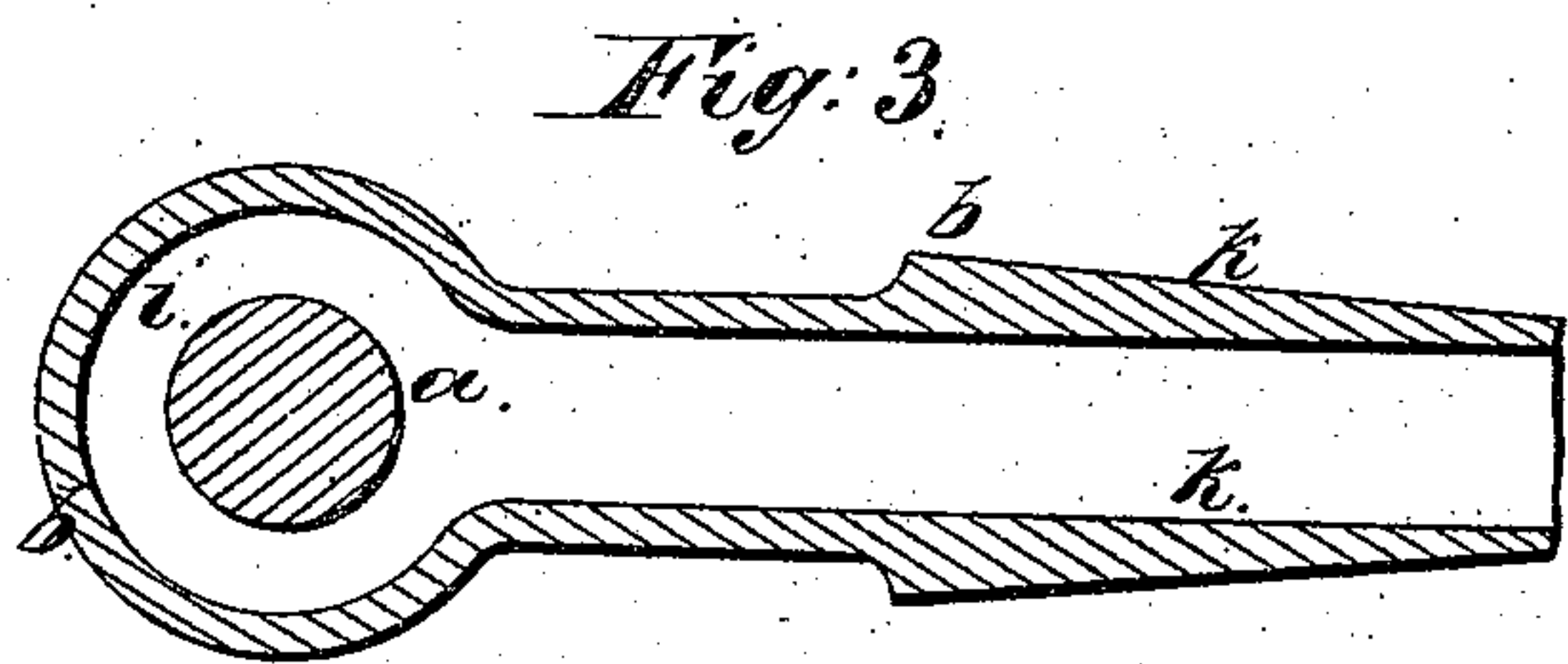
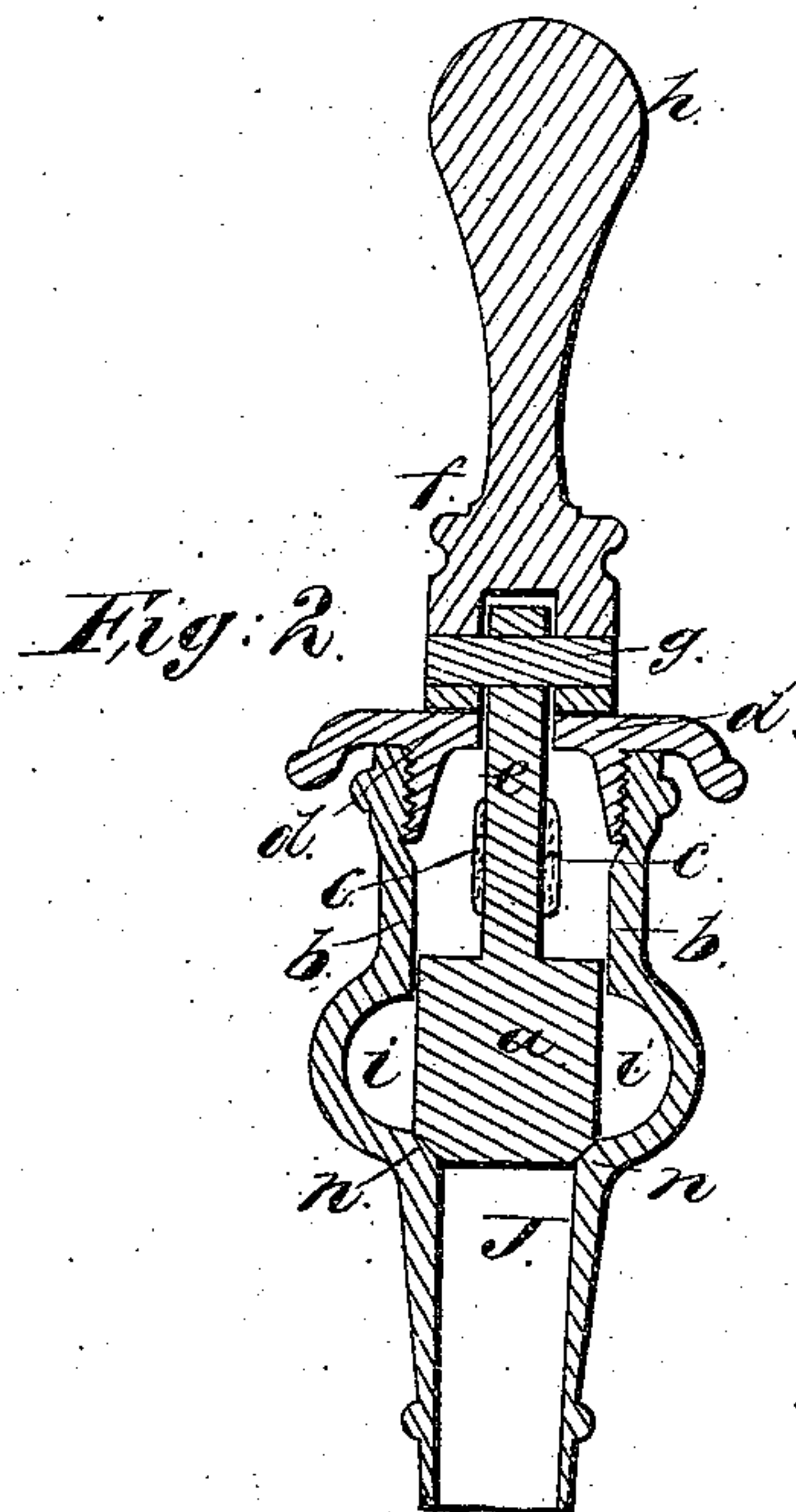
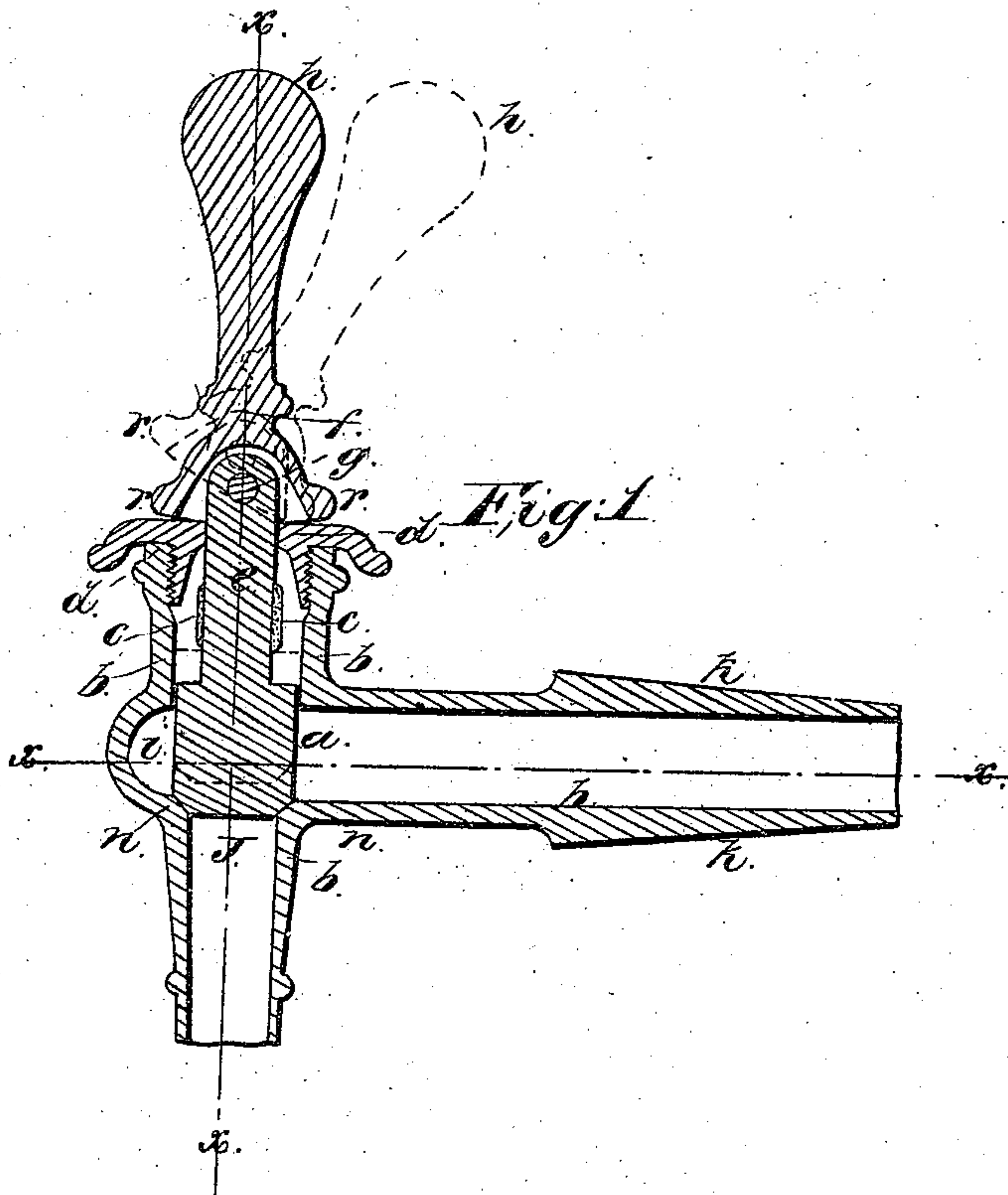


D. N. B. Coffin, Jr., Cock.

No 12,195.

Patented Jan. 9, 1855.



Witnesses:

J. J. Lee
Joseph Garrett

Inventor:

David N. B. Coffin, Jr.

UNITED STATES PATENT OFFICE.

DAVID N. B. COFFIN, JR., OF LYNN, MASSACHUSETTS.

STOP-COCK.

Specification of Letters Patent No. 12,195, dated January 9, 1855.

To all whom it may concern:

Be it known that I, DAVID N. B. COFFIN, Jr., of Lynn, in the county of Essex and State of Massachusetts, have invented a new and useful Self-Closing Stop-Cock, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1 represents a vertical longitudinal section of the cock; Fig. 2 represents a vertical transverse section of the same through the valve at the line *x x* of Fig. 1, and Fig. 3 represents a horizontal section of the cock through the line *# #* of Fig. 1.

It has long been a desideratum to obtain for the pipes that supply and distribute water in cities, a stop cock, simple in construction, durable, and cheap, whose valve can be readily opened by hand, and will close of itself when the hand is withdrawn, and thus prevent the waste which results from carelessly leaving hydrants open.

It is the main object of my invention to supply this desideratum.

The cock represented in the drawings, does not differ materially in its external form and proportions from ordinary cocks. It has a chamber to contain the valve and its seat, which chamber communicates by one tube called the shank of the cock, with the pipe, cistern, or other source of supply of the liquid to be drawn off, and by another tube called the nozzle, with the open air, or the receptacle into which the liquid is to be discharged. The valve seat (*n*) and the valve (*a*) are for the purpose of opening and closing the communication between these tubes through the chamber (*i*), so as to establish a current of the liquid through the cock from the source of supply and to cut off the same at will.

The valve chamber is cylindrical and has its upper end closed by a screw gland (*d*), which serves the purposes of guiding the valve stem, permitting the same to protrude through the side of the cock, and of compressing an elastic packing of india rubber, or other suitable material tightly around the valve stem, and against the sides of the chamber to prevent leakage, and also to support the packing against the valve, in order to press the same constantly toward its seat.

The valve (*a*) is, in this example, cylindrical, and is fitted into the chamber so as to slide freely toward and from its seat (*n*).

The stem (*e*) of the valve, extends through the gland (*d*) and is surrounded or packed by an annular piece of vulcanized india rubber (*c*). This packing also presses upon the valve with sufficient force to cause it to close promptly, and to hold it closed. Whenever the valve is opened, the spring will be forcibly compressed, and consequently will tend with increased power to return the valve to its seat.

The upper extremity of the valve stem is jointed to the central part of a disk, cap or foot, whose edges (*r*) project considerably beyond the sides of the stem, and rest upon the top of the gland (*d*). From the upper side of this foot (*f*) a handle (*h*) projects upwards, and stands erect, when the valve is closed. By inclining this lever any way in which the joint will allow it to turn, the valve will be raised; but as the point at which the stem is jointed to the foot is always considerably on one side of the point, on which the edge of the foot rests, there is nothing to prevent the valve from being closed by the pressure of the spring whenever the hand of the operator is removed from the handle (*h*); therefore, the cock will be in no danger of standing open, except when intentionally held so.

I have described a vulcanized india-rubber packing, as I have tried that substance and found it to answer a good purpose, but I have no doubt that many other elastic substances or springs, simple or compound might be employed for the purpose, and would answer very well.

Having thus described my improved stop cock, what I claim therein as my invention and desire to secure by Letters Patent is—

1. The arrangement of a rocking lever substantially as herein described, so that if turned either way by the hand, it will open the valve and be in such a position that when the hand is removed, the valve will be free to close by the pressure of the spring.

2. I also claim the arrangement of the elastic packing substantially as herein described, so that it will perform the two duties of packing the valve stem, and constantly pressing the valve toward its seat.

In testimony whereof, I have hereunto subscribed my name.

DAVID N. B. COFFIN, JR.

Witnesses:

A. R. COFFIN,
WILLIAM WHITINE.