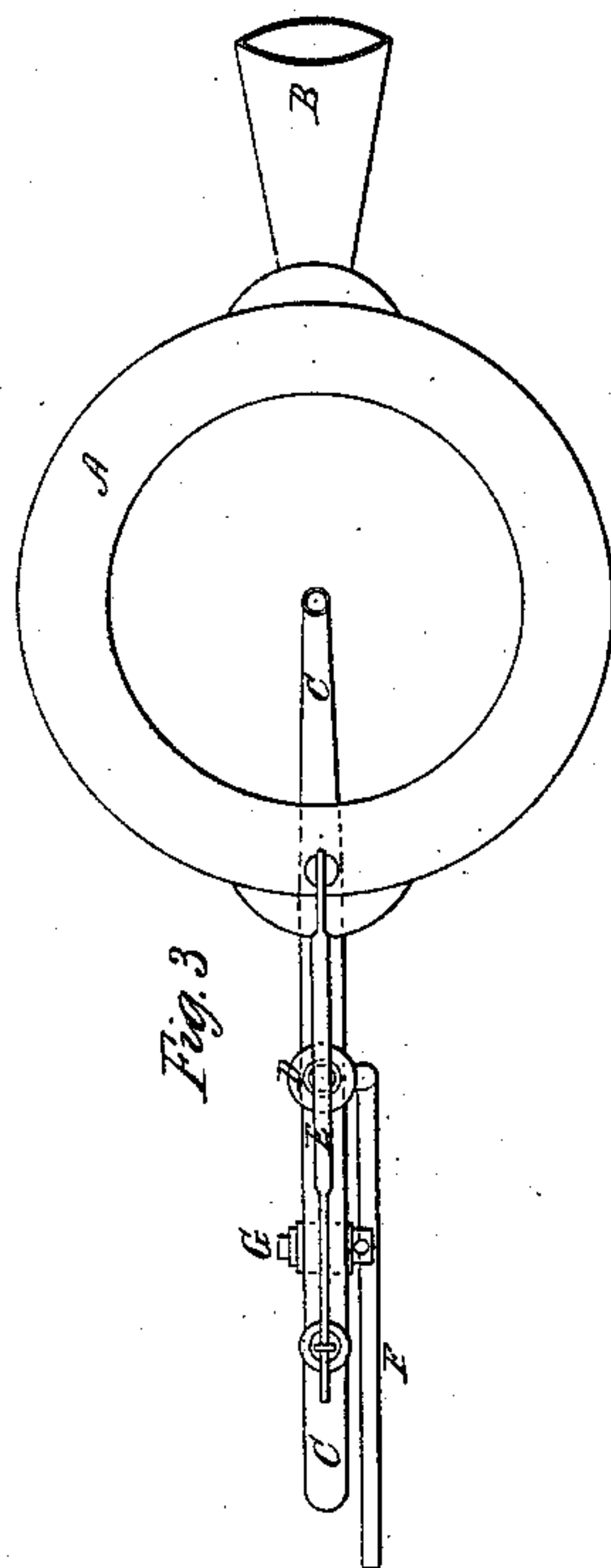
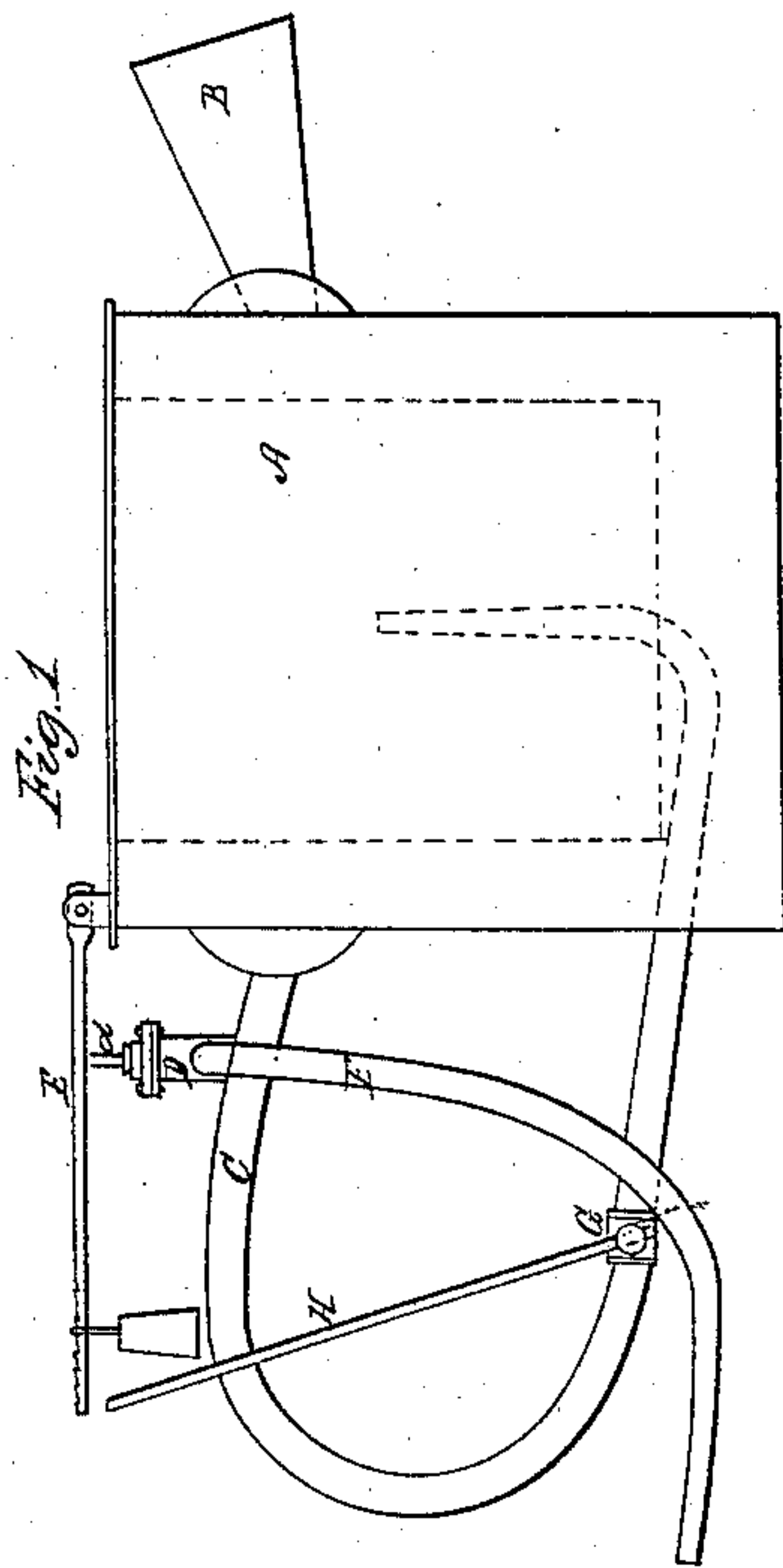
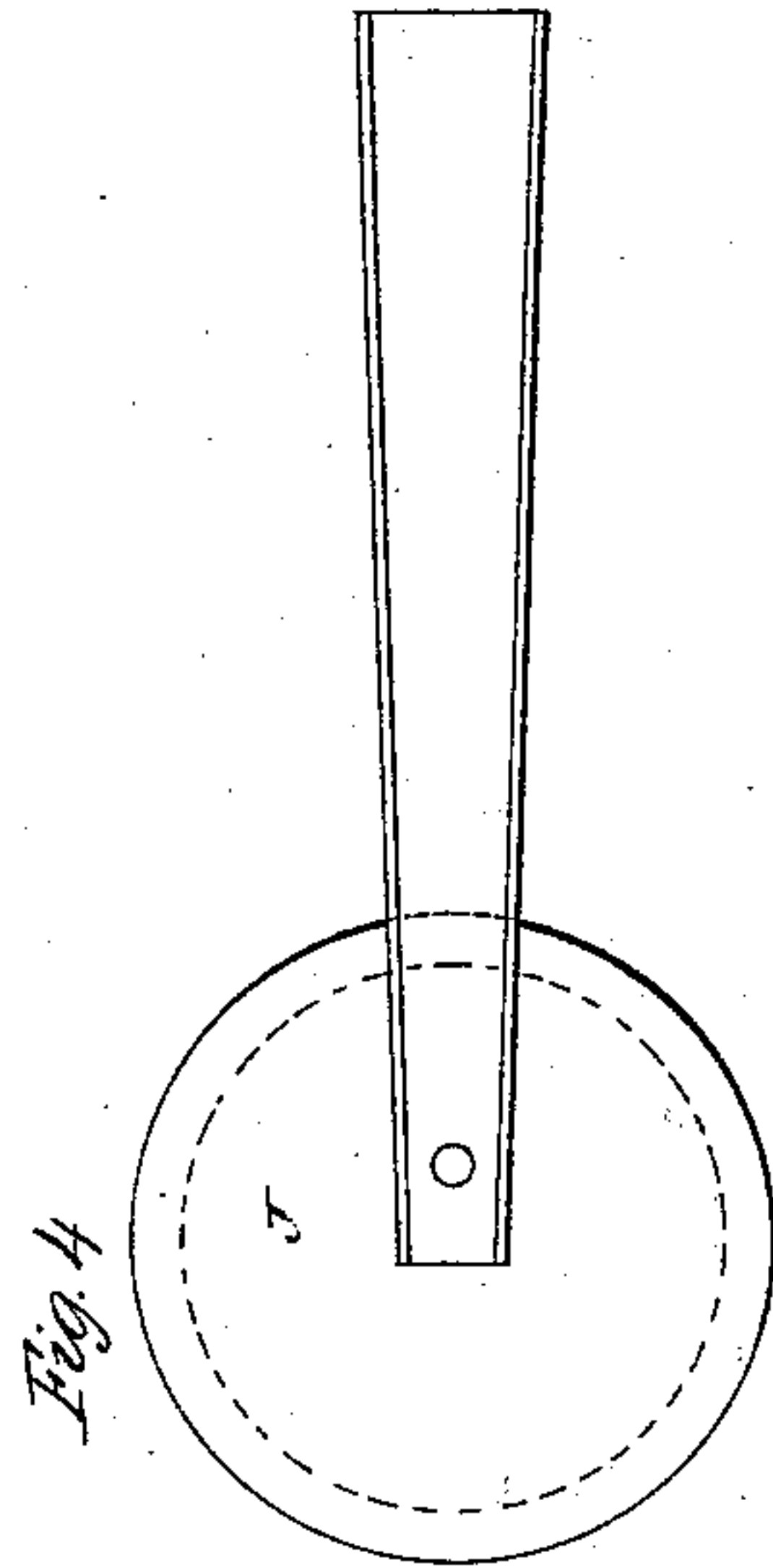
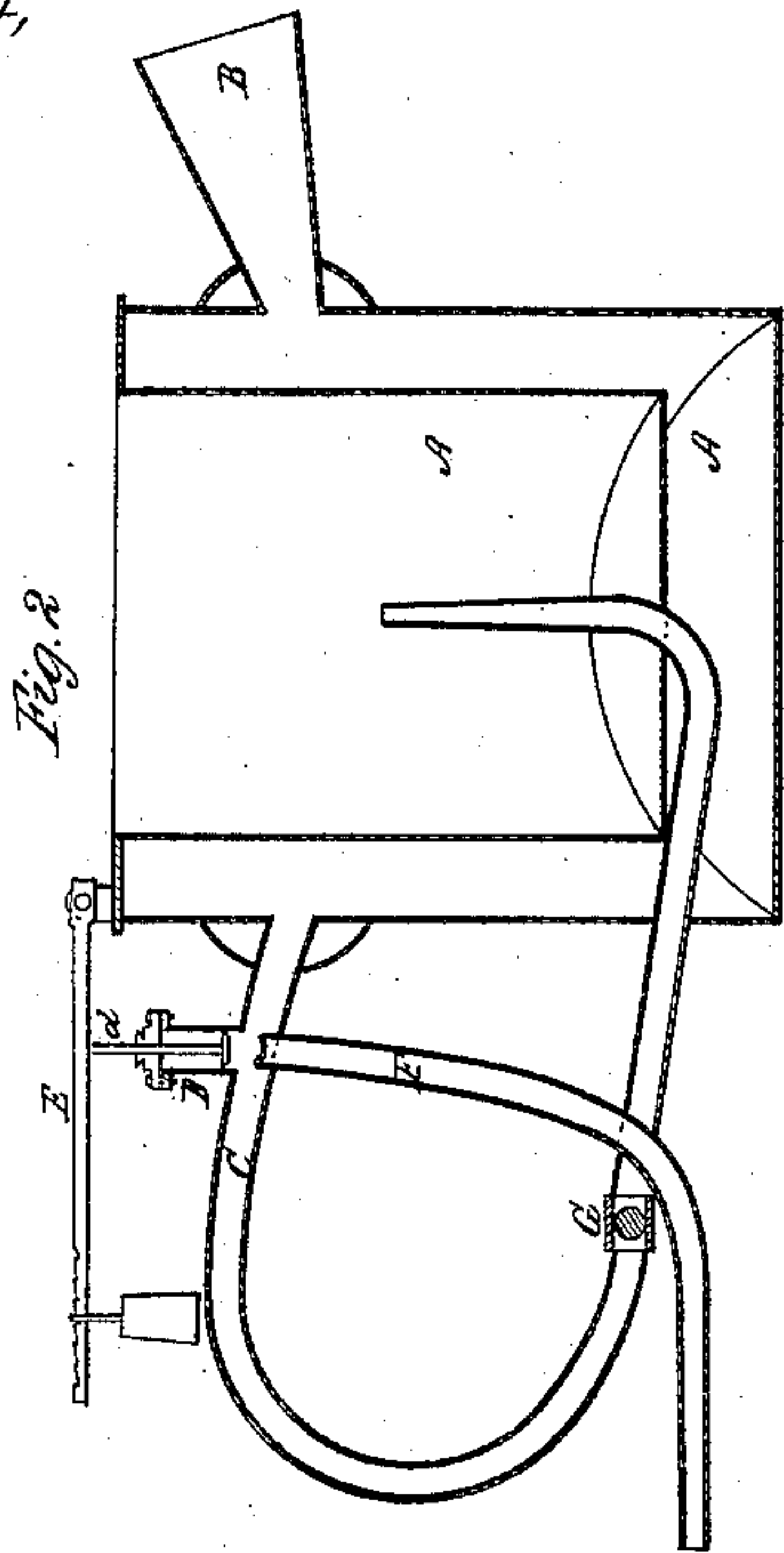


D. W. C. McCloskey,

Blow Pipe,

N^o 8,324,

Patented Aug. 26, 1851.



UNITED STATES PATENT OFFICE.

D. W. C. McCLOSKEY, OF NEW YORK, N. Y.

IMPROVEMENT IN SELF-ACTING BLOW-PIPE LAMPS.

Specification forming part of Letters Patent No. 8,324, dated August 26, 1851.

To all whom it may concern:

Be it known that I, DAVID W. C. McCLOSKEY, of the city, county, and State of New York, have invented a new and Improved Self-Acting Blow-Pipe Lamp; and I do hereby declare the following to be a full and exact description of the same.

The nature of my invention consists in the application to the ordinary self-acting blow-pipe lamp of a safety-valve and escape-pipe in such a manner as to regulate the pressure of the gas in the gas-chamber, and thereby prevent any accident with the lamp, and also in combining with the blow-pipe a cut-off or stop-cock, for the purpose of diverting the current of gas through the escape-pipe and of regulating the volume of gas passing through the blow-pipe.

To describe my invention more particularly, I will refer to the accompanying drawings, making a part of this specification, the same letters in the several drawings referring to the same parts wherever they occur.

Figure 1 is a side elevation of the blow-pipe lamp. Fig. 2 is a cut section of the same, except the rod for turning the stop-cock and a portion of the upper part of the escape-pipe, which is represented as broken off to expose the safety-valve. Fig. 3 is a horizontal view of the lamp. Fig. 4 is a view of the damper or cover of the lamp.

Letters A A is the lamp-case, made of any suitable material and size required. This case is made in the form of a double cylinder, one cylinder within the other, and leaving some half an inch (more or less) space between each for the purpose of making a chamber for the alcohol or fluid used for generating the gas. At one side of the outer cylinder is a mouth-piece, B, for filling the chamber and which may be stoppered by any suitable contrivance, and at the opposite side is inserted the upper end of the blow-pipe C. This pipe is curved and its lower end made to enter the side of the lamp again at a point near the bottom, and then pass through into the interior of the lamp, and then bent up so as to create a vertical jet of flame underneath any basin or other vessel placed upon the top of the lamp. In this blow-pipe, at a point

near its upper connection with the lamp, is placed a safety-valve, D. This valve is made in the usual form, having a rod, *d*, attached to the upper side of the valve, and passing through a screw-cap on the head of the case or box in which the valve acts. Upon the head of this valve-rod an ordinary weighted lever, E, is made to rest to hold the piston-valve down, except when the pressure of the gas is greater than the weight on the end of the lever, when it will rise and allow the gas to escape through the escape-pipe F, inserted in the side of the valve case or box. This escape-pipe is inserted for the double purpose of relieving or carrying off the escape gas and for the making an independent blow-pipe for a spirit-lamp where the convenience of the other arrangement would not admit of its being used. To accomplish this independent blow-pipe action the valve or stop-cock G, in the lower end of the blow-pipe C, is turned or shut off, so as to prevent the jet of gas escaping by the vertical pipe in the interior of the lamp. The gas then reacts on the safety-valve, and, forcing it from off its seat, allows the gas to escape by the escape-pipe under any regulated pressure that may be required.

H is the handle of the stop-cock.

J is the damper or cover for putting out the lamp.

The operation of this lamp is that when it is required for use it is first requisite to fill the chamber between the outer and inner casings of the lamp with alcohol or other fluid and then stopper it up tight. When this has been done, the interior of the lamp is then filled with the alcohol to near the top of the vertical end of the blow-pipe, and then by a match is ignited. Immediately on ignition the alcohol confined between the casings of the lamp begins to vaporize and passes off through the blow-pipe and causes the flame in the lamp to jet up with increased force. Should the flame be too great, by turning off partially the stop-cock its force will be regulated immediately, and if by doing so the gas makes too rapid for the consumption it by means of the safety-valve and escape-pipe arrangement the excess of gas will pass off without endangering the lamp. If it is required to use only

the jet from the escape-pipe, the stop-cock is turned off entirely, when the whole force of the gas is diverted through the escape-pipe.

Having now described the mode of construction and operation of my improved lamp, I will proceed to state what I claim and desire to secure by Letters Patent of the United States—

The use of the safety-valve and escape-pipe and stop-cock, in combination with the blow-pipe of a self-acting blow-pipe lamp, substantially as hereinbefore set forth.

D. W. C. McCLOSKEY.

Witnesses:

NATHL. R. HOXIE,
C. RESSLER SMITH, Jr.