

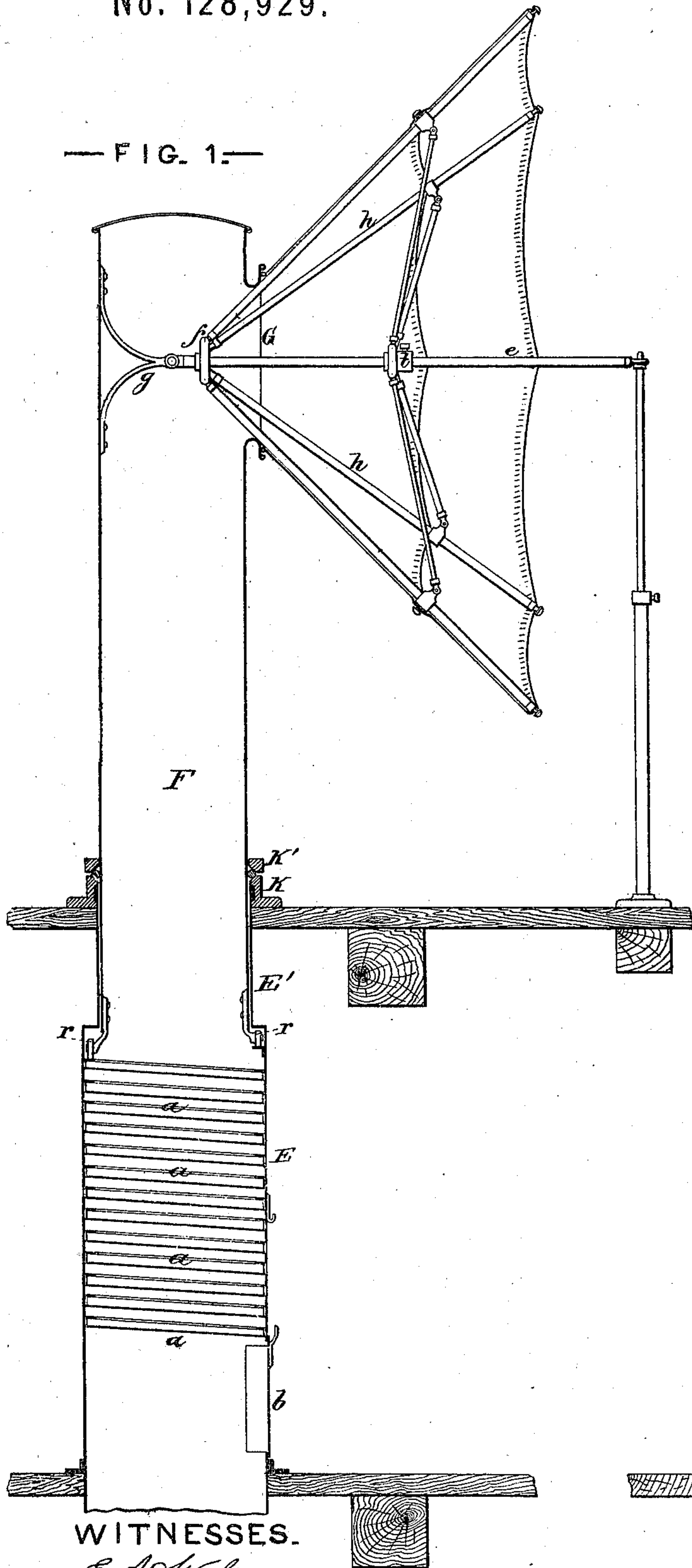
F. Z. TUCKER.
Ventilator.

3 Sheets--Sheet 1.

No. 128,929.

Patented July 9, 1872.

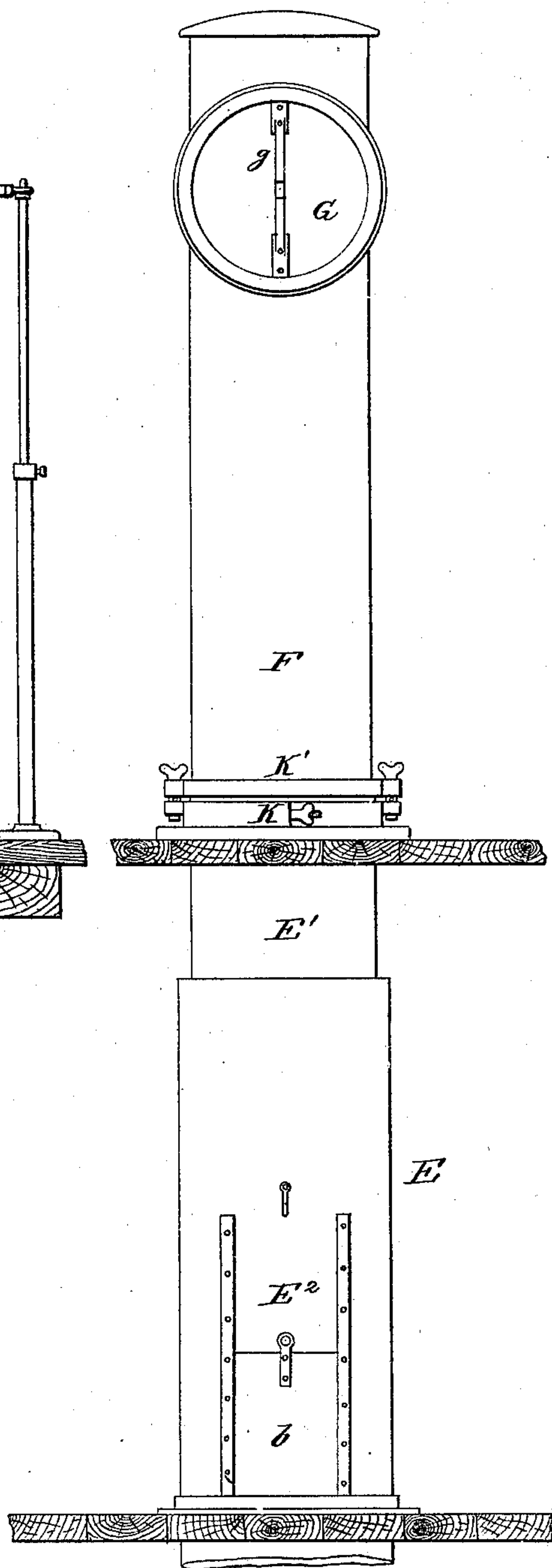
—FIG. 1.—



WITNESSES.

E. A. Hays.
R. D. Benedict.

—FIG. 2.—



INVENTOR.

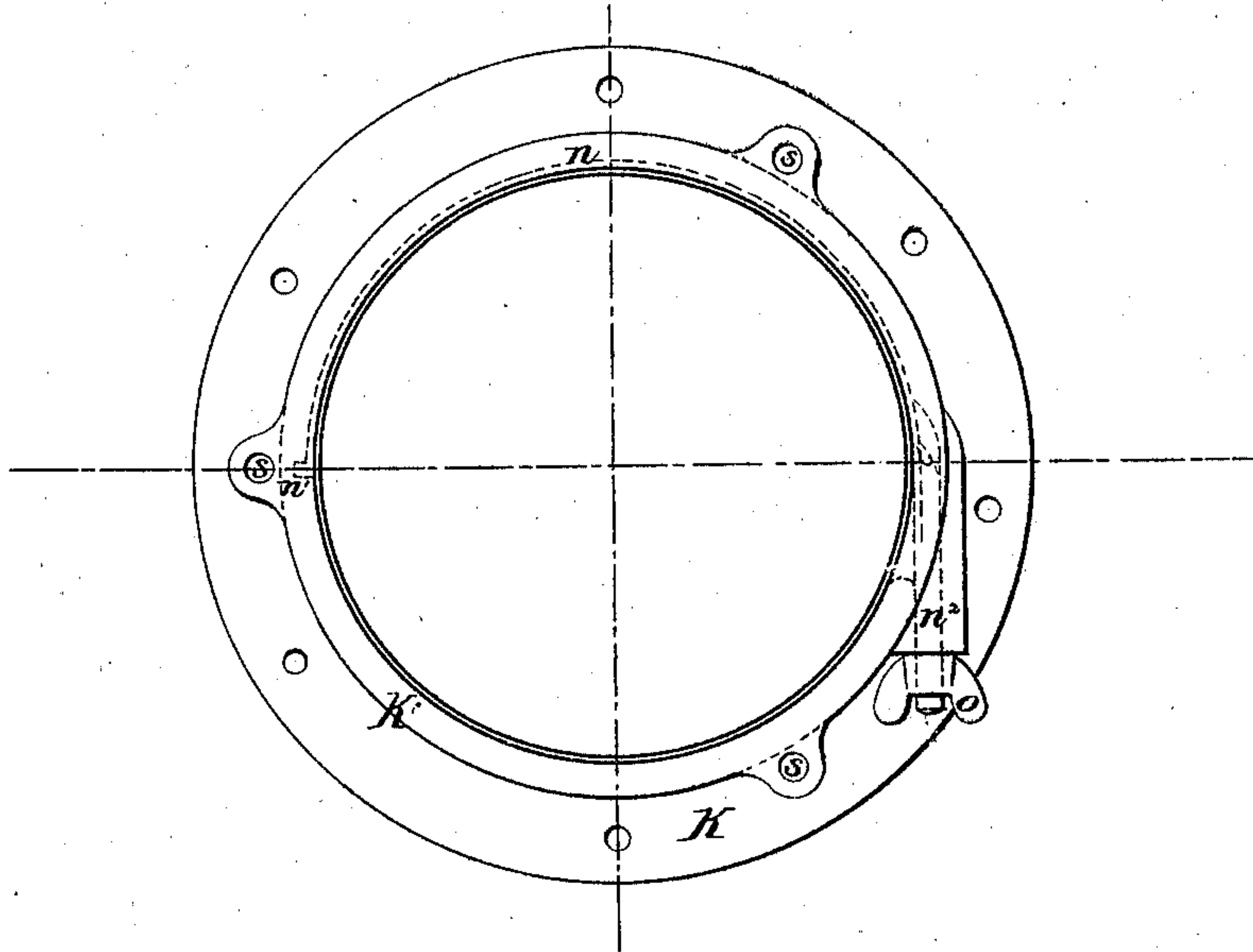
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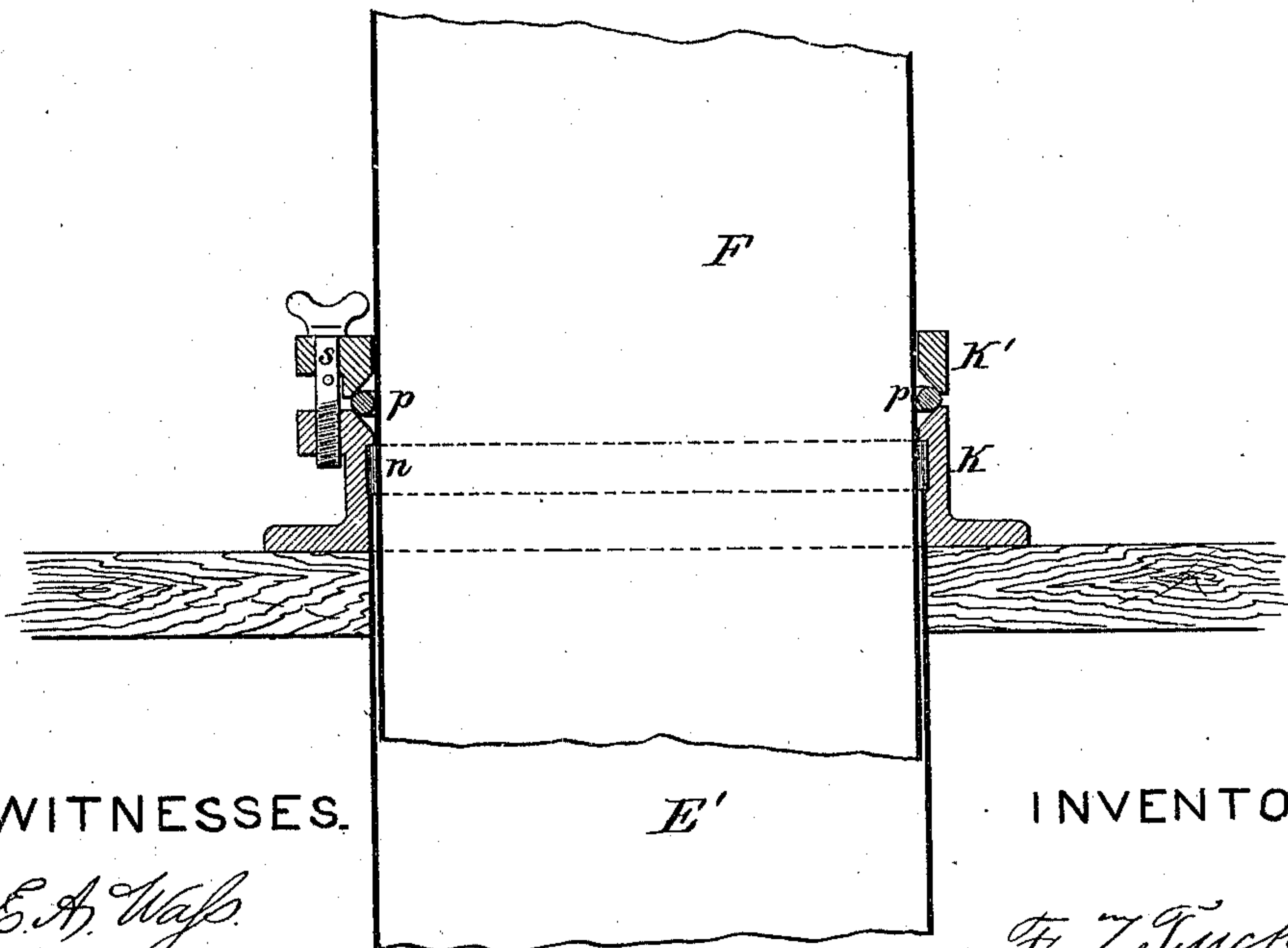
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— FIG. 4.—



— FIG. 3.—



WITNESSES.

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R. D. Benedict.

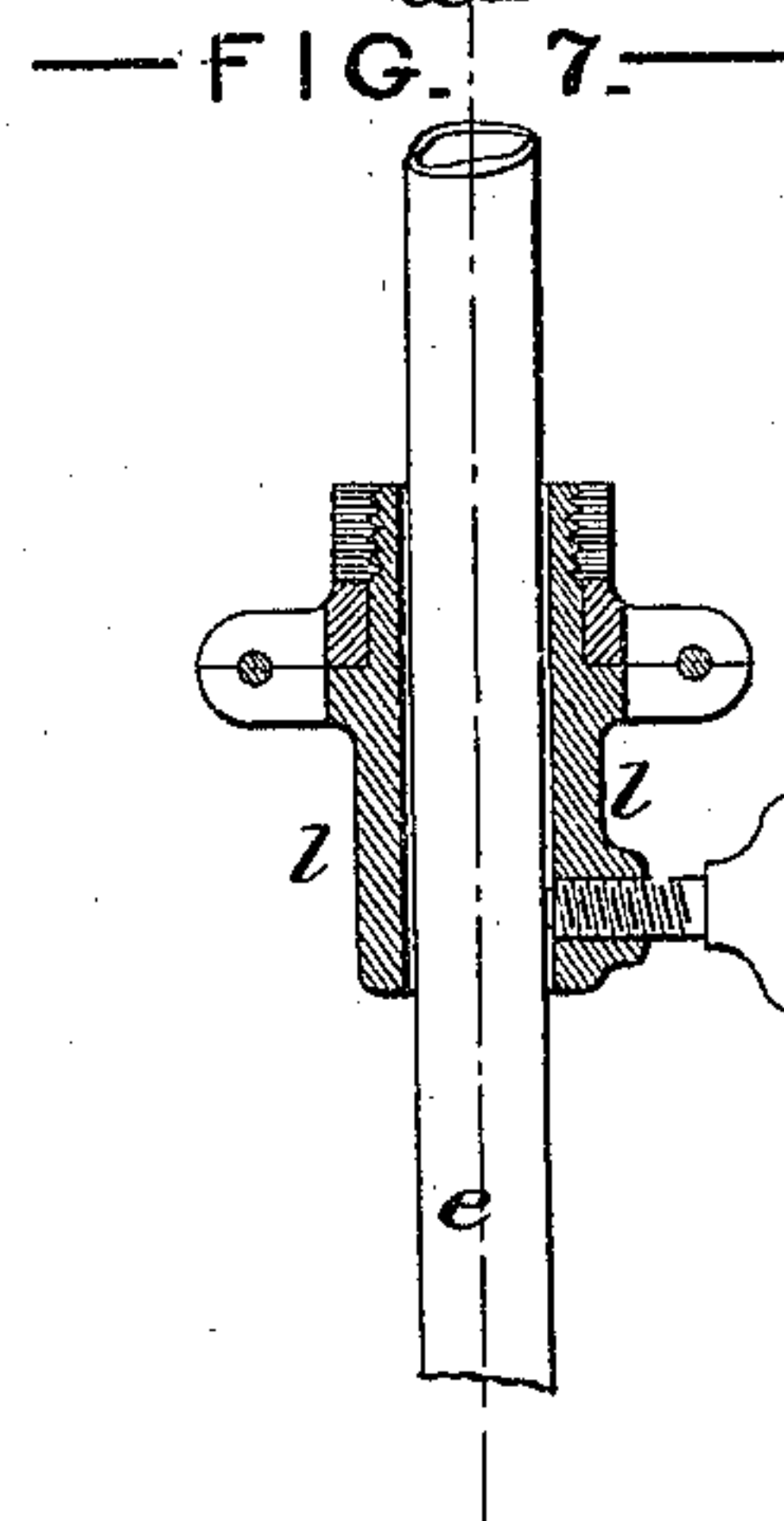
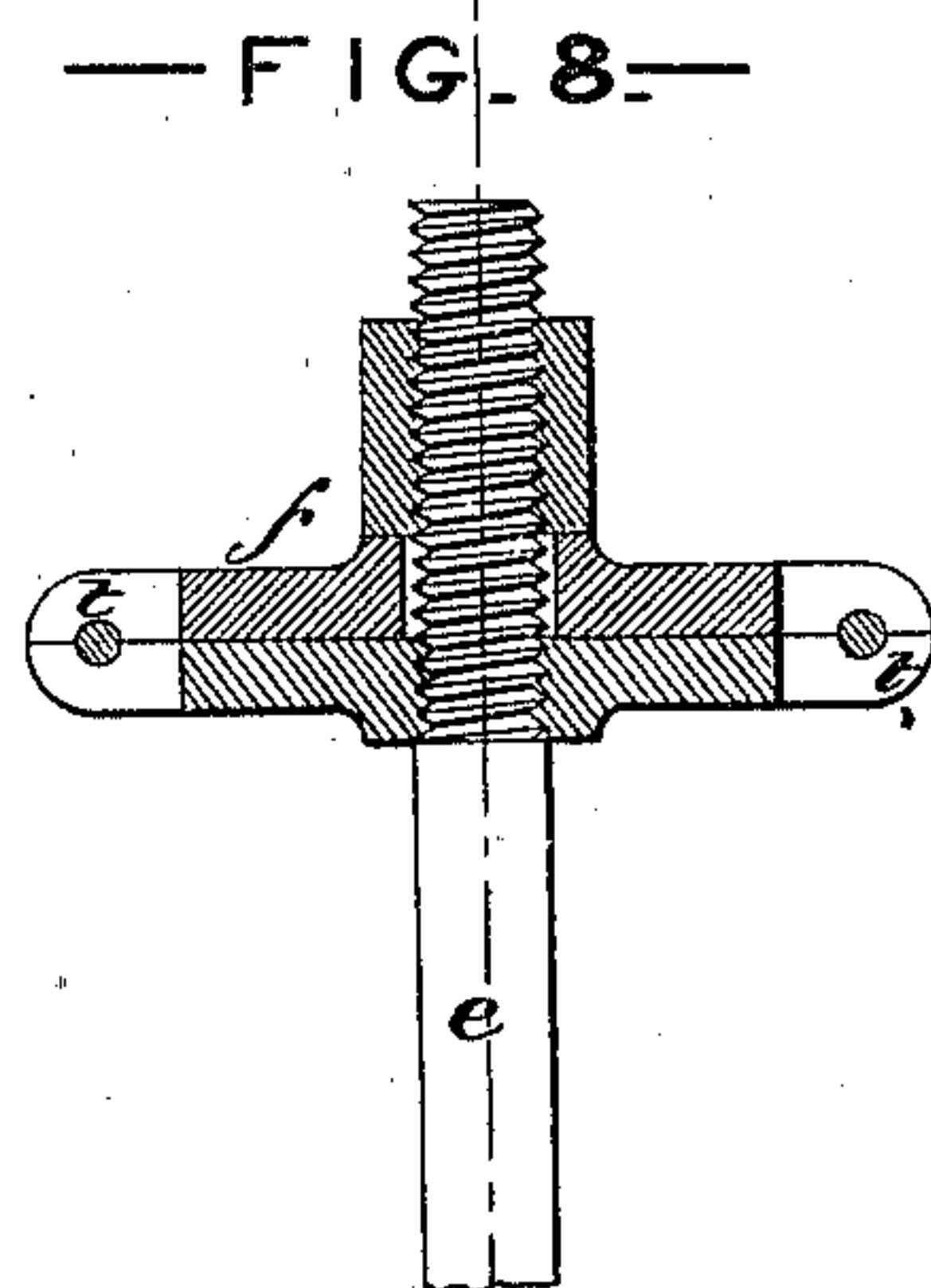
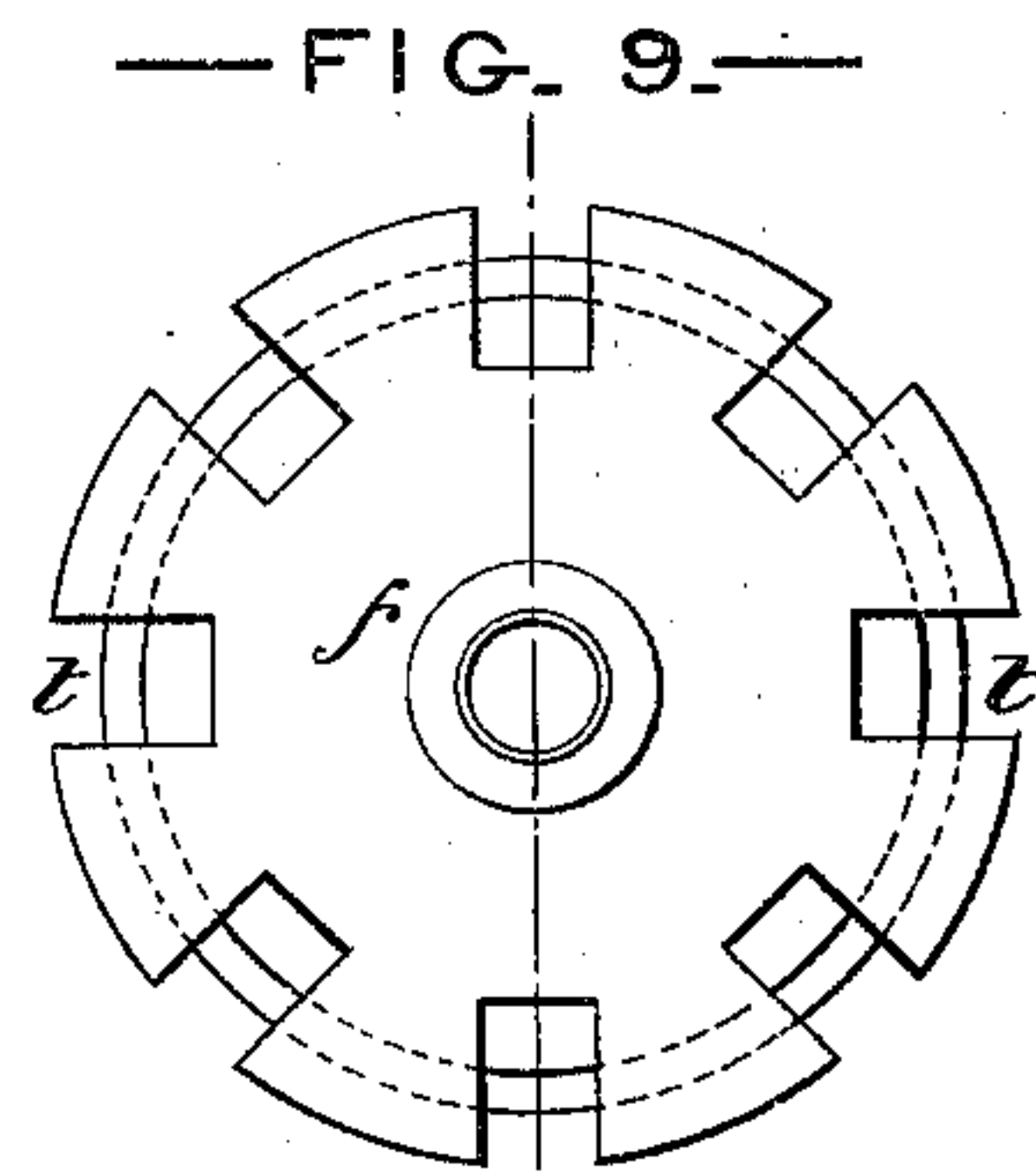
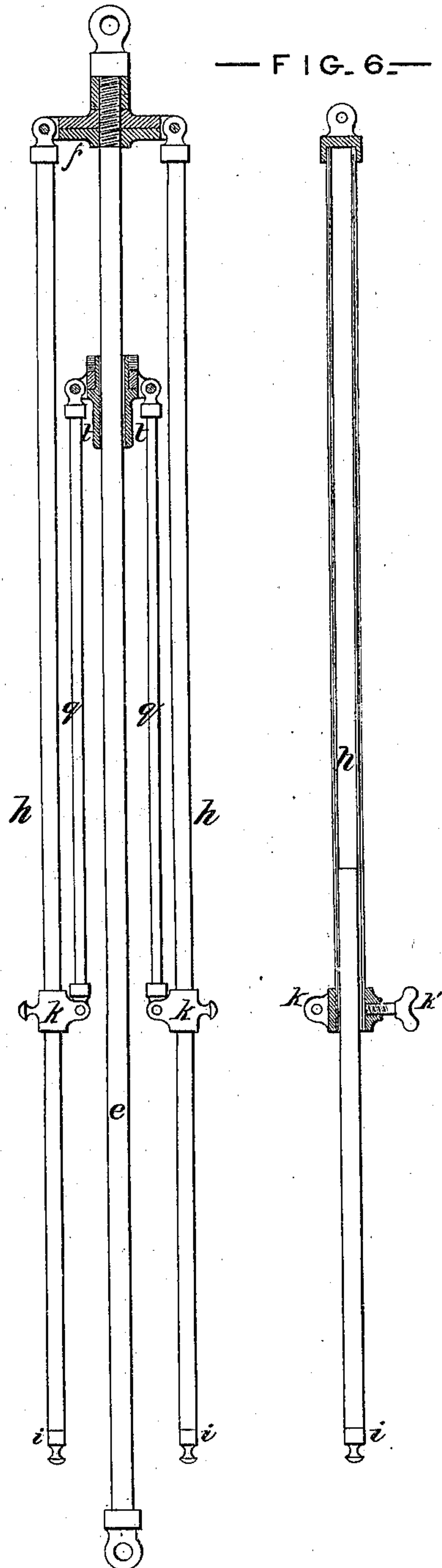
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F. Z. Tucker.

F. Z. TUCKER.
Ventilator.

No. 128,929.
—FIG. 5—

Patented July 9, 1872.



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E. A. Wap.
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F. Z. Tucker

UNITED STATES PATENT OFFICE.

FARNHAM Z. TUCKER, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN VENTILATORS.

Specification describing Letters Patent No. 128,929, dated July 9, 1872.

To all whom it may concern:

Be it known that I, FARNHAM ZEBEDIAH TUCKER, of the city of Brooklyn, in the county of Kings, State of New York, have invented a new and Improved "Graduating Telescopic Ventilator;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon, the same letters designating the same parts in the different views.

The principal features of my invention consist, first, in a simple and new device for raising and lowering and for holding the "ventilator-pipe" in any desirable position which is especially necessary on board vessels; and, second, in an umbrella-shaped extension or enlargement of the opening of the ventilator, which can be easily put on or off and folded together so as to occupy only a small space when taken off.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

Figure I is a vertical section through its center line; Fig. II, a vertical front elevation; Fig. III, a vertical section, in larger scale, through the center of the ventilator-pipe near the upper deck of a vessel; Fig. IV, a top view of the same.

This ventilator consists, first, of a stationary pipe, E, which is fastened into the decks of a vessel or the floors of a building, as the case may be. This pipe is furnished with a coil or thread, *a a*, of flat or angle iron or any other suitable material, bolted or riveted or otherwise fastened, solid on its inside face. Below this coil is a door, 6, attached to the pipe E, which may be opened or closed at will. Such doors or openings are also provided along its whole length wherever ventilation may seem desirable. Pipe E may be extended downward as far as desired, so as to conduct the air from the ventilator wherever required. This ventilator consists, secondly, of a movable pipe, F, which revolves easily within pipe E, the latter serving as a guide for it. Pipe F is, on its lower end, furnished with a proper number of rollers—say two or three—*r r*, by which it is supported on the coils *a a*; therefore, by turning the pipe F the one or the other way it is raised or lowered, one revolution of it

raising it or lowering it as much as the pitch of said coil. The upper part of pipe F is furnished with a nozzle, G, of circular shape, see Fig. II, and closed on top. This ventilator consists, thirdly, of an umbrella-shaped extension of nozzle G. This umbrella extension is constructed with a center stem, with arms, (as many as preferred,) with one end of them hinged near the end of the center stem. These arms are all covered, excepting as much of the hinged end that is on the inside of nozzle G when set, with a conical-shaped cloth of a suitable material, and will open and shut similar to the common umbrella. The upper or hinged end of the umbrella-shaped extension is hooked or hinged into the interior of pipe F into strap *g* in such a way that the stem of the umbrella extension will be central in the nozzle G, and, when opened out, its arms touch all around the inside of the nozzle G, thus supporting the umbrella extension in a horizontal position. The cloth or covering of the umbrella extension will close tight around the nozzle G. By the means of this umbrella extension the air will be concentrated and forced through nozzle G into pipe F. The stem and arms of the umbrella extension may be made of pipe or tubing, or of solid material, as preferred. There may be two sizes of this umbrella extension, one large and the other small, in this way increasing or diminishing the ventilation as desired. There is further a ring, K, fastened to the upper floor or deck, (see Figs. III and IV,) into which the pipe E is fastened, and which is furnished with a half-circular strap, *n*, located just above pipe E, (see Fig. III,) which is fastened to K at *n*¹, and which extends around on the inside of K to *n*², and is there furnished with a screw-thread, so that it may be screwed tight by means of nut *q*, clamping thereby the pipe F solid to the ring K, and thus preventing the former from turning. On top of ring K is a follower, K', and between both is a rubber ring or gasket, *p*, which, when compressed between the angular faces of both by means of screws *s s*, closes water-tight around the pipe F, and prevents any water from entering around it below decks. The pipe F may by these means be raised as much as desired. It may be turned with its nozzle G and with its umbrella extension in the proper direction to the wind, and held firm

in this position by the strap *n*. The umbrella extension may be taken off, the pipe F may be screwed down on deck as far as desirable by loosening the strap *n*, the follower K' bolted down, the strap *n* tightened again, and a water-tight cover be properly fastened over the nozzle G, so as to make every part above deck water-tight and immovable, the whole occupying only a very small space on deck.

Having thus described the construction and the operation of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The detachable umbrella-shaped extension, when combined and used in connection with the ventilating-pipe F, in the manner set forth.

2. The ventilating and movable pipe F, having an opening, G, to admit the umbrella-shaped extension, and provided at its lower end with rollers *r r*, in the manner and for the purpose described.

3. In combination with the foregoing, the stationary pipe E having a screw-thread or coil on its inside face, as and for the purpose set forth.

4. The arrangement of ring K to strap *n*, follower K', and packing-ring *p*, substantially as and for the purpose set forth.

FARNHAM ZEBEDIAH TUCKER.

Witnesses:

E. A. WASS,
B. M. TUCKER.