T. W. PLATT & A. M. ORWIG.

Lifting-Jack.

No. 210,708. Patented Dec. 10, 1878.

Fig: 1.

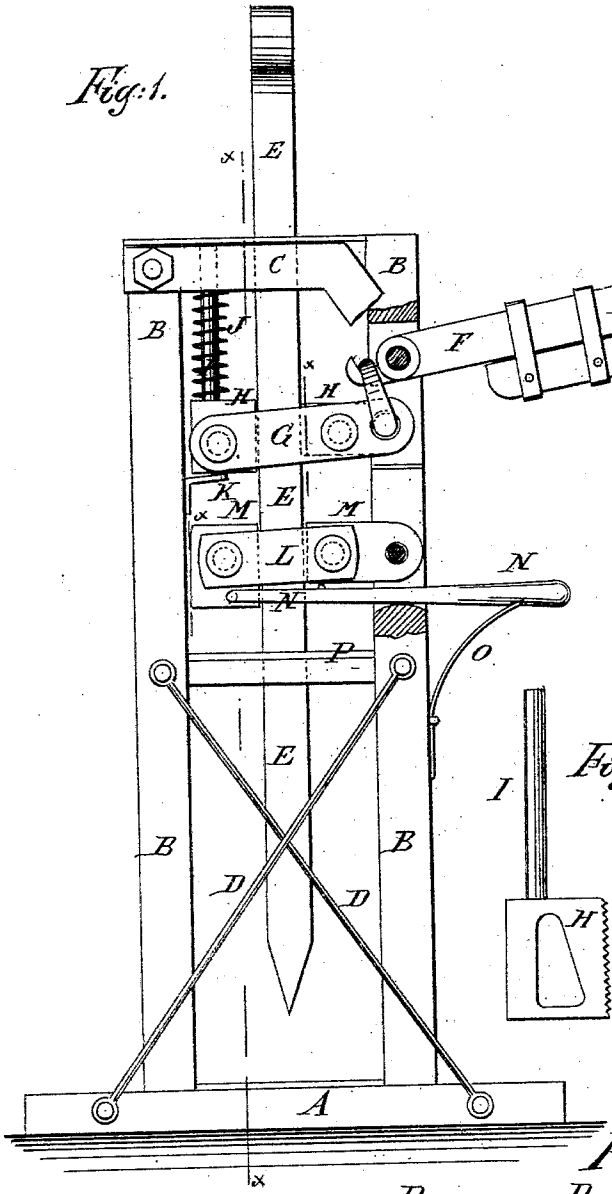


Fig: 4.

Fig: 2.

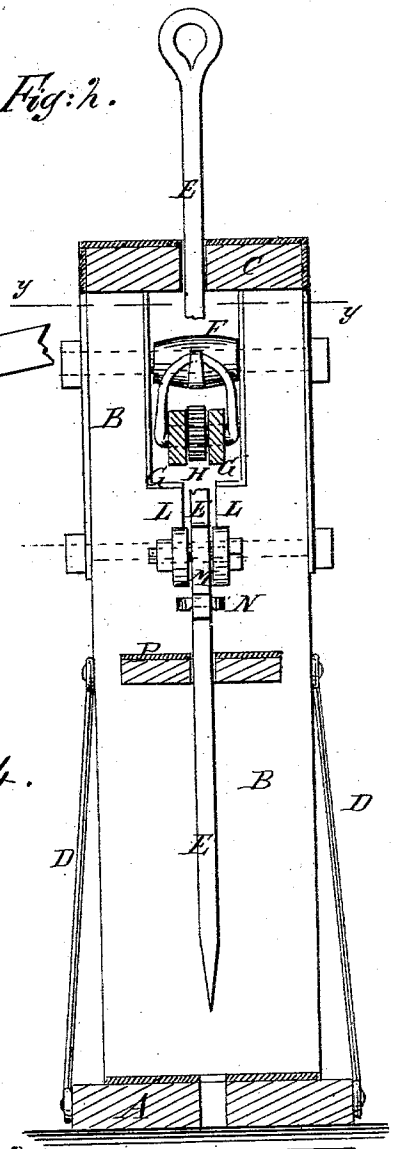
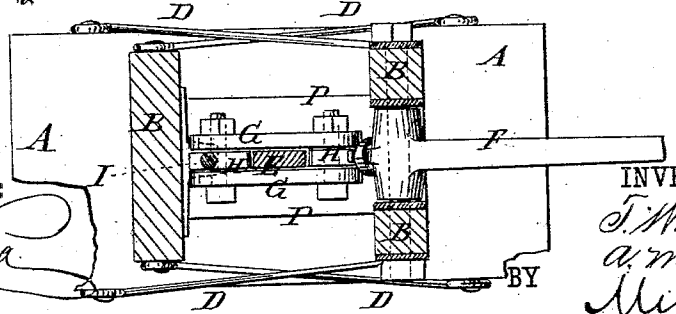


Fig: 3.



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UNITED STATES PATENT OFFICE.

THOMAS W. PLATT AND ARTHUR M. ORWIG, OF WINDFALL, INDIANA.

IMPROVEMENT IN LIFTING-JACKS.

Specification forming part of Letters Patent No. **210,708**, dated December 10, 1878; application filed September 13, 1878.

To all whom it may concern:

Be it known that we, THOMAS WESPY PLATT and ARTHUR MACK ORWIG, of Windfall, in the county of Tipton and State of Indiana, have invented a new and useful Improvement in Lifting-Jacks, of which the following is a specification:

Figure 1 is a side view of our improved machine, part being broken away to show the construction. Fig. 2 is a section of the same, taken through the broken line *x x x x*, Fig. 1. Fig. 3 is a cross-section of the same, taken through the line *y y*, Fig. 2. Fig. 4 is a detail side view of the wedge-block of the upper clasp.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved lifting-jack or press-power, which shall be capable of exerting an immense power, while being simple and compact in construction, and which may be used in a vertical, inclined, or horizontal position, as may be desired.

The invention will first be described in connection with the drawing, and then pointed out in the claim.

A is the base of the machine, which is made of such a size as to afford a firm support and prevent it from being pressed into the ground. To the base A are attached the lower ends of two standards or frames, B, the upper ends of which are connected by a platform or top frame, C. The base A and top C may be faced with metal to prevent wear. The uprights or standards B are strengthened by inclined brace-rods D, attached to them and to the base A. Through the top C and base A are formed holes for the passage of the lifting-bar E, the lower end of which is made pointed, so that it can be driven into the ground, to give it a longer upward movement. A hole is formed in the upper end of the lifting-bar E, to receive the end of a bar, the other end of which is placed in the hole in the upper end of the lifting-bar of another machine, so that it may be used for pulling stumps, or other work where the machine cannot be conveniently placed under or over the object to be raised.

The bar E may be of any desired shape, and for some uses it may be replaced by a wire or other cable.

The machine is worked by means of a lever, F, which is pivoted near its inner end in a slot in the forward standard B. With the inner end of the lever F are connected, by a link or clevis, the forward ends of two straps or bars, G. To and between the two straps G, and upon the opposite sides of the lifting-bar E, are pivoted by bolts two blocks, H, the faces of which that rest against the lifting-bar E are corrugated or roughened, to prevent them from slipping upon the said bar E. The rear block, H, has an inclined or wedge-shaped slot formed in it to receive the pivoting-bolt, so that the said block may wedge itself against the bar E, and thus grasp it more firmly. To the rear block, H, is attached, or upon it is formed, a guide-pin, I, which passes through a hole in the top C, and upon which is placed a spiral spring, J, to push the clasp G H down and release the bar E when the pressure upon the lever F is removed.

The spiral spring J is only used when the machine is worked in an inclined or horizontal position.

When the machine is used in an upright position, the weight of the clasp G H will release the bar when the outer end of the lever F is raised. The downward movement of the clasp G H, when the bar E is released, is limited by a stop, K, attached to the rear standard B. The bar E and its load are held in place while the clasp G H is being lowered for another hold by a second clasp, which consists of two bars or straps, L, having two blocks, M, pivoted to and between their ends upon the opposite sides of the lifting-bar E. The faces of the blocks M that bear against the bar E are corrugated or roughened, to prevent them from slipping upon the said bar. The forward block, M, is extended outward into a slot in the forward standard, B, and is pivoted to the said standard.

With this construction, as the lifting-bar E is carried upward by the action of the upper clasp, G H, it will slide through the lower clasp, L M, freely, and as the said bar E is released from the said upper clasp, G H, its downward pressure will cause the lower clasp, L M, to grasp and hold it.

N is a lever, the inner end of which is forked, to pass the bar E, and is pivoted to the rear block, M. The lever N passes through and is

fulcrumed to the forward standard B, and its outer end projects into such a position that it may be conveniently reached and operated.

By this construction, by pressing the outer end of the lever N downward and the outer end of the lever F upward, the lifting-bar E will be allowed to drop to the ground. The two levers F N also allow the bar E and its load to be lowered, as may be required.

O is a spring, attached to the forward standard B, and which presses against the lower side of the outer end of the lever N, to draw the lower clasp, L M, down when released from the downward pressure of the bar E.

The spring O is only required when the machine is used in an inclined or horizontal position. When the machine is used in an upright position, the weight of the clasp L M will be sufficient to carry it down.

The lifting-bar E is made to move up and down in a straight line by the guide-plate P, attached to the standards B, and through a hole in which the said bar E passes.

The shape of the frame-work A B C may be varied, as the different purposes for which the jack is to be used may require.

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

The combination, with bar E, of the lever F, clasps G H L M, and spring-supported lever N, the latter pivoted to lower clasp, as and for the purpose specified.

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Witnesses:
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JOSEPH GIFFORD.