A. B. Mattingly

Isaac B. Owens

INVENTOR

Morris Steiner

BY Munn & Co

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 749,638. Patented January 12, 1904.

UNITED STATES PATENT OFFICE.

MORRIS STEINER, OF NEW YORK, N. Y.

FAN ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 749,638, dated January 12, 1904.

Application filed August 24, 1903. Serial No. 170,567. (No model.)

To all whom it may concern:

Be it known that I, MORRIS STEINER, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Fan Attachment for Sewing-Machines, of which the following is a full, clear, and exact description.

The object of this invention is to provide means for fanning the operator at a sewing-machine, and in attaining this end I provide a peculiarly-constructed fan which is attached to the shaft carrying the fly-wheel of the machine, or to the fly-wheel itself, so that as soon as the machine is operated the fan is turned and a current of air is produced.

This specification is an exact description of one example of my invention, while the claims define the actual scope thereof.

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

Figure 1 is a sectional view showing a form of my invention in which the fan is attached to the shaft carrying the fly-wheel and drive-pulley of the machine. Fig. 2 is a perspective view of the fan, and Fig. 3 is a view of the blank of which the fan is formed.

a indicates the fly-wheel of the machine, and *b* indicates the shaft on which the wheel is mounted. The fan has a hub formed of an inner tube *c* and an outer tube *d*, these parts being secured together and the hub being projected beyond one side of the fan, so as to receive the shaft *b*. Said projected portion of the hub is fastened to the shaft by pins or screws *e*.

The fan is of peculiar construction, as illustrated best in Figs. 2 and 3. It is formed of an integral sheet of metal stamped up to produce the wings or blades *f* and having a central orifice *g*. In this orifice the hub formed of the tubes *c* and *d* is secured. The blades are of triangular form in the blank, as shown in Fig. 3, one outer corner being rounding, as indicated at f', and the other corner being sharp, as indicated at f^2. After the hub is secured in the hub *g* of the blank the sharp corners e^2 are turned over into the hub and are introduced into openings d', formed in the outer tube *d* of the hub. Said corners are not, however, passed through the inner tube *c*, but are bent to lie between the inner and outer tubes and are secured in place by solder or any other suitable means.

The operation and advantages of the invention will be apparent, since by its means the operator of a sewing-machine is supplied with a current of cooling-air without any material expenditure of the power required to run the machine.

Various changes in the form, proportions, and minor details of my invention may be resorted to at will without departing from the spirit and scope thereof. Hence I consider myself entitled to all such variations as may lie within the intent of my claims.

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

1. A fan, comprising a hub, and blades of essentially triangular form, said blades each being curved or bent and having two of its corners engaged with the hub of the fan.

2. A fan, comprising a hub, and a plurality of blades formed of an integral sheet of metal, said blades being essentially triangular in form and having two of their corners attached to the hub.

3. A fan, comprising a hub formed of two tubes one within the other, and a blade having a portion projected through an orifice in the outer tube and secured between the inner and outer tubes.

4. A fan, comprising a hub, and angular blades, each blade being connected with the hub at two of its angles or corners, and said connections being effected at different points along the length of the hub, the part of the blade between said angles or corners being bowed or arc-shaped and spaced from the hub, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MORRIS STEINER.

Witnesses:

ISAAC B. OWENS,

ELIZABETH C. NIELSON.