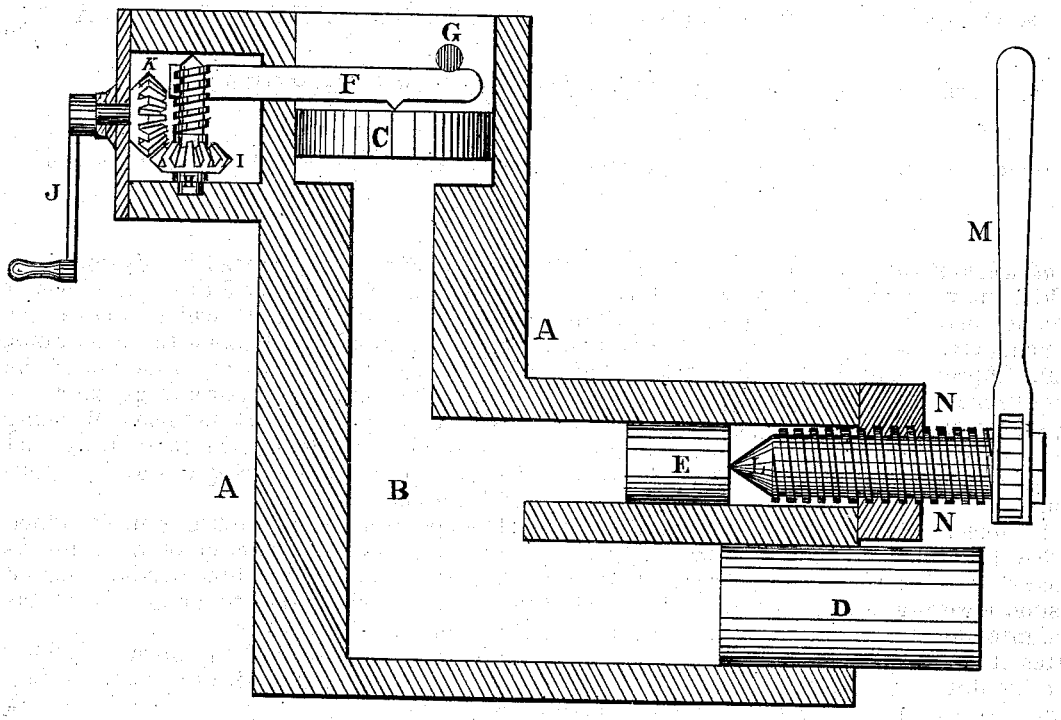
S. A. ALEXANDER.

Pressure-Jack, Hydraulic.

No. 198,176. Patented Dec. 18, 1877.



Attest

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SOLOMON A. ALEXANDER, OF YORK, PENNSYLVANIA.

IMPROVEMENT IN PRESSURE-JACKS, (HYDRAULIC.)

Specification forming part of Letters Patent No. **198,176,** dated December 18, 1877; application filed November 1, 1877.

To all whom it may concern:

Be it known that I, SOLOMON A. ALEXANDER, of York, in the county of York and State of Pennsylvania, have invented a new and useful Improvement in Pressure-Jacks, which improvement is fully set forth in the following specification and accompanying drawings.

The accompanying drawing is a longitudinal section of a machine embodying my invention.

The object of my invention is to furnish a device that may be changed to produce great speed or great power, as may be required, in raising, lowering, or pushing any object, or in straightening or bending columns, bars, or plates of metal.

In the drawing, A is the frame of the machine. B is a chamber for holding any fluid or pliable substance. C is a large ram. D is a medium-sized ram. E is a small ram. F is a lever with thread in one end. G is fulcrum for the lever. H is a screw-shaft, with bevel-wheel I secured to it. J is a crank, with shaft and bevel-wheel K secured to it. L is a screw used to press against the rams D or E, as may be desired. M is a ratchet-lever used to give motion to the screw L. N N is a plate secured to the frame A for the screw L to work in. The plate N N and the screw L can be changed to use against either D or E.

The machine being placed in position, a rotary motion of the crank J draws the lever F against the large ram C, which presses the fluid in the chamber B against the other rams, and produces the desired rapid motion of the object to be moved, bent, or straightened.

In like manner the ratchet-lever M, being made to vibrate, presses the screw L against the rams D or E, producing a slow but powerful motion.

The operation of my device is not confined to any angle or any direction of the rams, as it is obvious that the machine can be designed for either of the rams to press any of the others in any direction.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A pressure-jack consisting of frame A, having chamber B, rams C, D, and E, lever F, screw-shaft H, with bevel-wheel I, crank and shaft J, with bevel-wheel K, screw L, with ratchet-lever M, and adjustable plate N N, substantially as shown and described.

SOLOMON A. ALEXANDER.

Witnesses:
H. E. PASSMORE,
LOUIS H. BARKER.