

(No Model.)

E. M. HEWSON.  
STEAM BOILER GAGE COCK.

No. 601,142.

Patented Mar. 22, 1898.

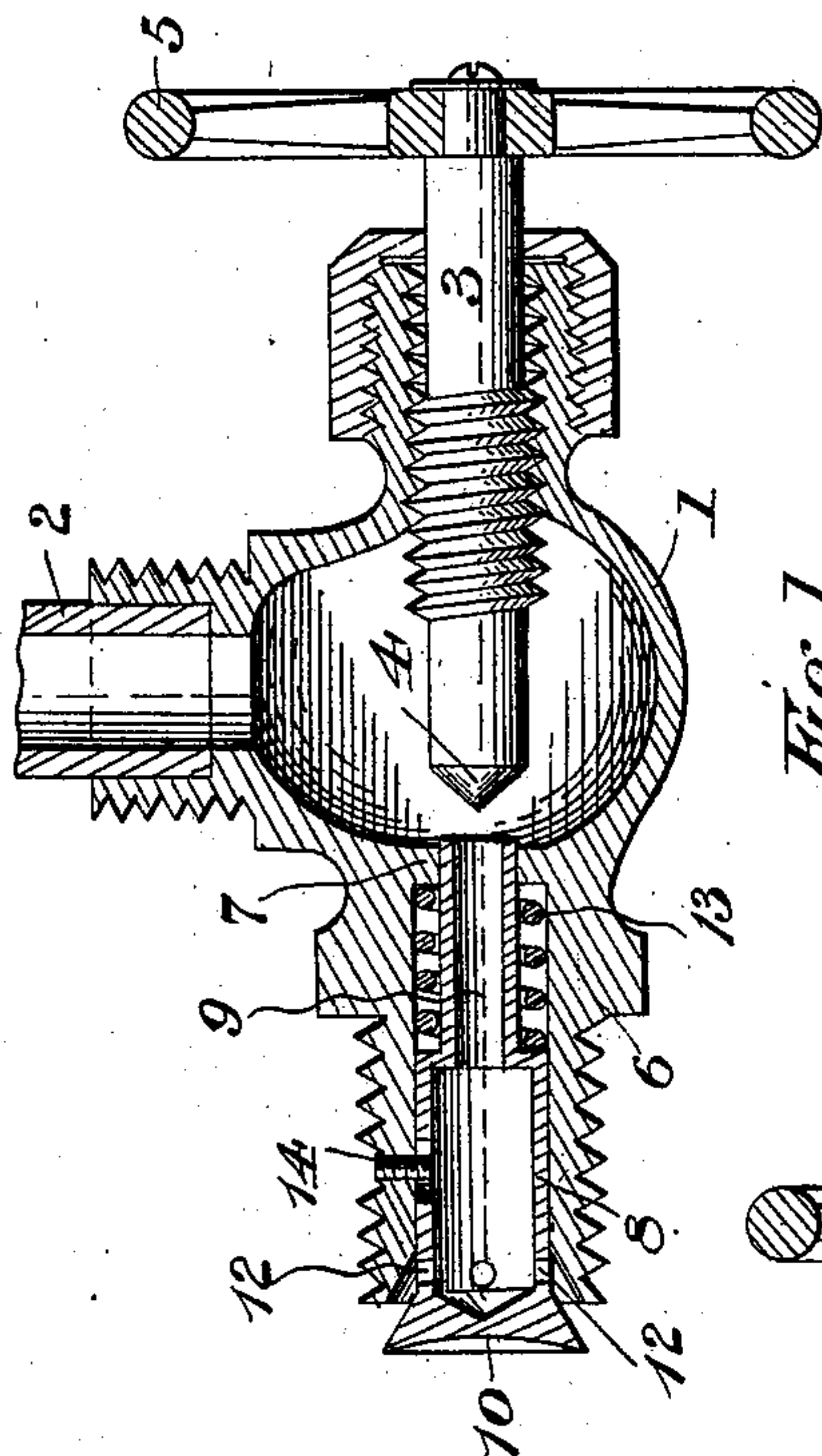


Fig. 1

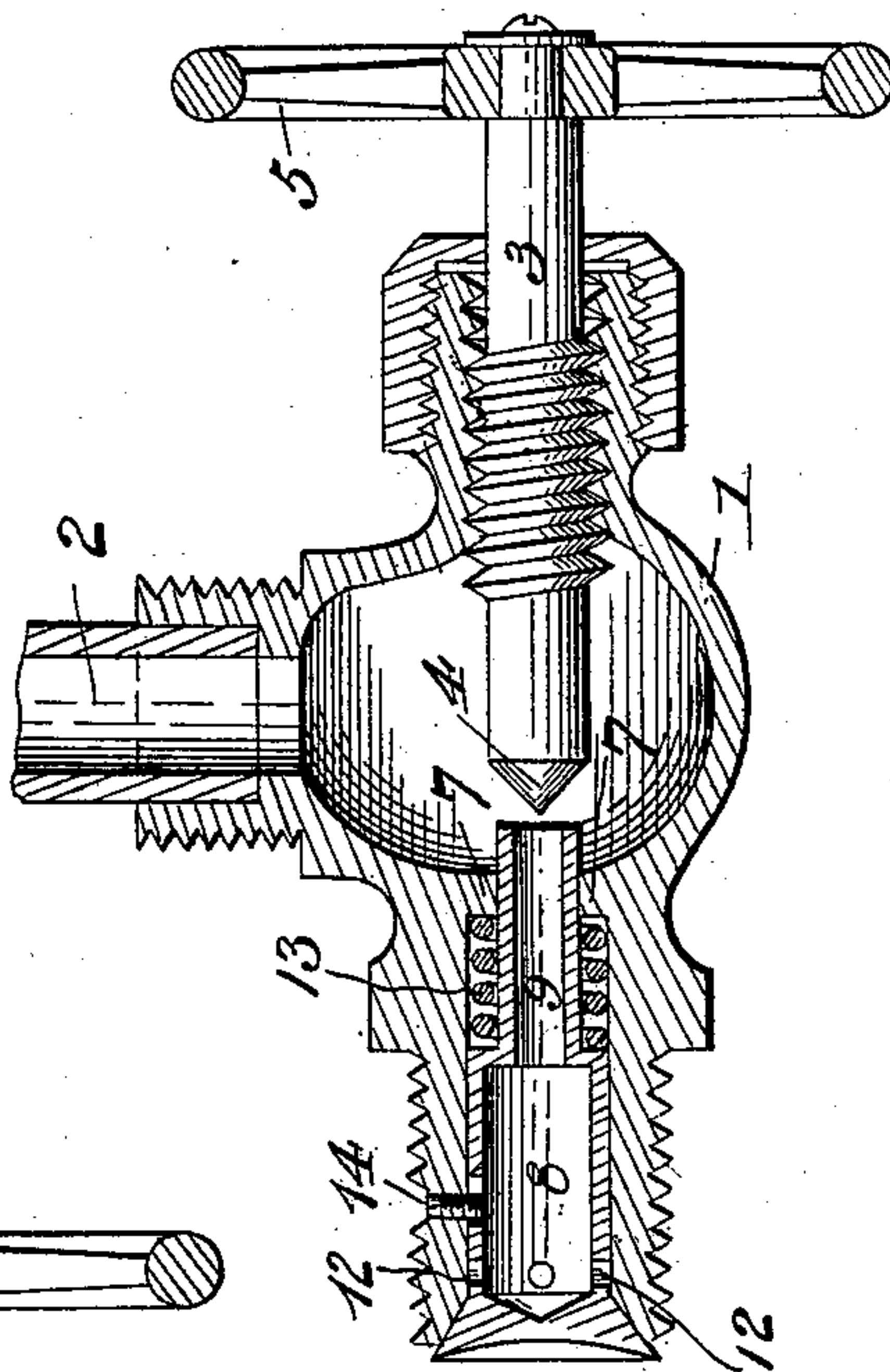


Fig. 2

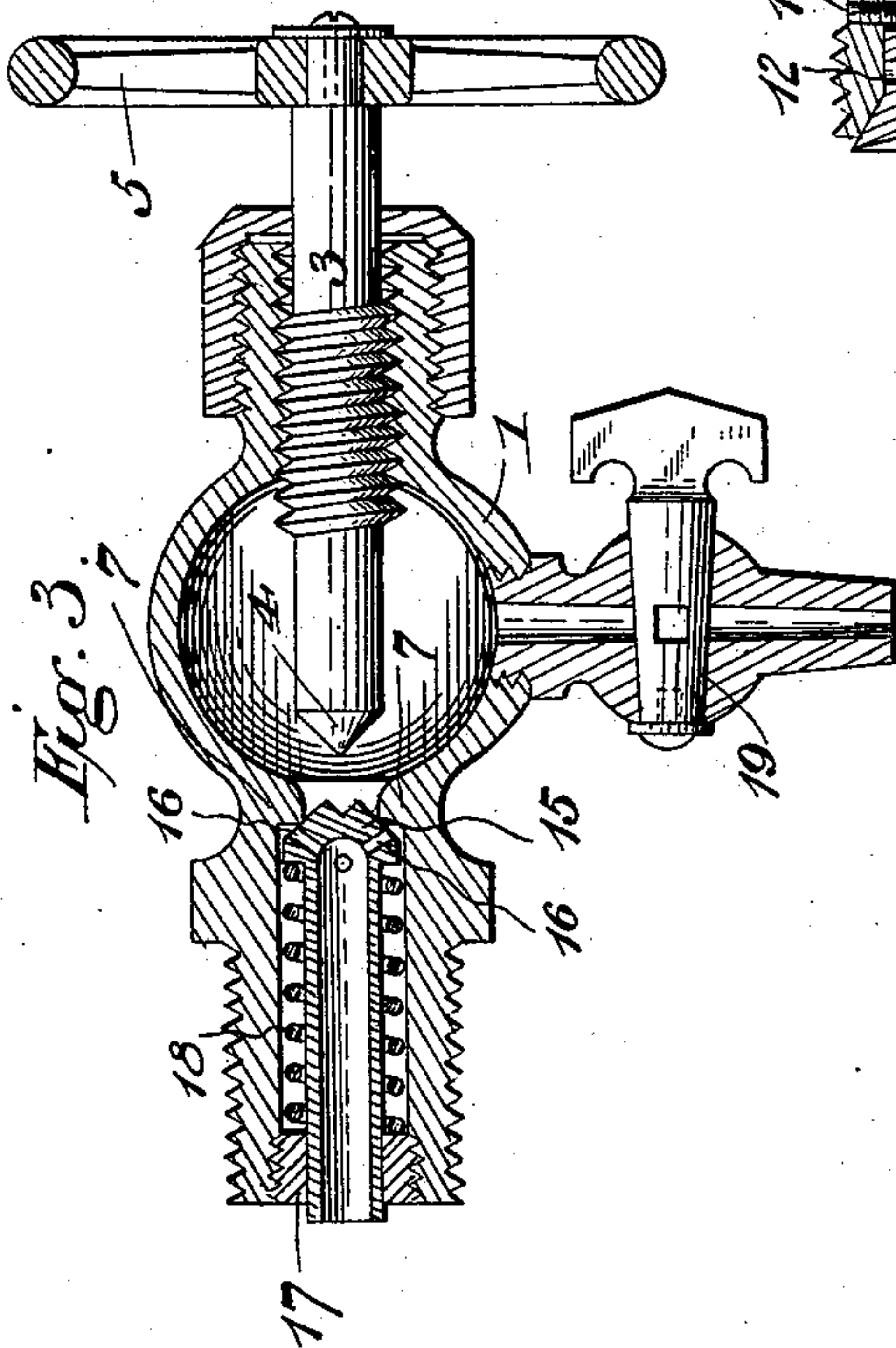


Fig. 3

Witnesses:  
Frank L. Ourand.  
J. L. Levens

Inventor:  
Edward M. Hewson,  
By Louis Raggs & Co.  
Attorneys.



# UNITED STATES PATENT OFFICE.

EDWARD M. HEWSON, OF STILLWATER, NEW YORK, ASSIGNOR OF ONE-HALF TO NICHOLAS E. SYTTLE, OF MECHANICSVILLE, NEW YORK.

## STEAM-BOILER GAGE-COCK.

SPECIFICATION forming part of Letters Patent No. 601,142, dated March 22, 1898.

Application filed April 26, 1897. Serial No. 633,975. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD M. HEWSON, a citizen of the United States, and a resident of Stillwater, in the county of Saratoga and State of New York, have invented certain new and useful Improvements in Steam-Boiler Gage-Cocks; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to gage-cocks for steam-boilers; and its object is to provide an improved construction of the same, whereby should the glass sight-tube become broken from any cause the valve or cock will automatically close, thereby preventing escape of steam and water from the boiler.

The invention consists in the novel construction and combination of parts herein-after fully described and claimed.

In the accompanying drawings, Figure 1 is a horizontal sectional view of a gage-cock constructed in accordance with my invention, showing the valve open. Fig. 2 is a similar view showing the valve closed. Fig. 3 is a similar view of a modified construction.

In the said drawings the reference-numeral 1 designates the valve-casing, provided with an ordinary glass sight-tube 2 and a screw-threaded stem 3, having a conical inner end 4 and a hand-wheel 5 at the outer end. The end of the casing is formed with an extension 6, having a cylindrical bore formed with a shoulder 7 at the inner end. This extension is screw-threaded to engage with a correspondingly-threaded aperture in a steam-boiler. Located in said bore is a tube 8, having a reduced inner end 9. At the outer end this tube is formed with a valve 10.

The numeral 12 designates passages formed in the tube just in rear of the valve. Located in said extension and surrounding the reduced end of the tube is a coiled spring 13, the tendency of which is to force the tube and valve outward, so that steam and water can escape through the passages 12 to the tube and from thence to the glass gage-tube.

The numeral 14 designates a screw in the extension, engaging with a groove in the tube to limit the movement of the latter.

The operation is as follows: The stem 3 is turned inward, so that its inner end will engage with the end of the valve-tube, pressing the latter outward and uncovering the passages 12. The steam and water will now escape to the glass gage-tube, and when equilibrium is established the stem is turned backward out of contact with the valve-tube. The spring 13 will now hold the valve-tube in said open position. Should the glass gage-tube be broken, the pressure in the boiler will overcome the tension of the spring and force the tube inward, closing the passages 12 and preventing escape of steam and water from the boiler.

In Fig. 3 I have shown an ordinary steam-cock for locomotives, so constructed that should the stem which operates the valve-tube be broken by a collision or other causes the valve will automatically close and prevent escape of steam and water from the boiler. In this case the valve-tube is provided with a head or valve 15 at the inner end, formed with passages 16. A screw-threaded sleeve or collar 17 engages with the outer end of the extension and holds the coiled spring 18 in place.

The numeral 19 designates a turn-cock connected with the valve-casing.

In using this device the stem is turned inward, so as to contact with and open the valve. Should the valve-casing or the stem be broken by collision or otherwise, the coiled spring will close the valve and prevent escape of steam and water from the boiler.

Having thus fully described my invention, what I claim is—

The combination with the casing, provided with the screw-threaded stem, the extension having a cylindrical bore, formed with a contracted opening, an annular shoulder at the inner end and a concave recess at the outer end, of the tube located in said extension, having a reduced inner end passing through said contracted opening and communicating with the casing, and formed with a number of lateral openings near its outer end, the

conical valve closing the outer end of said  
tube, the screw-pin passing through said ex-  
tension and engaging with a slot in said tube,  
and the coiled spring interposed between the  
5 enlarged portion of said tube and said annu-  
lar shoulder substantially as described.

In testimony that I claim the foregoing as

my own I have hereunto affixed my signature  
in presence of two witnesses.

EDWARD M. HEWSON.

Witnesses:

EMMA K. HUESTED,  
JANE A. COLLAMER.