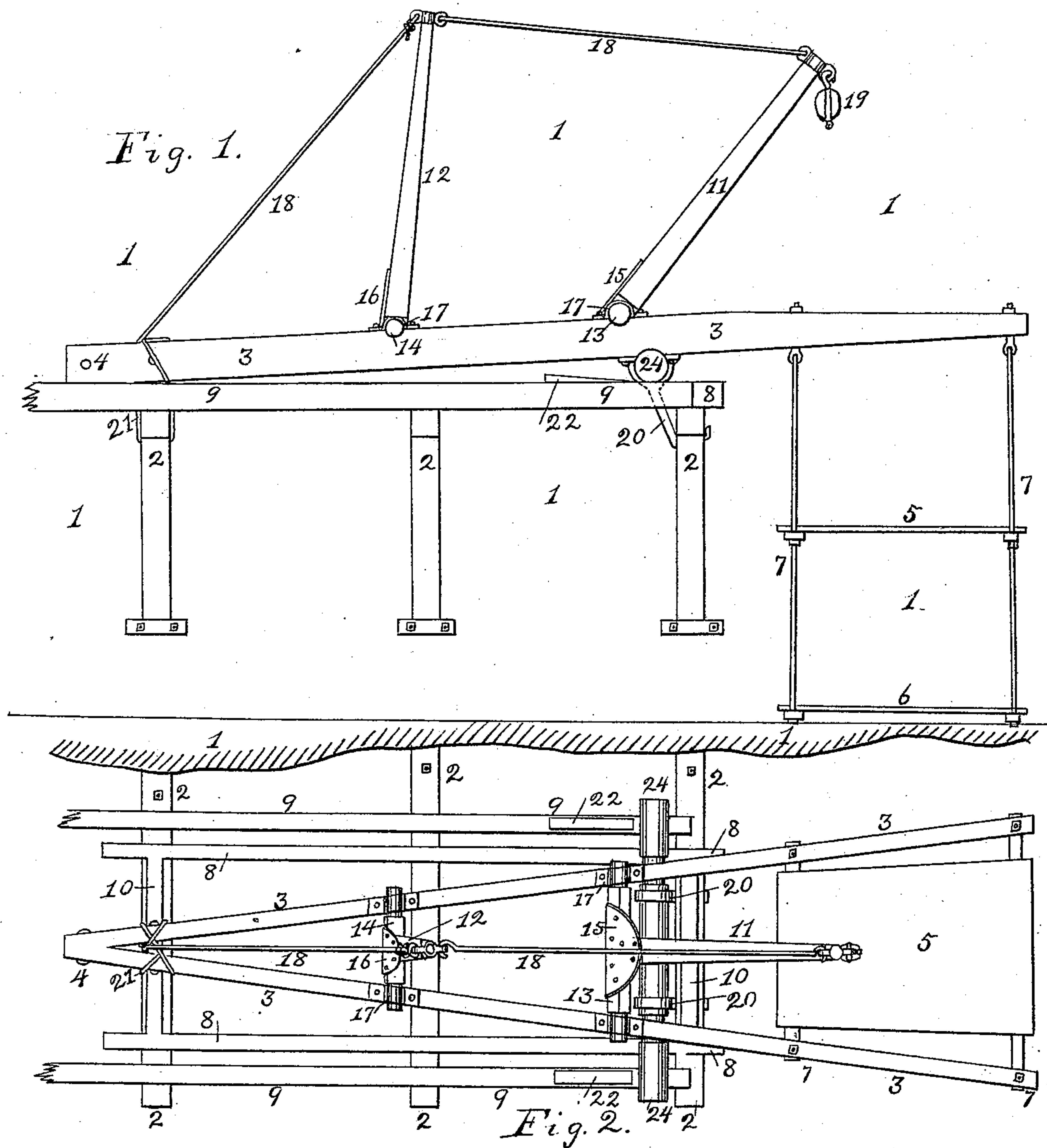


(No Model.)

M. S. HILDRETH.  
DERRICK.

No. 430,207.

Patented June 17, 1890.



Witnesses:  
Frank McIntock  
Roy McIntock

Inventor:  
Michael S. Hildreth

# UNITED STATES PATENT OFFICE.

MICHAEL S. HILDRETH, OF GRAND JUNCTION, COLORADO.

## DERRICK.

SPECIFICATION forming part of Letters Patent No. 430,207, dated June 17, 1890.

Application filed March 21, 1890. Serial No. 344,817. (No model.)

*To all whom it may concern:*

Be it known that I, MICHAEL S. HILDRETH, residing at Grand Junction, in the county of Mesa and State of Colorado, have invented a new and useful improvement in derricks for the construction of a flume, tramway, or similar structure along a nearly perpendicular wall of rock, of which the following is a specification.

My invention relates to a derrick to be used in the construction of flumes, tramways, or similar structures along a nearly perpendicular wall of rock when the brackets supporting the structures are too high above the base of the rocky wall to be secured in place by ordinary means; and the objects of my invention are, first, to provide a derrick which may be readily moved forward as each bracket is secured in place; second, to provide means for securing the derrick rigidly and firmly to the brackets without the use of guy-ropes, and, third, to provide platforms on which the workmen may stand while putting up the brackets. I attain these objects by means of the mechanism shown in the accompanying drawings, in which—

Figure 1 is a side view of the derrick, and Fig. 2 is a top view.

Similar figures refer to similar parts in both views.

The derrick proper consists of two timbers 3, fastened together at one end by a bolt 4, and opening out at the other end like the letter V. These timbers are long enough to rest upon three or more of the brackets, and extend out beyond the point where the next bracket is to be attached to the rocky wall. Platforms 5 and 6 are supported from the projecting and open end of the timbers 3 by ropes or rods 7, and are occupied by the workmen when drilling holes and securing the brackets in place. A movable carriage 8 10, in connection with the permanent stringers 9, all resting on top of the brackets 2, serve as a support for the derrick and for moving it forward as each bracket is secured. The carriage consists of two parallel pieces of timber 8, of the same size as the stringers 9, securely joined together by the cross-pieces 10, the carriage being made narrower than the space between the stringers 9.

The derrick is supported on a roller 24, which is long enough to extend out over both

of the stringers 9. Two posts 11 and 12 are framed to the cross-pieces 13 and 14, which are secured at each end in boxes 17. Stay ropes or rods 18 serve to raise the posts to the desired position and to hold them firmly in place, while the braces 15 and 16 prevent any side swaying. Suitable blocks and tackle 19, suspended from the post or boom 11, are used for raising or lowering timbers, &c. Two iron hooks 20 are secured to the roller 24, and are of a suitable length and shape to engage the under side of the horizontal timber 2 of the bracket when the roller 24 is nearly above the timber. After the hooks 20 have been hooked to the timber 2, if the derrick be drawn backward a little the grasp of the hooks upon the timber will be tightened and made very firm and secure, and the rear end of the derrick is then tied by a rope or chain 21 to the bracket just underneath it. The derrick is thus secured firmly and rigidly without the aid of guy-ropes, and is in position for use in putting up the next bracket, which is the position shown in the drawings.

To move the derrick forward after the bracket is in place, the rope or chain 21 is loosened and the machine moved forward far enough to disengage the hooks 20 from the timber 2. Two tapering strips or wedges 22 are now placed on top of the stringers 9 and the machine rolled backward, raising the roller 24 entirely above the carriage-timbers 8, when the entire carriage may be pushed ahead until the front end rests upon the new bracket. The stringers may now be put in place and the derrick rolled forward and secured as before.

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

1. The combination, with the V-shaped derrick-frame 3, of the roller 24, hooks 20, posts 11 and 12, and suspended platforms 5 and 6, all arranged and operating substantially as and for the purposes specified.

2. The combination, with a portable derrick mounted on a roller 24, of the carriage 8 10, stringers 9, and wedge-shaped pieces 22, substantially as and for the purpose specified.

MICHAEL S. HILDRETH.

Witnesses:

WILLIAM JACK,  
ABEL M. LAYTON.