No. 755,734. PATENTED MAR. 29, 1904.

T. BARROW.

VALVE OPERATING MECHANISM.

APPLICATION FILED JULY 13, 1903.

NO MODEL.

Fig. 1.

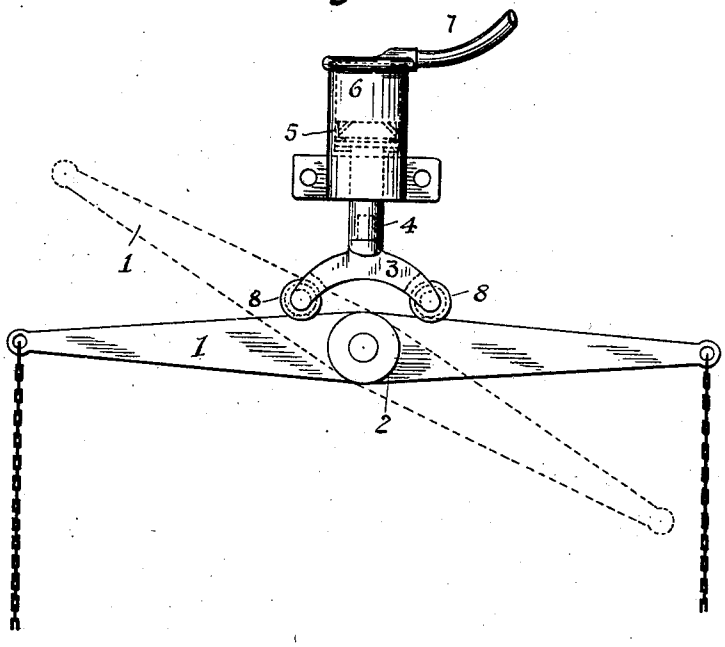
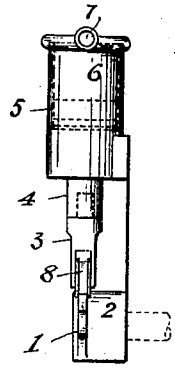


Fig. 2.



Witnesses
Charles Hanimann.
Samuel L. Sargent

Thomas Barrow
Inventor
By his Attorney
Chas. N. Forbes

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

No. 755,734. Patented March 29, 1904.

UNITED STATES PATENT OFFICE.

THOMAS BARROW, OF PLAINFIELD, NEW JERSEY, ASSIGNOR TO PEDRICK AND AYER COMPANY, OF PLAINFIELD, NEW JERSEY.

VALVE-OPERATING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 755,734, dated March 29, 1904.

Application filed July 13, 1903. Serial No. 165,242. (No model.)

To all whom it may concern:

Be it known that I, THOMAS BARROW, a subject of the King of Great Britain, and a resident of Plainfield, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Valve-Operating Mechanism, of which the following is a specification.

This invention consists in a pneumatic valve-operating mechanism wherein the valve is held normally closed and made capable of opening in reverse directions and when released will automatically assume its normal closed position.

In the accompanying drawings, forming a part of this specification, a mechanism is illustrated embodying the invention, Figure 1 representing a front view, and Fig. 2 a side view, thereof.

The mechanism shown comprises an operating-lever 1, which is rigidly attached to a central hub 2, which may form an extension of a rotating valve or its spindle or connected with means to impart a rectilinear movement, like a toothed pinion and rack, to a slide-valve, which will be readily understood. The operating-lever 1 is held in a horizontal position, which conforms to the closed position of a connected valve, by means of a pneumatic pressure device bearing upon the lever at points on opposite sides of its hub or pivot 2. This pressure device consists of a curved yoke 3, that bears at its extremities upon the top of the lever and normally retains the lever in a horizontal position. Grooved rollers may be used at the bearing ends of the yoke to maintain it in engagement with the lever and to reduce the friction, as shown in Fig. 1. This yoke is attached to the end of a piston-rod 4, that connects with its piston 5 in the pressure-cylinder 6, the pressure-supply to the cylinder being introduced above the piston by means of a pipe connection 7. The air-pressure in the cylinder may be constant or variable. When the operating-lever is tilted, as shown in dotted lines, Fig. 1, to open the valve direct or to reverse its movements, as the case may be, the yoke and its connected piston are forced upward against the pressure in the cylinder, and when the lever is released the pressure on the yoke automatically returns it to its horizontal position.

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

A valve-operating mechanism, comprising an oscillating lever connecting with means for operating the valve, in combination with a yoke engaging the lever on opposite sides of its pivotal point and a pneumatic pressure device for normally holding the yoke in a horizontal position and automatically restoring the same when released from a tilted position, as set forth.

Signed at New York, in the county of New York and State of New York, this 26th day of June, A. D. 1903.

THOMAS BARROW.

Witnesses:
CHAS. W. FORBES,
CHARLES HANIMANN.