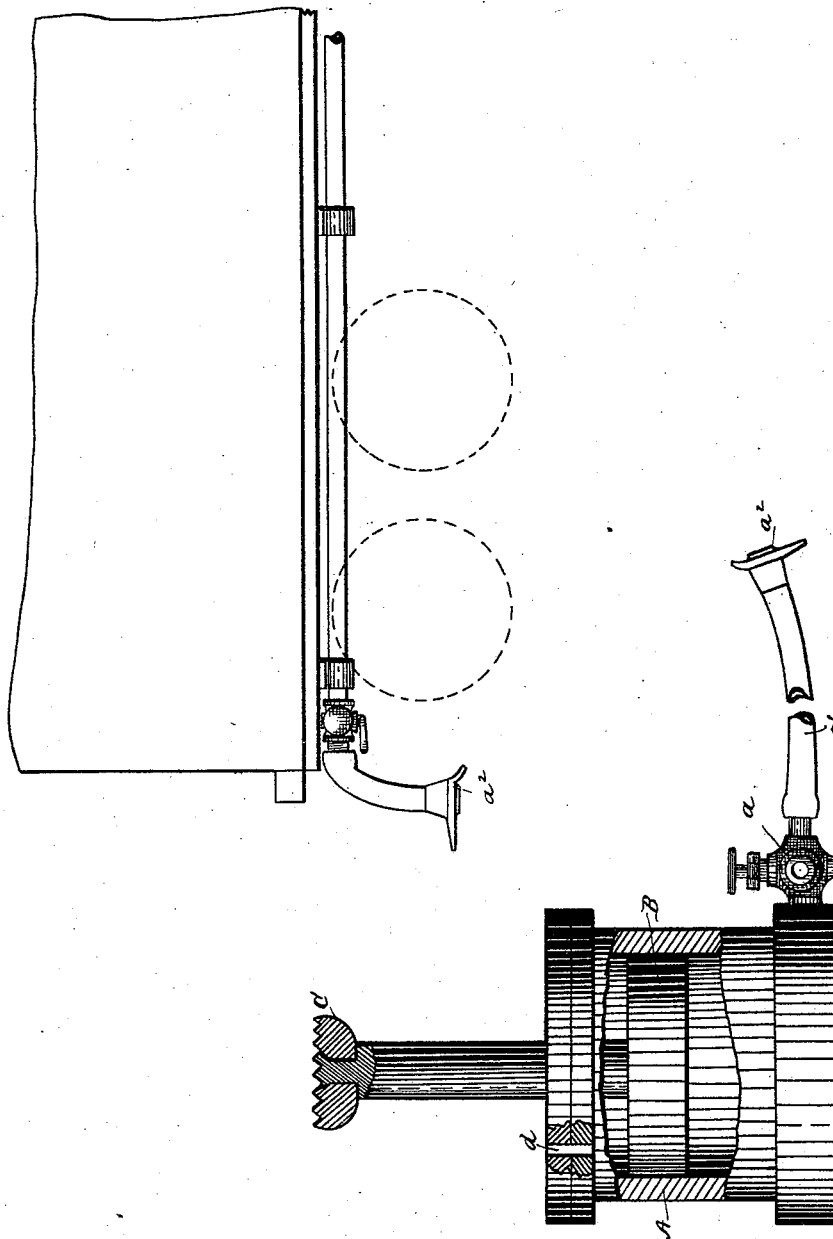


(No Model.)

W. H. SILVERTHORN.
LIFTING JACK.

No. 455,124.

Patented June 30, 1891.



Witnesses.
W. R. Edson,
Chas. D. Jones

Inventor
William H. Silverthorn
By *Leggett & Leggett*
Attys

UNITED STATES PATENT OFFICE.

WILLIAM H. SILVERTHORN, OF CLEVELAND, OHIO.

LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 455,124, dated June 30, 1891.

Application filed September 15, 1890. Serial No. 365,044. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. SILVERTHORN, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Lifting-Jacks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to an improved lifting-jack that is adapted to be automatically operated by air or steam under pressure, and more especially adapted to be used on railway-cars in connection with the air-supply of the air-brakes.

My invention further consists in certain features of construction and in combination of parts hereinafter described, and pointed out in the claim.

The accompanying drawing is an elevation, partly in section, of my improved automatic lifting-jack, showing the mechanism for establishing an open communication between the jack and compressed-air supply of the air-brake mechanism of a railway-car.

A represents a cylinder, in which is adapted to operate a suitable piston B. Cylinder A, below the extremity of the downward movement of the piston, is provided with suitable mechanism, usually a two-way valve *a* and a flexible tubing and half-coupling *a'* *a*², whereby cylinder A may be connected either with the reservoir or, as shown, with the pipes of the air-brake mechanism of a railway-car for receiving the desired supply of compressed air; or cylinder A may be connected directly with the compressed-air reservoir at the engine, as may be found most convenient, according to the point or place at which the jack is to be employed. The piston-rod extends through the upper head of the cylinder A, and has secured thereto a disk or plate C, stationary or otherwise, that may be turned in either direction, said disk or plate C constituting the head of the jack.

In using my improved jack, it is placed with head C against the weight or load desired to be lifted, and the device having been connected with the desired source for supplying the compressed air, communication is opened between the latter and that portion of cylinder A that is below the piston. The compressed air admitted under the piston causes the latter to rise. The elevation of the piston raises the connected head and the load is lifted, as desired. The work having been performed, communication with the air-supply is cut off, the two-way valve or cock *a* affording exit for the compressed air under the piston, so that the latter can descend by gravity to its normal position.

Of course one or more outlets *d* should be provided for the exit of the air in the cylinder above the piston as the latter is being lifted.

My improved jack is simple in construction and, being automatic, is much more convenient than the screw and lever jacks heretofore used, and is less cumbersome.

Although I have shown and described my improved jack operated by compressed air, I do not wish to be understood as limiting myself in this respect, as steam-pressure might be used instead.

What I claim is—

In a lifting-jack, the combination, with a cylinder having an air-opening in its top and an inlet in the opposite end for steam or air, of a piston fitted inside of the cylinder, a piston-rod secured to the piston and extending out at the upper end, and a head C, swiveled on the upper end of the piston-rod, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 30th day of August, 1890.

WILLIAM H. SILVERTHORN.

Witnesses:

CHAS. H. DORER,
WARD HOOVER.