

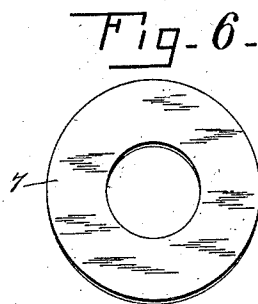
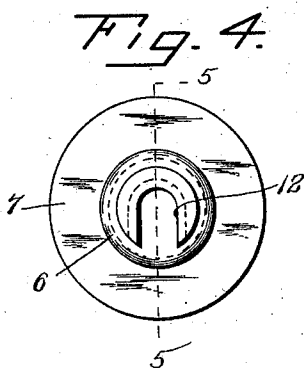
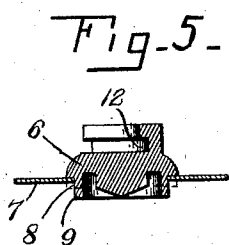
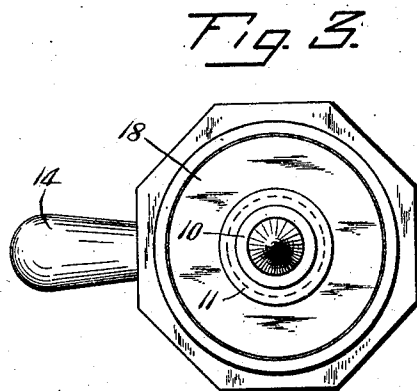
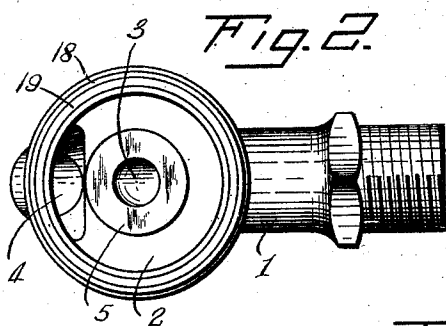
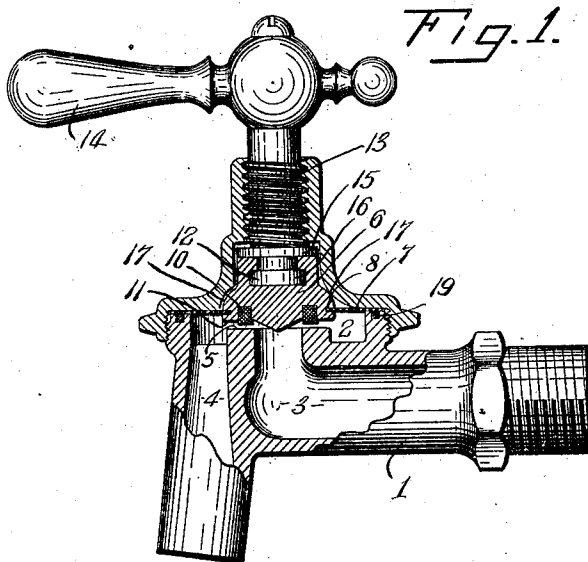
C. C. SCHOENECK & I. F. WARME.

VALVE.

APPLICATION FILED AUG. 9, 1909.

986,765.

Patented Mar. 14, 1911.



WITNESSES:

Chas. Young
S. Davis.

INVENTORS
Conrad C. Schoeneck
I. F. Warme
BY
Parsons, Hall & Bodell.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

CONRAD C. SCHOENECK AND IVAR F. WARME, OF SYRACUSE, NEW YORK.

VALVE.

986,765.

Specification of Letters Patent.

Patented Mar. 14, 1911.

Application filed August 9, 1909. Serial No. 511,844.

To all whom it may concern:

Be it known that we, CONRAD C. SCHOENECK and IVAR F. WARME, of Syracuse, in the county of Onondaga and State of New York, have invented a certain new and useful Valve, of which the following is a specification.

Our invention relates to valves particularly applicable for controlling the flow of water or other fluids, and has for its object the production of a structure for the desired purpose, which is simple in construction, economical in manufacture, durable and efficient in use, and may be readily assembled and repaired; and to this end it consists in the combinations and constructions herein-after set forth and pointed out in the claim.

In describing this invention, reference is had to the accompanying drawing, in which like characters designate corresponding parts in all the views.

Figure 1 is an elevation, partly in section, of a valve embodying one construction of our invention. Fig. 2 is a plan of a portion of said valve. Fig. 3 is an inverted plan of another portion of such valve. Fig. 4 is a plan of the detached diaphragm. Fig. 5 is a section of the diaphragm on line 5-5, Fig. 4, the yielding wall of the internal part of the diaphragm being shown in its position assumed before such wall is clamped upon the external ring-shaped part of said diaphragm. Fig. 6 is a perspective view of the external ring-shaped part of the diaphragm.

Our invention includes generally a body 1 having a conduit extending therethrough and preferably comprising a chamber 2, and inlet and outlet passages 3, 4 opening from one side of the chamber 2, the inlet passage 3 opening axially into the chamber 2, and the end surface of the inlet passage forming a seat 5 opposed to the side of the chamber 2 opposite to the side thereof through which the passages 3 and 4 open. This invention also includes a diaphragm consisting of concentrically-arranged internal and external parts 6, 7, the part 6 being composed of relatively thick metal and opposed to the seat 5 and formed with a circumferential groove 8, and the part 7 being composed of sheet metal and formed substantially ring-shaped and having its inner margin extended into the circumferential groove 8. Preferably, the lower wall 9 of the groove 8 is relatively flexible or yielding, is extended parallel to the axis of the diaphragm before

the parts of the diaphragm are secured together, and is thereafter clamped upon the inner margin of the external part 7 of the diaphragm for forcing said margin against 60 the opposing wall of the groove 8 and firmly uniting together the contiguous portions of the parts 6 and 7 of the diaphragm.

The end of the internal part 6 of the diaphragm opposed to the seat 5 is provided 65 with a yielding ring 10 seated therein and coacting with a portion of the seat 5, and said end of the part 6 is also provided with a surface 11 encircling the ring 10 and adapted to coact with the outer margin of 70 the seat 5 when the ring 10 becomes worn sufficiently to permit contact of the surface 11 with the seat 5. The opposite end of the internal part 6 of the diaphragm is provided 75 with a socket 12 which opens through the side and said end of the part 6 and is formed at its inner portion of greater size than the portion thereof opening through said end of the part 6.

An operating member, as a threaded stem 80 13, is movable in the body 1 and is provided at one end with a handle 14 external to such body, and at its opposite end with annular shoulders 15, 16, one engaging the contiguous 85 end face of the internal part 6 of the diaphragm, and the other fitting within the enlarged portion of the socket 12. This operating member 13 positively moves the central part of the diaphragm in opposite directions, the engagement of the ring 10 or 90 the surface 11 with the seat 5 limiting the movement of the operating member in one direction, and an annular shoulder 17 on the internal part 6 of the diaphragm coacting 95 with a correspondingly shaped surface on the shell of the body 1 and limiting the movement of the operating member in the opposite direction.

As shown in the drawings, the body 1 comprises sections detachably engaged with each 100 other, one section inclosing the inlet and outlet passages 3, 4, and the other section being in the form of a cap screwing upon the first-mentioned section and containing a threaded opening for receiving the threaded portion 105 of the operating member 13. Opposing surfaces 18 of the sections of the body are spaced apart from each other and adapted to receive the outer margin of the external part of the diaphragm for clamping the same in 110 position, and one of these surfaces is provided with a yielding ring 19 which is seat-

ed therein and engages the outer margin of the external part of the diaphragm for facilitating the making of a water-tight joint between the diaphragm and the shell of the body 1 when the sections of the body are clamped together.

The operation of our valve will be readily understood by those skilled in the art, and it will be particularly noted that the wearing surfaces of the diaphragm coacting with the seat 5 to prevent the flow through the valve are substantial and durable, and that ready access is permitted to the interior of the valve, facilitating the assembling, repair or substitution of the diaphragm or parts thereof.

What we claim, is:—

A stop-cock comprising a body portion provided with a shallow chamber formed by an annular wall exteriorly threaded, an inlet passage leading through the body and opening into the chamber axially thereof, a rim surrounding such opening and providing a valve seat, a discharge passage leading through the body and communicating with said chamber by a port in the bottom of the latter located adjacent the side wall of the same, a cap surmounting the body and having a threaded flange engaging the threaded wall of said chamber, a flat surface arranged

perpendicular to and adjacent the flange, and an axial extension having a threaded portion and a shoulder between such portion and said flat surface, and a valve comprising a stem engaging the threaded part of said cap extension, and a sectional head, one of such sections having at one end a surface seating on said rim, at its other end a swivel connection with said stem, and at an intermediate point a shoulder coöperating with said shoulder of the cap extension, and the other section consisting of a flat metallic ring-shaped disk held at its inner marginal edge in an annular recess in the first section, located between said shoulder of the latter and the face thereof coöperating with the said rim, and at its outer marginal portion between said flat surface of the cap and the edge of the wall of the chamber in the body.

In testimony whereof, we have hereunto signed our names in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 7th day of August, 1909.

CONRAD C. SCHOENECK.
IVAR F. WARME.

Witnesses:
S. DAVIS,
F. G. BODELL.