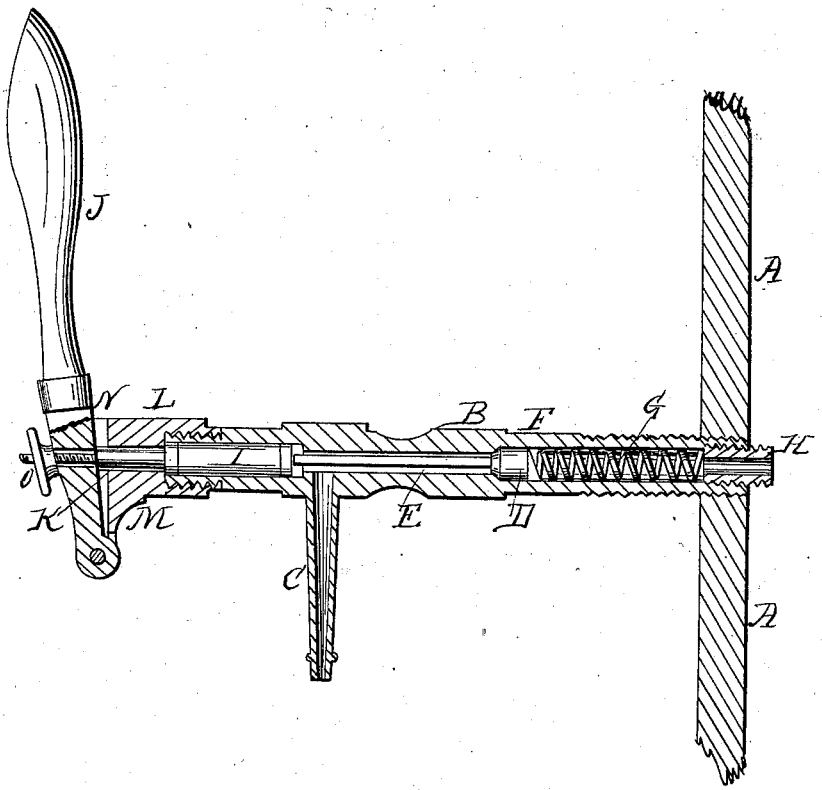
F. Henke,

Gage Cock.

No. 54,722, Patented May 15, 1866.



Witnesses.

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UNITED STATES PATENT OFFICE.

FREDERICK HENKE, OF SCRANTON, PENNSYLVANIA.

IMPROVEMENT IN STEAM GAGE-COCKS.

Specification forming part of Letters Patent No. **54,722**, dated May 15, 1866.

To all whom it may concern:

Be it known that I, FREDERICK HENKE, of Scranton, in the county of Luzerne and State of Pennsylvania, have invented a new and useful Improvement in Gage-Cocks; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a vertical longitudinal section of my improved gage-cock.

The object of my invention is to furnish a gage-cock for steam-boilers and similar uses which will be easily operated, will be steam and water tight, will not be liable to get out of order, will be subject to little wear, and which can have the piston removed for repacking or cleaning out the gage while the gage is attached to the boiler and the boiler in operation; and it consists in combining a packed piston or valve-pusher with the lever and valve, as hereinafter more fully described.

A represents the side or end of the steam-boiler to which the gage-cock is attached. B is the main body or barrel of the gage, and C is the nozzle through which the water or steam is discharged.

D is the valve, E the valve-stem, and F the valve-seat. The valve D is held in the valve-seat, when there is no pressure of steam or water upon the valve, by the coiled spring G, the lower end of which rests upon the screw-plug H, and the upper end presses against the valve D, holding it in place. The plug H is hollow and is screwed into the lower end of the barrel B with sufficient force to hold the valve D in its place. The pressure of the water when its surface is above the gage and the pressure of the steam when the surface of the water is below the gage have a tendency to press the valve D more firmly into its seat.

The valve-stem E extends from the valve D to a point at a little distance above the nozzle C, projecting only so far above the lower end of the enlargement of the bore of the barrel B for the reception of the piston or valve-pusher I that when the end of the valve-stem shall be pushed down to a level with the shoulder formed by the lower end of said enlargement the valve D will be pushed back far enough to permit the passage of the water or steam past the valve to the nozzle C. The piston I is packed to make it steam and water tight, is placed in an enlargement or chamber in the upper part of the bore of the barrel B, has only sufficient play to allow it to open the valve D, and is connected with the lever J by the piston-rod K.

L is a cap screwed on the upper end of the barrel B and being perforated for the passage of the piston-rod K. The lever J is pivoted to a projection, M, of the cap L, and works in a slot or channel, N, in the cap L.

The piston-rod K passes through a slot in the lever J to enable the said lever to be operated without varying the direction of the piston-rod K. The piston-rod K, at the point where it enters the slot in the lever J, is contracted so as to form a shoulder upon said rod, against which the lower side of the lever strikes when the lever is operated to open the valve D. O is a screw-nut screwed on the projecting end of the piston-rod K.

When the piston I is pushed down to the bottom of the chamber in which it works the bottom of the piston rests upon the shoulders which form the bottom of said chamber in the manner of a valve, rendering it unnecessary to pack the piston so tightly as would otherwise be required to prevent the passage of the water or steam.

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

A gage-cock formed by combining the piston I with the lever J, valve D, and spring G, substantially as described, and for the purpose set forth.

FREDERICK HENKE.

Witnesses:

A. P. VINING,

P. J. CONYNE.