

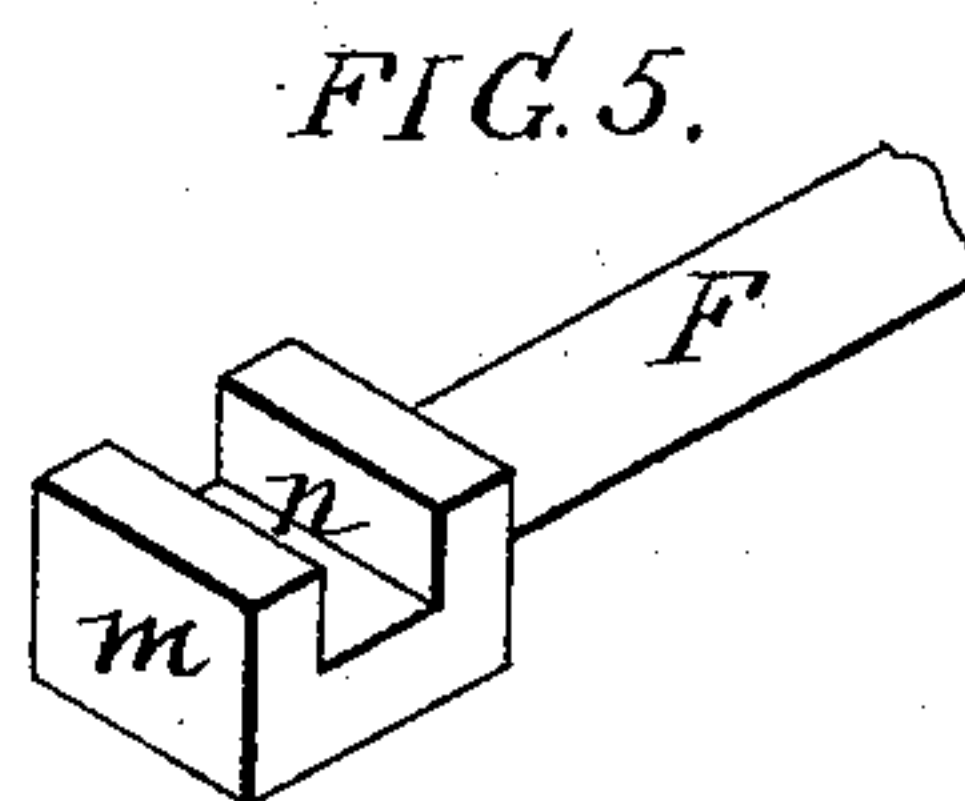
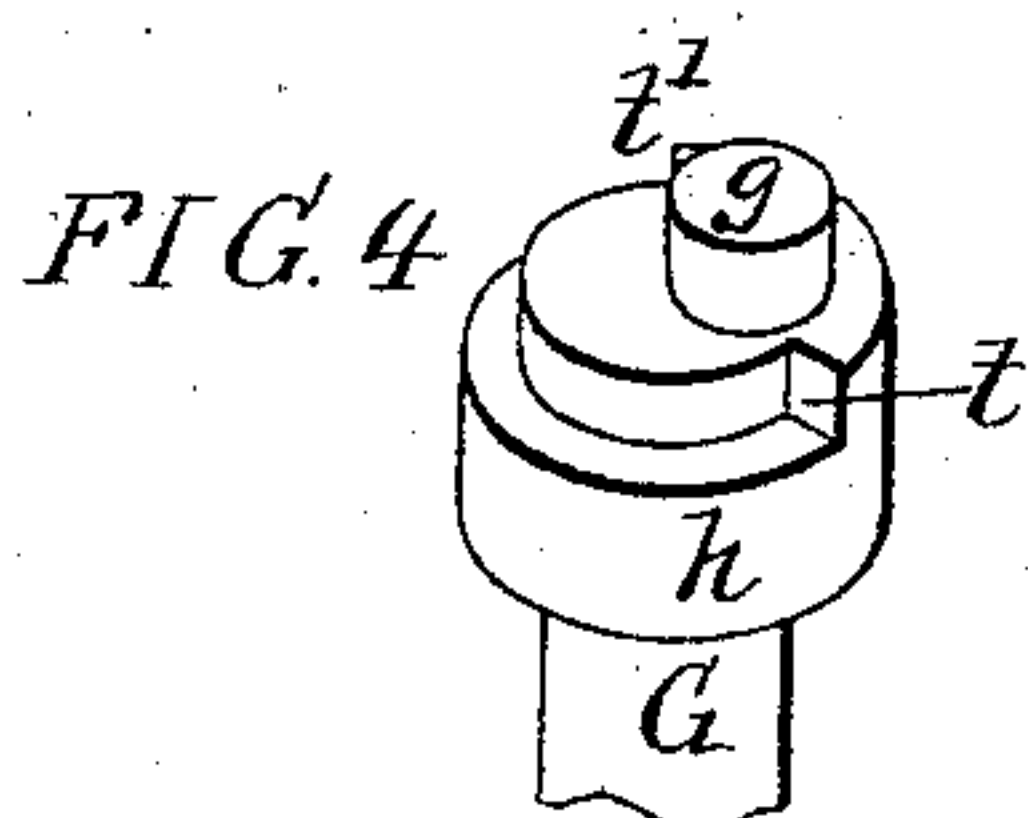
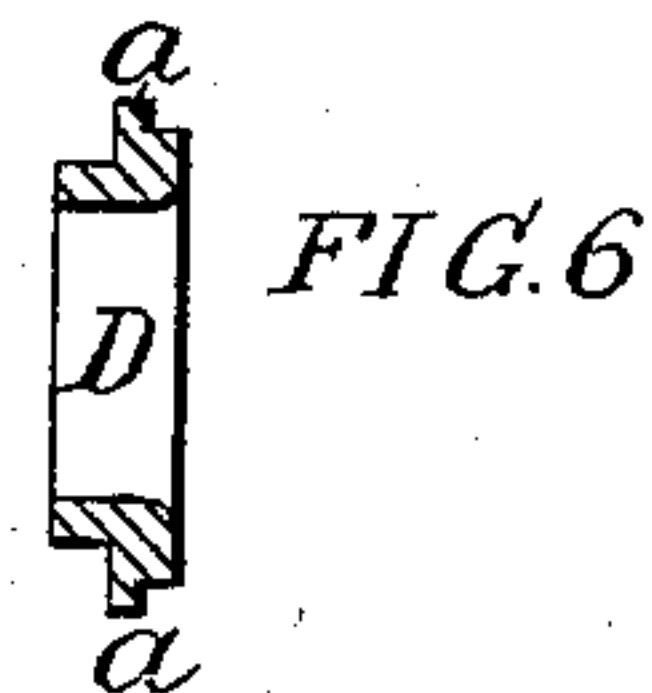
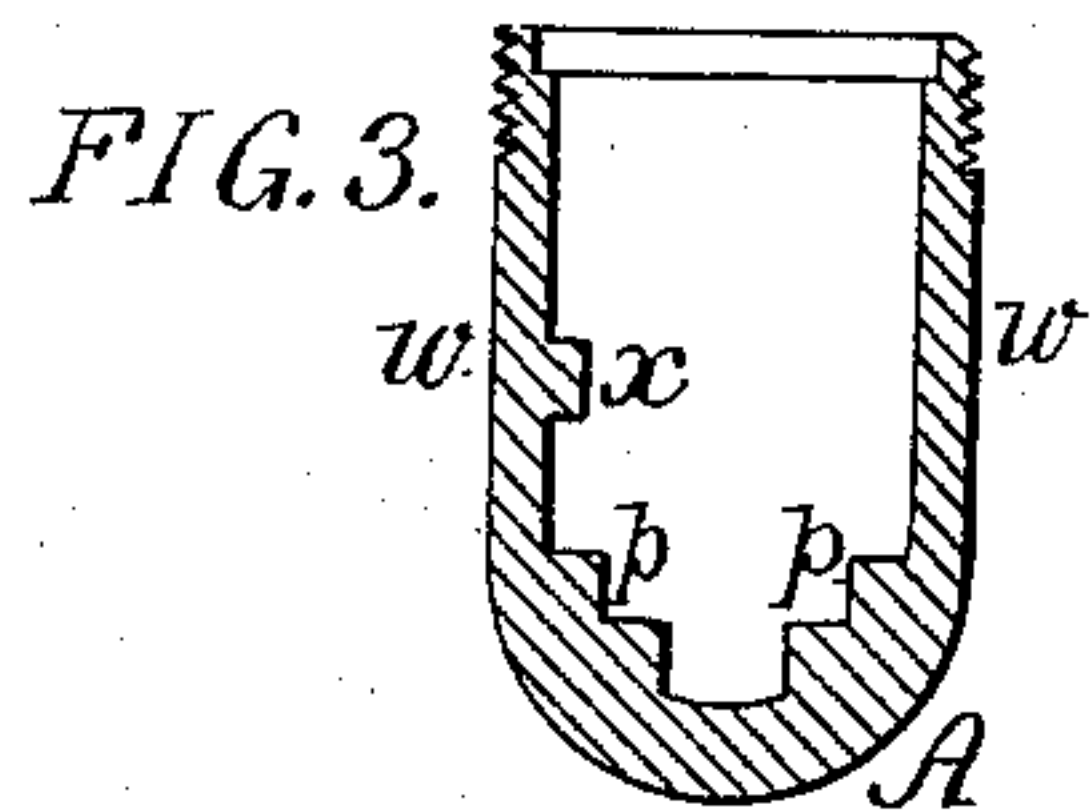
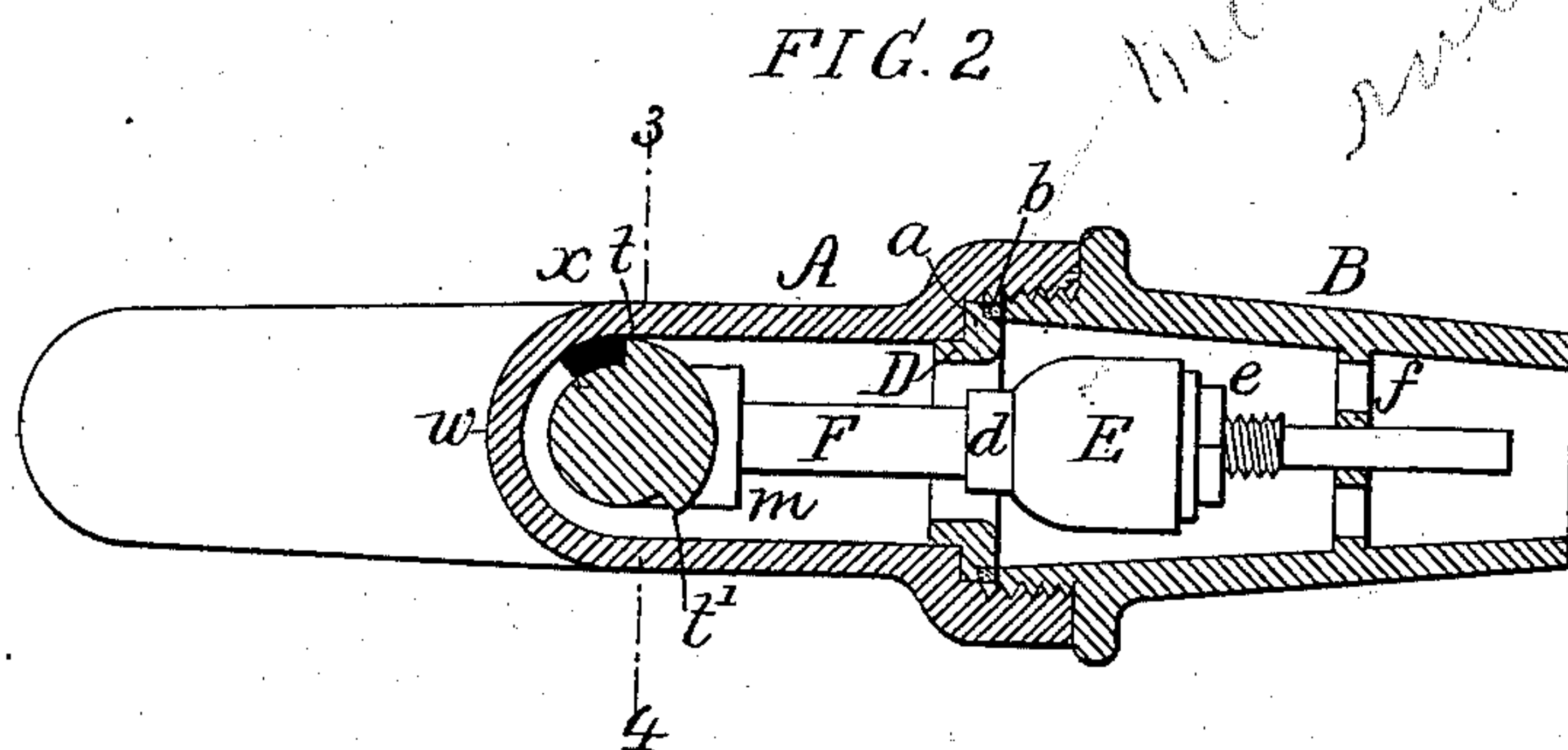
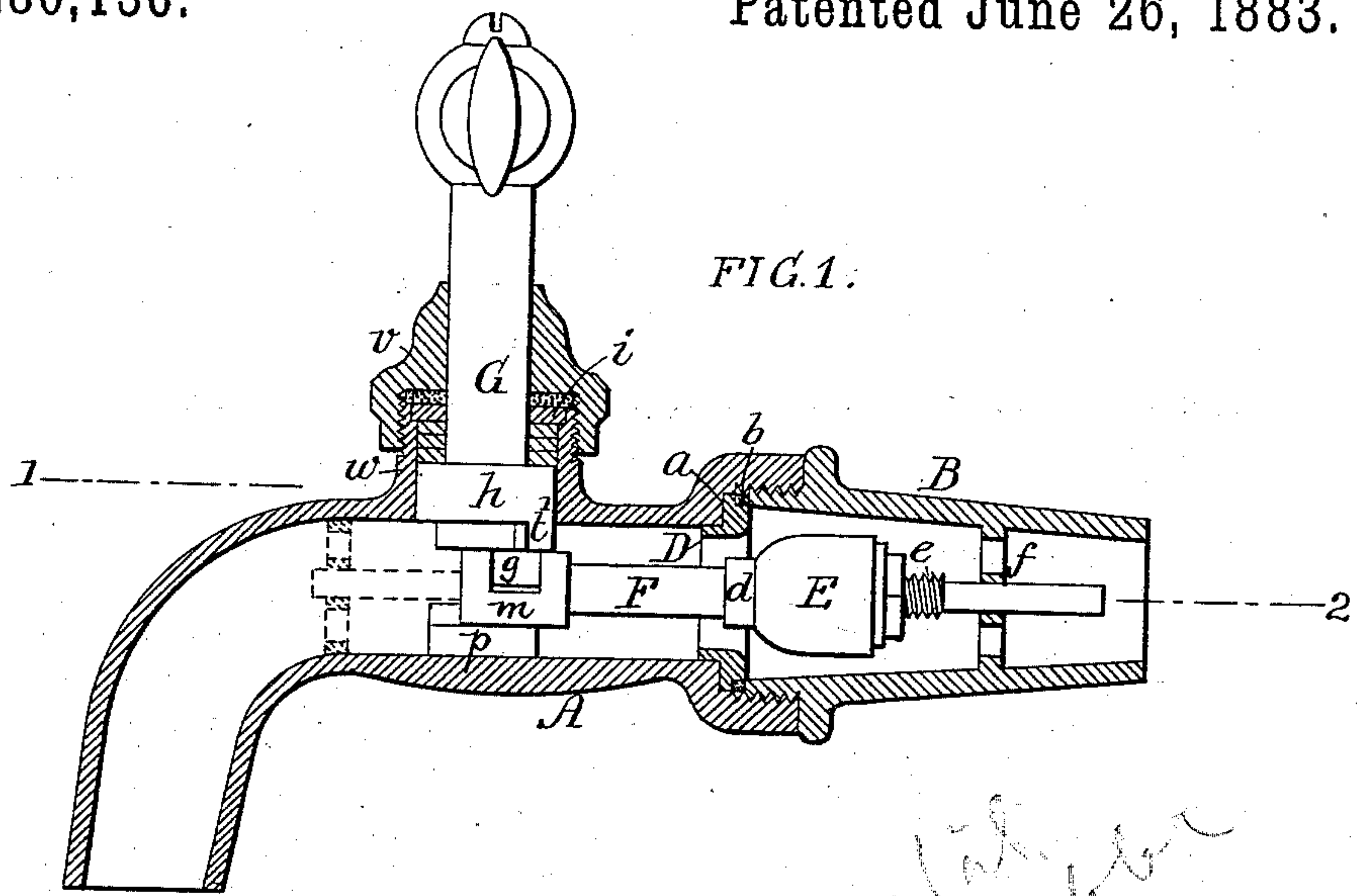
(No Model.)

W. S. COOPER.

COCK OR FAUCET.

No. 280,136.

Patented June 26, 1883.



WITNESSES:  
Thomas Dugan  
Harry Smith

INVENTOR:  
William S. Cooper  
by his Attorneys  
Howson and Fry



# UNITED STATES PATENT OFFICE.

WILLIAM S. COOPER, OF PHILADELPHIA, PENNSYLVANIA.

## COCK OR FAUCET.

SPECIFICATION forming part of Letters Patent No. 280,136, dated June 26, 1883.

Application filed January 8, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM S. COOPER, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Cocks or Faucets, of which the following is a specification.

My invention relates to an improvement in that class of faucets known as "Fuller cocks," the improvement relating to devices for stopping the movement of the operating-spindle.

In the accompanying drawings, Figure 1 is a vertical section of my improved faucet, the valve and devices for operating the same being in outside view; Fig. 2, a sectional plan on the line 1 2; Fig. 3, a transverse vertical section on the line 3 4, Fig. 2, without the valve-spindle; Figs. 4 and 5, perspective views of detached portions of the valve-operating mechanism, and Fig. 6 a detached view of the valve-seat.

Into the rear end of the body A of the faucet is screwed the valve-chest B, and between the two is interposed the flange *a* of a metal ring, D, Fig. 6, suitable packing, *b*, being also introduced for making a tight joint. This ring forms the seat of a valve, E, which consists of a block of rubber formed substantially as shown; the block having a central opening for the reception of the valve-spindle F, to which the valve is confined in one direction by a fixed collar, *d*, on the spindle, and in the other direction by a nut, *e*, adapted to the threaded portion of the spindle, the rear end of which is guided by a cross-piece, *f*, which extends across the chest without interfering with the passage of water through the same. The valve-spindle F terminates at its front end in an enlargement, *m*, Fig. 5, which is adapted to guides *pp*, formed within the body of the faucet, as best observed in Fig. 3, this enlargement having a transverse slot, *n*, for receiving a pin, *g*, on the enlargement *h* of the spindle G. The enlargement *h* is adapted to fit snugly but turn freely in the tubular projection *w* of the body A of the faucet, a cap, *v*, being screwed onto this projection, and suitable packing being interposed between the cap and a plate, *i*, which rests on a shoulder in the projection *w*, the usual spring being interposed between said plate *i* and the top of the

enlargement *h* of the spindle G. The latter passes through the cap and is provided at the top with a suitable handle, which preferably consists of a single arm. The spring bearing upon the enlargement *h* of the spindle serves to maintain said enlargement in contact with the slotted cross-head *m* of the valve-spindle, and to retain the said cross-head in its proper position in relation to the guides *pp*. The pin *g* is situated eccentrically in respect to the spindle G, and it will be seen, on reference to the perspective view, Fig. 4, which represents the enlargement *h* of the spindle and its pin *g* inverted, that the said enlargement is so cut away as to form two shoulders or stops, *tt'*.

Within the body A of the faucet is a permanent stop, *x*, (shown in Fig. 2,) the valve being properly open when one of the shoulders *t* of the spindle G is in contact with the stop, and properly closed to its seat when the other shoulder is in contact with the stop. The shoulders are at such a distance apart and the stop is of such thickness that about half a turn of the handle will be required to fully open the valve after it has been closed, and half a turn back to close the valve after it has been fully opened, the valve being so placed on the spindle that it will be drawn to its seat with sufficient pressure to make a tight joint when the movement of the spindle G has been arrested. By this system of stops the manipulator of the handle will know exactly when the valve is opened or closed to its full extent.

It will be observed that the ring D, forming the valve-seat, is rounded on the inner edge, so as to form a convex seat for the rubber valve. It has been found that this is the best form to prevent the valve from sticking to the seat, and by making the ring detachable from the casing ample facility is afforded for accurately turning and polishing the inner edge of the same.

In some valves I may use a stem on the valve-spindle and a cross-bar in the outlet branch of the casing, as shown by dotted lines in Fig. 1, to serve as a guide for said spindle in place of the guides *pp*.

I claim as my invention—

The combination of the elastic valve-spindle

F, the operating-spindle G, having an enlargement, *h*, recessed to form shoulders *t t'*, and a casing having an internal projection, *x*, adapted to act in conjunction with said shoulders to form a stop for the spindle G, as set forth.

In testimony whereof I have signed my name

to this specification in the presence of two subscribing witnesses.

WM. S. COOPER.

Witnesses:

THOMAS DUGAN,  
HARRY SMITH.