

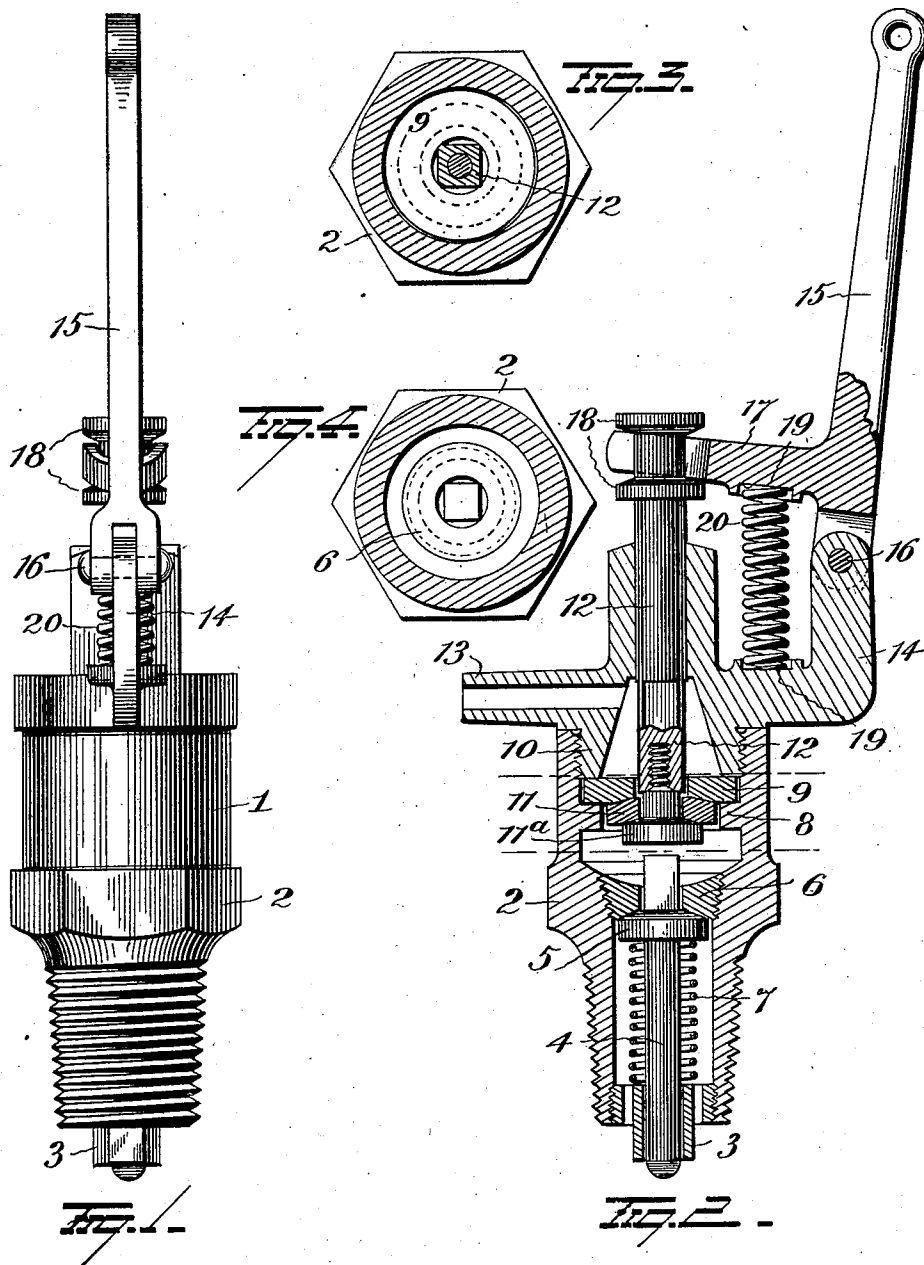
No. 727,195.

PATENTED MAY 5, 1903.

F. D. PHILP.
GAGE COCK.

APPLICATION FILED SEPT. 12, 1902.

NO MODEL.



WITNESSES

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FREDERICK D. PHILP, OF BUFFALO, NEW YORK.

GAGE-COCK.

SPECIFICATION forming part of Letters Patent No. 727,195, dated May 5, 1903.

Application filed September 12, 1902. Serial No. 123,148. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK D. PHILP, a resident of Buffalo, in the county of Erie and State of New York, have invented certain
 5 new and useful Improvements in Gage-Cocks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the
 10 same.

My invention relates to an improved gage-cock for boilers, the object of the invention being to provide a boiler gage-cock with two valves which work together, thereby forming
 15 two preventives against leakage, and both valve-seats are removable and can be duplicated at small cost, so that should a valve or valve-seat become cut a new seat or valve can be inserted, thereby saving the body or casing of the cock. The inner valve is operated
 20 as often as the outer valve, so that it is always in working order and remains closed except when the operating-lever is pulled, thereby permitting the removal and replacing of the outer valve and valve-seat when the boiler is under pressure.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of
 30 parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in elevation, illustrating my improvements. Fig. 2 is a view in section of the same, and Figs. 3 and 4 are views of details of construction.

1 represents a pipe forming the casing of my improved cock, contracted at one end and externally screw-threaded to screw into the boiler and made angular at its wider portion,
 40 as shown at 2, to receive a wrench and enable the casing to be screwed firmly in the boiler.

Into the extreme contracted end of casing 1 a perforated nut 3 is screwed and forms a bearing for the stem 4 of a beveled valve 5, seated against a beveled opening in a ring 6, screwed into the contracted portion of the casing near the center of the latter. The valve 5 is located on the stem 4 between the
 50 ends of the latter, so that one end of the stem projects through the ring, and a coiled spring

7 is placed on stem 4 between the nut 3 and valve 5 to hold the latter on its seat.

The enlarged portion of casing 1 is provided with an internal annular flange or
 55 shoulder 8, against which a ring 9 is firmly held by a plug 10, screwed into the outer end of the casing, and the ring is beveled on its inner edge, forming a seat for a beveled valve 11, secured by a screw 11^a onto the inner end
 60 of a stem 12, having a bearing in the plug and projecting outward beyond the same for a purpose which will hereinafter appear, or the valve may be secured onto the stem, if preferred, and this plug is provided with an
 65 outlet-spout 13, through which the water and steam escape when the cock is operated. An elbow or arm 14 is made integral with the upper edge of plug 10, and to the outer end of which the bifurcated end of a lever 15 is
 70 pivoted by means of a pin 16 and is perforated at its outer end to secure a chain or rope (not shown) to permit the operation thereof. This lever 15 is made with a depending arm 17, forked at its lower end to
 75 engage valve-stem 12 between annular flanges 18 thereon, so that when said lever is drawn down the stem will be forced inward, as will be hereinafter explained. The arms 17 and 14 are provided on their adjacent faces with
 80 pockets 19 to seat the ends of a coiled spring 20, normally holding the lever elevated and the stem 12 projected to its outer position, thus holding valve 11 on its seat.

The operation of my improvements is as
 85 follows: When it is desired to try level of water in the boiler, lever 15 is drawn downward, and the bifurcated or forked arm 16, engaging stem 12 between flanges 18 thereon, forces the stem 12 inward and moves valve 11 from
 90 its seat, and the screw 11^a at the inner end of valve 11 engages the end of stem 4 and forces valve 5 from its seat, thus opening a passage to spout 13 to permit the boiler to blow off. When the downward pressure on
 95 lever 15 is removed, the springs 7 and 20 will force the valves back upon their seats and make the cock steam-tight.

It will be seen that the valve 5 is held on its seat by the pressure of steam behind it, 100 and any small fraction of steam or water which might escape past this valve will be

stopped by valve 11 and not escape, thus providing an absolutely tight cock, but which can be quickly opened when desired.

5 A great many slight changes might be made in the general form and arrangement of the parts described without departing from my invention, and hence I do not limit myself to the precise construction set forth, but consider myself at liberty to make such slight
10 changes and alterations as fairly fall within the spirit and scope of my invention.

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

15 1. A gage-cock comprising a casing, a perforated nut secured to the inner end of the casing, a removable valve-seat, a valve provided with a stem which extends through the perforated nut and through the valve-seat, a
20 coiled spring interposed between the valve and perforated nut, in combination with a valve and its actuating mechanism, substantially as set forth.

25 2. A gage-cock comprising two removable valve-seats located inside the casing, a perforated guide removably secured to the inner

end of the casing, a valve provided with a stem one end of which extends through the valve-seat and its other through the perforated guide, a valve removably secured to a stem 30 and means for actuating the latter and opening both valves, substantially as set forth.

3. A gage-cock comprising a casing, a ring screwed therein forming a seat for a valve, a valve on said seat, a stem for the valve hav- 35 ing a bearing in the inner end of the casing and projecting through the ring, an internal shoulder in the casing near its outer end, a plug screwed into the outer end of the casing, a ring held against the shoulder by the plug 40 and forming a valve-seat, a valve-stem projecting through the plug and having a valve against the seat, springs to hold the valves on their seats, and a lever to move both of said valves from their seats. 45

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

FREDERICK D. PHILP.

Witnesses:

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