

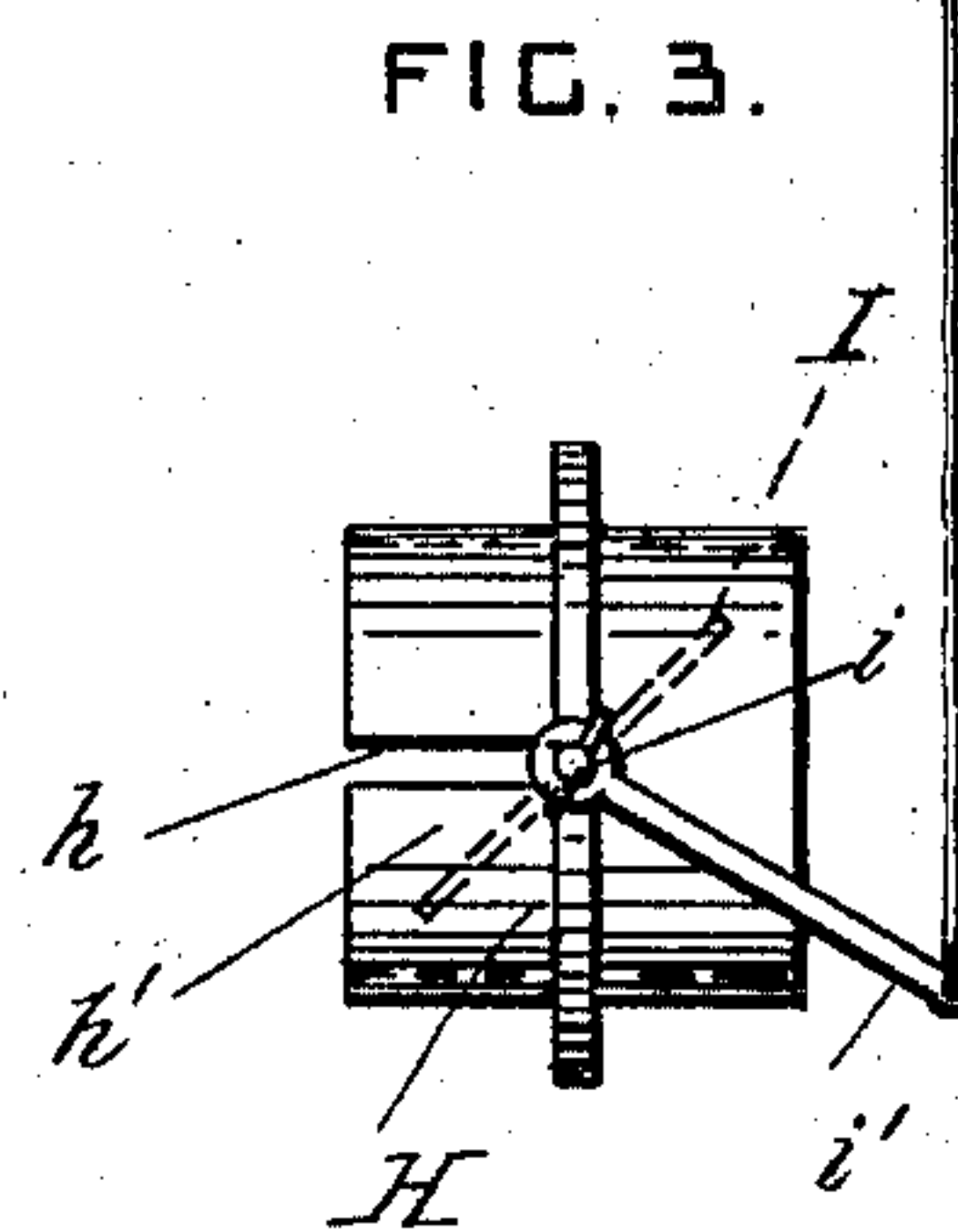
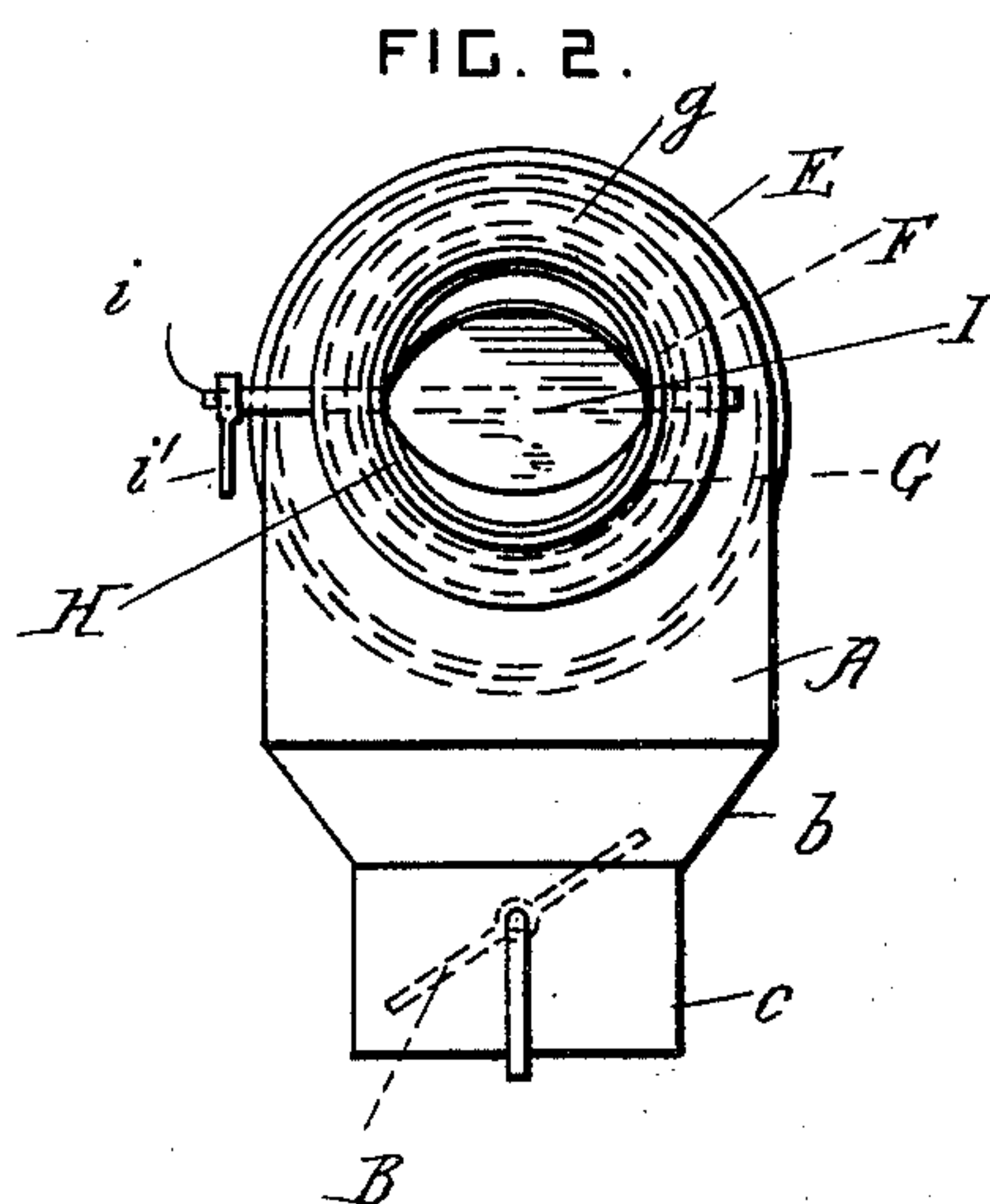
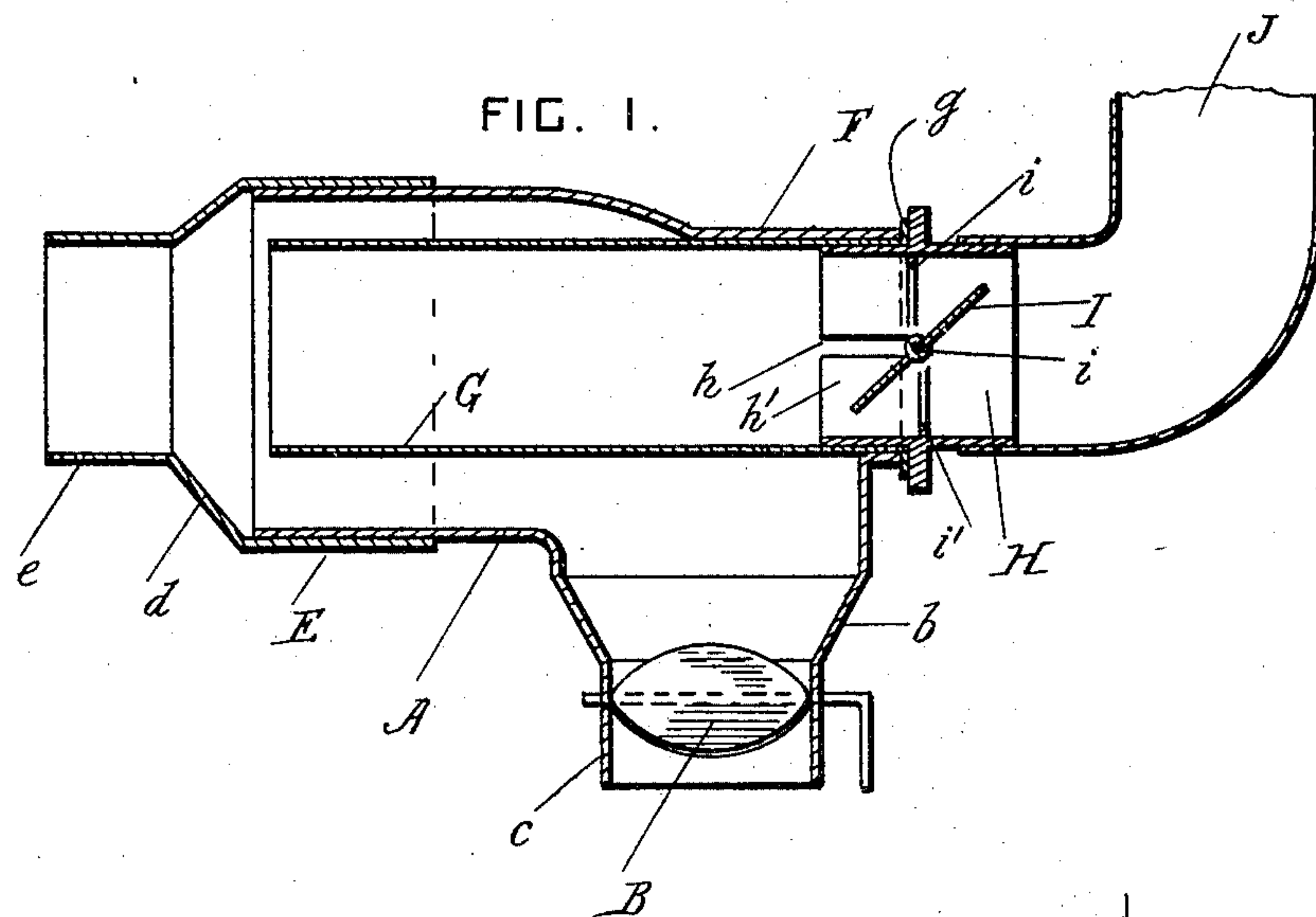
No. 688,049.

Patented Dec. 3, 1901.

A. L. YATES.
DRAFT REGULATOR.

(Application filed Apr. 8, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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DRAFT-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 688,049, dated December 3, 1901.

Application filed April 8, 1901. Serial No. 54,872. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM L. YATES, a citizen of the United States, residing at Niagara Falls, in the county of Niagara and State of New York, have invented certain new and useful Improvements in Draft-Regulators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to draft-regulators for all kinds of stoves and furnaces; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a vertical section through the draft-regulator. Fig. 2 is an end view. Fig. 3 is a detail side view of the frame for the air-damper.

A is an elbow or bend pipe, provided at one end with a conical portion *b* and a cylindrical portion *c* of smaller diameter than the body of the bend-pipe.

B is a smoke-damper of any approved construction, arranged in the cylindrical portion *c*. A conical portion *d* is provided at the other end of the bend-pipe, and *e* is a cylindrical portion, of smaller size than the body of the bend-pipe, which is connected to the conical portion *d*. The cylindrical portion *c* is connected with the furnace or stove, and the cylindrical portion *e* is connected with the chimney in any approved manner.

The bend or elbow pipe is formed of cast metal or of sheet metal, according to convenience and the size of the furnace to which it is to be connected. The smaller cylindrical portions may be made in one piece with the body of the bend-pipe; but, if preferred, the cylindrical portion *e* and the conical portion *d* may be provided with a cap or band *E*, which is slidable upon the end of the body portion of the bend-pipe, so that the length of the bend-pipe and the position of the conical portion *d* can be adjusted.

F is a tubular extension on the bend-pipe, arranged axially in line with the cylindrical portion *e* and of smaller diameter than the body of the bend-pipe.

G is a slidable air-inlet pipe, which is slidable in the tubular extension F. When the pipe G is pushed in to its full extent, it ex-

tends across the cylindrical portion *c* and over the smoke-damper, and its mouth is in proximity to the conical portion *d*. A flange or stop *g* is provided on the rear end of the telescopic pipe to prevent it from being pushed in too far.

H is a cylindrical damper-frame, which is journaled in the rear end portion of the pipe G. This frame has two slots *h* in its sides at the end *h'* which enters the pipe G, so that the end *h'* is a spring end and holds the frame in the pipe in any position in which it is placed. The frame H has an exterior projecting flange, which bears against the end of the pipe G, and which also affords a means for revolving the frame in the said pipe.

I is a damper mounted on a spindle *i*, which is journaled in the end portions of the slots *h* in the damper-frame. The frame can be turned around to bring the damper-handle *i'* into any convenient position. The damper-handle is secured on either end of the spindle *i*, as found convenient, and may be worked by a cord or chain from any part of the building in which the furnace is located. Stop-flanges *i'* are provided inside the frame for the damper to bear against when closed.

J is a portion of a ventilating-pipe, which is connected to the damper-frame H. This ventilating-pipe is connected to any part of the building from which it may be desired to draw a supply of cold air or air which has become impure, so as to make way for warm air or pure air.

The slidable air-inlet pipe above the smoke-damper enables the draft through the ventilating-pipe J to be regulated and prevents smoke from passing up the ventilating-pipe instead of taking its proper course to the chimney.

The furnace-draft is regulated by its smoke-damper and by admitting air into the elbow-pipe through the air-pipe and air-damper.

What I claim is—

1. The combination, with an elbow-pipe provided with a damper at one end, of an air-inlet pipe slidable in the said elbow-pipe over the smoke-damper, a ventilating-pipe for connecting the said air-inlet pipe with a distant part of the building, and an air-damper connected to the said air-pipe, substantially as set forth.

2. The combination, with an elbow-pipe hav-

ing a conical portion at each end, inlet and outlet portions of smaller diameter than its body portion, and a tubular extension arranged in line with its outlet; of a cylindrical
5 air-inlet pipe slidable in the said extension over the said inlet, a ventilating-pipe for connecting the air-inlet pipe with a distant part of the building, and separate dampers for reg-

ulating the passage of smoke and of air, substantially as set forth.

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

ABRAHAM L. YATES.

Witnesses:

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