

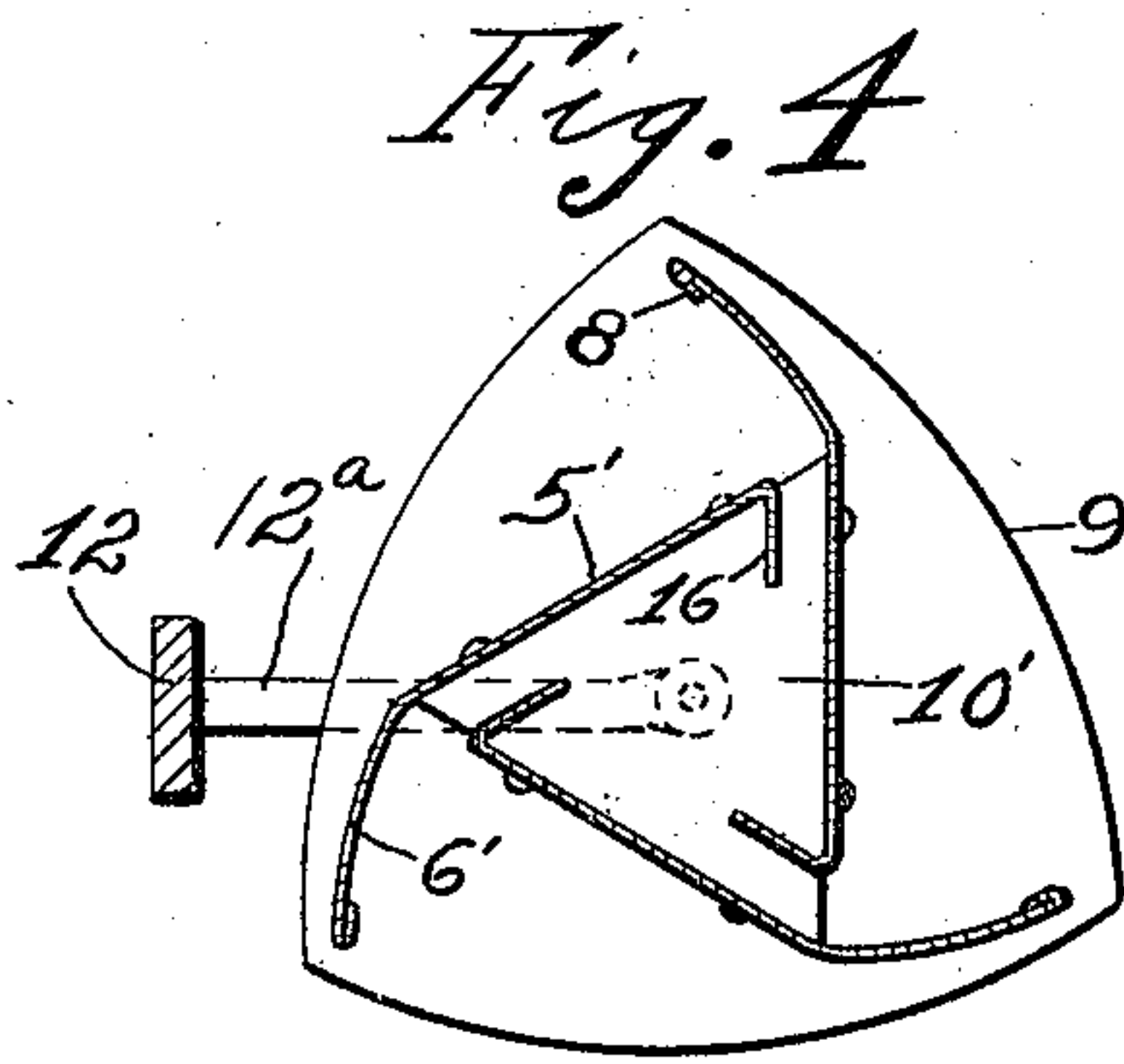
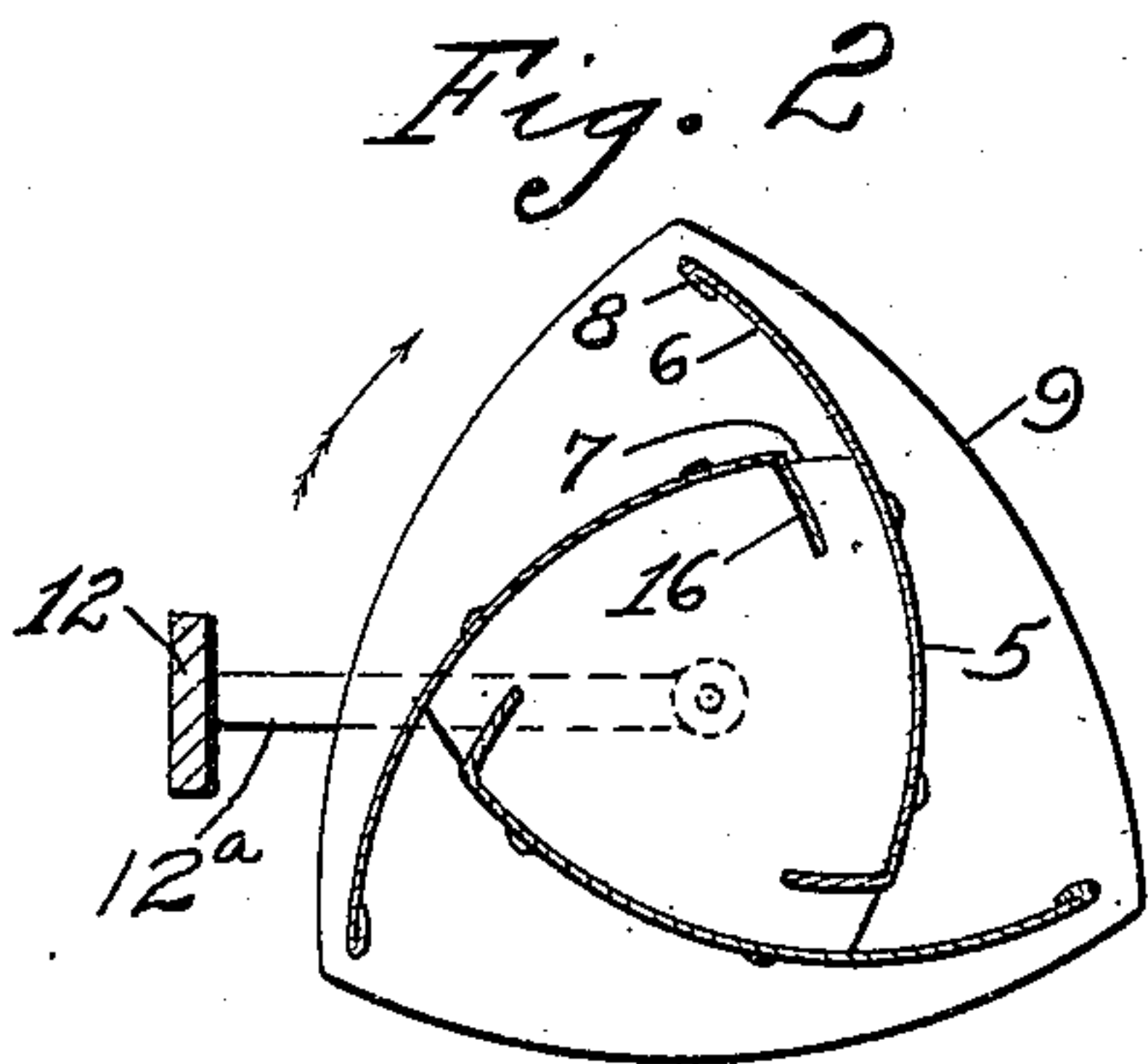
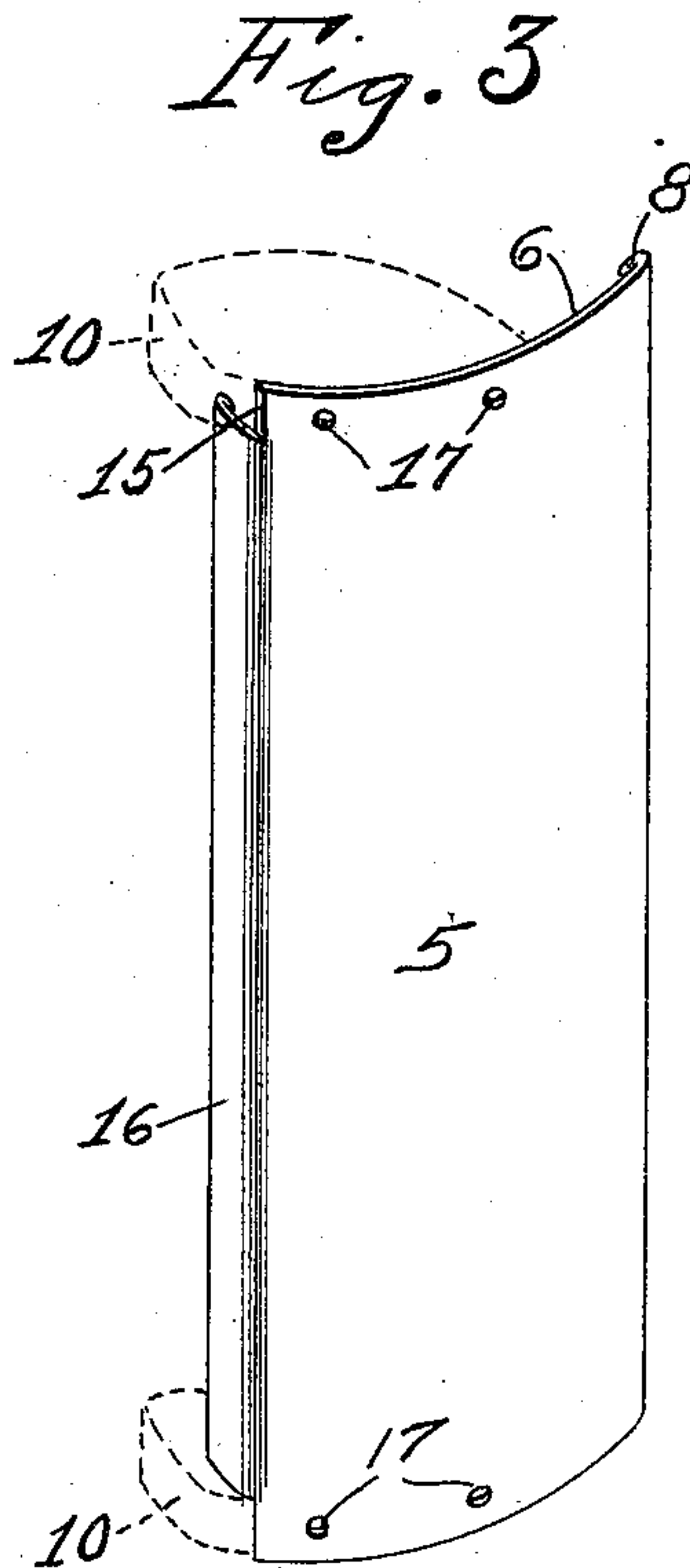
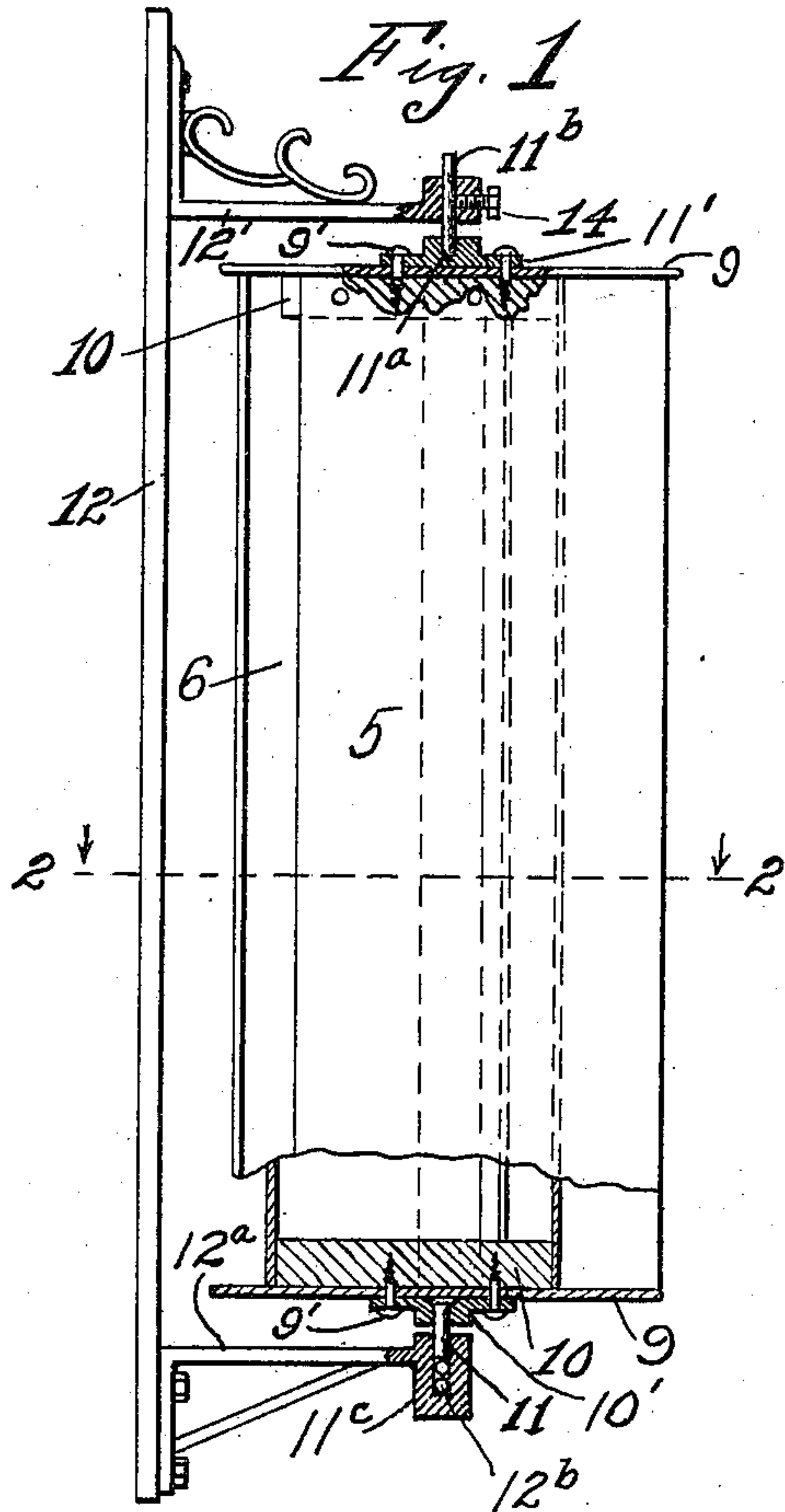
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SIGN.

APPLICATION FILED FEB. 7, 1910.

983,684.

Patented Feb. 7, 1911.



Witnesses

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# UNITED STATES PATENT OFFICE.

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983,684.

Specification of Letters Patent.

Patented Feb. 7, 1911.

Application filed February 7, 1910. Serial No. 542,516.

*To all whom it may concern:*

Be it known that I, GEORGE L. CLAPP, a citizen of the United States, residing at Ithaca, in the county of Tompkins and State of New York, have invented certain new and useful Improvements in Signs, of which the following is a specification.

My invention relates to improvements in signs, and relates particularly to improvements in that type of sign which is mounted in a suitable support and is adapted to be revolved by the wind currents striking the blades or vanes of the sign.

The object of the invention is to provide a sign of this type of such construction that there will be comparatively few parts, the sign will be durable, easy of installation, and comparatively inexpensive to manufacture.

A still further object of the invention is to provide a sign of the type stated in which the disposition of the blades or vanes is such that the sign will revolve under comparatively light wind currents, and which permits of the bulkiness of the sign being reduced to the minimum.

These and other objects which will appear as the invention is more fully described, are accomplished by the novel construction, combination and arrangement of parts to be hereinafter described, and shown in the accompanying drawings illustrating preferred embodiments of the invention, and in which,

Figure 1 is a side view of a sign constructed in accordance with my invention, partially broken away and partially in section to better illustrate the construction. Fig. 2 is a horizontal sectional view taken on the line 2—2 of Fig. 1, looking in the direction of the arrows, Fig. 3 is a detached detail perspective view, of one of the blades or vanes of the sign, showing the end blocks to which the blades or vanes are secured in dotted lines, and Fig. 4 is a horizontal sectional view similar to Fig. 2, showing a modified form of construction of sign body.

The sign body is built up of a plurality of plates constituting the blades or vanes, three in number, and usually formed of sheet metal of a suitable thickness. These plates 5 as shown in the construction illustrated in Figs. 1 and 2 are each formed convexly, and disposed with relation to each other so that the convexed surface of each plate extends outwardly of the sign body, the plates being

further so disposed with relation to each other that a portion as 6 of each plate extends beyond one of the other plates and constitutes continuously extending wings, the plates being arranged with relation to each other so that there is an opening as 7 between the edge of each plate and the adjacent plate crossing the line of said opening. Preferably, each plate has its outer edge bent over as at 8 so as to strengthen the plate throughout its length.

The blades 5 are secured in their spaced relation to each other by means of end-blocks 10 having the general cross-sectional shape of the interior of the sign and which engage the end plates 9 to which they are secured by the hold-fast devices as 9'. The hold-fast devices 9' at the lower end of the sign body secure to the lower end plate 9 an apertured boss or plate 10' in which is secured the lower bearing pin or pintle 11. The hold-fast devices 9' at the upper end of the sign secure to the upper end plate, a bearing plate 11' provided with a conical seat 11<sup>a</sup> to receive the pointed bearing end of the upper bearing pin or pintle 11<sup>b</sup>. The upper bearing pin 11<sup>b</sup> is retained in the upper arm 12' of the supporting bracket 12 by a set screw 14 which permits the securing of the pin 11<sup>b</sup> in adjusted position when it becomes worn. The lower bearing pin 11 enters a socket 11<sup>c</sup> at the end of the lower bracket arm 12<sup>a</sup> and rests upon the uppermost ball of a pair of superposed antifriction balls 12<sup>b</sup> in said socket. With the construction shown and above described, it will be obvious that the sign revolves at its upper end on the pintle 11<sup>b</sup>, and at its lower end carries the pintle 11 with it, and said pintle 11 revolves on the antifriction balls 12<sup>b</sup>. In case of wear at the upper end of the sign, the bearing pin 11<sup>b</sup> can be adjusted to take up the wear, and as the pin 11 at the lower end of the sign has a flat bearing end, it will be observed that should this pin cup itself over the ball on which it rests, that the superposed balls will still provide for easy and comparatively frictionless movement of the pin.

Each blade 5 is cut away at the upper and lower corners of its inner edge as at 15, and the portion 16 of the blade which lies beyond the vertical lines of the cut 15 is bent inwardly at substantially right angles to the body of the plate, and the ends of this in-



wardly bent portion 16 abut against the end blocks 10 as clearly seen in Fig. 3, the plates 5 being secured to the end blocks at the ends of the plates by means of suitable hold-fast devices 17 entering through the plates 5 adjacent the ends thereof and into the end blocks 10.

In Fig. 4 a slight modification of the invention is shown, wherein the body of the plates 5' are straight instead of convexed as shown in the construction above described the extending wings 6', however, of this construction being convexed outwardly and corresponding to the wings 6 of the construction shown in Figs. 1 and 2. The end blocks 10' in this construction are, of course, shaped, or have an outline to fit the substantially triangular cross-sectional shape of the sign body, but in all other respects the construction is identical with that of the construction previously described, and the same reference numerals have, therefore, been applied thereto. In both of the constructions shown and described, it is to be noted that the convexed faces of the sign body proper are presented to the outside of the body, and the extended wings have the concaved surface thereof presented to the wind. I have discovered by actual practice, that by the convexing of the plates, the air currents which may be moving about the sign are effectively gathered and utilized in the pockets which are formed by the extending wings 6 or 6', the rapidity and direction of the revolutions of the sign body varying, of course, with the amount and direction of the air current, the characters borne on the separate faces of the plates being brought successively to the view of the observer. An illusive effect is produced whether the sign body is revolving slowly or rapidly, yet the sign is never rendered indistinct or difficult to read.

The longitudinal openings or air passages 7 communicating with and admitting air to the hollow interior of the sign body are essential elements of the invention, since it is to be observed that by their provision, the entire interior concave face or side of each blade or vane is presented to the wind pressure, without however exposing to view any more of such surface than the wing portion. This provision of air passages so as to per-

mit of a free entrance for the wind currents into the interior of the sign body has been found in actual practice to cause the sign to readily revolve in very light wind currents, and furthermore it enables me to reduce the bulkiness of the sign, since I obtain a large pressure surface to the wind currents without necessitating the exposure to view of more than a small portion of such surface.

What I claim is:

1. A revoluble sign comprising a substantially prismatic sign body formed of three vertically-disposed plates convex from end to end and so disposed that the entire convex face of each plate is exposed to view and only a portion of the concave face of each plate is exposed to view, the entire concave surface of each plate being exposed to the wind currents, the inner vertical edge of each plate being turned inwardly to form a flange lying at substantially a right angle to the body of the plate, the flange being spaced from the adjacent plate and of less length than the plate, and end blocks fitted in the ends of the sign with the plates secured thereto and the ends of the flanges abutting the end blocks.

2. A revoluble sign comprising a substantially prismatic sign body formed of three vertically-disposed plates convex from end to end and so disposed that the inner edge of each plate lies at substantially right angles to the plate adjacent said inner edge, the plates so disposed as to provide a passage between said inner edge of each plate and the adjacent plate, each plate having a flange at the inner edge which extends at substantially right angles to the body of the plate and is of less length than the plate, blocks mounted within the body at the ends thereof to which the plates are secured, and against which the ends of the flanges abut, end plates secured to said blocks and provided with pintles, and a bracket having arms in which said pintles are mounted.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE L. CLAPP.

Witnesses:

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