

(No Model.)

E. A. GOODELL.

VENTILATOR.

No. 397,122.

Patented Feb. 5, 1889.

Fig 1.

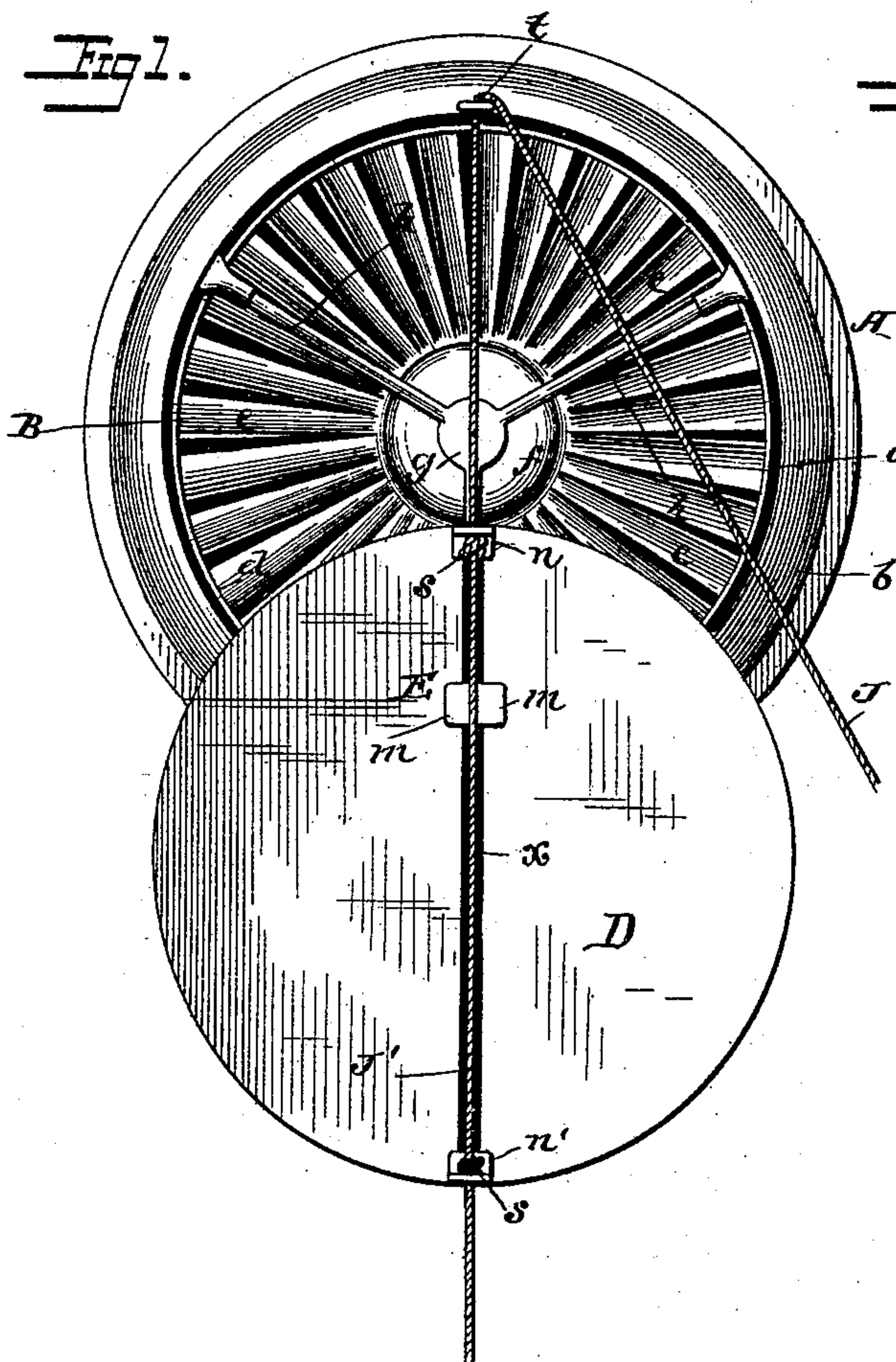


Fig 2.

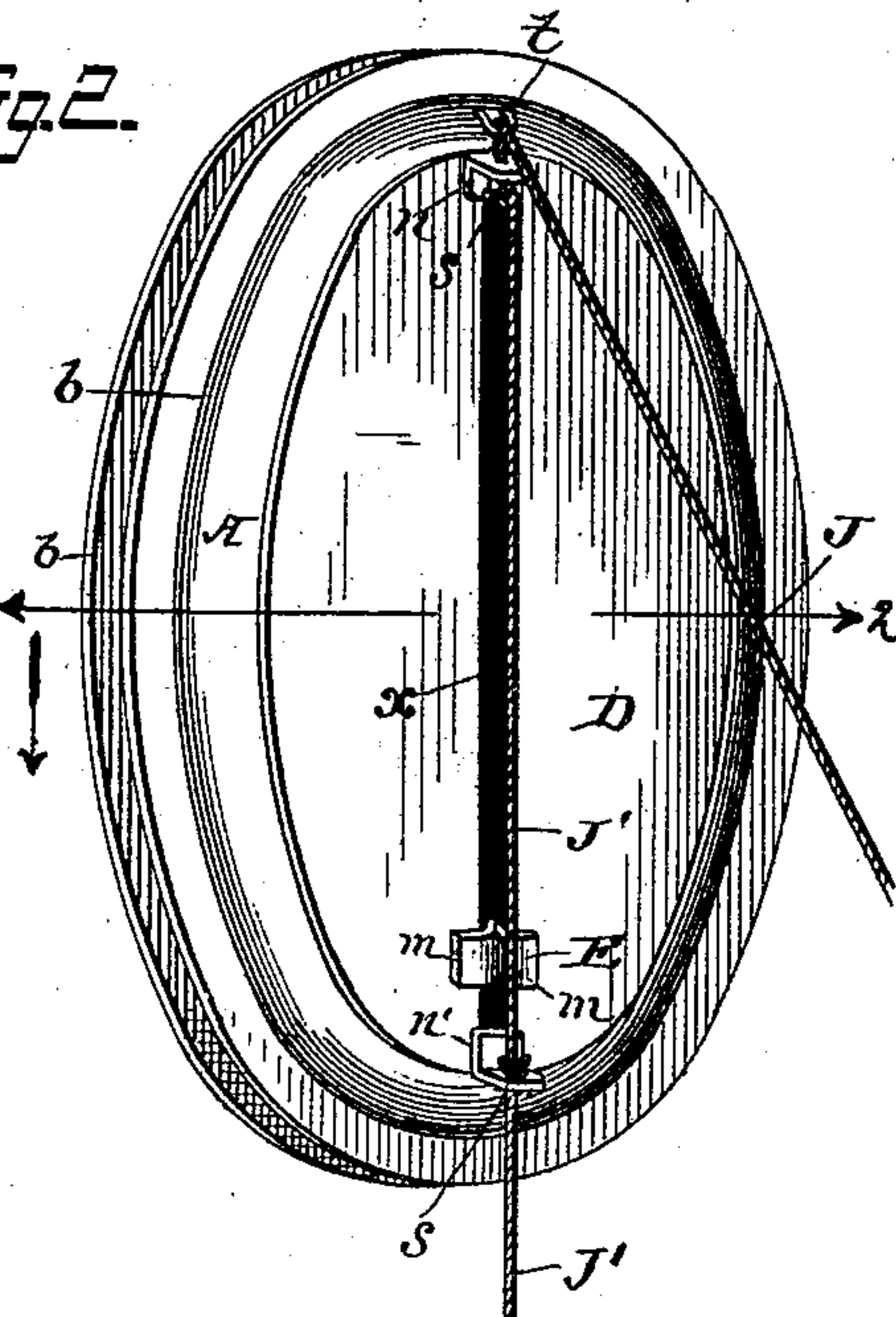
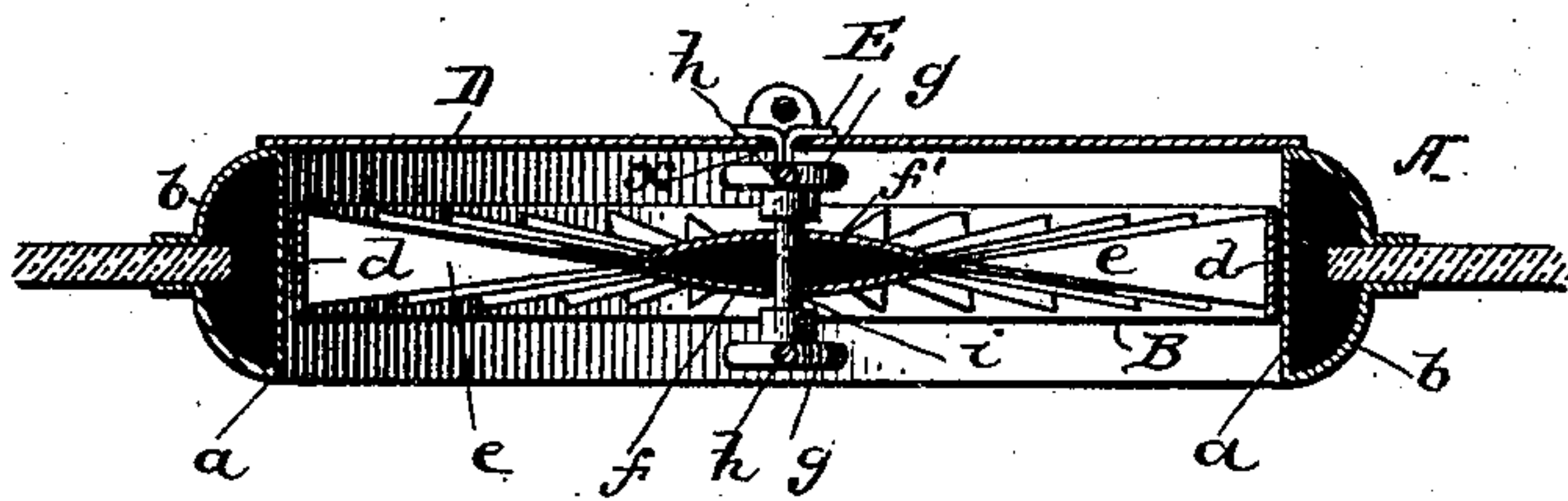


Fig 3.



Witnesses.

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# UNITED STATES PATENT OFFICE.

ETTA A. GOODELL, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE CONSOLIDATED PATENTS COMPANY, OF SAME PLACE.

## VENTILATOR.

SPECIFICATION forming part of Letters Patent No. 397,122, dated February 5, 1889.

Application filed December 8, 1887. Serial No. 257,325. (No model.)

*To all whom it may concern:*

Be it known that I, ETTA A. GOODELL, a citizen of the United States, residing at Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Ventilators, of which the following is a specification.

My invention relates to that class of devices employed in connection with openings for ventilating chambers; and it consists of certain appliances, fully set forth hereinafter, for regulating the passage of air through said openings, and in the construction of the ventilating-wheels sometimes used in connection with such openings.

In the accompanying drawings, Figure 1 is a side elevation of a ventilator wheel and frame embodying my invention. Fig. 2 is a perspective view thereof. Fig. 3 is a section on the line 1 2, Fig. 2, looking in the direction of the arrow.

The rim A, which supports the wheel B, consists of a narrow cylinder, *a*, having external converging flanges, *b b*, which receive between them the glass plate when the ventilator is being supported in the pane of a window. In other cases, where the ventilator is simply inserted in an opening in the wall, door, &c., one of the flanges may be dispensed with.

The wheel B consists of a narrow cylinder or rim, *d*, and a plate divided radially and bent to form veins *e*, soldered at their outer ends to the rim *d*, said plate being flat, with two central convex portions, *f f'*, on opposite sides, constituting a thickened hollow hub for supporting rigidly a transverse wire, constituting the shaft *i* of the wheel. This wheel is very simple in construction, and besides possesses great strength, the central convex portions which form the hollow hub giving rigidity to the wheel and preventing its becoming warped. The wheel B is supported with but little frictional resistance in two recessed steps or buttons, *g g*, each receiving one end of the shaft *i* and each supported centrally within the rim A by radial arms *h*, extending and secured to the rim.

With the ventilator-wheel and its supporting-rim I combine an adjustable cover in the form of a slide, D, and so connect it with

said parts that it may be moved in a plane parallel to the plane of the wheel, so as to wholly or partially cover or uncover said wheel, thus regulating the flow of air through the same, as may be desired.

In order to properly guide the sliding cover with but little frictional resistance, and at the same time provide a cheap but effective connection for said cover, I provide the same with a central transverse slit or opening, *x*, extending nearly to the edges of the slide and receiving a lug or guide, E, upon some part of the frame of the wheel. The said guide E consists, preferably, of two thin metal plates soldered at their edges to one of the arms *h*, and, after passing through the slot *x*, being bent at right angles to form lips *m m*, which prevent the removal of the cover D, which can then slide freely upon the stem of the lug.

In order to operate the slide with facility I prefer to arrange the device so that the slot of the slide will be vertical, and to draw the slide upward by means of a cord, J, the slide descending when the cord is slackened by gravity. A convenient construction is shown in the drawings, and consists in providing the slide at each end of the slot *x* with an eye, *n n'*, through which extends the operating-cord J, having two knots, *s s*, for bearing against said eyes; and in a line with the upper eye, *n*, I secure to the rim A a third eye, *t*, through which the cord extends, so that by pulling upon the said cord the slide may be raised, and by slackening said cord the slide will descend. If the slide should become bent or wedged, so as not to descend readily by gravity, a downward pull upon the other portion, *J'*, of the cord will serve to carry it to the desired position.

The above-described construction and arrangement of operating means for moving the slide may be used in connection with slides intended for chimney or other openings in which the ventilating-wheels are not employed.

Without limiting myself to the precise construction and arrangement of parts shown, I claim—

1. The combination, with a lid or frame, A,

inclosing a ventilator-opening, of a cover, D, arranged to slide in a plane parallel to said frame and provided with a transverse slot,  $x$ , receiving a guiding-stud, E, upon the frame, 5 serving as the sole means of guiding and retaining the cover in permanent sliding connection with the frame, substantially as set forth.

10 2. The combination of the frame A, guided slide D, eye  $t$ , arranged above the slide, and operating-cord J, extending through the eye  $t$  and downward and connected to the slide, substantially as set forth.

3. The combination of the frame A and slide D, having a vertical opening,  $x$ , guiding-stud E on the frame, extending into said opening, eyes  $n$   $n'$  upon the slide, eye  $t$  upon the frame, and operating-cord J, substantially as set forth. 15

In testimony whereof I have signed my name 20 to this specification in the presence of two subscribing witnesses.

ETTA A. GOODELL.

Witnesses:

L. G. FISHER,

E. P. HIGGINS.