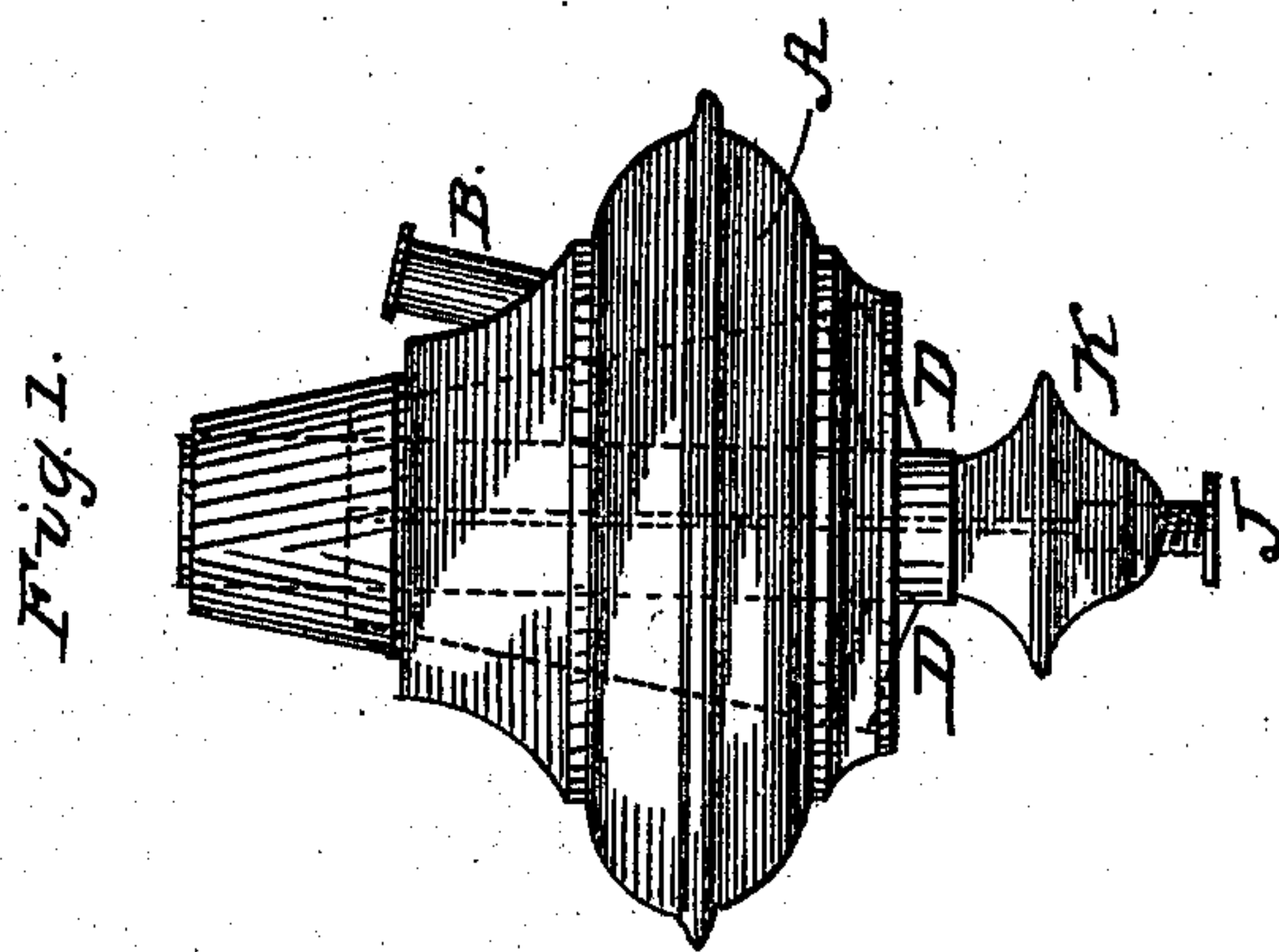
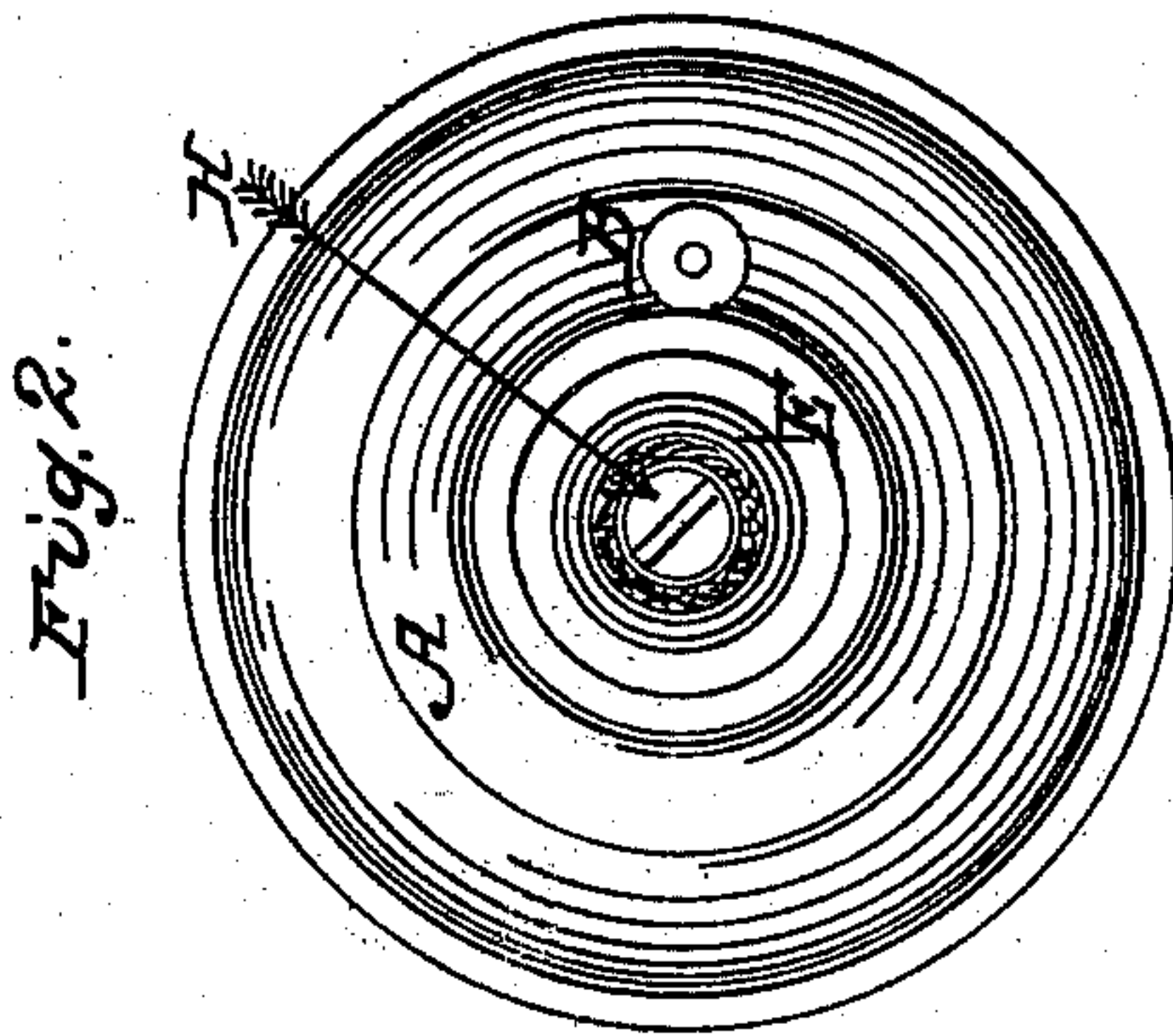
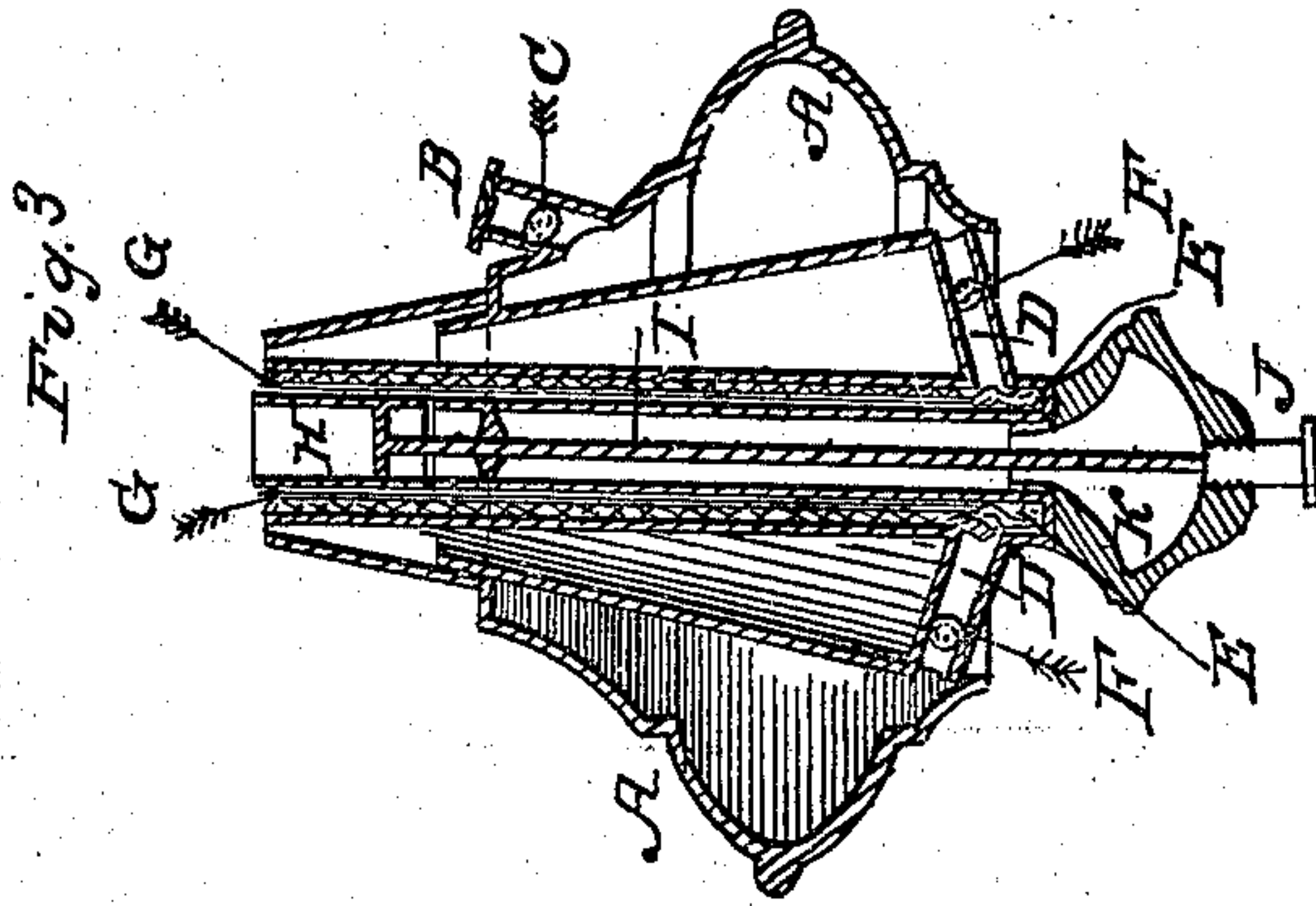


F. C. RIDER.
Vapor Burner.

No. 12,520.

Patented March 13, 1855.



UNITED STATES PATENT OFFICE.

F. C. RIDER, OF PROVIDENCE, RHODE ISLAND.

LAMP.

Specification of Letters Patent No. 12,520, dated March 13, 1855.

To all whom it may concern:

Be it known that I, FREDERICK C. RIDER, of the city of Providence, Providence county, and State of Rhode Island, have
5 invented certain new and useful improvements in lamps for burning spirit gas, ethereal oil, or burning fluid or other analogous preparation having a large percentage of alcohol as its base; and I do hereby declare
10 the following to be a full description of the same.

The nature of my invention consists in regulating the flame of a spirit gas burner, by means of a short tube on the inside of
15 the hollow wick, so that by adjusting the height of the tube, by a screw the volume of the flame may be increased or diminished at pleasure and at the same time without the risk of generating too much heat in
20 the lamp to be liable to explosion, and thereby in connection with wire gauze balls in the filler tube, and supply tubes to the wick, making a lamp perfectly safe to use, and at the same time equal to the most splendid
25 Argand lamps in use. But to describe my invention more particularly I will refer to the accompanying drawings forming a part of this schedule, the same letters of reference wherever they occur referring to the
30 same parts.

Figure 1, is a profile rim of the lamp. Fig. 2, is a plan view of the same. Fig. 3, is a vertical cut section of the same through the line $x-x$, Fig. 2.

35 Letter A, is the shell of the lamp, having an ordinary filler tube B on the upper side, and in which is a wire gauze ball C, the object of which is to prevent the flame, should any accident occur, from getting into
40 the lamp. From the lower and inner side of the lamp are two supply tubes, D, D, communicating with the wick chamber E. In these tubes are also wire gauze balls F, F, the object of which is to prevent the possibility of the flame by any accident run-

ning down by the wick and gaining access to the lamp and cause an explosion.

The lamp wick is hollow on the principle of the Argand lamps, but differing in the mode of adjustment as a measure of pre-
50 caution against accident. The wick is made to fit tight over a tube G, and the two are then forced tightly into the wick chamber, formed by the inner wall of the lamp, and the hollow core of the lamp. This prevents
55 the liability to the flow of the gas, as would be the case if the wick was raised by the spiral, used in Argand lamps where looseness is required. When the elevation of the wick is required it is done by with-
60 drawing the wick tube from the lamp and working the wick up by the fingers, and as the regulator tube H, in the core of the wick regulates the flame, it is not material as to great care or nicety in the length of
65 the wick above the edges of the wick tube. This regulator tube is about an inch long and is secured on a rod I, attached to a screw elevator J, passing through the bottom of the drip cup K, which is screwed to
70 the core of the lamp in the ordinary way of Argand lamps, and through which there are perforations for the admission of air to the interior of the wick.

Having now described my invention and
75 its operation I will proceed to state what I claim and desire to secure by Letters Patent of the United States.

What I claim is—

The use of the regulator tube H, ar-
80 ranged and operated as set forth, in combination with the wick and wick holder, as applied to the inner surface of the wick to regulate and control the flame of wick substantially as hereinbefore set forth.

F. C. RIDER.

Witnesses present:

CHARLES L. BARRITT,
CHAS. H. FELLOWS.