

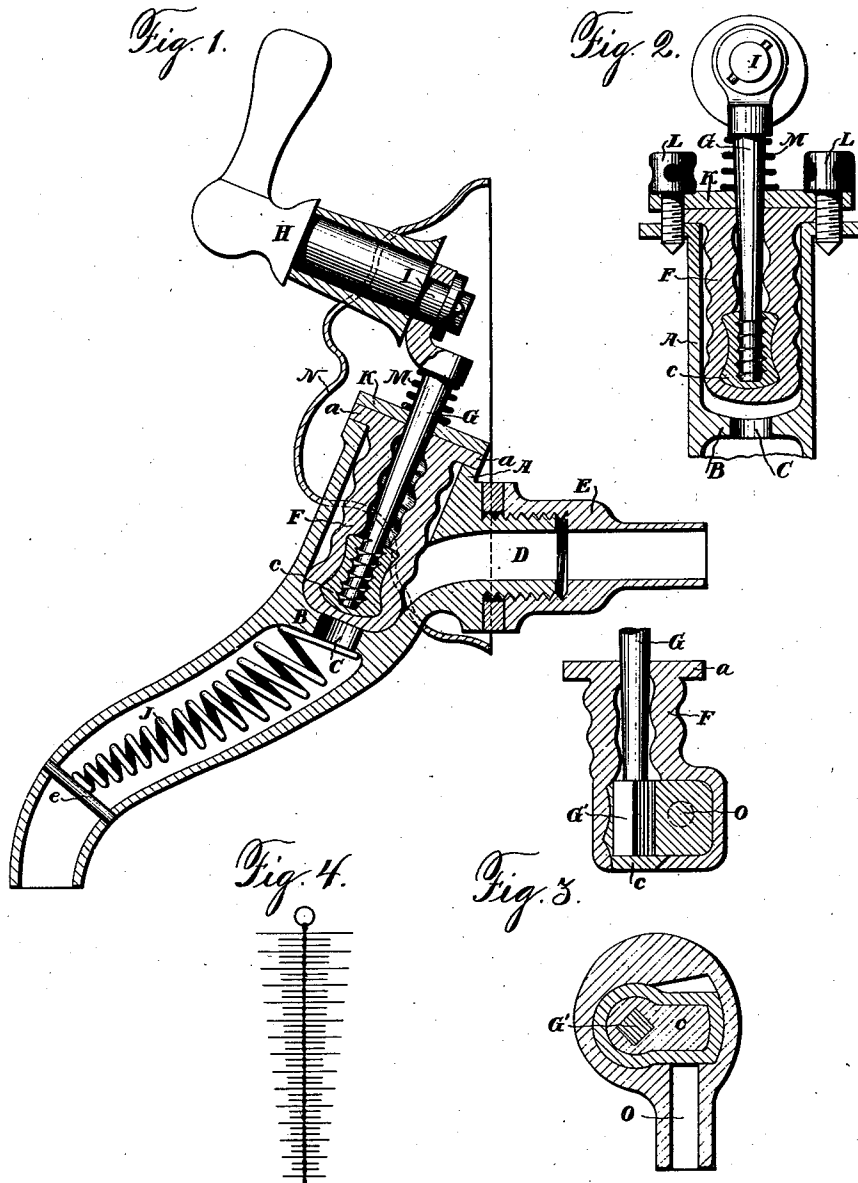
(No Model.)

E. DRAULLETTE.

COCK WITH DRIVING PARTS ENTIRELY ISOLATED FROM LIQUIDS.

No. 588,765.

Patented Aug. 24, 1897.



Witnesses.
Frank P. Prindle.
Henry C. Hazard.

Inventor.
Edmond Draullette
by Charles E. Russell
his attorney

UNITED STATES PATENT OFFICE.

EDMOND DRAULLETTE, OF PARIS, FRANCE.

COCK WITH DRIVING PARTS ENTIRELY ISOLATED FROM LIQUIDS.

SPECIFICATION forming part of Letters Patent No. 588,765, dated August 24, 1897.

Application filed September 16, 1896. Serial No. 606,016. (No model.) Patented in France July 18, 1895, No. 248,986; in England September 12, 1895, No. 17,077, and in Belgium September 16, 1895, No. 117,438.

To all whom it may concern:

Be it known that I, EDMOND DRAULLETTE, a citizen of the Republic of France, residing in the city of Paris, France, have invented a new and useful Cock with Driving Parts Isolated from Liquids, (for which I have obtained patents in Great Britain, No. 17,077, bearing the date of September 12, 1895; in France, No. 248,986, bearing the date of July 18, 1895, and in Belgium, No. 117,438, bearing the date of September 16, 1895,) of which the following is a specification.

In all cocks in use up to the present day the liquid is in direct contact with the devices which control its flow, (spigot, piston, &c.) which causes such devices to be easily deteriorated and leads rapidly to wear of the joints and seats. To avoid these inconveniences, I have devised a cock of which the parts which control the flow of liquid are completely isolated from the liquid.

The improved cock also has the following advantages: The handle may be moved in differently to right or left, the liquid will run out regularly and without dispersing, the back throw is greatly diminished, and the wear is thus almost reduced to nothing.

The improved cock is shown in the annexed drawings, in which—
Figure 1 is a vertical and axial section in closed position; Fig. 2, an elevation and section as seen from the back in open position; Fig. 3, a sectional view and plan of a modification of the closing-valve. Fig. 4 represents a regulator of the flow of liquid.

The cock is composed, essentially, of a body A, divided into two parts by a flange B, forming a seat for the valve F, which consists of a sleeve or bag surrounding and inclosing the rod G, moved by the eccentric I. The body A and the hand-lever are set in a chamber N, which may be of any ornamental design.

The annular space of the upper part of the body A is occupied in part by a valve F, made of elastic material, such as caoutchouc, which is formed exteriorly and interiorly with spirals, ribs, or rings, permitting it to be flattened or compressed lengthwise.

The valve F has at its upper edge a circular flange a, intended to make a joint between the body A and cap K, and at its lower end

it contains a block c of hard material, (ebonite or metal,) in which is screwed or otherwise fixed the extremity of rod G. This block may be made separate from and attached to the rest of the valve-body in any desired way or can be, where the valve is of rubber, formed of the same material made harder than the rest.

The rod G, elbowed at its upper end, is threaded on an eccentric I on the shaft of the hand-lever H, so that when the handle H is moved, and in consequence the eccentric turned, the rod G is drawn up or pressed down and the valve-bag F compressed or extended.

The valve F when compressed, Fig. 2, leaves its seat and opens passage between D and C for the liquid which in passing meets the spirals of the helical conical spring J, which is retained by the cross-pin e in the lower end of the body A. This spring has the effect of breaking up the jet of liquid and equalizing its outflow.

As above said, the flange a on the valve F is compressed between the edge of the body A and the cap-plate K. This is effected by two screws L L, Fig. 2.

To lessen the back throw produced if the cock is closed too quickly, there is placed on the cap K and around the rod G a helical spring M, of which the resisting force equalizes the force of extension of the elastic valve F. This prevents the latter from rapidly moving onto its seat whenever on closing the cock the eccentric I passes its dead-point. Moreover, the elasticity of the valve F is also a factor favorable to the reduction of the back throw.

Wear is reduced in the controlling parts by the adoption of the action of an eccentric combined with a rod and in the part more immediately serving for closing the cock by the fact that the valve comes direct onto its seat and cannot be crushed thereon, since its movement is limited by the throw of the eccentric, which it cannot surpass.

The cock, as shown, may be ornamented, as in Fig. 1, by a shield N of design appropriate to its destination—such as a human head, lion's head, elephant's head, monster, &c.

As shown in Fig. 3, the mode of compression

of the valve F in place of being obtained by a longitudinal traction can be had by a torsional movement which removes a plane surface O from the orifice of the spout P and permits of progressive outflow of the liquid. In this variation the lower extremity of the piston-rod G will terminate in a square G', inserted in the block of hard material c, which forms a single operative body with the valve F.

10 Several other variations can be obtained by utilizing the elasticity of the valve, modifying its form and structure, while preserving the fundamental principle, which consists in isolating, by surrounding them, the parts which

15 control the passage for the liquid. Lastly, in place of spring J, I may use a brush-like device, of metal or other material, as shown in Fig. 4, having the same effect and advantages as the said spring. Such device or the spring

20 may also be placed at the entrance to the cock in the sleeve D.

Having now particularly described and ascertained the nature of this invention and in what manner the same is to be performed, I

25 declare that what I claim is—

1. In a cock, the combination of a suitable valve-seat, a valve composed of an elastic body fixed at one point, whereby it may be placed under tension, means for counteracting the

30 movement of the valve when it is under tension, and valve-actuating mechanism, substantially as and for the purpose specified.

2. In a cock, the combination of a suitable

valve-seat, a valve composed of an elastic body that is placed under tension when moved from said seat, a spring that counteracts the tendency of the valve, when under tension, and valve-actuating mechanism, substantially as and for the purpose shown.

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3. In a cock, the combination of a suitable valve-seat, a valve composed of an elastic body that is placed under tension when moved from said seat, a rod attached to said body, a spring tending to move said rod with a force that counteracts the force exerted by the valve, when under tension, an eccentric connected to said rod, and means for rotating the eccentric, substantially as and for the purpose set forth.

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4. In a cock, the combination of a suitable valve-seat, a valve composed of an elastic body, fixed at one point, whereby it may be placed under tension, a spring that counteracts the tendency of the valve when under tension, and valve-actuating mechanism, the valve-body being interposed between the latter and the liquid-passage, so as to keep the liquid from contact with said mechanism, substantially as and for the purpose specified.

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In testimony that I claim the foregoing I have hereunto set my hand, this 26th day of August, 1896, in the presence of two witnesses.

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EDMOND DRAULLETTE.

Witnesses:

J. F. WILMOT,

EDWARD P. MACLEAN.