

No. 686,238.

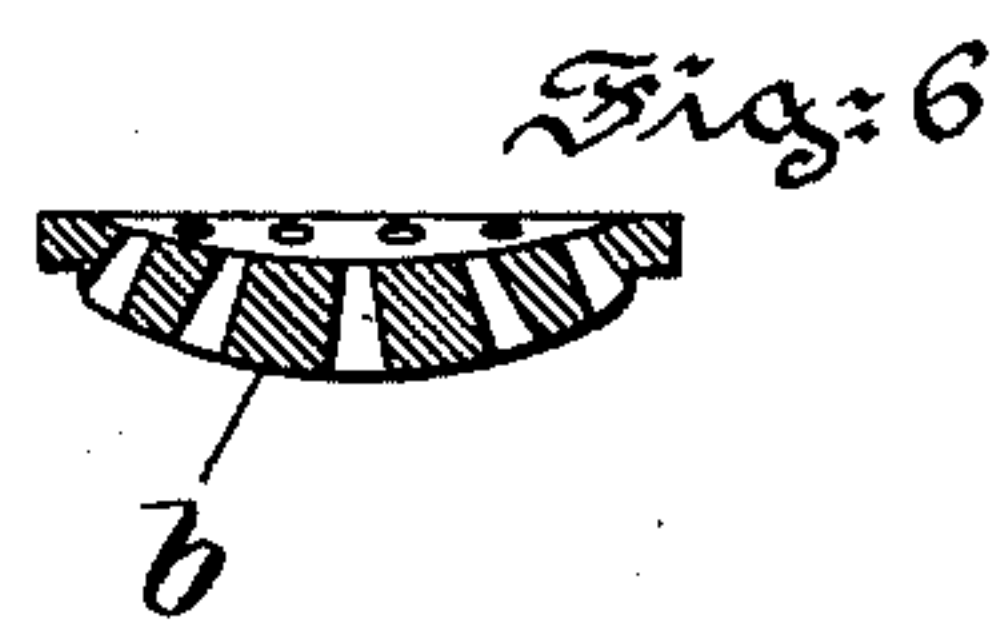
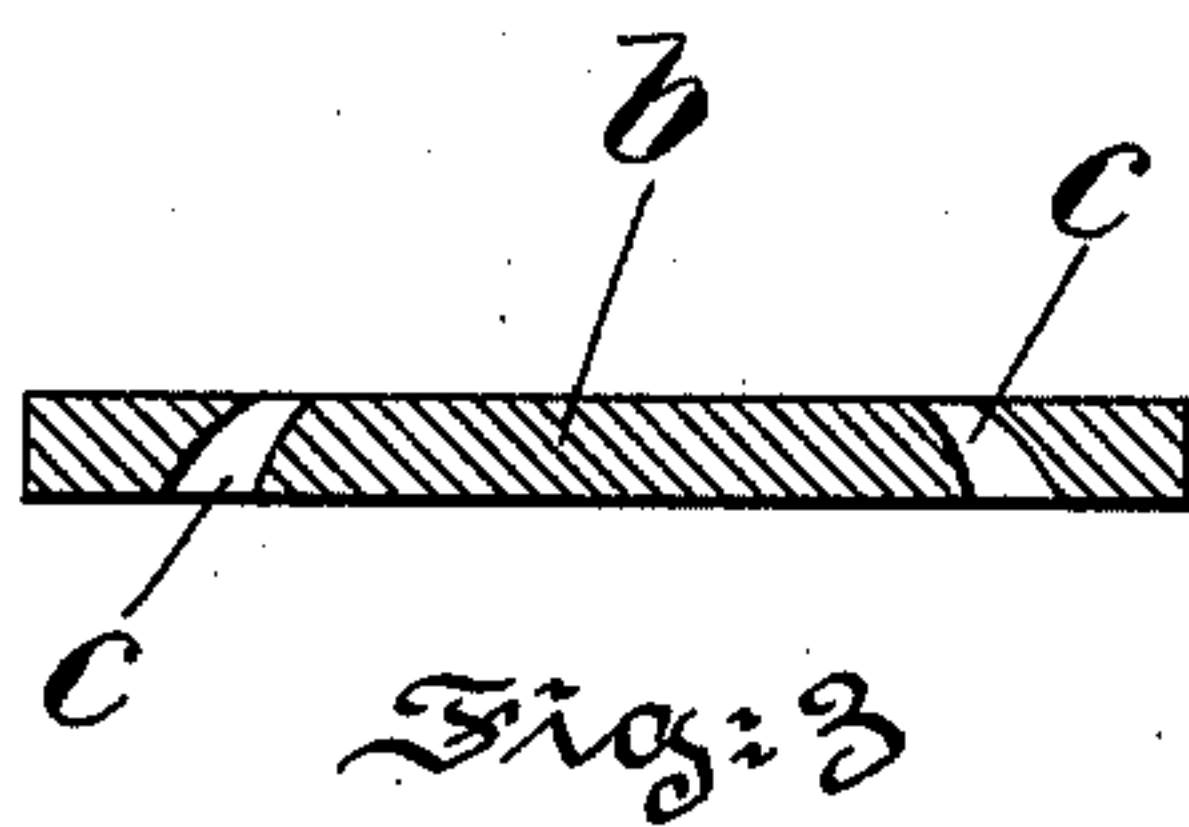
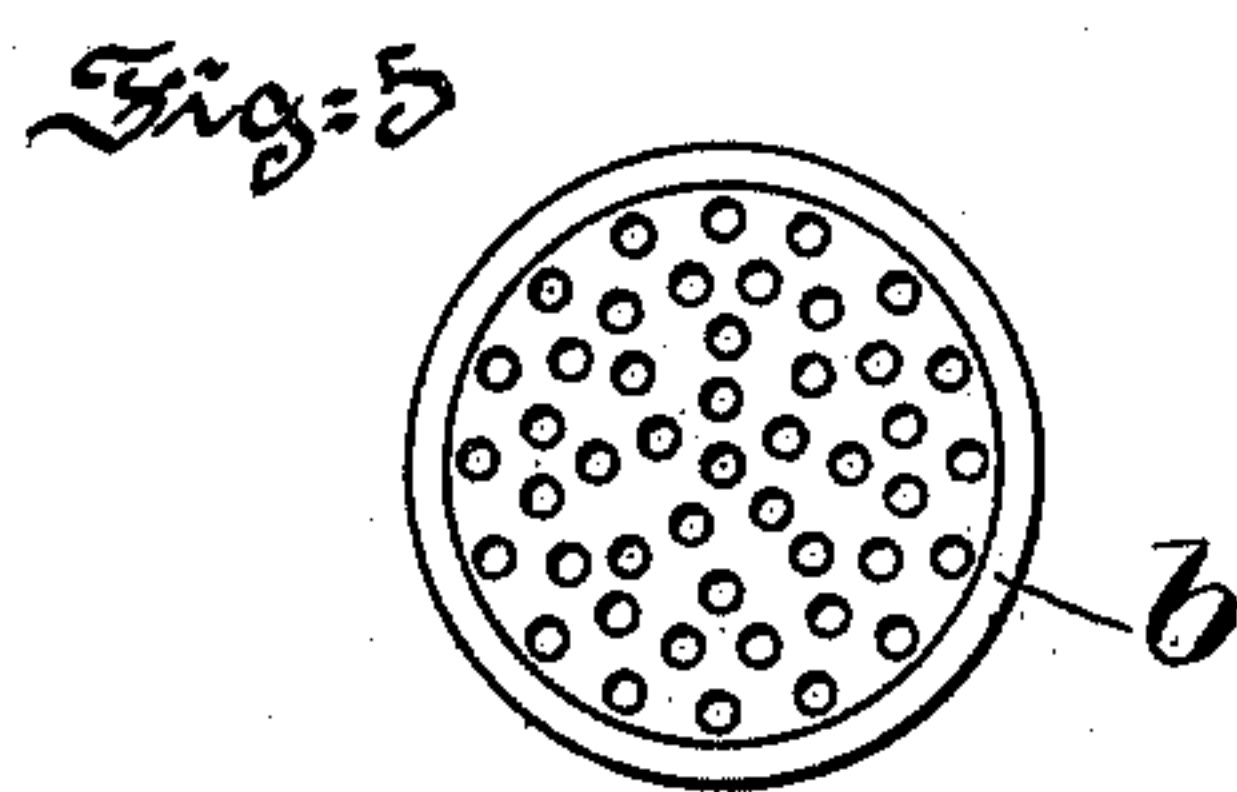
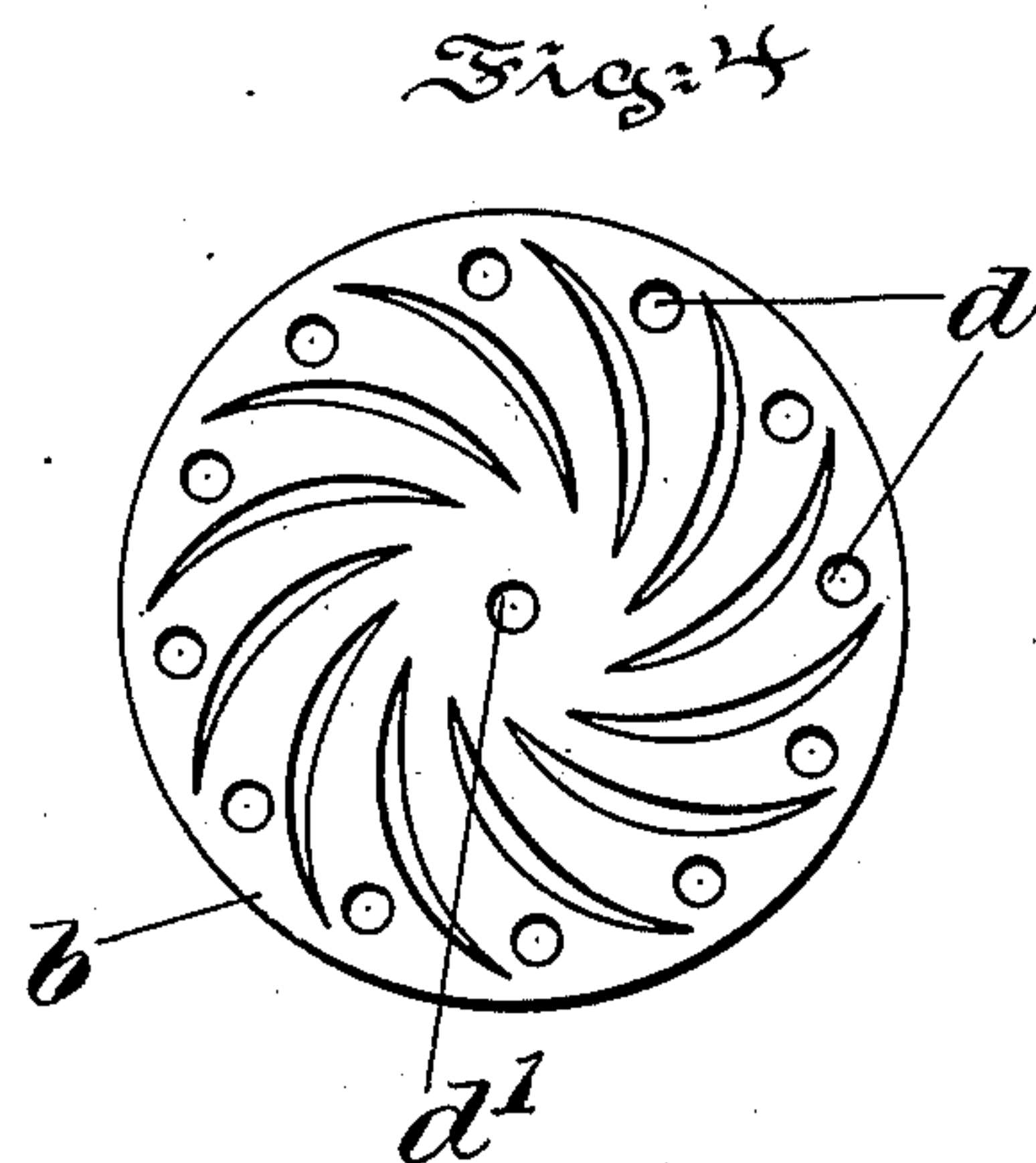
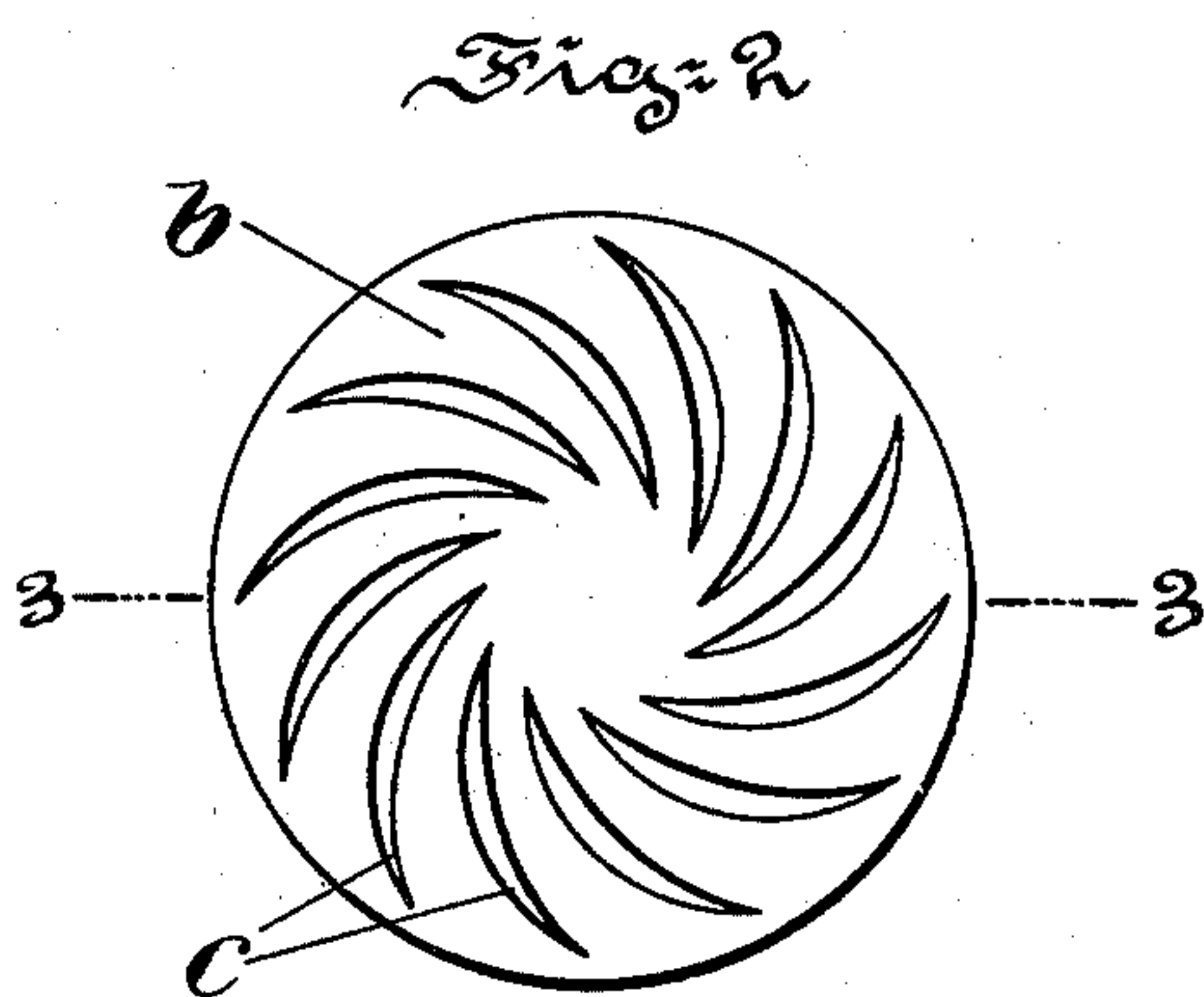
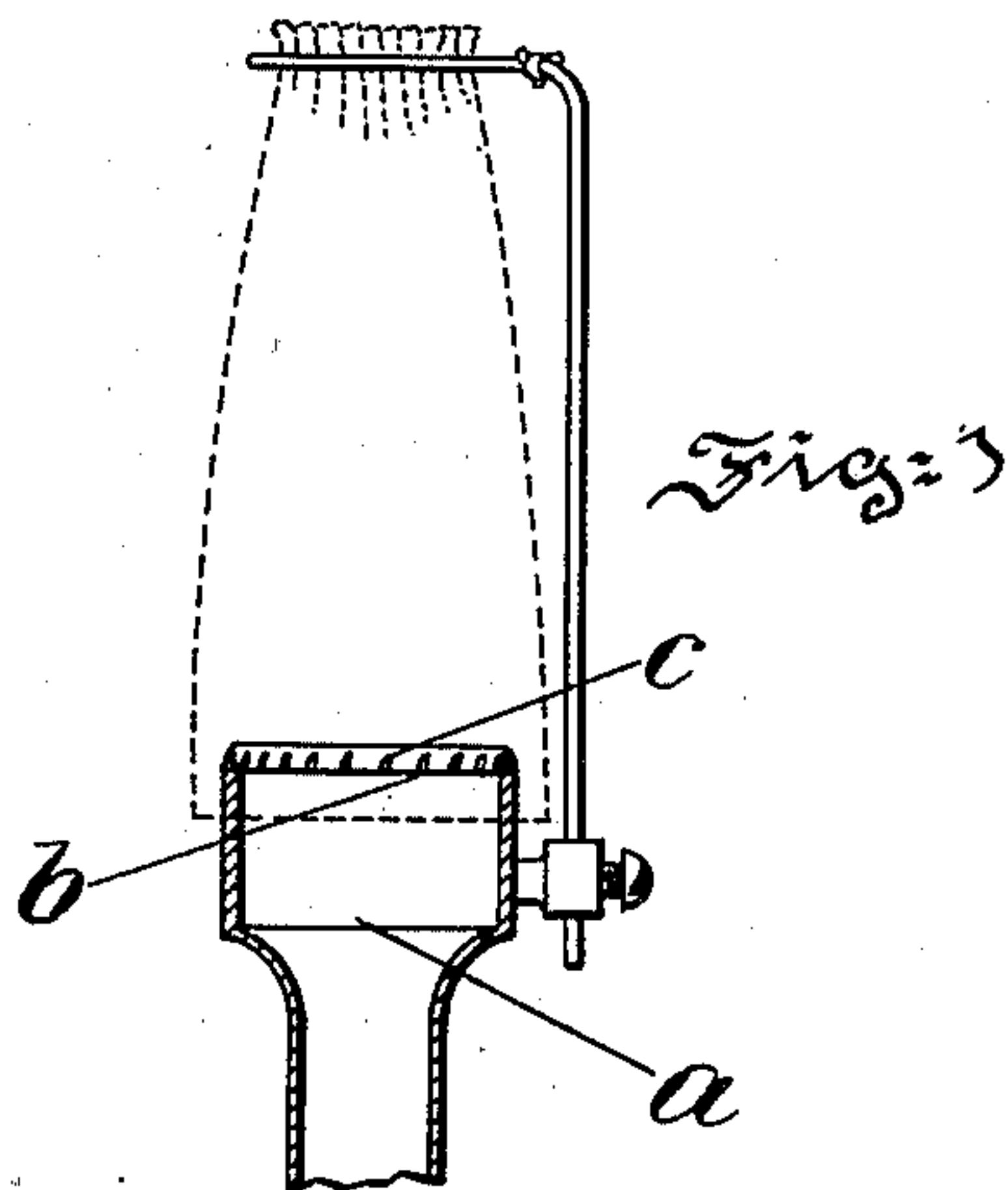
Patented Nov. 5, 1901.

G. D. SCOTT.

CAP FOR INCANDESCENT BURNERS.

(Application filed Mar. 1, 1900.)

(No Model.)



Witnesses:
W. A. Macdonald
R. M. Gilligan

Inventor.
George D. Scott.
By
Augustus B. Stoughton
Attorney.

UNITED STATES PATENT OFFICE.

GEORGE D. SCOTT, OF BIRMINGHAM, ALABAMA, ASSIGNOR TO KITSON HYDROCARBON HEATING & INCANDESCENT LIGHTING COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF WEST VIRGINIA.

CAP FOR INCANDESCENT BURNERS.

SPECIFICATION forming part of Letters Patent No. 686,238, dated November 5, 1901.

Application filed March 1, 1900. Serial No. 6,923. (No model.)

To all whom it may concern:

Be it known that I, GEORGE D. SCOTT, a citizen of the United States, residing at Birmingham, in the county of Jefferson and State of Alabama, have invented a certain new and useful Cap for Incandescent Burners, of which the following is a specification.

In hydrocarbon and other burners the combustible mixture is frequently forced under pressure to a mantle, and it frequently occurs that the fragile mantle becomes shattered, due to the gases issuing with great force from the gauze-like and other caps now in use. To obviate these defects, I have embodied in the burner-cap of this invention means whereby the gases issuing under the mantle are caused to ascend centrally through the mantle in the form of a revolving cone, thus not coming into violent contact with the sides of the mantle in a manner that would break the same.

The invention consists of the improvements hereinafter described and claimed.

The nature, characteristic features, and scope of the invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, and in which—

Figure 1 is a sectional view of the upper part of a hydrocarbon-burner, showing in application thereto a burner-cap of my invention. Fig. 2 is a plan view of the burner-cap. Fig. 3 is a sectional view taken on the line 3 3 of Fig. 2. Fig. 4 is a plan view of a modification of my invention, and Figs. 5 and 6 are respectively a plan and a view in cross-section of a cap embodying another modification of my invention.

In the drawings, *a* is the upper portion of a hydrocarbon-burner, which may be of any preferred type and is not part of my invention. Located at the top of the part *a* in any preferred manner is a burner-cap, which may consist of a disk *b*. Diverging from at or near the center of the disk *b* are slots *c*, which may be cut, cast, or otherwise formed therein. These slots *c*, as shown in Fig. 3, are somewhat larger at their base or inlets than at the top surface of the disk, and these slots may take a more or less crescent shape, as shown. The slots *c* are inclined from their inlets to their outlets in respect to the faces of the disk of plate *b*. In the modification shown in Fig.

4 the disk may have perforations *d* around the circumference of the same and a perforation, as *d'*, through the center thereof. The construction illustrated in Figs. 5 and 6 differs from that above described in connection with Figs. 2 and 3 only in respect to the shape in plan of the openings and in the fact that the cap is slightly dished.

In use the combustible mixture ascending through the Bunsen or mixing tube of the burner *a* issues through the slots *c*, which, by reason of their shape, inclination, and disposition, cause the ensuing flames to ascend centrally through the mantle in the form of a revolving cone or column, thus prolonging the life of the mantle to a great extent by not coming violently in contact with its sides or otherwise causing breakage.

It will be obvious to those skilled in the art to which the invention appertains that modifications may be made in details without departing from the spirit thereof. Hence I do not limit myself to the precise construction and arrangement of parts hereinabove set forth and illustrated in the drawings; but,

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

1. A cap for a hydrocarbon or other burner, having substantially radial slots or openings inclined at their upper ends in a direction toward its vertical axis and each having the opening of its base larger than the opening of its top, whereby gases ascending through the cap are caused to assume the form of a revolving cone, whose apex is alined with the vertical axis of the burner-cap, substantially as described.

2. A cap for a hydrocarbon-burner having crescent-shaped inclined slots diverging from its center and each having the opening of its base larger than the openings of its top, whereby gas and air ascending through it are caused to assume the form of a revolving column or cone, substantially as described.

In testimony whereof I have hereunto signed my name in the presence of two witnesses.

GEO. D. SCOTT.

Witnesses:

K. M. GILLIGAN,
W. T. JACKSON.