

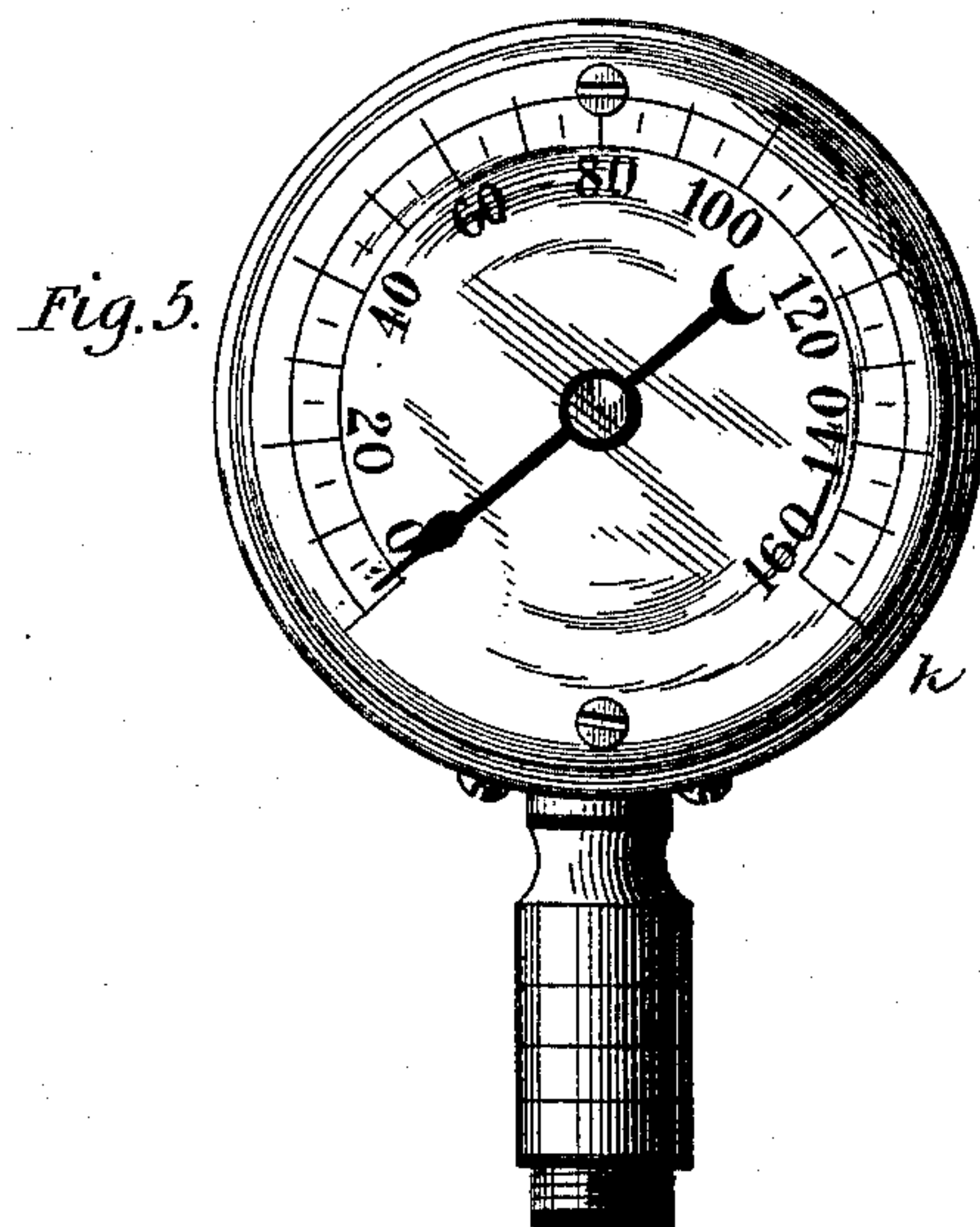
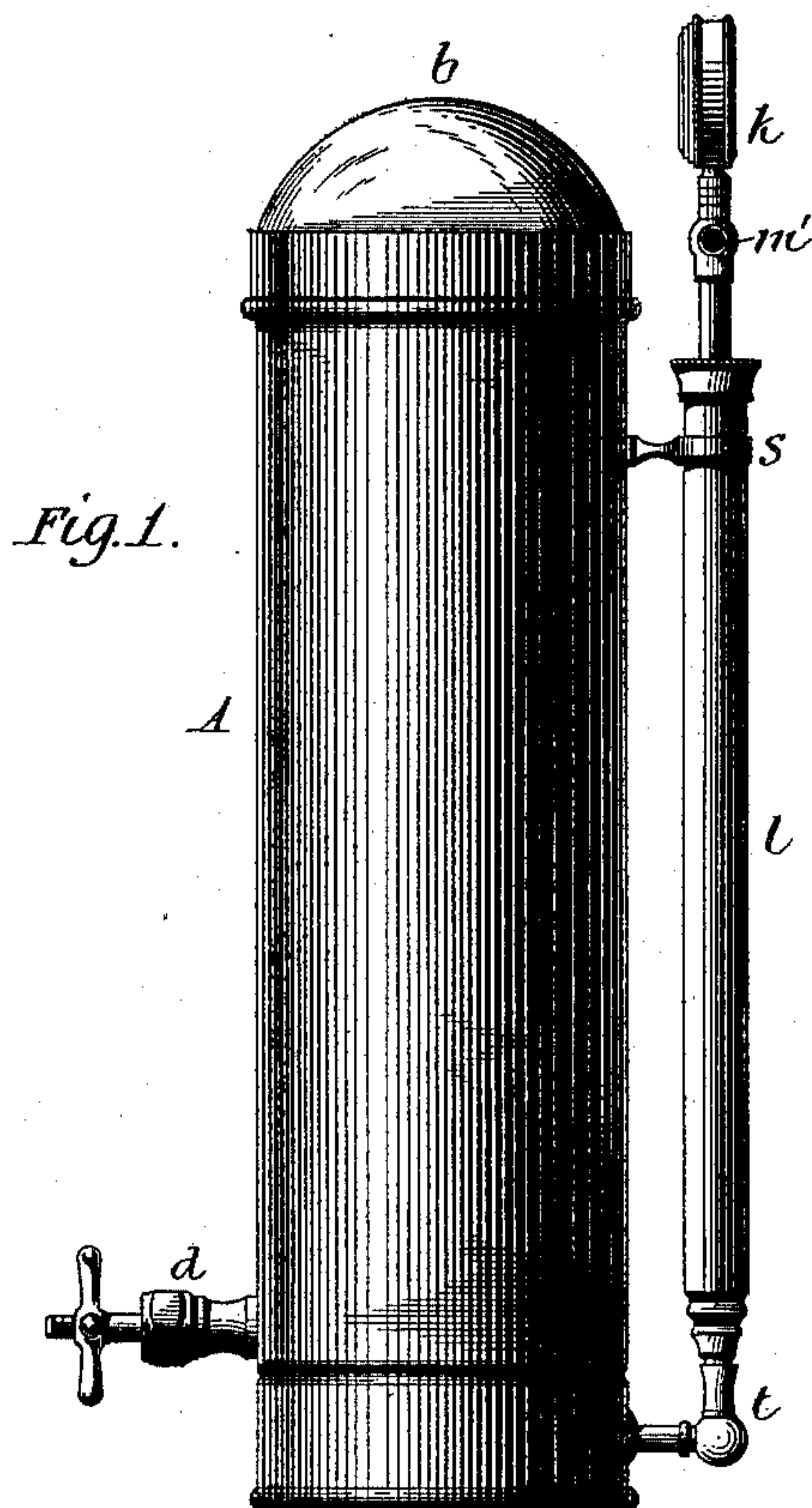
(No Model.)

2 Sheets—Sheet 1.

H. D. GREENE.  
PORTABLE FIRE EXTINGUISHER.

No. 474,042.

Patented May 3, 1892.



Witnesses:

Wm. Norton  
Jas. B. Kelly

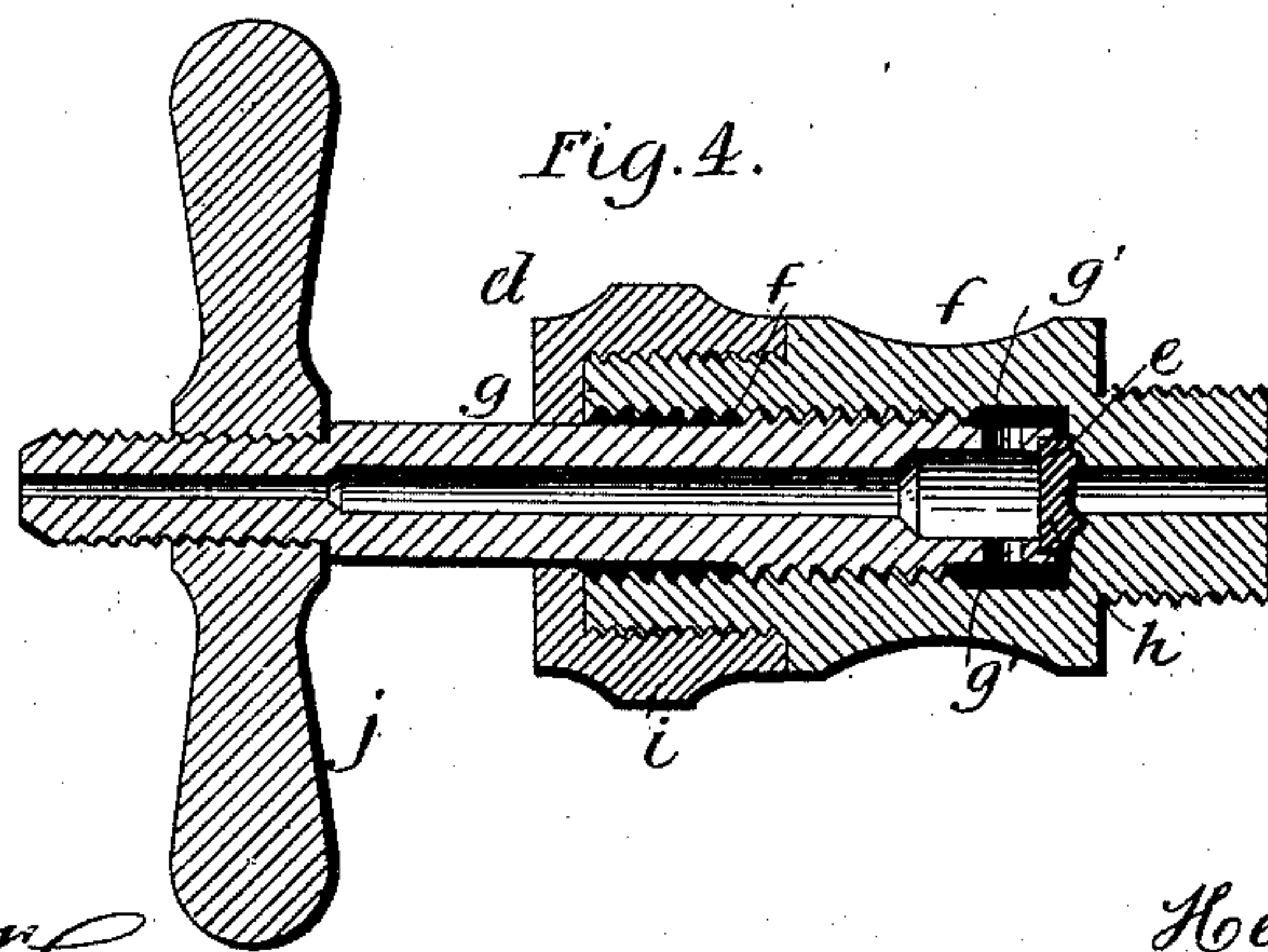
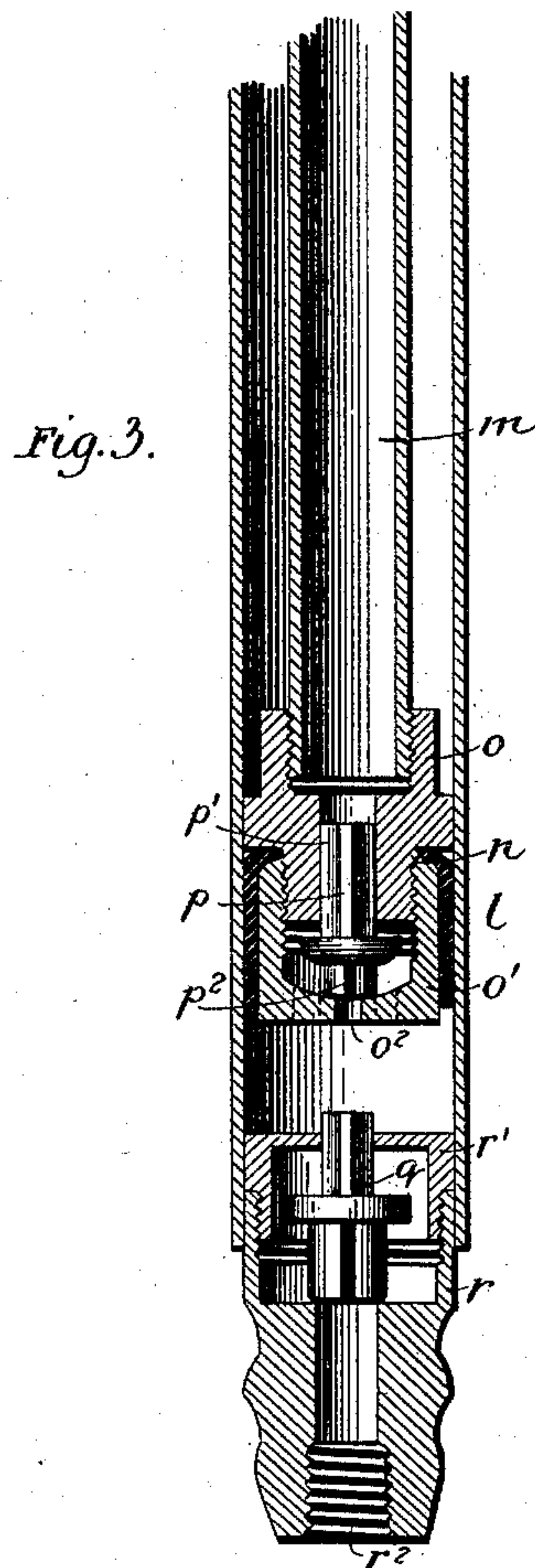
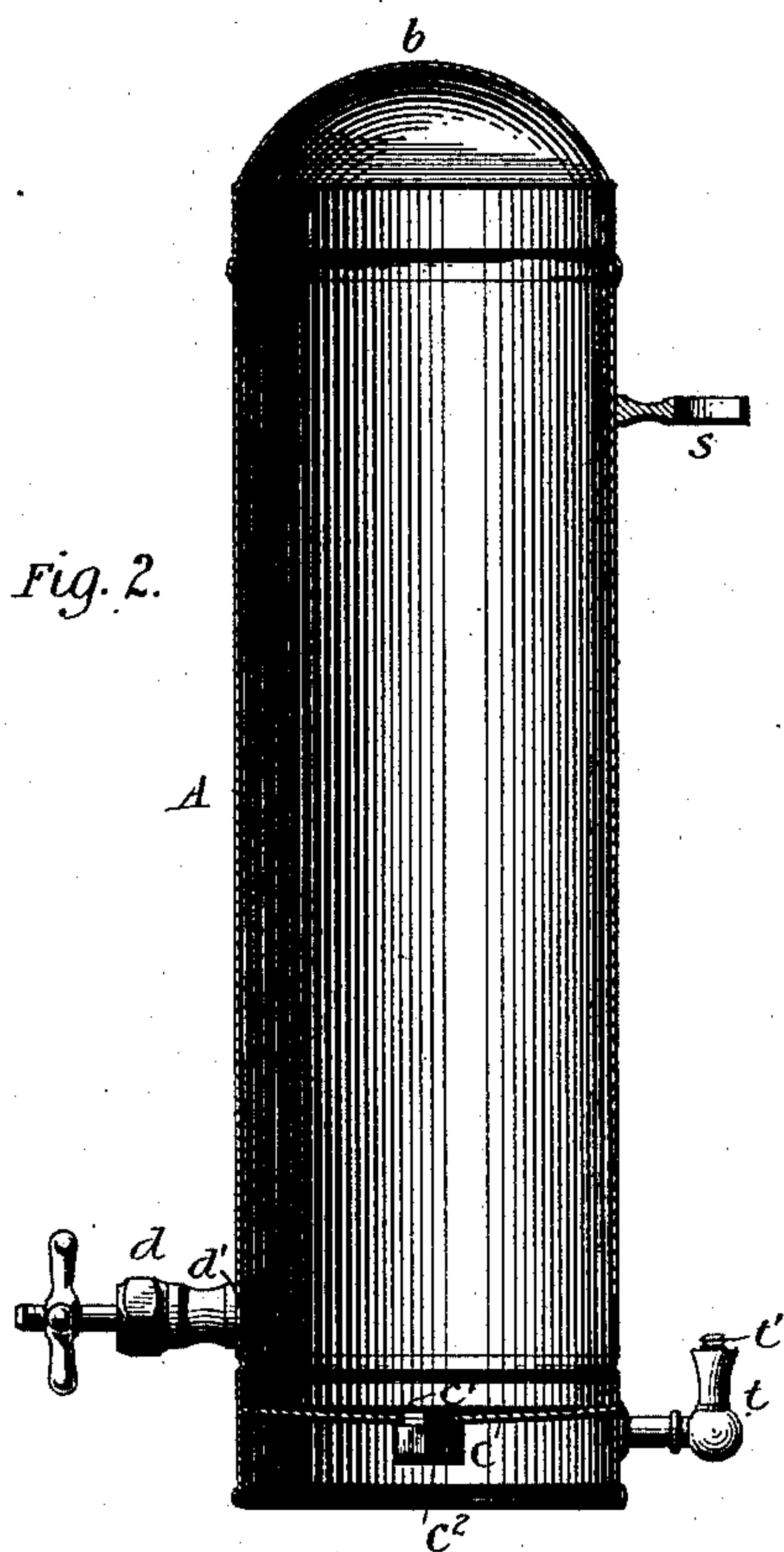
Inventor:

Henry D. Greene  
by W. W. Wadley  
Attorney.

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Witnesses:  
Wm. Norton  
M. C. Brundage

Inventor:  
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# UNITED STATES PATENT OFFICE.

HENRY D. GREENE, OF PHILADELPHIA, PENNSYLVANIA.

## PORTABLE FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 474,042, dated May 3, 1892.

Application filed December 30, 1890. Renewed March 9, 1892. Serial No. 424,338. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY D. GREENE, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Portable Fire-Extinguishers; 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.

My invention relates to fire-extinguishers, and more especially to that class of extinguishers in which the fluid is contained within a suitable reservoir and is expelled therefrom when needed by compressed air confined within the reservoir.

The object of my invention is to provide a portable apparatus of the kind above referred to that shall be simple in construction and operation, inexpensive in its manufacture, and very neat and compact.

To these ends my invention consists in a new and novel combination and arrangement of the several parts constituting my improved apparatus, all of which will fully and clearly appear from the following description and claim, taken in connection with the accompanying drawings, in which—

Figure 1 illustrates in side elevation my improved fire-extinguisher; Fig. 2, a vertical central section of the same; Fig. 3, a section, enlarged, of the pump for introducing compressed air; Fig. 4, a section of the discharge-nozzle, and Fig. 5 a view of the gage detached.

A is the reservoir for containing the fluid under pressure, and which is preferably cylindrical in shape, my preferred method of manufacture being to form the cylinder from seamless drawn copper tubing.

b is a cap secured in any suitable manner to the upper end of the cylinder and forming the top or head thereof. In the bottom c is an opening c', through which the fluid is admitted to the reservoir. A screw cap or plug c<sup>2</sup> normally closes the same.

d is the discharge-nozzle, secured to the cylinder near its lower end by means of the nut d'. A valve-seat e is formed in the piece f, and this piece is also provided with the in-

ternal screw-threads f' for the external screw-threads on the valve-rod g. This rod is bored centrally for nearly its entire length, the passage being closed at its inner end by the valve h. Small holes or openings g' form a communication between the chamber in the piece f and the passage through the valve-rod and permit the fluid when the valve is open to pass from the reservoir through the valve-rod and from the nozzle.

i is the ordinary confining-nut. The outer end of the valve-rod is screw-threaded, as shown, to permit of the attachment of the handle j, and also of a test-gage, as at k, and of the pump l for admitting compressed air.

The construction and operation of this pump I will now describe.

m is the pump-rod, which is formed hollow, as is also the handle m', and through which the air to be compressed is admitted. Above the handle is a socket, in which is temporarily secured the test-gage. On the lower end of the pump-rod is a casing n, which is formed of the section o, having the cap o' thereon. In this cap is a series of openings o<sup>2</sup>, through which the air is adapted to pass when the valve p is lowered. This valve is provided with the vents p' and p<sup>2</sup> to give passage to the air. Immediately below this valve is a second valve q, which is constructed similar to the valve p and which moves in the casing r and its cap r'. Near the top of the cylinder is suitably secured an eye s, and in line therewith, but near the base of the cylinder is also suitably secured an L-shaped support t, which is provided with the screw-threaded tip t', which is adapted to enter the threaded socket r<sup>2</sup> in the lower portion of the casing r. This eye s and support t serve as a temporary holder for the air-pump and permit the use of the air-pump as a handle for manipulating the apparatus.

In practicing my invention the fluid is first admitted through the opening in the bottom of the reservoir and the opening then closed by means of the cap, as already stated. The pump is now applied to the discharge-nozzle by means of the socket r<sup>2</sup>, which is screwed onto the screw-threaded tip of the nozzle. The valve of the nozzle is then opened and the pump is operated until the approximate requisite press-

ure is attained. Then the valve is closed, the pump is disconnected, and the pressure-gage applied, which is done in a manner similar to that employed in attaching the pump.  
5 The valve is now opened, which permits the pressure of the contents to be indicated on the gage. The valve is then closed and the gage removed and screwed to the upper portion of the pump, which is placed in its supports on  
10 the side of the cylinder, as already described. The apparatus is now in condition for use. Thus it will be seen that by my invention I am enabled to manufacture at small expense a neat, simple, but effective fire-extinguisher  
15 and one that will be easily handled and operated. By my invention I am also enabled to employ the discharge-nozzle not only as an

outlet for the fluid, but also as a means of connection for the pump and gage.

I claim—

In a portable fire-extinguisher, the combination, with a reservoir having a fluid-inlet, of a discharge-nozzle having a valve and the screw-threaded tip for the purposes set forth, an air-pump, a gage temporarily secured thereto, and supports on the side of the cylinder for temporarily securing the pump and gage thereto, as described. 20 25

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

HENRY D. GREENE.

Witnesses:

WILL T. NORTON,  
ARTHUR BRENNING.