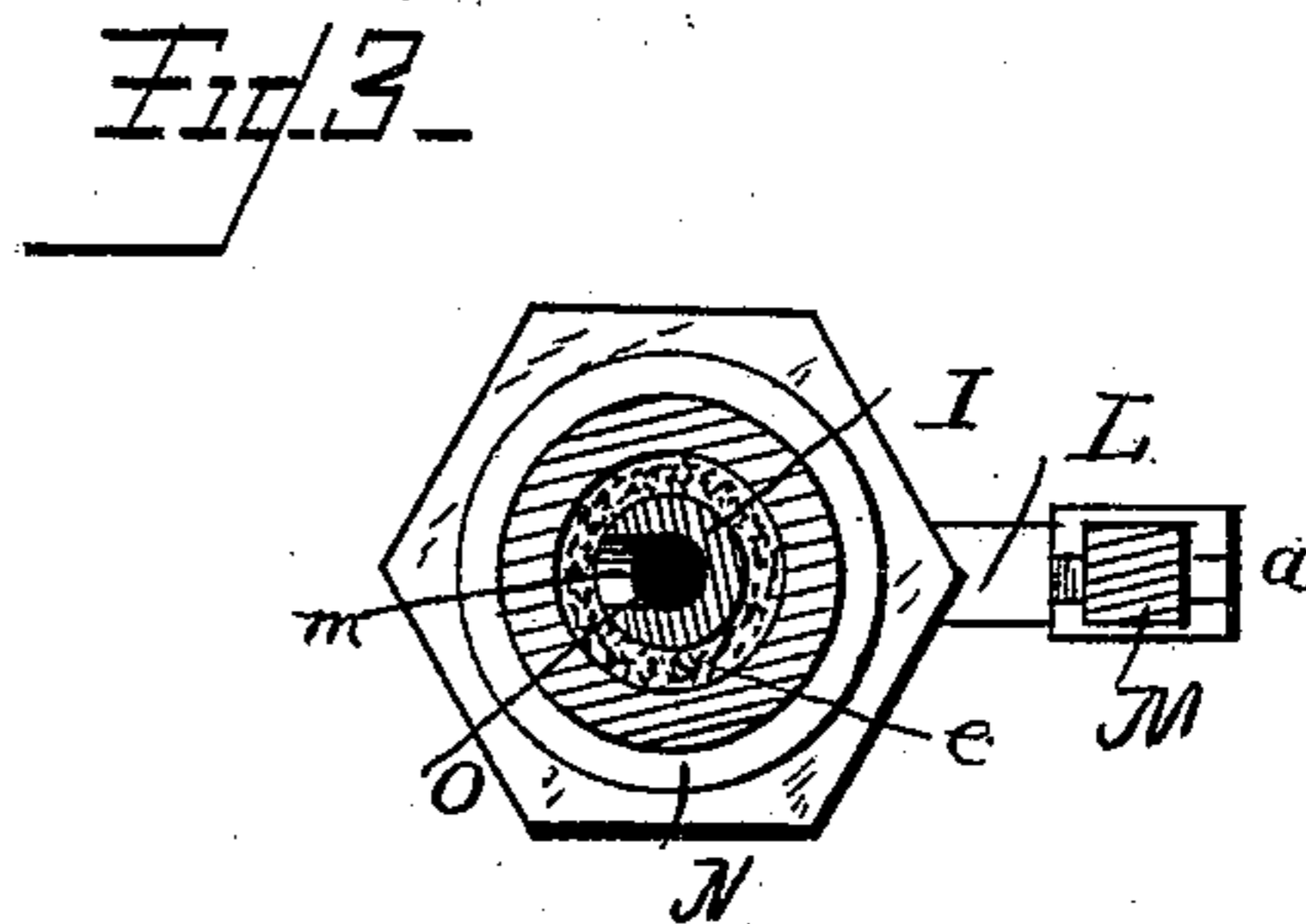
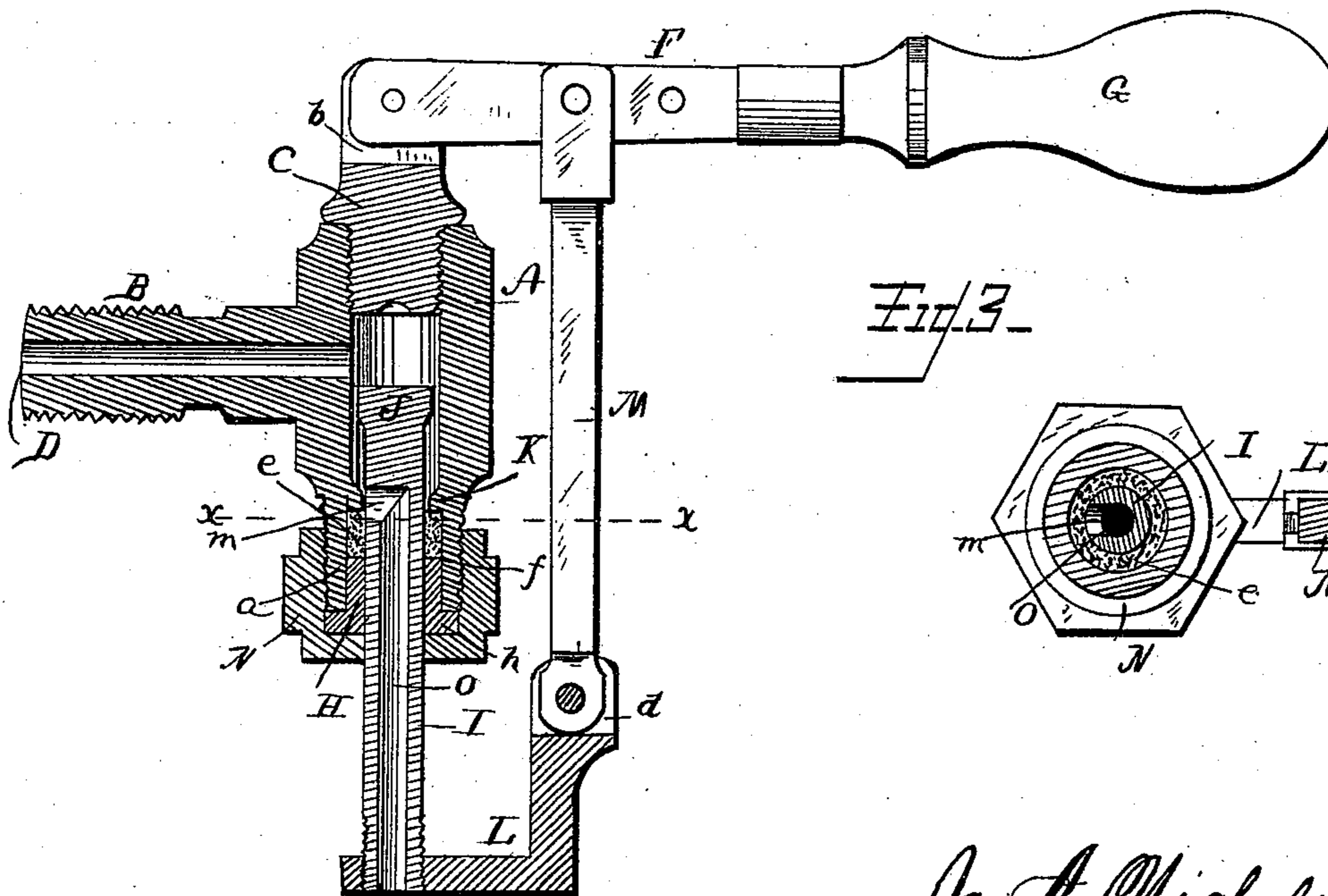
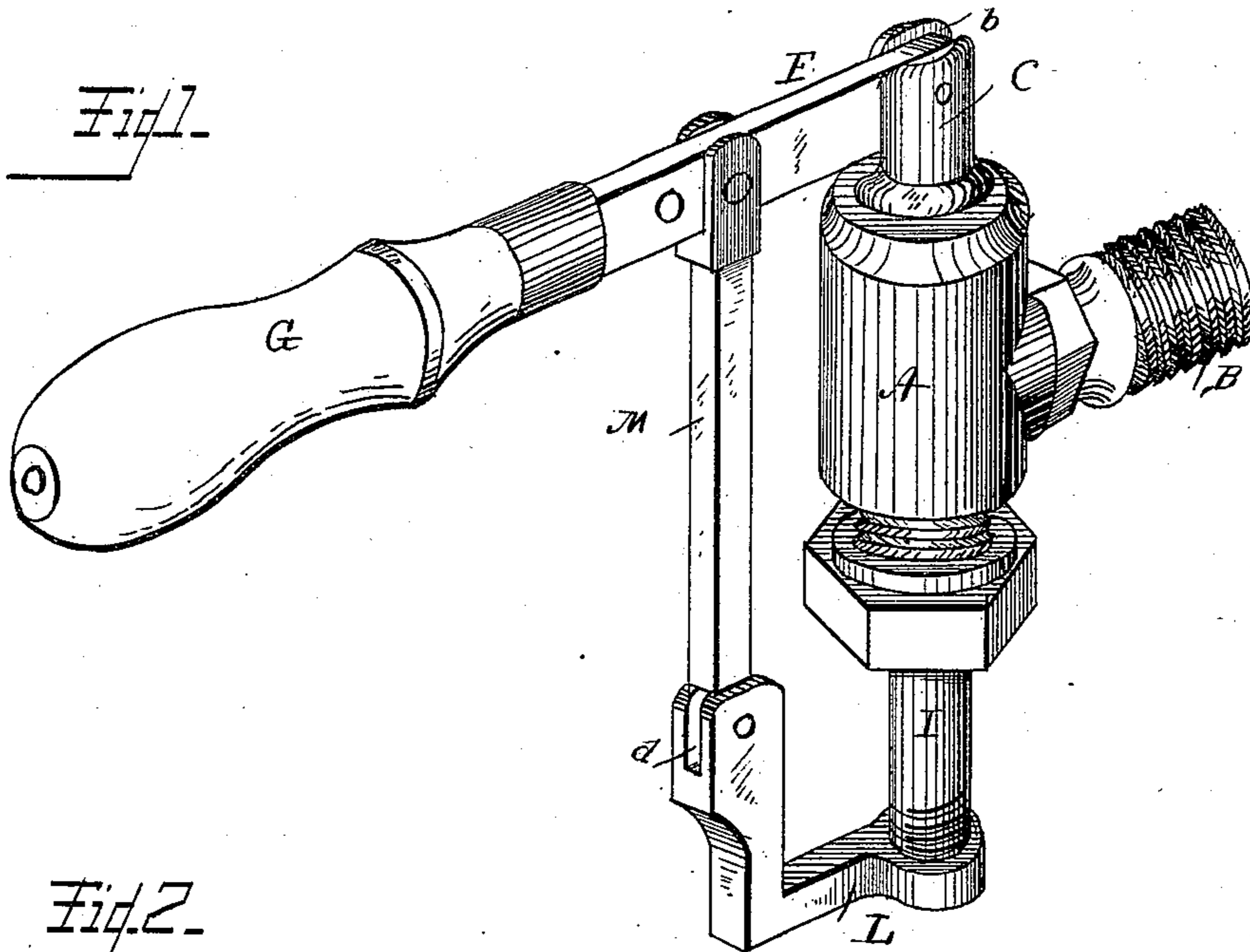


(No Model.)

J. A. NICHOLSON.
STEAM OR WATER COCK.

No. 300,792.

Patented June 24, 1884.



WITNESSES
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UNITED STATES PATENT OFFICE.

JOHN ASBERRY NICHOLSON, OF FAYETTEVILLE, NORTH CAROLINA.

STEAM OR WATER COCK.

SPECIFICATION forming part of Letters Patent No. 300,792, dated June 24, 1884.

Application filed February 13, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. NICHOLSON, a citizen of the United States, residing at Fayetteville, in the county of Cumberland and State of North Carolina, have invented a new and useful Steam or Water Cock, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to steam or water cocks for steam-boilers; and it has for its object to provide a simple and efficient device of this character which will operate with ease and rapidity, the actions being direct and positive, and the construction will be such as to effectually prevent all danger of leaks.

A further object of the invention is to provide a cock which will require less attention than ordinarily to keep it in order, and which may be used in various places on a boiler or engine.

With these and other objects in view the said invention consists in certain details of construction and combination of parts, as hereinafter set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved cock. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a horizontal sectional view on the line x x , Fig. 2.

Like letters refer to corresponding parts in the several figures.

Referring to the drawings, A designates the body of the cock, provided with an arm, B, at right angles thereto, the outer end of said arm being exteriorly screw-threaded to screw into a boiler or engine at any desired point, a passage or opening, D, being bored longitudinally through the arm, so as to open into the body. One end of the body is exteriorly screw-threaded, as at a , for the purpose to be explained hereinafter, and the other end is interiorly screw-threaded to receive a threaded plug, C, which projects outward beyond the body A. The outer end of the plug C is bifurcated or slotted, as at b , a suitable shank, F, being pivoted in the slot and provided at its outer end with a handle, G, to be used in operating the cock in the manner well known.

I designates a valve-stem formed with a cen-

tral longitudinal passage, O, at the end of which is a cross-passage, m , at right angles thereto, the valve-stem carrying a valve, J, at its inner end, a seat, K, for the valve being formed in the body A above the screw-threaded end a , the stem I passing outward and having its outer end screw-threaded to receive one arm of an angle plate or casting, L. The other arm of the plate L is bifurcated or slotted, as at d , a connecting-rod, M, being secured in the slot by a screw or other suitable means, the other end of the connecting-rod being similarly bifurcated to clasp the shank F of the operating-handle, and secured thereto by a screw, as shown. The screw-threaded end a of the body A is recessed interiorly, as at f , suitable packing, e , being supplied to the inner end of the recess, and a sleeve, H, encircling the valve-stem I and fitting in the recess against the packing, and formed with an annular flange, h , at its outer end, said flange fitting over the outer end of the end a . A stuffing-box, N, likewise encircles the stem I, and is interiorly threaded to engage with the threaded end a , so that when the stuffing-box is screwed down over the end a it fits over and incloses the sleeve, and thus forms a tight joint.

The operation of my invention will be readily understood from the foregoing description, taken in connection with the annexed drawings. By operating the handle G, the stem is forced up until the valve strikes the plug C, the cross-opening m registering with the opening D of the arm B, so that the steam or water from the boiler will pass through the opening or passage D into the cross-opening m of the stem and out through the longitudinal passage O, for the purpose well known. When it is desired to close the cock, the handle is drawn down so as to close the valve, the latter resting in its normal position on the seat K, and should any steam or water pass by the valve it is prevented from passing into the cross-opening m of the stem by the packing.

It will be seen that I am enabled to construct a perfect cock, which will operate with ease and precision, the actions being positive and direct, so that there will be very little danger of it working out of order. It will not

be necessary to grind the valve in closing it, since the packing stops all leakage. The pressure in the boiler will automatically hold the valve down on its seat, while the plug C
5 acts to limit the movement of the valve-stem.

My improved cock is very simple and durable in its construction, is efficient in operation, and is easily governed. It is applicable to be used in various places on a boiler, and
10 for this reason I do not limit myself to the uses which I may make of the same.

Having described my invention, I claim as new and desire to secure by Letters Patent of the United States—

15 1. In a steam or water cock, the combination, with a suitable body communicating with the boiler, of the valve, valve-stem operating in the body, an angle plate or casting attached to the end of the valve-stem, a connecting-rod
20 attached to the angle-plate, and a handle secured to the end of the connecting-rod, as set forth.

2. In a steam or water cock, the combina-

tion, with a suitable body communicating with the boiler, of a plug at one end of the body, a
25 valve seated at the other end, a stem for the valve, an angle-plate attached to the end of the stem, a connecting-rod attached to the angle-plate, and a handle pivoted in the plug and secured to the connecting-rod, as set forth. 30

3. In a steam or water cock, the combination, with a suitable body provided with a plug at one end, of a valve seated at the other end and formed with a stem, I, a longitudinal passage, O, through the stem, a cross-open-
35 ing, m, at the end of the passage, a handle pivoted in the plug, and an angle-plate attached to the stem and connecting with the handle, as set forth.

In testimony that I claim the foregoing as
40 my own I have hereto affixed my signature in presence of two witnesses.

JOHN ASBERRY NICHOLSON.

Witnesses:

ROBT. H. LEDBETTER,

M. J. ATKINSON.