

J. Quetil,
Lifting Jack,

No 27,067,

Patented Feb. 7, 1860.

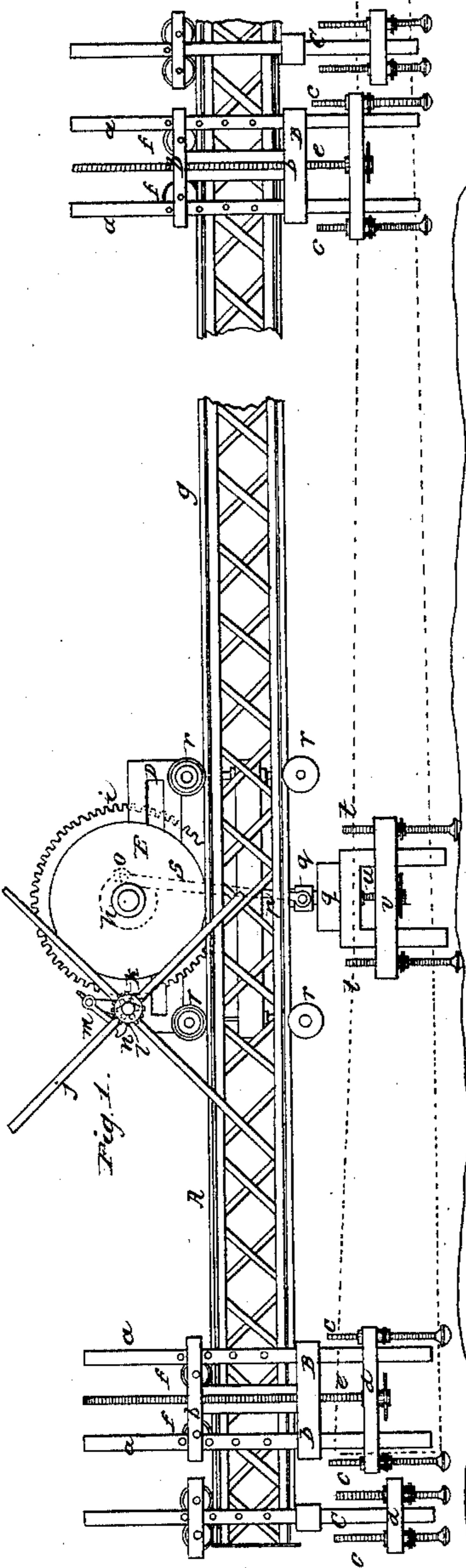


Fig. 2

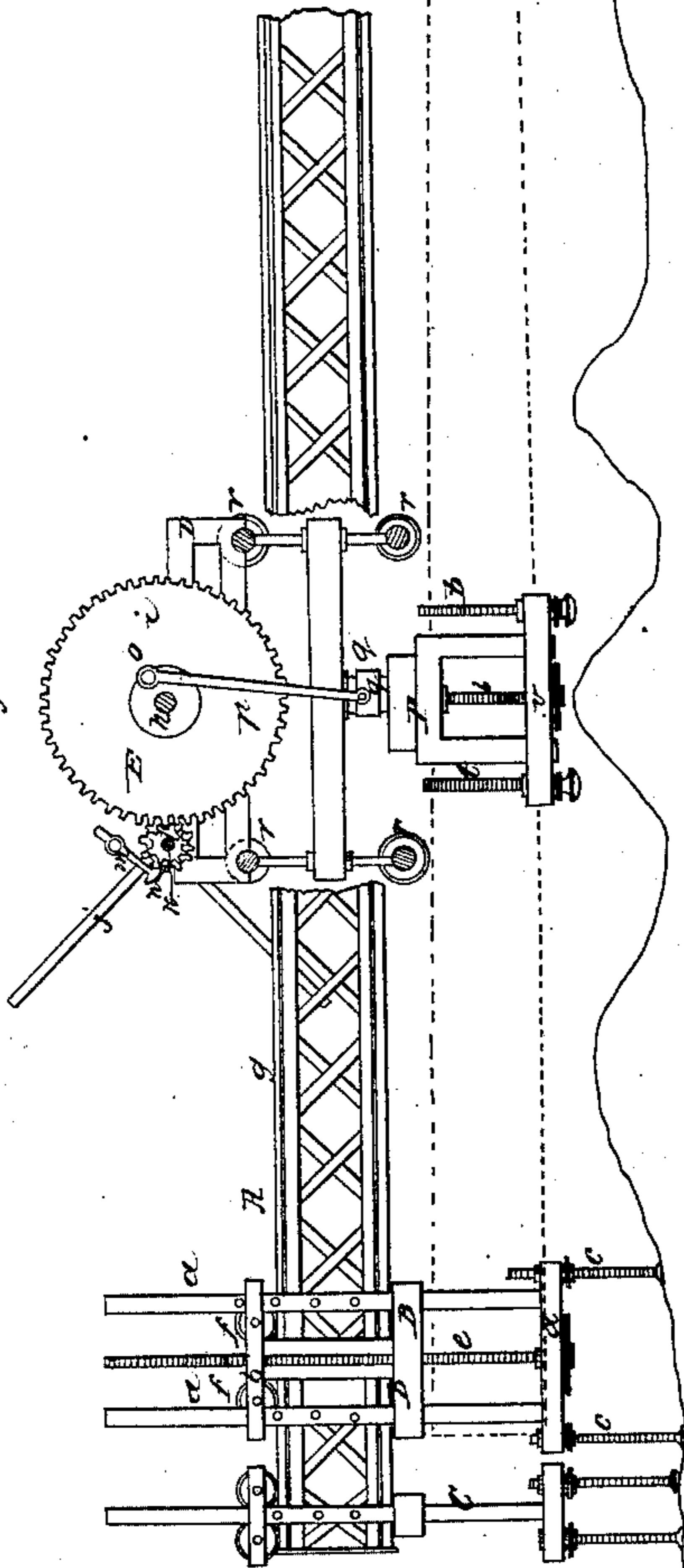


Fig. 3

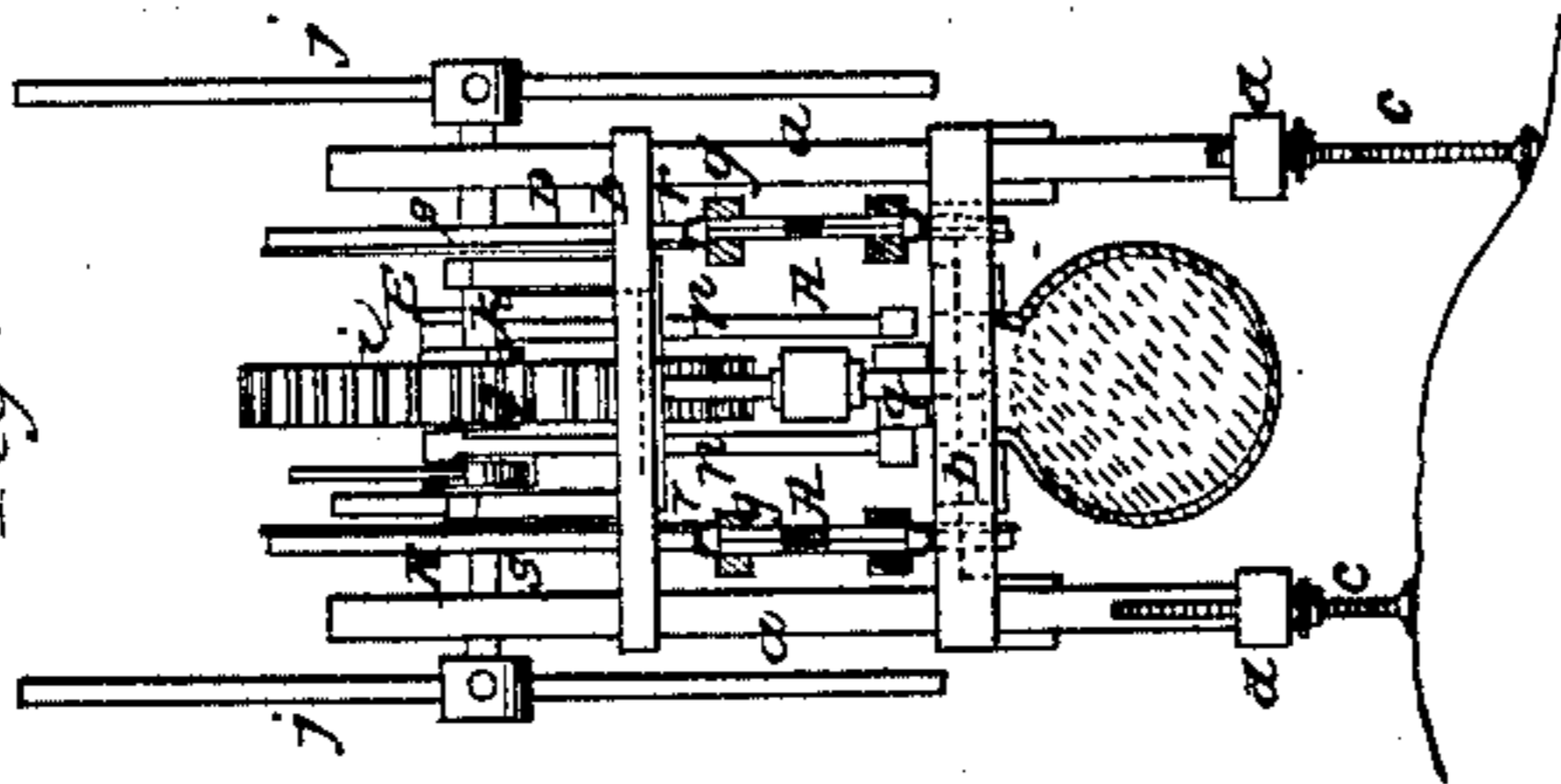
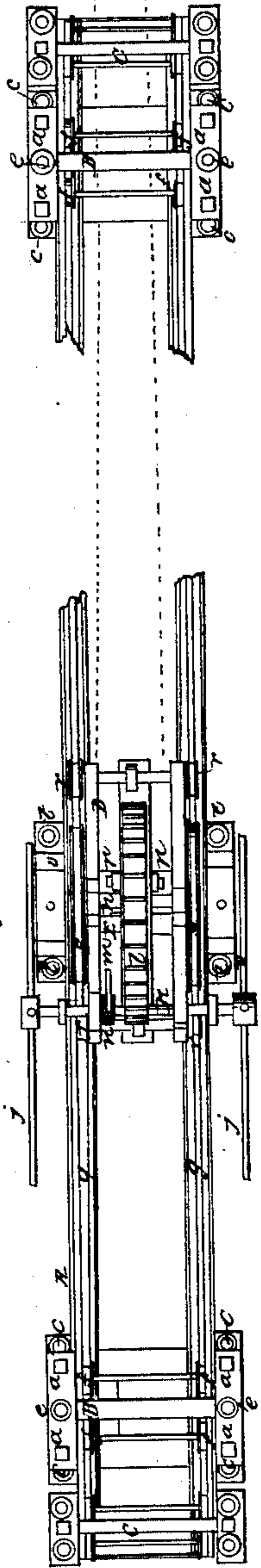


Fig. 4



Witnesses

M. M. Livingston
Thos. Pettigall

Inventor

J. Quetil

UNITED STATES PATENT OFFICE.

JULIEN QUÉTEL, OF NEW YORK, N. Y.

APPARATUS FOR MOVING HEAVY WEIGHTS.

Specification of Letters Patent No. 27,067, dated February 7, 1860.

To all whom it may concern:

Be it known that I, JULIEN QUÉTEL, of the city, county, and State of New York, have invented a new and useful Apparatus for
5 Transporting Heavy Weights; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, in
10 which—

Figure 1 represents a side elevation of my invention. Fig. 2 is a sectional view of the same in another position. Fig. 3 is a plan or top view of ditto. Fig. 4 is a trans-
15 verse vertical section of the same.

Similar letters of reference in all the figures indicate corresponding parts.

The object of this invention is to transport heavy weights, such as large logs, blocks
20 of marble, or stone, heavy pieces machinery, etc., from one place to another; and my invention consists in arranging on a bridge, which slides or rolls on a series of adjustable lifting jacks, a windlass that is movable on
25 the bridge, and to which a separate adjustable lifting jack is attached so that said bridge together with the windlass and the weight attached to it can be moved in a longitudinal direction on the first named lifting
30 jacks that it can be turned around in either direction on the second or central lifting jack, and that it can be raised together with the weight attached to it by the aid of all the lifting jacks combined so as to avoid obsta-
35 cles which may occur on the road and so that it works with equal facility up hill or down as on a level ground and on a smooth road as on a rough surface.

To enable those skilled in the art to make
40 and use my invention I will proceed to describe its construction and operation.

A represents a bridge constructed of sufficient strength for the weights which it has to sustain, and of a length and width which
45 corresponds to the dimensions of the largest logs or blocks of stone to be transported with the same. It is supported by two lifting jacks, B, in such a manner that it slides along on them quite easily, and to facilitate
50 this sliding motion friction rollers may be placed under the bridge, the same as above. These lifting jacks consist of four upright bars, *a*, connected by cross bars, *b*, and supported by screws, *c*, which screw into sliding
55 bars, *d*. These slides move on the upright bars, *a*, by means of screws, *e*, which screw

into the cross bars, *b*, as clearly shown in Figs. 1 and 2. The height of the bridge from the ground is determined by the screws, *c*, and *e*, and these screws can also
60 be so arranged that the bridge retains its level position independent from the formation of the surface as clearly shown in Figs. 2 and 4. The lifting jacks, B, slide along on the bridge and to facilitate their motion fric-
65 tion rollers, *f*, are secured to the upper cross beams, *b*, to work on rails, *g*, on the top of the bridge. Additional jacks, C, are arranged on the bridge, A, beyond the lifting jacks, B, for the purpose of more effectually
70 supporting said bridge.

On the top of the bridge, and arranged on a separate frame, D, between the lifting jacks, B, is the windlass, E, which consists
75 of an arbor, *h*, a large cog wheel, *i*, to which a rotary motion is imparted by means of hand wheels, *j*, on an arbor, *k*, which bears a pinion, *l*, that gears into the cog wheel, *i*. A click, *m*, catching into a ratchet wheel, *n*, serves to arrest the windlass in the desired
80 position. Secured on the sides of the wheel, *i*, are the eccentric wrist pins, *o*, which connect by rods, *p*, with sleeves, *q*, sliding on pins, *q'*, which rest on a frame, F. By turning the windlass the sleeves are depressed
85 and the bridge is lifted independent from the weight which is suspended from the frame, F.

The frame, D, of the windlass is provided with four pairs of rollers, *r*, which fit on
90 rails on the bottom and on the top of the bridge and large grooved wheels, *s*, are attached to the ends of the arbor, *h*, and movable on the same, in order to support the same if it has to sustain the weight suspend-
95 ed from the frame, F.

The frame, F, which supports the pin, *q'*, is furnished with screws, *t* and *u*, similar to the screws of the lifting jacks, B. The screws, *u*, serve to raise the sliding cross
100 bars, *v*, which form the nuts for the screws, *t*, so that the frame, F, can be raised and lowered in the same manner as the lifting jacks, B.

The operation is as follows:—The weight
105 is suspended from the frame, F, and properly balanced as clearly shown in the drawing. If it is now desired to transport the weight over level ground, as represented in Fig. 1, the bridge is alternately supported
110 by the frame, F, and by the lifting jacks, B and C. If it rests on the frame, F, as repre-

sented in the said figure, the lifting jacks on the back end of the bridge are brought close up to the windlass and frame, F, which latter in this case is exactly in the center of the bridge. The screws of the lifting jacks are now turned down so as to relieve the frame, F, and the frame, D, is pushed along to the end of the bridge. The bridge is now supported by the frame, F, and that lifting jack, B, in the rear of said frame, those in front being raised and it can now be moved in a longitudinal direction. If the bridge is now supported by the additional lifting jacks, C, and the jack, B, in the rear, is brought close up to the frame, B, and the other jacks are brought to the end of the bridge, the apparatus is in its original condition.

It will be readily understood how easy it is with my apparatus to keep the bridge always perfectly level so that when it has to be moved over an inclined surface or up or down hill, the transportation takes place with equal facility as it does on level ground.

Where the transportation takes place over rugged ground, or if there are obstacles in the way, such as represented in Fig. 2, the bridge together with the weight has to be raised until both pass over the obstacles. To effect this the screws in the lifting jacks, B and C, are screwed down until the center of the bridge is raised sufficiently high, together with the weight and frame, F, to pass over the obstacles, and the bridge is now moved along by alternately supporting it on the lifting jacks, and then again on the frame, F, as has been already described.

In order to turn the bridge and the weight the operation is the same as above described: The weight and the bridge are alternately supported by the frame, F, and by the lifting jacks, B, but instead of shifting the latter toward the center of the bridge, the bridge when supported by the frame, F, is turned as much at a time as the nature of the weight and the frame, F, will allow, and it is now supported by the lifting jacks, and the frame, F, is turned independent from the bridge and so on until the desired direction has been given to the weight and to the bridge.

It must be remarked that the weight can be moved over the entire length of the bridge, if it is desired, by pushing the frame, D, along on the top of the bridge. This motion can be facilitated, if it is desired, by means of a steam-engine.

What I claim as new, and desire to secure by Letters Patent, is:—

1. The arrangement of the bridge, A, in combination with the lifting jacks, B and C, and with the frame, F, or their equivalents, substantially as and for the purpose specified.

2. The combination with the frame, F, or its equivalent, and with the bridge, A, of the windlass, E, substantially in the manner and for the purpose set forth.

J. QUÉTIL.

Witnesses:

MONTGOMERY M. LIVINGSTON,
THOS. PETENGAL.