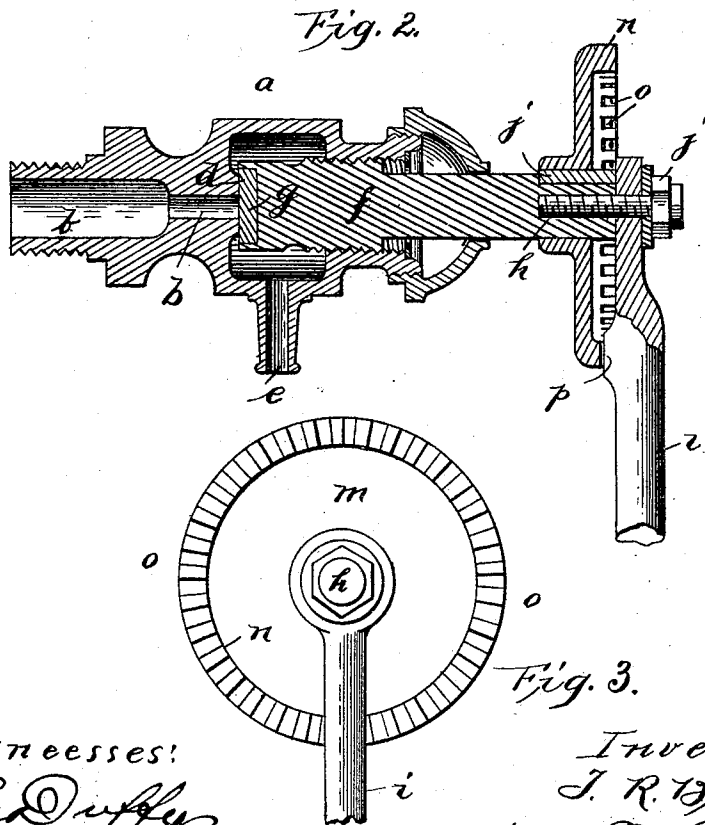
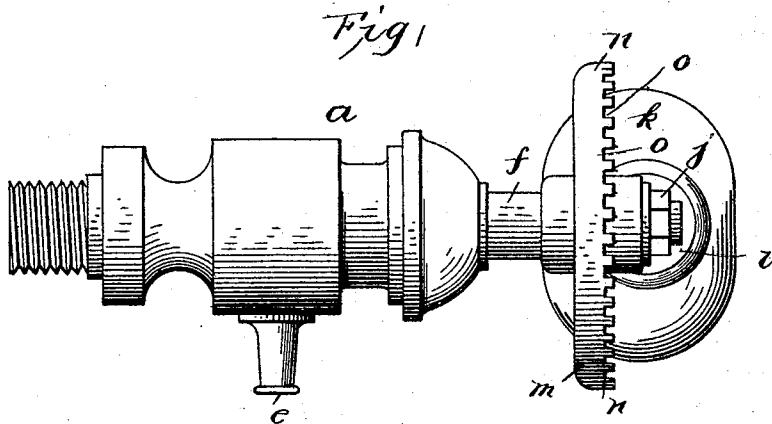


(No Model.)

T. R. BUTMAN.  
GAGE COCK.

No. 479,732.

Patented July 26, 1892.



*Fig. 3.*

Witnesses:  
*E. C. Duffey*  
*Herbert Peck*

Inventor  
*T. R. Butman*  
per *E. C. Duffey*  
Attorney

# UNITED STATES PATENT OFFICE.

THOMAS REED BUTMAN, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE BUTMAN FURNACE COMPANY, OF SAME PLACE.

## GAGE-COCK.

SPECIFICATION forming part of Letters Patent No. 479,732, dated July 26, 1892.

Application filed April 2, 1892. Serial No. 427,465. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS REED BUTMAN, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in 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, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in gage-cocks.

The object of the invention is to provide a gage-cock which can be easily operated, wherein all wear can be taken up, and which will not blow or spatter the discharge, and will discharge through an outlet only and in one direction.

The invention consists in certain novel features of construction and in combinations of parts more fully described hereinafter and particularly pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a side elevation of the gage-cock. Fig. 2 is a longitudinal section thereof. Fig. 3 is an end view thereof.

These gage-cocks ordinarily are located in an elevated position on the column or the side of the boiler above the reach of the fireman. Hence in order to reach the handles of the cocks to open or close the same the fireman often has to use ladders or the like, and, furthermore, the ordinary gage-cocks have so many avenues of escape that the water and lime from the boiler are discharged in many directions, spattering the brickwork and boiler-room, causing considerable work in cleaning up, if it is desired to keep the boiler-room neat. Where weighted levers are used to operate gage-cocks, chains or small wires have in some instances been employed to raise the weighted lever and open the valve; but such connections are often a nuisance, because, among other reasons, the implements in the boiler-room often become entangled in the same.

In the drawings reference-letter *a* indi-

cates the shell of the gage-cock, which is secured in the boiler or column.

*b* indicates the discharge-passage into the chamber *c* and through the valve-seat *d*.

*e* indicates a single discharge-nozzle from the chamber *c*.

*f* indicates a screw-threaded valve-stem having valve *g* at its inner end to engage the valve-seat *d* and close the passage *b*. Of course it is obvious that the valve is moved toward or from the valve-seat by means of the screw-thread when the valve-stem is rotated in either direction. The outer end of the valve-stem is provided with an internal-screw-threaded socket or aperture *h*, extending inwardly from its ends. The lever *i* extends laterally from the outer end of the valve-stem and is clamped thereto by means of the screw *j*, extending through the opening in the end of said lever and screwing into said socket or opening *h*; but, if desired, one or more washers can be interposed between the head of the screw and the end of the lever. The lever can thus be loosened, so as to turn independently of the valve-stem, or it can be clamped rigidly to the valve-stem. The outer end of this lever is provided with suitable weights *k*, and the lever is so arranged and adjusted as to normally rest in a horizontal position with the valve closely held to its seat, closing the cock. When it is desired to open the gage-cock, the weighted lever is raised by a suitable instrument in the hands of the fireman, thereby rotating the valve-stem and opening the valve. When the instrument is removed from the lever, it drops to its normal horizontal position and the valve is again tightly closed.

It is evident that as the valve or the seat wears the weighted lever will gradually drop below the horizontal line. When the lever drops below the horizontal line, the raising of the lever is materially interfered with and the full leverage of the parts of the valve is lost. To obviate this, I provide means whereby the lever can be adjusted upwardly when it drops below the horizontal line to such an extent as to be objectionable. This adjusting and holding means for the lever consists of a disk *m*, preferably having a hub keyed or otherwise

rigidly secured to the outer end of the valve-stem, so that the lever is located between the extremity of the stem and said disk. This disk has an inturned rim *n*, provided with a closely-  
 5 arranged series of radial serrations or notches *o*, and the lever has a feather or projection *p* at the portion of its face extending across said rim, and this feather, lip, or projection is adapted to fit in any one of said notches and hold the  
 10 lever rigid with the valve-stem. Of course the notches could be formed in any suitable manner without the rim *n*. It should be observed that the screw *j* holds the lever rigidly in position with its feather fitted in one of  
 15 said notches, so that it is rigid with the valve-stem. When it is desired to adjust the lever relatively to the valve-stem, the screw is loosened, so that the feather can be removed from the notch. The lever can thus be turned  
 20 to the desired position and its feather inserted in the notch and the screw tightened, and the lever will be rigidly held. This is the most positive and sure means for securing the lever and is of great advantage and utility.  
 25 It is evident that various slight changes might be made in the form, arrangements, and constructions of the parts described without departing from the spirit and scope of my invention.  
 30 Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—  
 1. A gage-cock having the screw valve-stem, the weighted lever controlling the movement  
 35 of said stem and adjustably secured thereon, so as to be capable of turning independently thereof, and means, substantially as described, whereby said lever is rigidly held in the desired position to turn with said valve-stem,  
 40 substantially as described.

2. A gage-cock consisting of the casing or

shell having a single discharge-nozzle and the valve-seat, the rotary screw-threaded valve-stem having the end valve to engage said seat, and the laterally-extending lever screwed  
 45 to the outer end of said valve-stem and having its outer end weighted, substantially as described.

3. The gage-cock consisting of the shell having the valve-seat, the rotary screw valve-stem having the valve to engage said seat, and the weighted lever-arm adjustably secured to and extending laterally from the  
 50 outer end of said valve-seat, as described.

4. A gage-cock having a rotary valve-stem, 55 a laterally-extending lever adapted to receive weights and adjustably secured to the end of said valve-stem, and a disk rigid with the valve-stem having notches to receive and hold said levers. 60

5. The gage-cock having a rotary valve-stem, the notched disk rigid with the outer end of the valve-stem, the lever adapted to be weighted and engaged and be held by said  
 65 projections, and a screw passing through the end of said lever into the valve-stem to hold the lever in a notch.

6. A gage-cock having the rotary valve-stem provided with a disk rigid with the outer end thereof and having a lateral notched rim, 70 the weighted lever having a feather to fit in one of said notches, and a screw passed through the end of said lever into said stem to hold the feather in the notch.

In testimony that I claim the foregoing as 75 my own I affix my signature in presence of two witnesses.

THOMAS REED BUTMAN.

Witnesses:

JENNIE E. ENGLAND,  
 HANS P. G. NORSTRAND.