(No Model.)

M. D. L. SWANK, J. T. THORNLEY & J. A. AWALT.

STEAM GAGE COCK.

No. 265,992. Patented Oct. 17, 1882.

Fig. 2.

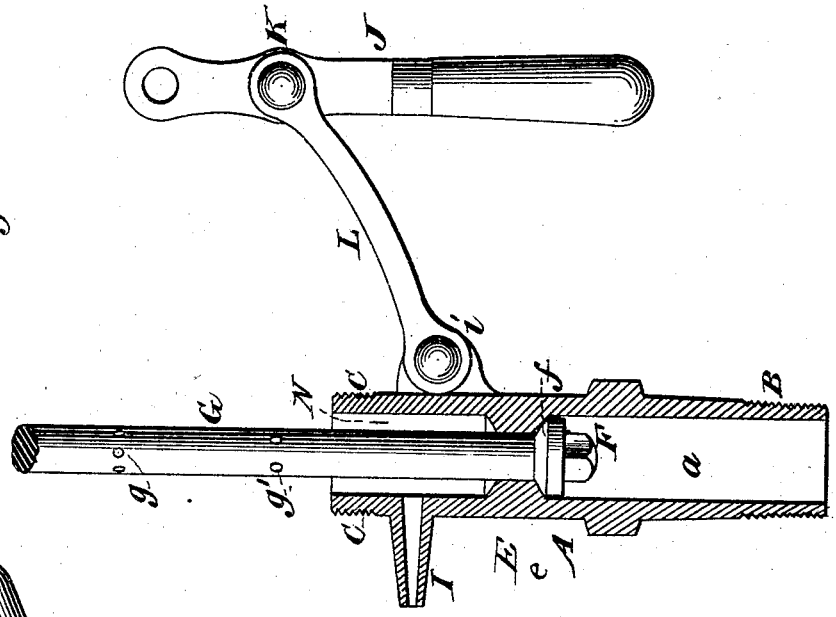

Fig. 3.

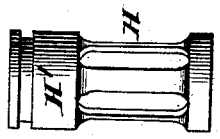

Fig. 1

Witnesses.
A. Ruppert
A. Clay Smith.

M. D. L. Swank
Jasper T. Thornley
John A. Awalt
Inventors.
by J. R. Nottingham
atty.

UNITED STATES PATENT OFFICE.

MARQUIS D. L. SWANK, JASPER T. THORNLEY, AND JOHN A. AWALT, OF ANDERSON, INDIANA.

STEAM GAGE-COCK.

SPECIFICATION forming part of Letters Patent No. 265,992, dated October 17, 1882.

Application filed January 27, 1882. (No model.)

To all whom it may concern:

Be it known that we, MARQUIS D. L. SWANK, JASPER T. THORNLEY, and JOHN A. AWALT, citizens of the United States, residing at Anderson, in the county of Madison and State of Indiana, have invented certain new and useful Improvements in Steam Gage-Cocks; and we do 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 same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Our invention relates to steam gage-cocks adapted for service upon steam-boilers or the like; and the novelty consists in the construction and arrangement of parts, as will be more specifically set forth hereinafter, and fully pointed out in the claims.

In devices of this kind it often becomes necessary to change the packing in the gland-chamber while the boiler is hot and in operation, and to do this the external cap must be removed, which allows the escape of steam or hot water, and seriously inconveniences the operator, if it does not entirely prevent his accomplishing the desired object.

The object of this invention is to so construct a gage-cock that a simple uncoupling of two of the parts will effectually close the device against any escape of steam and allow the repacking of the gland-chamber while the boiler is hot and in operation without inconvenience to the operator.

The invention is fully illustrated in the accompanying drawings, which form a part of this specification, and in which Figure 1 is a central longitudinal section, showing the gage-cock in efficient operation as such; Fig. 2, a similar view, showing the drip-chamber open, the nut removed, and the valve-stem disconnected, allowing free access to the said drip-chamber, and preventing most effectually the escape of the hot water or steam; and Fig. 3, a detail of the gland.

To enable others skilled in the art to which the invention relates to make and use the same, its construction and operation will now be explained in connection with the said drawings, which are referred to, and in which similar letters of reference indicate like parts in all figures, thus:

A represents a tubular casting of proper metal, and provided at one extremity with an external screw-thread, B, by which it is secured to the boiler, a similar thread, C, at the opposite extremity, to which the cap-nut D, having central aperture, *d*, for the reception of the valve-stem, is secured, and an internal annular collar, E, the inclined inner side, *e*, of which forms a seat for a correspondingly-inclined surface, *f*, upon a valve, F, as shown. The dimensions of the valve F are such that it will operate snugly in the tube *a* of the casting, and it is formed upon the end of a stem, G, which reciprocates snugly in the collar E, and is formed hollow for a distance at least equal to the space between the outer edges of the holes *g g'*, which are so arranged in relation to each other and to the valve F that while the valve is open to allow escape from the boiler one or more of the holes *g'* opens into the tube *a*, while the holes *g* connect with an annular chamber, H, in the gland H', which chamber has direct communication with the drip or exit pipe I. To the end of the valve-stem outside of the cap-nut D is secured in such a manner as to be readily separated or uncoupled a lever, J, to which, at K, is loosely pivoted a link, L, secured at *i* to the case A. The gland H', having annular recess H, connects the hollow portion of the valve-stem with the exit and forms in the drip-chamber N the packing-chambers O and P, as shown.

It will be observed that when the valve F is drawn within the tube *a* the holes *g'* are within the collar E, and no escape of water or steam is possible, except between the ring and stem, and that the valve F has a steam-tight seat at *e*. The valve is sufficiently small as to be forced back through the tube when the repacking has been completed.

What is claimed as new is—

1. The valve F, stem G, having apertures *g g'*, and uncoupling-connections, combined with the casing A, having collar E, with seat *e*,

gland H′, having annular recess H, the exit I, and operating means J L, as and for the purposes set forth.

2. The combination of the case A B C, having tube *a*, drip chamber N, and packing-chambers O P, the exit I, and internal annular collar E, combined with the valve F, stem G, having ports *g g′*, the gland H′, having annular recess H, the cap-nut D, the separable lever J, and link L, all as and for the purposes specified.

In testimony whereof we affix our signatures in presence of two witnesses.

MARQUIS D. L. SWANK.
JASPER T. THORNLEY.
JOHN A. AWALT.

Witnesses:
WM. ROTH,
JOHN F. MCCLURE.