

(No Model.)

J. BUFFET.
COCK OR VALVE.

No. 329,809.

Patented Nov. 3, 1885.

Fig. 1.

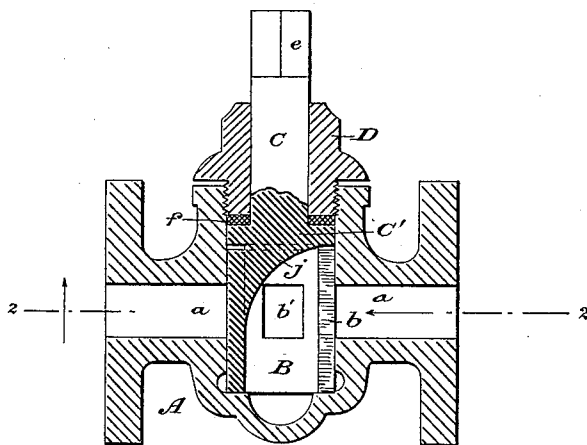
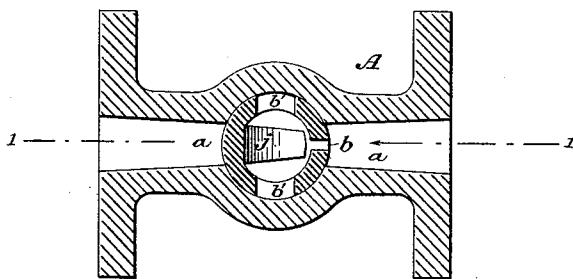


Fig. 2.



WITNESSES:

E. R. Bolton
Geo. Bainson

INVENTOR:

Jules Buffet
By his Attorneys,
Burke, Fraser & Connors

UNITED STATES PATENT OFFICE.

JULES BUFFET, OF PARIS, FRANCE, ASSIGNOR TO JULES FONTENELLE, OF
SAME PLACE.

COCK OR VALVE.

SPECIFICATION forming part of Letters Patent No. 329,809, dated November 3, 1885.

Application filed October 27, 1882. Serial No. 75,316. (No model.) Patented in France July 20, 1881, No. 144,037; in Belgium February 1, 1882, No. 56,941; in England February 6, 1882, No. 577; in Germany February 7, 1882, No. 19,372; in Italy March 15, 1882, XXVII,499, and in Austria May 12, 1882, No. 9,382.

To all whom it may concern:

Be it known that I, JULES BUFFET, a citizen of the French Republic, and a resident of Paris, France, have invented certain Improvements
5 in Cocks or Valves, (for which patents have been granted to my assignee, la Société Anonyme des Produits Chimiques, in the following countries, namely: in France July 20, 1881, No. 144,037; in Belgium February 1, 1882, No.
10 56,941; in Great Britain February 6, 1882, No. 577; in Germany February 7, 1882, No. 19,372; in Italy, filed March 15, 1882, XXVII, 499, delivered March 22, 1882, and in Austria May 12, 1882, No. 9,382,) of which the following
15 is a specification.

My invention relates to that class of cocks wherein the plug, usually without taper, is hollow and open at one side at right angles to the parts, for the admission of fluid under pressure to expand the plug and thus keep it pressed tightly to its seat when the fluid is shut off. Cocks of this general character have been proposed wherein the plug or key is made up of segments normally pressed outward or against
20 the walls of the chamber by springs not integral with the plug, in some cases aided by the pressure of the fluid. Others have been proposed wherein the plug is formed of a hollow cylinder or tube, caused to move longitudinally
25 while it rotates, a wedge being provided to expand the cylinder and force it radially outward to its seat in closing the cock. My invention differs materially from these, both in its construction and operation, and is more simple, cheap,
30 and durable than any that I am familiar with.

The object of my invention is to produce a simple, economical, and durable valve that will always remain perfectly tight under all pressures and with all fluids. Its novel features
40 will be hereinafter fully described, and definitely set forth in the claim.

In the drawings which serve to illustrate my invention, Figure 1 is a vertical axial section of my cock or valve, taken in the plane indicated by line 1 1 in Fig. 2; and Fig. 2 is a horizontal section of the same, taken in the plane indicated by line 2 2 in Fig. 1 and looking upward.

A is the shell of the cock, which is provided with a fluidway or passage, *a a*, and a cylindrical bore at right angles to *a a*, of uniform diameter, to receive the plug. 50

B is the body of the plug, which is in the form of a hollow elastic cylinder of metal, provided with a slit, *b*, through its entire length
55 on one side, and parts *b' b'*, oppositely arranged in the sides at right angles to slit *b*, through which the fluid passes when these parts are brought into coincidence with passages *a a*.

C is the stem of the plug, which has a less
60 diameter than B, and C' is a ring-flange formed on the plug and having the same diameter, substantially, as B. The stem C and flange C' are formed integrally with the body B, and C' is connected or tied to B by a bracket-
65 shaped tie, *j*, which is attached to the inner face of the wall of the body B on the side opposite to the slit *b*. There is a little space left between the top of the body B and the flange C', all around, in order that the body B may
70 be free to expand elastically against the sides of its chamber under pressure exerted by the fluid, which has access to its interior through slit *b* when the cock is closed, as in the drawings. It will be seen that under these conditions the slit *b* stands coincident with the receiving-passage *a*, which is designated by the
75 arrow. The body B rests on the bottom of its chamber in A, and a cap-plug, D, through which the stem C passes, is screwed down into
80 the shell and onto a packing-ring, *f*, which insures a hermetic joint and at the same time prevents any endwise movement of the plug. On the exteriorly-projecting stem C is formed a square, *e*, to receive a wrench or crank,
85 whereby the plug may be turned. A crank or wheel may be fixed permanently to the stem, and marks or stops may be provided to insure the slit *b* being turned toward the inlet when the cock is closed. These features I make no
90 claim to.

It will be seen that my plug, comprising the body B, stem C, and intermediate flange, C', is all made in one piece, and there is no stem or other part interposed between the parts *b' b'*
95 to impede the flow of the fluid. The tie *j*,

as will be seen in Fig. 1, stands entirely clear of the fluid-passage. At the same time the body B, while solidly connected to the stem, is left free to expand throughout, practically, its entire circumference.

My cock is very simple and durable, and it will be obvious that any end wear can readily be taken up by screwing down the cap-plug D, while the radial outward pressure of the fluid will always keep the body B pressed tightly up to the walls of its chamber.

Having thus described my invention, I do not claim, broadly, to be the first to utilize the pressure of the fluid to keep the plug pressed up to the wall of its chamber, as this has been proposed before; but

What I claim is—

A cock or valve comprising the shell A, having a fluidway or passage, *a a*, and a cylindri-

cal chamber arranged at a right angle to said fluidway to receive the plug, a plug comprising the hollow cylinder B, provided with the slit *b* and the ports *b' b'*, respectively, arranged as shown, the stem C, the flange C', and the tie *j* all formed in one piece, the cap-plug D, and the interposed packing, all arranged substantially as shown, whereby the body of the plug, while formed integrally with the stem, is left free to expand, as and for the purposes set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JULES BUFFET.

Witnesses:

JULES FONTENELLE,
CHARLES MARDELES.