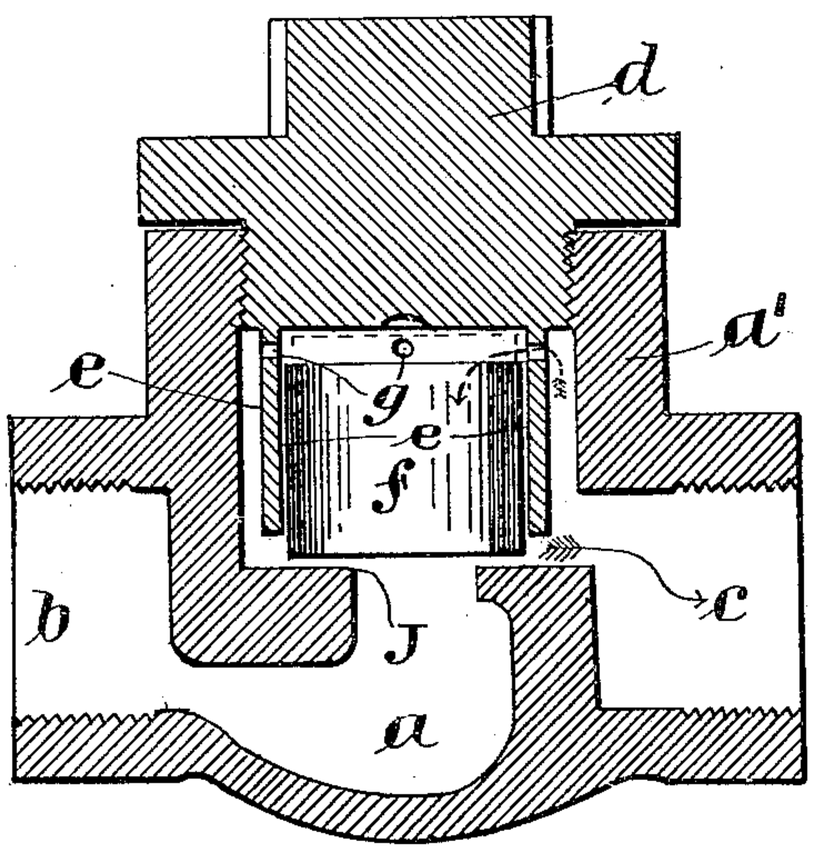
E. W. SHAW.

AUTOMATIC CHECK VALVE.

APPLICATION FILED MAY 1, 1913.

1,136,840. Patented Apr. 20, 1915.



Witnesses:

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

EDWARD WORSTER SHAW, OF BROWN HILL MINE, KALGOORLIE, WESTERN AUSTRALIA, AUSTRALIA.

AUTOMATIC CHECK-VALVE.

1,136,840. Specification of Letters Patent. Patented Apr. 20, 1915.

Application filed May 1, 1913. Serial No. 764,943.

To all whom it may concern:

Be it known that I, EDWARD WORSTER SHAW, a subject of the King of Great Britain, residing at Brown Hill Mine, Kalgoorlie, Western Australia, Australia, have invented a certain new and useful Improvement in Automatic Check-Valves, of which the following is a specification.

This automatic check valve has been principally devised for use with sand and slime pumps or with apparatus for pumping water bearing gritty matter, in which cases the wear of the valve is a constant trouble. In this valve I have devised a construction which results in an automatic check action against the return or back flow of the discharge or outflow water.

The construction of the valve will now be explained with the aid of the attached drawing, which shows a vertical sectional view thereof, and in same *a* is the valve box or casing having the inlet *b* and the outlet *c* as shown.

In the upper part or throat a^1 is interscrewed the head nut *d*, on which is integrally formed the circular hollow neck *e* in which latter the valve *f* works and is guided in its up and down movement, the external diameter of the said neck being less than the internal diameter of said throat. The valve is cylindrical, and is constructed of leather or such like material. The hollow neck terminates short of the valve seat *j*, and is made with the openings *g* which act as return passages for the back flow of water from the outlet *c* as seen by the dotted arrows, whereby the valve *f* is forced home on its seat *j* and so prevents such backflow water from returning into the chamber *b* immediately pumping operations cease. As soon as pumping is resumed the valve is thereby lifted into the dotted position and the water allowed to flow into the outlet *c* as is denoted by the full-line arrows.

What I claim as my invention and desire to secure by Letters Patent is:—

A check valve comprising a casing formed with intersecting inlet and outlet passages having a horizontally flat valve seat at the point of intersection thereof, said casing also being formed with an internally threaded upstanding throat directly over the valve seat, a nut having a portion thereof threaded in said throat, said threaded portion being provided with a depending cylindrical valve guide fully open at the bottom and having a straight contour with openings therethrough only at the upper extremity adjacent to the threaded portion of the nut, the openings in the guide being for the entry of back-flow water from said outlet passage and the guide terminating adjacent to and above the valve seat and having an external diameter which is less than the internal diameter of the said throat, and a cylindrical valve having opposite flat ends and arranged interiorly of the said guide, the lower flat end of the valve being adapted to fully cover the horizontally flat valve seat, the upper flat end of the valve being free to rise close to the lower end of the nut within the throat and close over the openings solely in the upper portion of the guide and also to release said openings when the valve is closed to permit the back flow water to engage the upper flat end of the valve.

In witness whereof I have hereunto set my hand in presence of two witnesses.

EDWARD WORSTER SHAW.

Witnesses:
F. W. COLLETT,
F. C. WALTHAM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."