

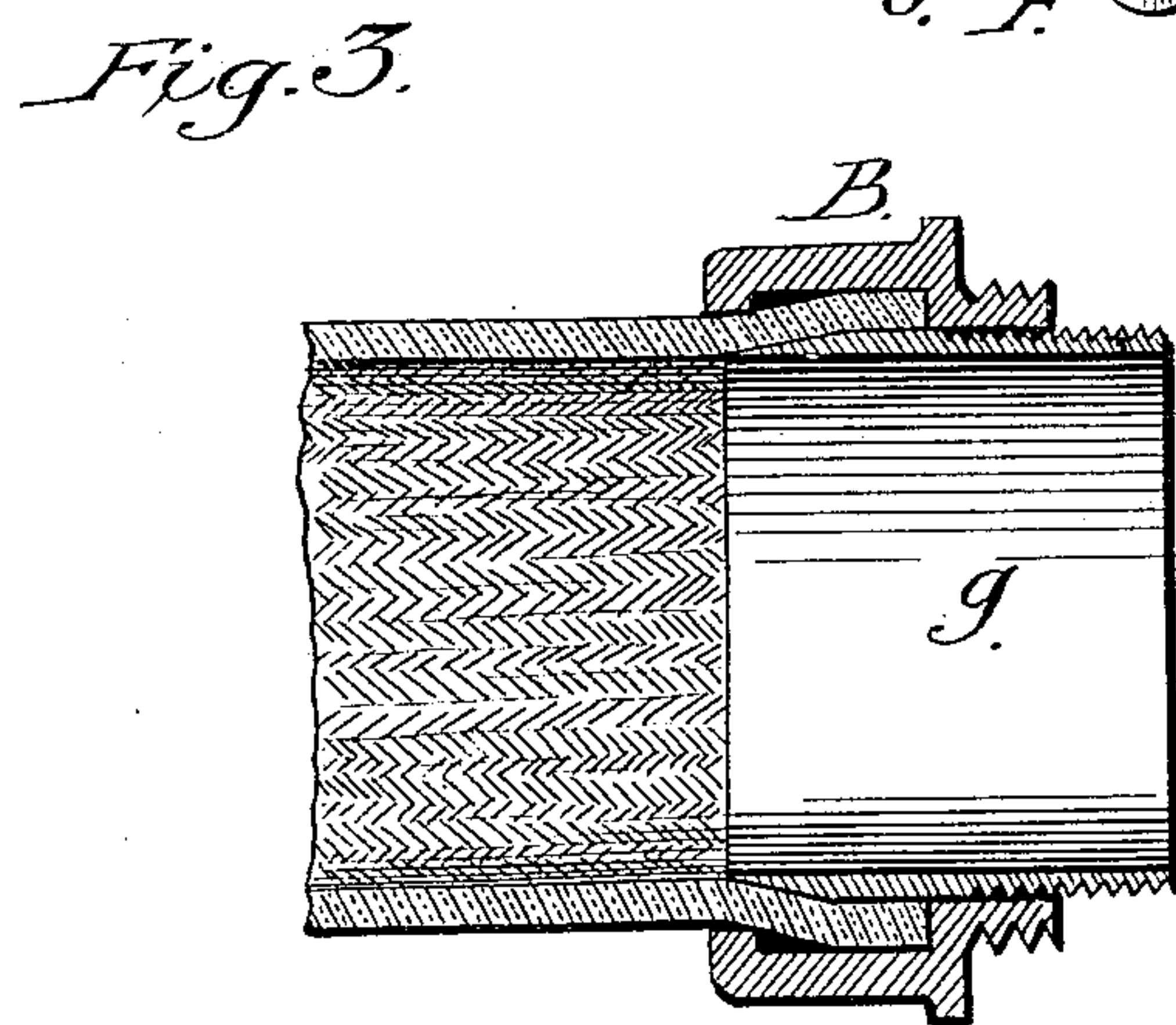
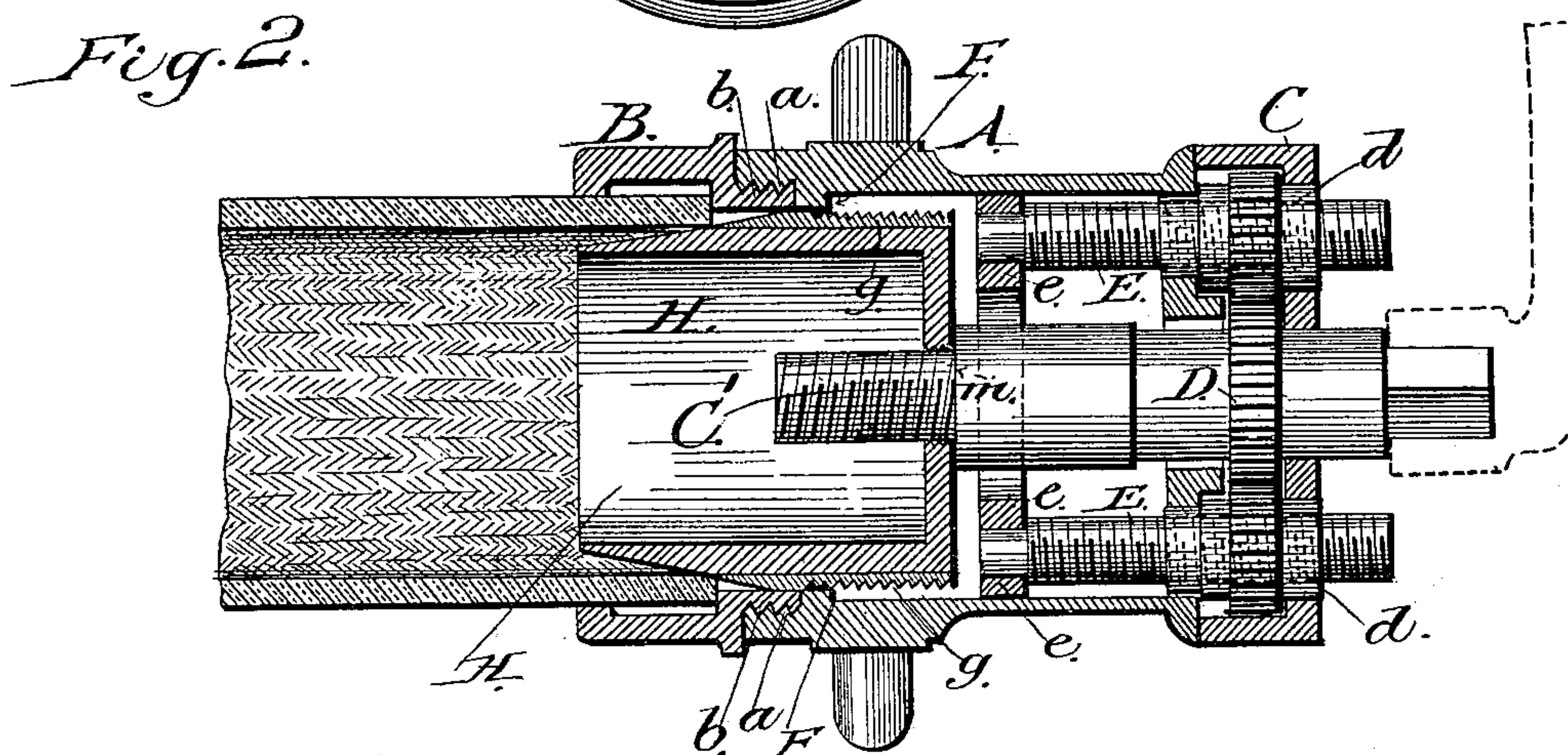
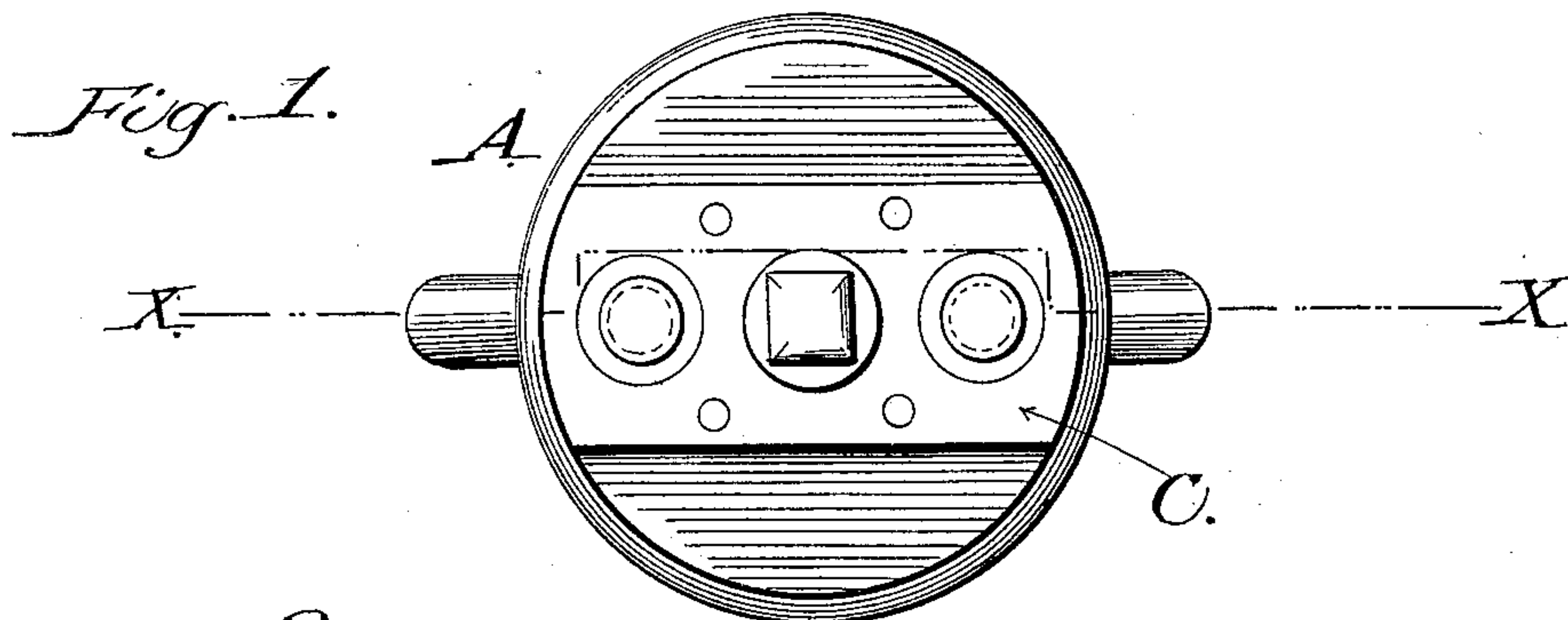
(Model.)

C. CALLAHAN

TOOL FOR APPLYING COUPLINGS TO HOSE.

No. 389,441.

Patented Sept. 11, 1888.



WITNESSES

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# UNITED STATES PATENT OFFICE.

CORNELIUS CALLAHAN, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE  
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## TOOL FOR APPLYING COUPLINGS TO HOSE.

SPECIFICATION forming part of Letters Patent No. 389,441, dated September 11, 1888.

Application filed February 22, 1888. Serial No. 265,559. (Model.)

*To all whom it may concern:*

Be it known that I, CORNELIUS CALLAHAN, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Tools for Applying Couplings to Hose, of which the following is a clear and full description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a top view of my improved tool. Fig. 2 is a vertical section of the same through the line X X of Fig. 1, with its manner of application to a hose-coupling. Fig. 3 is a section of a coupling, showing the clamping-ring in place.

My present invention relates to a tool for readily applying couplings to hydraulic hose; and it consists in the combination of devices hereinafter explained and claimed.

To enable others skilled in the art to construct and use my invention, I will now proceed to describe the exact manner in which I have carried it out.

Referring to the drawings, A represents the outer casing of my improved tool, provided on its lower inner periphery with a female screw, *a*, for a short distance—say about half an inch or less—to fit on the male screw *b* on the coupling-section B, as shown in Fig. 1. Across the top of the casing A is bolted the metal block C, through which loosely passes the central screw, C', provided with gearing D for revolving the nuts *d d*, by which the side screws, E, are evenly raised or lowered. To the lower end of these side screws I attach the follower *e*, in the form of a flat ring, fitting snugly within the casing A, and which is adapted to be lowered by the screws E until it reaches the interior shoulder, F, immediately above the female screw *a*. This shoulder arrests the downward movement of the follower when its proper function has been completed.

A hollow plug, H, having a central threaded opening, is adapted to be screwed upon the central screw, C', and over the said plug an internal ring, *g*, is slipped, so that it may be operated upon by the follower-ring, as I shall hereinafter fully describe.

The operation of this tool is as follows: First

I insert the hose in the outer ring of the coupling B, and raise the follower-ring *e* by turning the central screw, C', until the follower has risen high enough to allow the conical ring director or plug H to be screwed on the central screw until it reaches the shoulder *m* on the same. Then I place internal ring, *g*, on the plug, with the screw end in next to the follower-ring *e*. The tool being ready, I screw it on the male screw of the binder, as shown in Fig. 2. Now it will be observed that when the central screw is turned it operates the side screws and causes the follower-ring to move toward the hollow plug H, the said plug turning with the screw. When the follower-ring comes against the face of the plug, the latter and the follower-ring are to all practical purposes locked together, and the continued rotation of the screw C', which is provided with left-hand threads, causes the said plug to commence to unscrew therefrom. As the plug begins to unscrew or work off the central screw, C', it is also caused to move downward into the adjacent coupling-section. At the same time the follower-ring, which is immediately behind the plug and internal ring, *g*, bears against said internal ring to force it downward with the plug H into the coupling section. By the time the follower-ring reaches the limit of its movement, or, in other words, when it strikes the shoulder F on the inside of the casing A, the hollow plug and internal ring, *g*, will have been forced into the coupling-section. The plug H is now readily detached from the screw C' by unscrewing the casing A from the coupling-section, and said plug may be removed from the coupling-section by means of a suitable tool, thereby leaving the internal ring firmly seated in said section, with its threaded end projecting beyond the coupling, as shown more particularly in Fig. 3.

It is important to have the threads on the central screw that engages the plug and the two connected with the follower-ring of different pitches—say right and left—when I operate all three by the turning of the central screw. I could reach the same result with three independent screws, but prefer geared ones, as being quicker and carrying the ring down evenly.



Instead of the exact form of the screws I have described and shown, it is obvious I might employ any other suitable construction of screws and nuts to cause the downward movement of the follower without departing from the spirit of my invention.

The ring-director serves also as a wedge to hold the hose in place between it and the coupling-ring while the inner ring is being inserted.

10 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a tool for applying couplings to hose, the combination, with the coupling-section B, 15 the plug H, and the internal ring, *g*, of the casing A, the internal follower, *e*, the screws E, and the centrally-placed screw C', engaging the plug and operating the screws E in unison, substantially as described.

20 2. In a tool for applying couplings to hose, the combination, with the coupling-section, the

hollow plug, and internal ring, of the casing adapted to be screwed upon the coupling-section and provided with an internal shoulder or stop, F, the follower adapted to bear against 25 said ring, the screws E, secured to said follower, the central screw, and suitable gearing between said central screw and the screws E, whereby said screws move in unison and operate the follower, substantially as described. 30

3. The coupling-section, the casing A, the plug H, and the internal ring, *g*, in combination with the follower adapted to bear upon said ring, the screws E, the nuts *d* thereon, the central screw, C', and gearing between said 35 screw and the nuts *d*, whereby the side screws are evenly raised and lowered, substantially as and for the purpose described.

CORNELIUS CALLAHAN.

Witnesses:

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