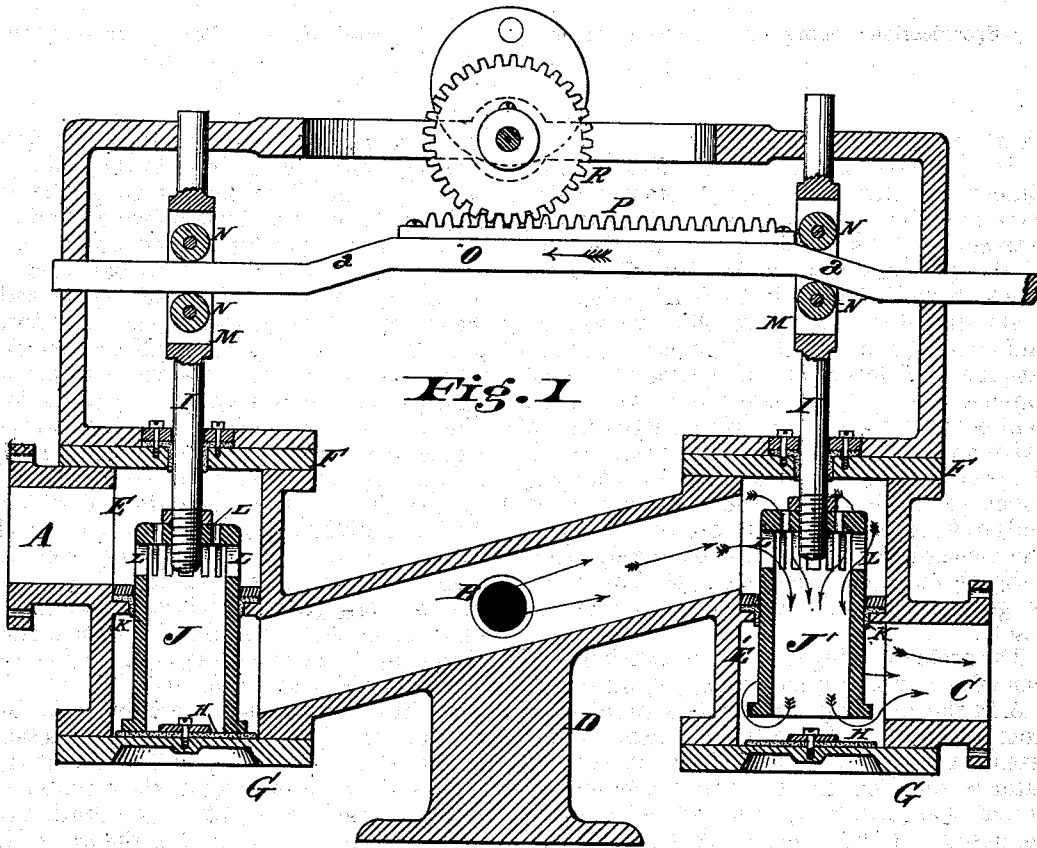


H. J. REEDY.

Valves for Hydrostatic-Elevators.

No. 155,675.

Patented Oct. 6, 1874.



Attest
Edgar Gross
Edgar Gross

Inventor
Henry J. Reedy
By *J. Millward*
Attorney

UNITED STATES PATENT OFFICE.

HENRY J. REEDY, OF CINCINNATI, OHIO.

IMPROVEMENT IN VALVES FOR HYDROSTATIC ELEVATORS.

Specification forming part of Letters Patent No. **155,675**, dated October 6, 1874; application filed April 2, 1874.

To all whom it may concern:

Be it known that I, HENRY J. REEDY, of Cincinnati, Hamilton county, State of Ohio, have invented a certain new and useful Improvement in Valves for Governing the Flow of Water to and from Hydrostatic Elevators, of which the following is a specification:

My invention relates to the construction and operation of valves for governing the inlet-pipe and outlet-pipe of hydrostatic hoisting-machines and analogous uses; and my invention consists of a certain construction of valve for both inlet and outlet pipes, and in the peculiar method of packing the same, by which a very cheap construction is arrived at, and an effective, durable valve provided, which, when closed, shall be almost balanced, (being perfectly balanced when open,) so that it may be governed rapidly, and with accuracy and ease.

The accompanying drawing is a vertical section of an apparatus embodying my invention.

A in the drawing represents a supply-pipe from the water-works to the elevator. B represents the aperture through which the elevator is supplied, the same aperture serving as a discharge-aperture from the elevator, in the descent of the same. C is the discharge-pipe from the aperture. The pipes A B C may be, as shown, all embraced in one casting, D. Two unfinished cylinders, E E', may be formed in the casting D, the cylinders being simply faced off at the ends, for the attachment thereto of circular heads F G. The heads G are fitted interiorly, in the manner shown, with leather seats H, and the heads F have hydraulic packing as a stuffing-box, through which the valve-rods I pass. To the inner ends of the valve-rods I the valves J J' are secured rigidly, and, if desirable, adjustably. The lower ends of the valves J J' are faced off truly, so as to seat with a close joint upon the leather, gum, or other suitable seats H; and the outer peripheries of each valve is turned off cylindrically and smoothly, so that it may

work snugly and with a tight joint in the hydraulic packing K, secured to the cylinders E E'. Apertures L are made through the upper ends of the valves, through which the water passes when the valve is open, and by means of which the pressure is nearly balanced when the valve is closed. Upon the upper ends of the valve-rods I elongated eyes M are formed, in which anti-friction rollers N are journaled, in the manner shown. Between these rollers a horizontal reciprocating bar, O, is fitted, which is moved backward and forward by means of a rack, P, and a toothed wheel, R, or equivalent means. The bar O has double inclines a upon it, the operation of which, as the bar reciprocates, serves to open or close the valves, the operation being such that, when one valve has been closed, (the other having been previously closed,) both may remain so; or, by a continuation of the motion of the bar in the same direction, the one previously closed may be opened.

By this means, when the valve J' is closed by a motion of the bar O in the direction of the arrow immediately upon the descent of the elevator to the proper level, the elevator may again be raised immediately by a continuation of the motion of the bar O in the same direction, this motion serving to open the valve J.

The bar O may be operated by the usual appliances customary in stopping and starting mechanisms for hoisting-machines.

I claim—

In combination with the cylinders E E', having seats H and central packing K, the hollow cylindrical valves J J', connected and operating substantially in the manner and for the purpose specified.

In testimony of which invention I hereunto set my hand.

HENRY J. REEDY.

Witnesses:

FRANK MILLWARD,
J. L. WARTMANN.