(No Model.) 2 Sheets—Sheet 1.

G. A. BARTH.

COCK.

No. 398,117. Patented Feb. 19, 1889.

Fig. 1.

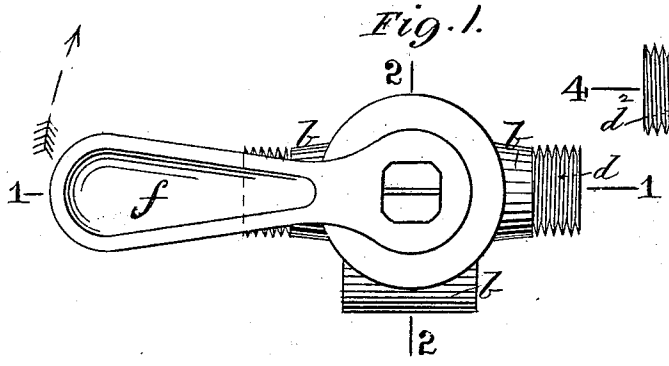


Fig. 2.

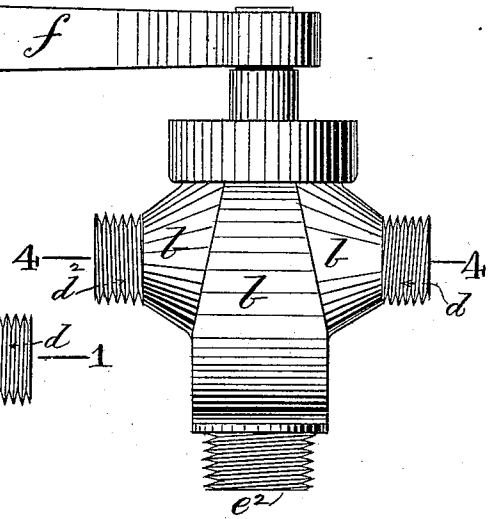


Fig. 3.

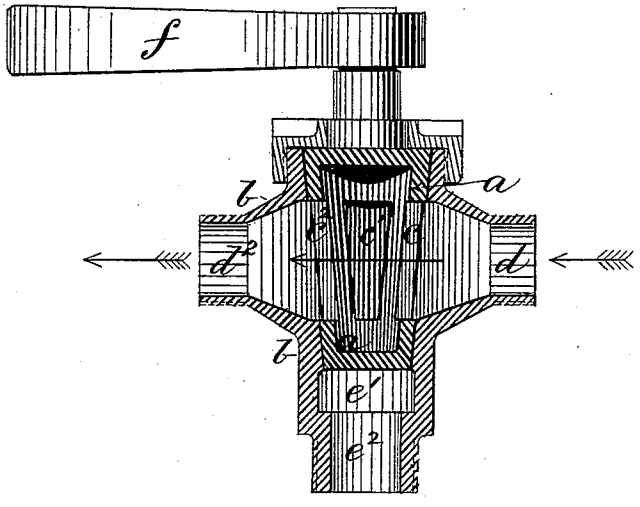
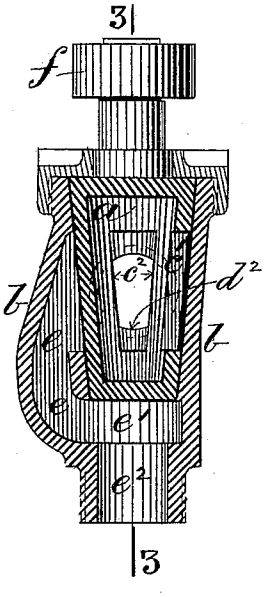


Fig. 4.



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(No Model.) 2 Sheets—Sheet 2.

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COCK.

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Fig. 5.

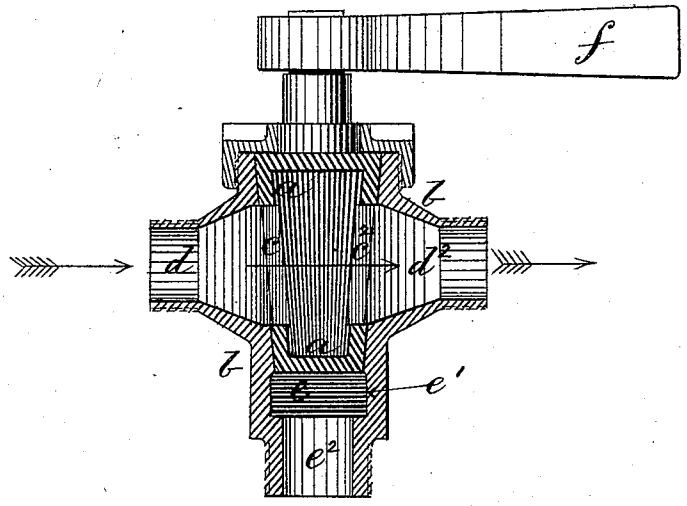


Fig. 6.

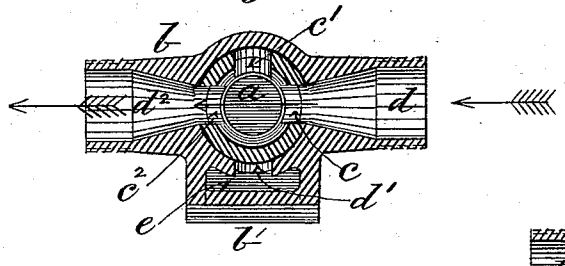
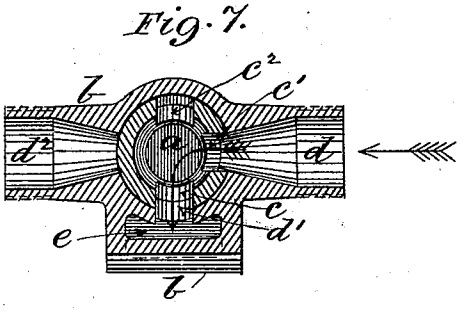


Fig. 7.



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UNITED STATES PATENT OFFICE.

GUSTAV A. BARTH, OF ST. LOUIS, MISSOURI, ASSIGNOR TO PIERRE CHOUTEAU, OF SAME PLACE.

COCK.

SPECIFICATION forming part of Letters Patent No. 398,117, dated February 19, 1889.

Application filed December 6, 1888. Serial No. 292,823. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV A. BARTH, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have invented a certain new and useful Improvement in Cocks, of which the following is a full, clear, and exact description.

My invention relates to an improvement in three-way cocks, and has for its object to obtain a simple and compact form of cock, whereby steam, water, compressed air, or other fluid may be readily directed either through an outlet-passage opposite to and in line with the inlet, along the shell and through an outlet-passage in line with the plug, or at right angles to the inlet.

On the accompanying drawings, Figure 1 represents a plan of my improved three-way cock; Fig. 2, a side elevation thereof; Figs. 3 and 4, sectional elevations on lines 1 1 and 2 2, respectively, in Fig. 1; Fig. 5, a similar view on line 3 3 in Fig. 4; Fig. 6, a sectional plan on line 4 4 in Fig. 2; and Fig. 7, a similar view to Fig. 6, showing an altered position of the plug.

Like letters of reference denote like parts in all the figures.

The plug *a* of my improvvd three-way cock is preferably made hollow, closed at both ends, and fitted within the shell *b* in the usual manner. Through the circumferential wall of the plug *a* are openings *c c′ c²*, the openings *c c²* being opposite to each other and the opening *c′* at right angles thereto. Through the shell *b* are corresponding passages, *d d′ d²*, having the same relative arrangement as the openings *c c′ c²* in the plug *a*. The passage *d′* opens into a pocket, *e*, formed in the shell and extending along the latter to a space, *e′*, immediately beneath the bottom of the plug *a*, where it communicates with the outlet-passage *e²*.

As seen in Figs. 1 to 6, the plug *a* is so located by its handle *f* that the openings *c c²* of the plug *a* are opposite to and communicate with the passages *d d²*, respectively, of the shell *b*, the opening *c′* of the plug *a* being closed against the wall of the shell *b*, which also closes the passage *d′*—that is to say, steam or other fluid entering through the inlet-passage *d*, as indicated by the arrows, passes through the openings *c c²* of the plug *a* and through the outlet-passage *d²* in the shell *b*.

On giving the plug *a* a quarter-turn by its handle *f* in the direction shown by the dotted arrow in Fig. 1 the openings *c′ c* of the plug *a* are brought opposite to and communicate with the inlet-passage *d* and outlet-passage *d′*, respectively, of the shell *b*, as shown in Fig. 7, while the opening *c²* of the plug *a* and outlet-passage *d²* of the shell *b* will be closed by the wall of the latter, whereby steam or other fluid from the inlet-passage *d* passes through the openings *c′ c* of the plug *a* and through the passage *d′* along the pocket *e* in the shell *b*, and thence through space *e′* and outlet-passage *e²*.

By this invention the steam or other fluid may be directed by a straight passage through the cock from side to side, or at right angles thereto in line with the plug without the aid of bends.

I claim as my invention—

In a cock, the combination of a plug, *a*, having openings *c c′ c²*, and shell *b*, having openings *d d′ d²*, with a pocket, *e*, and outlet-passage *e′ e²*, formed in said shell, substantially as shown, and for the purpose described.

In testimony whereof I affix my signature, in presence of two witnesses, this 30th day of November, 1888.

GUSTAV A. BARTH.

Witnesses:

S. L. SCHRADER,

PAUL BAKEWELL.