Davis & Warner,

Lifting Jack,

No. 21,822, Patented Oct. 19, 1858.

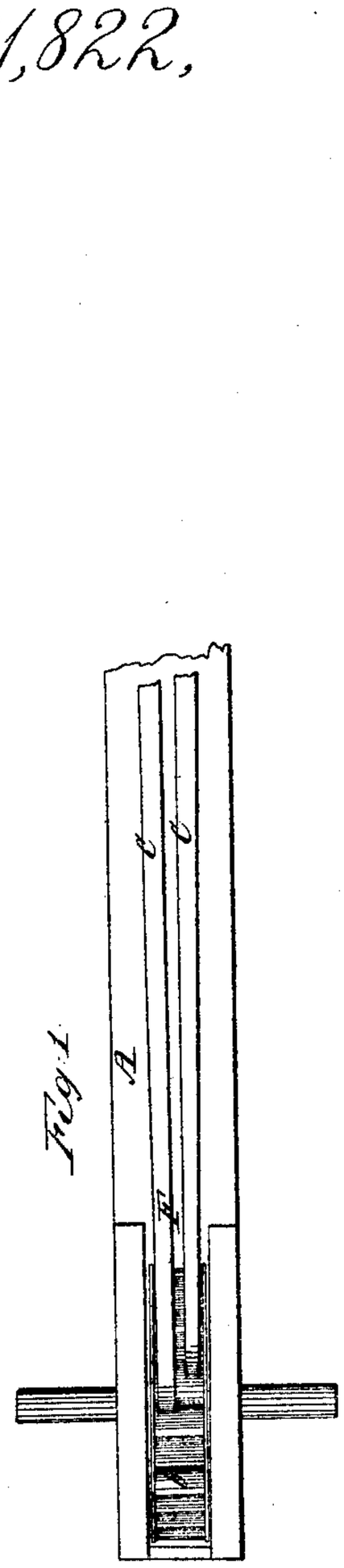

Fig. 1.

Fig. 2.

Fig. 3

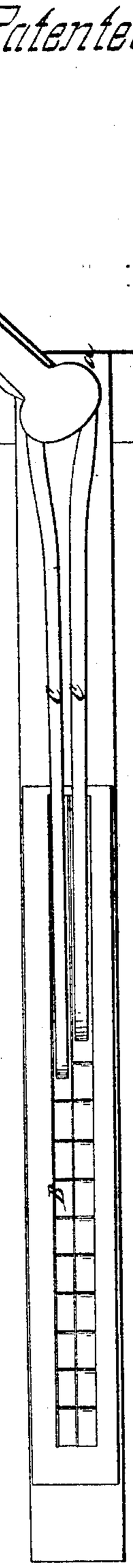

Fig. 4.

UNITED STATES PATENT OFFICE.

T. J. DAVIS, OF SCHROEPELL, AND J. B. WARNER, OF VOLNEY, NEW YORK.

MACHINE FOR LIFTING HEAVY WEIGHTS.

Specification of Letters Patent No. 21,822, dated October 19, 1858.

To all whom it may concern:

Be it known that we, T. J. DAVIS and J. B. WARNER, the former of the town of Schroepell and the latter of the town of Volney, both in the county of Oswego and State of New York, have invented a new and useful Improvement in Lifting Heavy Weights by Means of Levers; and we do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon.

Figures 1 and 2 are isometrical views of the different parts of the invention.

In Fig. 1, A, is the inclined plane or way for the weight to slide on—B, the sliding beam with alternate ratchets in it—C, the bent levers acting as pawls falling into said ratchets—D, the lever to which the power is attached—E, is the foundation for supporting the inclined plane—F, the tongue working in a groove on the under side of the beam B—*a*, the fulcrum of the power lever—*c c* the fulcrum to which is attached the pawl levers C—*d*, screws for securing a longer arm to the lever D.

In Fig. 2, A, the foundation—B, the ratchet wheel—C, the pawl levers—D, the power lever.

In the operation of our invention when we desire to raise great weights, such as drawing up canal boats from the water and for which purpose we use it successfully, the inclined plane is firmly fixed so that the bed or beam extends into the water while the other end is high enough out of and from the water to allow the vessel when drawn up to be entirely out of and above the level of the water. A chain is firmly fastened to the lower end of the sliding beam and then to the weight or vessel to be lifted and the pawls or arms C, fall into the catches in this sliding beam, while the fulcrum of the power lever D, is fixed as at *a* and the two arms are at *c c* by taking hold of the end of the lever and vibrating the same. The levers C catch alternately into the ratchet on the slide B, and thus alternating the catch of the same every time the power lever D, is vibrated and thus by sliding the weight up at every vibration of the lever D. The power of this lever is very great as the fulcrum of the resistance is very short in proportion to the power and by this peculiar device we gain a greater amount of leverage than in any known way for the purposes we intend it.

Instead of the sliding ratchet we intend using the ratchet wheel B, where we design using the levers C, and D, for elevating weights and also in some other convenient forms, for applying the power by these means without varying the principle, we contemplate the use of our invention thus gaining a very greatly increased amount of power by the principles involved in the operation of the lever D, which having its center as the point of bearing or fulcrum while the two arms of the levers C, are made to operate alternately on one or more by the same fulcrum and at each vibration of the lever D, is made to reach a step in the ratchet either sliding the weight as on the inclined plane or on the ratchet wheel lifting it up vertically at each step of the pawl.

Having thus fully described the construction and operation of our invention what we claim as new and desire to secure by Letters Patent is,

The combination of lever D, operating horizontally, and levers C, moving parallel to each other in a line with the fulcrum, and catching alternately into ratchet B, as they are made to reciprocate by the vibrations of lever D, as herein described, and set forth.

T. J. DAVIS.
J. B. WARNER.

Witnesses:
R. W. STANNELL,
CHAS. H. LUSK.