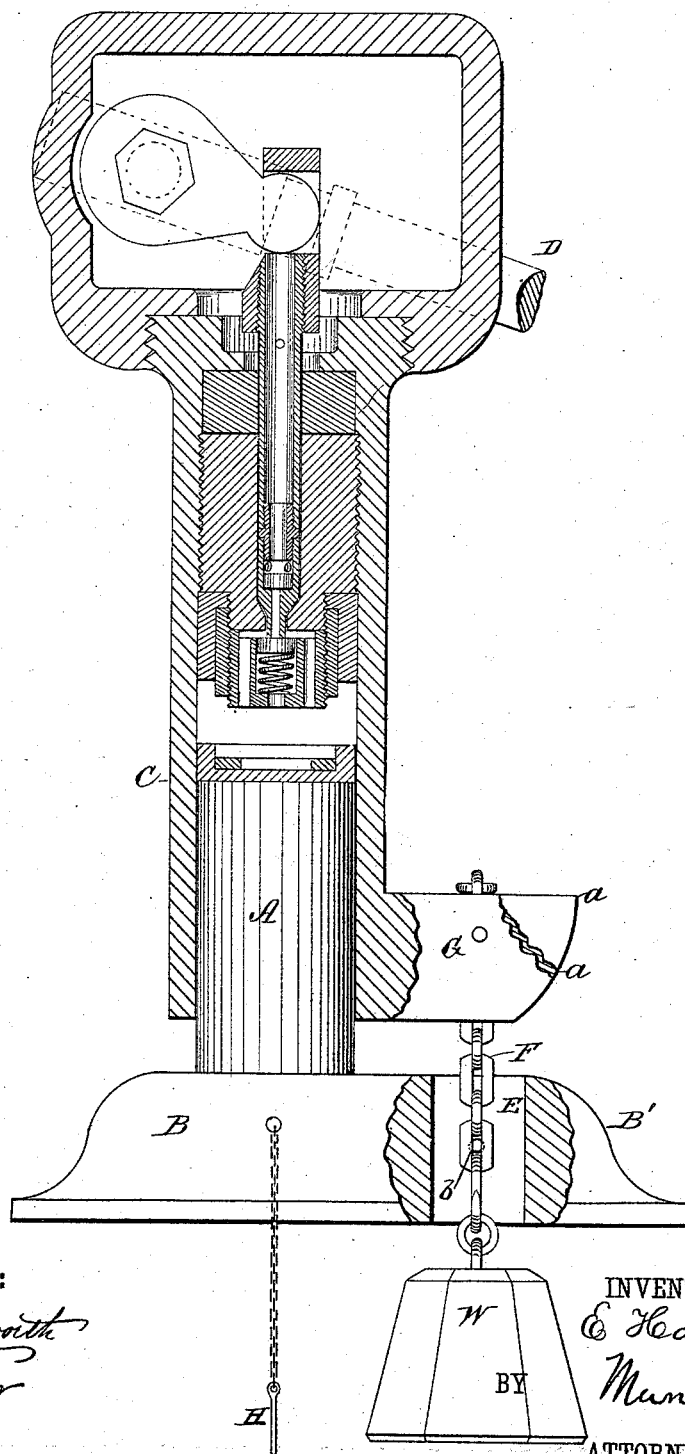


(No Model.)

E. HALL.
HYDRAULIC JACK.

No. 305,386.

Patented Sept. 16, 1884.



WITNESSES:

W. W. Heddingworth
J. W. Weister

INVENTOR:

E. Hall
Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ELNATHAN HALL, OF LATINGTOWN, (GLEN COVE,) NEW YORK.

HYDRAULIC JACK.

SPECIFICATION forming part of Letters Patent No. 305,386, dated September 16, 1884.

Application filed February 27, 1884. (No model.)

To all whom it may concern:

Be it known that I, ELNATHAN HALL, of Latingtown, (Glen Cove,) in the county of Queens and State of New York, have invented a new and Improved Hydraulic Jack, of which the following is a full, clear, and exact description.

This invention pertains to improvements in hydraulic jacks, being especially applicable to the lifting-jack covered by Letters Patent No. 162,044, and dated April 13, 1875; and it consists of the adaptation of the same for lifting weights on a plane below itself, thereby greatly extending the applications and uses to which it may be appropriated.

Reference is to be had to the accompanying drawing, forming part of this specification, in which the figure is a sectional elevation of the hydraulic jack, in part, above referred to with my invention applied thereto, the same being shown in side elevation, in part, and with a portion broken away.

The piston A of the jack is attached solidly to the base B in the ordinary way, and the cylinder C is placed on and operated up and down upon the piston A by the action of the lever D and of the other mechanism herein shown, and described in the above-referred-to Letters Patent, the same not being here described, because forming no part of this invention. The base B is extended in front of the piston A, as shown at B', and through this extended portion is formed the opening or passage E, through which the lifting-chain F passes, as shown in the drawing, when any weight, W, beneath the jack is to be lifted. The chain F is attached to the cylinder C of the jack by the pin G, which passes through the corresponding projections, *a a*, formed at the lower end of the cylinder C, which projections *a a* stand above the opening E, so that the space between them, through which the chain F passes, stands immediately over the center of the said passage E. At *b* there is a horizontal passage made through the extended portion B' of the base B, which passage comes near the center of the main passage E through the said extension, and this passage *b* is adapted to receive the pin H, which, when put in the opening *b*, is adapted to be passed through one of the links of the chain F, for

holding the weight W while the cylinder C is being lowered to take another hold upon the chain F for raising the weight still further.

In use for raising a weight beneath the jack, the chain F will be attached to the weight and then passed through opening E and between the projections *a a*, where it will be held by the insertion of the pin G. The lever D will then be operated, which will cause the cylinder C to be lifted upon the piston A, which will cause chain F to lift the weight. The cylinder C having been raised to the limit of its upward movement, the pin H will be inserted into opening *b* and through one of the links of the chain F, which will hold the weight being lifted. The cylinder C will then be lowered and the pin G withdrawn and the slack in the chain F taken up, and then the pin G will be replaced in the projections *a a*, passing it, as before, through one of the links of the chain F. The pin H will now be removed and the jack again operated, which will cause the weight to be again lifted, and this operation will be repeated until the weight is raised to the height required.

When the jack is to be used for ordinary purposes, the chain F will be removed from the jack by removing the pin G, when the jack is adapted for all ordinary purposes.

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

1. The base B of the jack, having the opening E made through it, in combination with the chain F, attached to the projections *a* of the jack, substantially as and for the purposes set forth.

2. The cylinder C, formed with the projections *a*, in combination with the base formed with the opening E, substantially as and for the purposes set forth.

3. The base B, extended as shown at B', and having the opening E and horizontal passage *b* made through it, in combination with the chain F, projections *a*, and pins G, H, substantially as described.

ELNATHAN HALL.

Witnesses:

ISAAC V. BALDWIN,
CHAS. J. CHIPP.