(No Model.)

W. WILSON.

GAGE COCK.

No. 545,115. Patented Aug. 27, 1895.

Fig: 1.

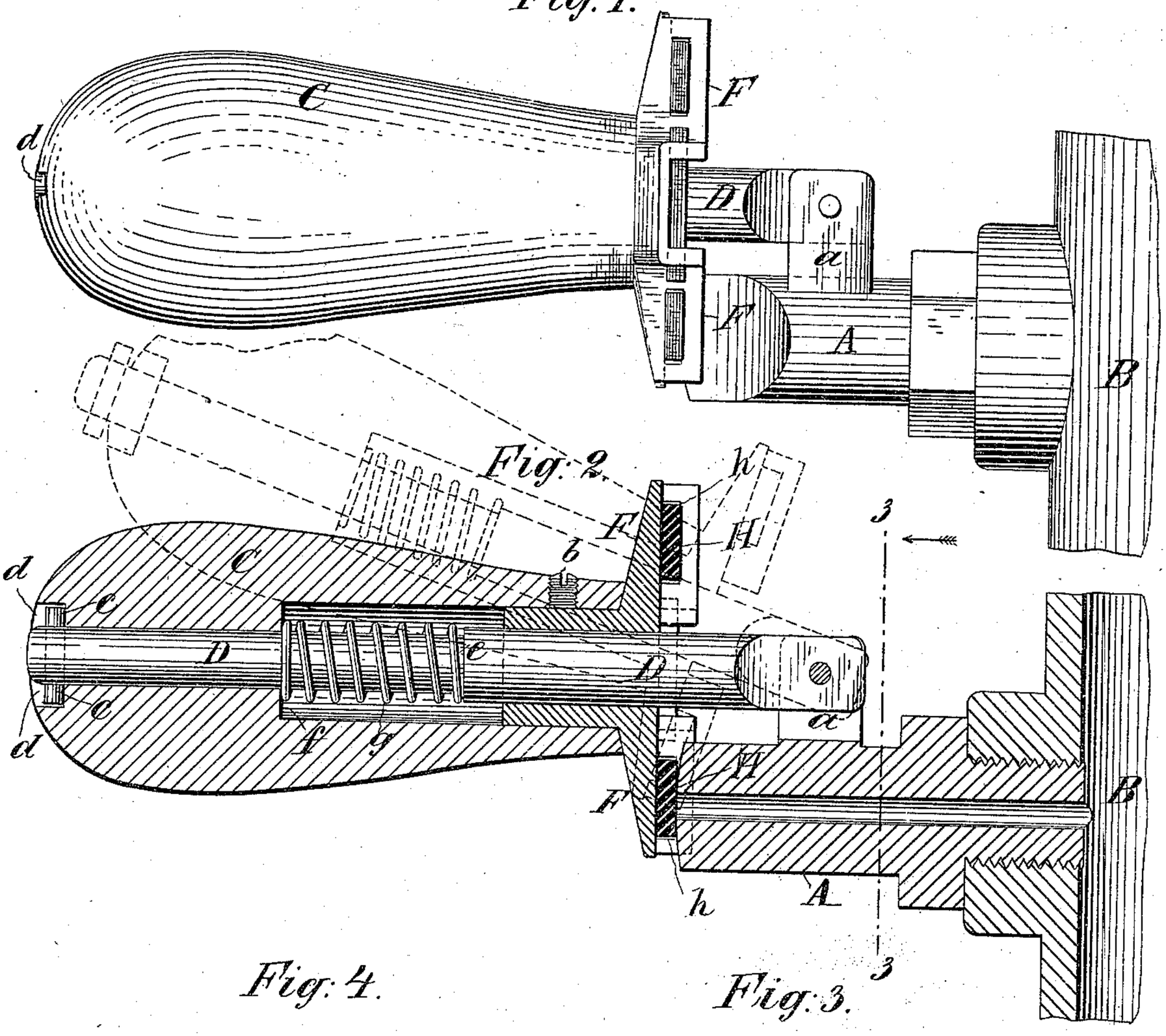

Fig: 2.

Fig: 4.

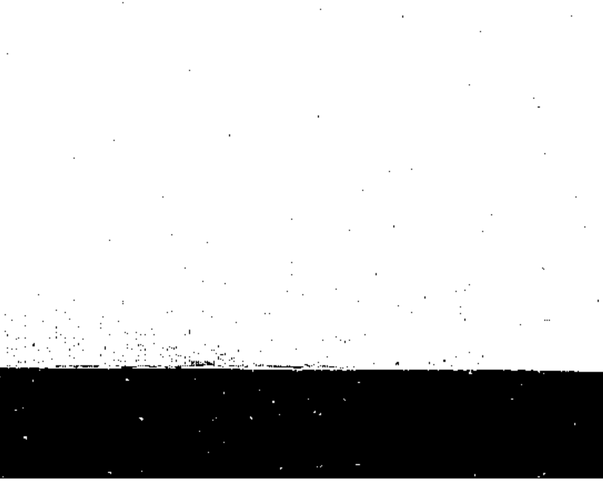

Fig: 3.

Witnesses:
John A. Parkes
Edward S. Ryan.

Inventor:
William Wilson
by A. Bell Malcomson
his Attorney

UNITED STATES PATENT OFFICE.

WILLIAM WILSON, OF GREENVILLE, NEW JERSEY.

GAGE-COCK.

SPECIFICATION forming part of Letters Patent No. 545,115, dated August 27, 1895.

Application filed September 24, 1894. Serial No. 523,876. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WILSON, of Greenville, in the county of Hudson and State of New Jersey, have made certain new and useful Improvements in Gage-Cocks, not heretofore known or used; and I hereby declare the following specification to be a full and clear description of the same, reference being had to the annexed drawings.

My invention relates to that class of gage-cocks in which the steam outlet or opening is closed by the weight of the handle or ball pressing a packing of rubber or other material against it.

The construction and operation is more particularly set forth hereinafter, but the general object of my invention is to provide a ready and certain means of replacing a worn-out packing, and thereby easily remedy any leakage from the gage-cock when the boiler is under full steam.

In the drawings, Figure 1 is a side view of my improved gage-cock as it appears attached to a boiler, the handle in a raised position being shown in dotted lines. Fig. 2 is a longitudinal vertical section of Fig. 1 with raised position shown in dotted lines. Fig. 3 is a vertical cross-section through the line 3 3 of Fig. 2. Fig. 4 is an end view.

In the drawings, A is the tap or vent, which is screwed into the face of the boiler B.

C is the ball or handle, usually made of metal, so as to be heavy enough to overcome the pressure of steam at the vent. This handle C is bored and receives a carrier-rod D, which is swiveled or hinged to a projection *a* on the tap A. Adapted to slide on the rod D is a four-armed face-plate F, socketed into the end of the handle C and held in place by the set-screw *b*. The rod D passes through the outer end of the handle C, and is prevented from sliding back into the handle by a pin *c*. The outer end of the handle is provided with recesses *d d*, in which the pin *c* will rest. The rod D has a shoulder at *e*, against which rests one end of a spiral spring S, surrounding it. The other end of the spring rests on a shoulder at *g*, formed in the bore of the handle.

The four arms G G′ G^2 G^3 of the plate F are channeled, and across the groove of each arm, through openings *h h*, are placed pieces of rubber or other suitable material H H, which may be readily replaced or renewed. In operation the weight of the handle forces the packing in one of the arms G against the opening in the vent A and prevents the escape of steam or water therefrom, except when lifted up, as shown by the dotted line in Fig. 1. The plate F is shown with four distinct arms, but this is done as a matter of convenience. The plate may be of different shape, and the number of arms is not material so long as there is more than one, in order that the packing in one arm may be renewed while the other is acting to stop the escape of steam from the boiler. I prefer the shape shown in the drawings, but two arms would answer the purpose of my invention. The plate F could also be made a part of the handle C, if desired, as the plate is firmly secured to the handle C and is intended to move with it.

The plate carrying the arms G, which have the packing in them, being fast to the handle C will be turned with it on the rod D, so that when it is desired to bring a fresh rubber or packing over the steam-vent it can readily be done by throwing the handle up and pressing it down on the rod D until the pin *c* at the end of the rod is free of the recesses *d d*, as shown in dotted lines in Fig. 2, then turning it until the pin *c* is opposite the other recess and permitting it to return into position. The spring S holds the pin *c* in the recesses *d d* and prevents turning, so that the packing will always be over the steam-vent when the handle is down. It will be apparent that by means of this arrangement a fresh packing will always be ready to bring into position in case the one in use is destroyed or wears out. By having two or more arms or packing-spaces arranged substantially as shown, new packings or rubbers may be introduced into the arm not covering the steam-vent while the gage-cock is in use and the boiler has full steam up. The rubber in the arm G is arranged to run across the channel T in the arm and through oblong openings *o o* in the sides of the channel, so that both ends of the rubber are held firmly in position and will avoid the packing being blown out, as is often the case with the gage-cock now in use.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a steam gage-cock the weighted handle C, with face plate F, in combination with a central rod D, pivoted at one end to the vent plug A, and a spiral spring *g* surrounding said central rod D in the interior of the weighted handle, said spiral spring bearing at opposite ends against shoulders on said handle and rod, and means for holding the handle on the rod, substantially as shown and described.

2. In a steam gage-cock the weighted handle C, with face plate F, a central rod D, pivoted at one end to the vent plug A, a spiral spring *g* surrounding said central rod and having bearings on the rod and handle in combination with stop or pin *c* on said rod, and recesses *d*, *d*, in the end of the handle substantially as and for the purposes shown and described.

3. In a steam gage cock the revolving face plate F, carrying packings, the channeled packing arm G, with openings *h*, *h*, on the sides to receive and hold the strips of packing at right angles to the channels substantially as shown and described.

WILLIAM WILSON.

Witnesses:
A. BELL MALCOMSON,
DAVID E. GROSSMAN.