

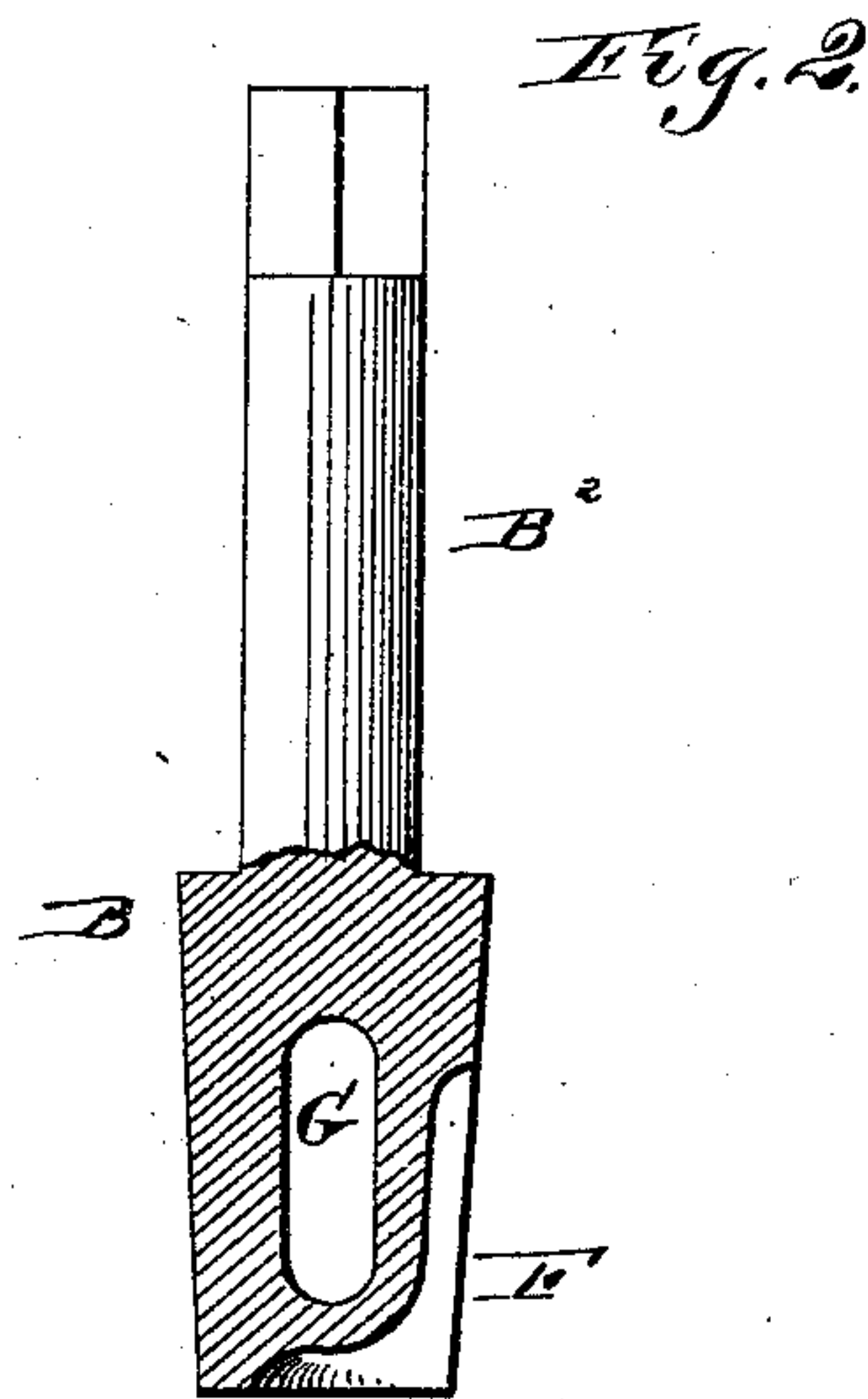
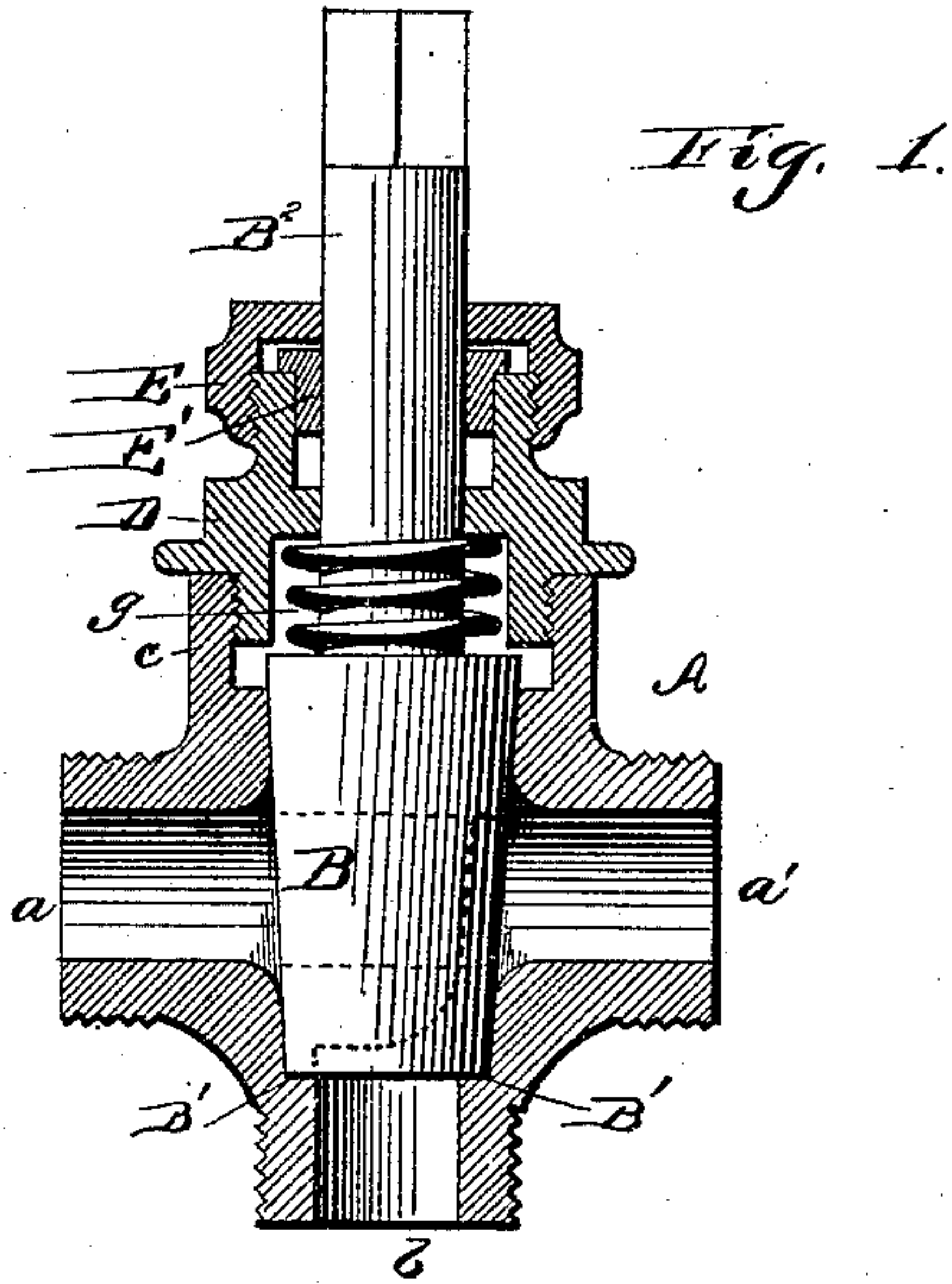
(No Model.)

T. J. SHELLHORN.

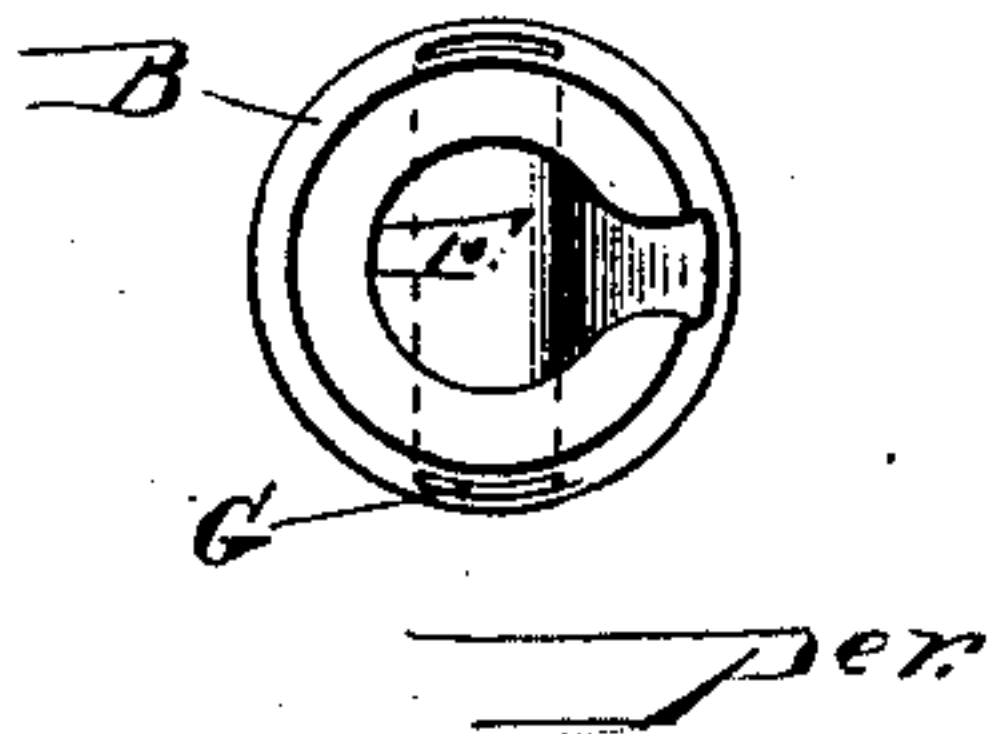
THREE-WAY COCK FOR STEAM BRAKES.

No. 265,880.

Patented Oct. 10, 1882.



*Fig. 3.*



*Witnesses:*

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# UNITED STATES PATENT OFFICE.

THOMAS J. SHELLHORN, OF HANCOCK, MICHIGAN.

## THREE-WAY COCK FOR STEAM-BRAKES.

SPECIFICATION forming part of Letters Patent No. 265,880, dated October 10, 1882.

Application filed February 21, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS J. SHELLHORN, of Hancock, in the county of Houghton and State of Michigan, have invented certain new and useful Improvements in Three-Way Cocks for Steam-Brakes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a vertical section of my three-way cock. Fig. 2 is a vertical section of the plug. Fig. 3 is a bottom view of the plug.

This invention relates to an improvement on three-way cocks, which are especially designed for use in connection with steam-brakes; and the nature of my invention consists in a three-way cock the plug of which is constructed with an exhaust-port arranged on one of its sides and extended beneath its lower end, in combination with steam inlet and outlet passages formed in the coupling-box of the plug, as will be hereinafter explained.

The following description of my invention, when taken in connection with the annexed drawings, will enable others skilled in the art to fully understand it.

A designates the coupling-box of the improved cock, which box is constructed with steamways  $a\ a'$ , coincident with each other, for the passage of the live steam to a cylinder. (Not shown in the drawings.) There is also a passage,  $b$ , at right angles to the passages or ways  $a\ a'$  and coincident with the vertical axis of the cock-plug B, through which latter passage,  $b$ , the exhaust-steam is allowed to escape from said cylinder when the plug is properly adjusted for this purpose. The plug B is the frustum of a cone, and it is seated in the box A, as shown in Fig. 1, its lower end bearing on an annular shoulder,  $B'$ , and forming, by the steam-pressure and the aid of a helical spring,  $g$ , a close joint on said shoulder or seat,  $B'$ . The stem  $B^2$  of the cock-plug passes through a stuffing-box formed of the parts  $c$ ,  $D$ ,  $E$ , and  $E'$ , and its upper end is adapted to receive a lever or other means, by which it can be adjusted for admitting steam to the cylin-

der or allowing the escape of the exhaust-steam therefrom. The plug B has an oblong hole,  $G$ , diametrically through it, which hole is adjusted to register with the ways  $a\ a'$  when it is desired to admit steam to the cylinder from the boiler. On one side of the plug is a vertical groove, which extends from a point near the upper end of this plug down to and beneath the lower end thereof, where the slot is expanded into a recess, which is concentric to the vertical axis of the plug, as shown in Fig. 3. The passage thus made in the side and bottom of the plug B forms an exhaust-port,  $F$ , which is caused to register with the steamway  $a'$  and outlet-passage  $b$  by adjusting the plug one-quarter of a turn about its axis from the position indicated in Fig. 1, and this port  $F$  will allow the steam from the cylinder, above referred to, to escape through passages  $a' b$  when the communication between the boiler and said cylinder is cut off.

When my improved cock is used on or in connection with a steam-brake the engineer can apply or release the brake by simply adjusting the plug B one-quarter of a turn either one way or the other.

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

1. The combination of the coupling-box A, the plug B, having the vertical and horizontal exhaust-port  $F$ , the steam-port  $G$ , and the seat  $B'$ , formed in the said coupling-box, substantially in the manner and for the purpose described.

2. The combination of the coupling-box having three ways, a plug, B, a spring to hold it down, the vertical and horizontal exhaust-passages in this plug, the seat  $B'$  in said coupling-box, and the passage  $G$ , substantially as described.

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

THOMAS J. SHELLHORN.

Witnesses:

DAVID S. KENDALL,  
CHAS. H. SANFORD.