No. 770,703. PATENTED SEPT. 20, 1904.

C. L. SCOVILLE.

VALVE.

APPLICATION FILED NOV. 11, 1903.

NO MODEL.

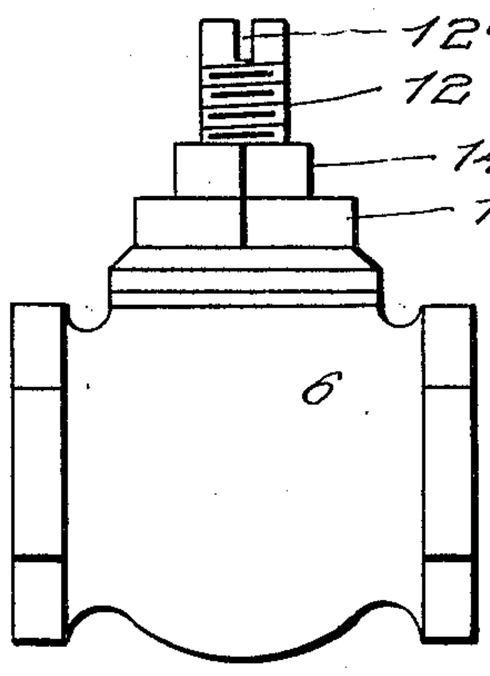

Fig. 1.

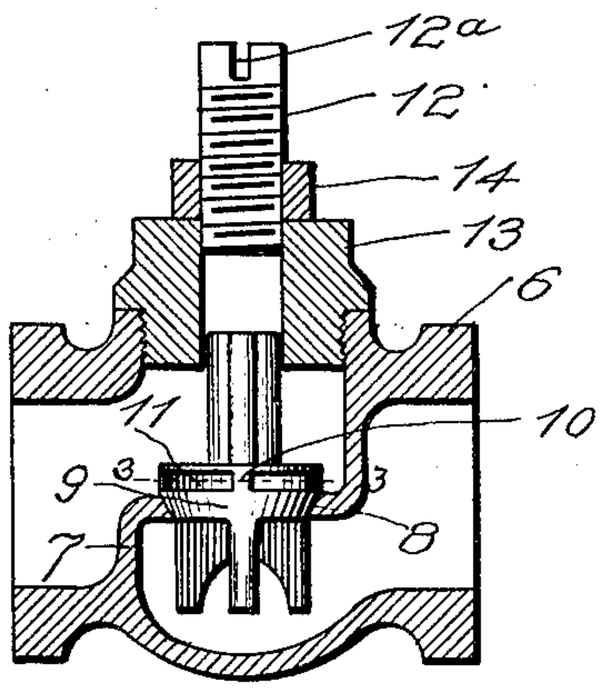

Fig. 2.

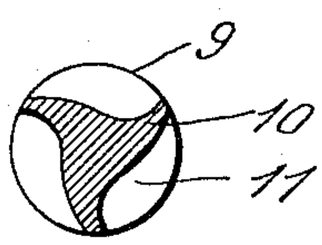

Fig. 3.

Witnesses
M. E. Corder.
Geo. E. Tew.

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No. 770,703. Patented September 20, 1904.

UNITED STATES PATENT OFFICE.

CHARLES L. SCOVILLE, OF ASHTABULA, OHIO.

VALVE.

SPECIFICATION forming part of Letters Patent No. 770,703, dated September 20, 1904.

Application filed November 11, 1903. Serial No. 180,737. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. SCOVILLE, a citizen of the United States, residing at Ashtabula, in the county of Ashtabula and State of Ohio, have invented new and useful Improvements in Valves, of which the following is a specification.

This invention applies particularly to check-valves, and is intended to provide a valve in which the disk as it seats will be given a rotary motion which will serve to grind the seat and keep it smooth and also prevent cocking of the valve.

A further object of the invention is to produce a construction whereby the lift of the valve may be limited or the valve closed and locked.

The article is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the valve. Fig. 2 is a central vertical section. Fig. 3 is a section on the line 3 3 of Fig. 2.

The valve-casing is indicated at 6, having therein an ordinary diaphragm 7, in which the valve-seat 8 is produced.

At 9 is the valve-disk, which is not particularly different from an ordinary valve, except that it has in the upper part thereof several radially-extending curved blades 10, produced by recessing or chambering the upper part of the disk, producing pockets, as shown at 11, in which the fluid gets a bearing on the blades to rotate the disk as the valve is seated.

To lock the valve or regulate its lift, a screw 12 is used. This is tapped through the cap 13 of the casing and is adapted to bear at its lower end upon the top of the valve-stem. It has a kerf 12^a to take a screw-driver to adjust it and is fixed at adjustment by a jam-nut 14 on the outside of the cap.

In the operation of this valve when pressure is brought to bear upon it by water, steam, or other fluid the ordinary downward pressure upon the top of the disk is secured and at the same time a rotary pressure is secured while the valve is seating by the bearing of the fluid against the wings. This gives a rotary motion to the disk as it seats, and any foreign substance adhering to the valve seat or disk is removed or ground off, so that a perfect-fitting valve is secured. With respect to the regulation of the lift of the valve it is obvious that by regulating the screw the lift of the valve is controlled by contact of its stem against the lower end of the screw, and by forcing the screw down to the limit the disk is locked against the seat and a locked valve is produced. It will be seen that the blades which produce the rotary motion are on top of the disk, so that it gets its motion from the back pressure, which I consider preferable, as the valve is thus caused to turn as it is seating.

What I claim as new, and desire to secure by Letters Patent, is—

1. A valve comprising a casing having a seat therein, and a disk fitting the seat and having, in the part thereof above the seat, a series of pockets recessed into the edge of the disk and having curved blades between the pockets and presenting a concave surface on one side and a convex surface on the other.

2. A valve comprising a casing having a seat therein, and a disk fitting the seat and having on the top thereof blades curved in the same plane and presenting a concave surface on one side and a convex surface on the other.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES L. SCOVILLE.

Witnesses:

ROY A. SCOVILLE,

M. A. SOULES.