IMPROVED VALVE COCK.

The annexed figures represent an improved valve cock, of which a patent was granted to John Griffiths, of Philadelphia, on the 14th of last February. Figure 1 is a side view of a stop cock constructed on the principle of this invention, and figure 2 is a longitudinal section of the valve, through the center. Similar letters of reference indicate like parts.

The valve cock possesses advantages over the plug cock in its lightness, and the facility with which the valve is ground tight, but, without Figure 2.

The valve cock as constructed is very imperfect. It is usual to make the screw by which the valve is opened and closed, on the valve stem, and unless every part is truly constructed, one side of the valve will be made to close or open upon its seat, harder than the other part, and the stem is thereby liable to be bent. This evil is increased by ravelling the bearing of the valve, hence it is customary to make it with a narrow seat. The object of this invention is to construct the cock in such a way that the valve will always close truly, and thus allow it to be made with a bearing of such width as will enable it to be kept as tight as the best plug cock. The valve is therefore made with a cylindrical stem passing through a hollow stem, which is attached rigidly to, or is formed part of the body of the cock, and is furnished outside with a screw, so that it is fixed and cannot be carried away, in which the valve stem is capable of turning freely, but not of moving longitudinally. By turning the nut the valve is raised and lowered—from and to its seat—in a right line, the valve being kept in such position that it will fall into and close tightly in its seat.

A is the body of the cock, and B is the valve seat, which do not differ materially from other valve cocks; C is the hollow fixed stem, which, in the cock shown, is secured into the body; D is the valve, and E is its stem, which is furnished at its top with an external screw, a; it is provided with a stuffing box, b, and gland, c, for the purpose of packing the valve stem; D is the valve, and E is its stem, which is furnished at its top with a screw, a, and a little below the screw with a collar, a;

E is the nut by which the valve is opened and closed; it is fitted to the screw, a, on the hollow fixed stem, and is provided with a wheel or lever, by which it is turned; it is furnished above with a yoke, a, which fits easily to the valve stem above the collar, b, being confined to the stem by a nut, a, fitting to the screw, a; this nut fits down to a collar, so that it does not bite the yoke, but simply prevents the longitudinal motion of the valve stem and nut, independently of each other, not preventing the turning of the nut. The valve is raised and lowered by the turning of the nut. The valve stem is squared at the top to receive a wrench for grinding the valve. To grind the valve, the nut, a, should be taken off. The valve of a cock of large size, constructed in this way, may be ground in a few minutes; whereas a three-inch plug will commonly take five or six, and sometimes ten hours to grind in tight, whenever it leaks. In cocks of large size, the body, A, may be made of cast iron, and the seat, B, and stem, of brass, which construction will reduce the expenses. The invention is applicable to cocks of almost every description.

Mr. Griffiths informs us that he has disposed of upwards of five hundred of the cocks, and that they give perfect satisfaction to the purchasers.

Leaky cocks are a sore trial to the patience of engineers; this valve is worthy their attention as a remedy for such an evil.

These valve cocks are manufactured by Mr. Griffiths, at his brass foundry, No. 16 North 5th Street, Philadelphia. For more information about which relates to business connected with it, we refer to an advertisement of the patentee on another column.