(No Model.)

A. REITZ.

PORTABLE ARCH DERRICK.

No. 305,476. Patented Sept. 23, 1884.

Fig. 1.

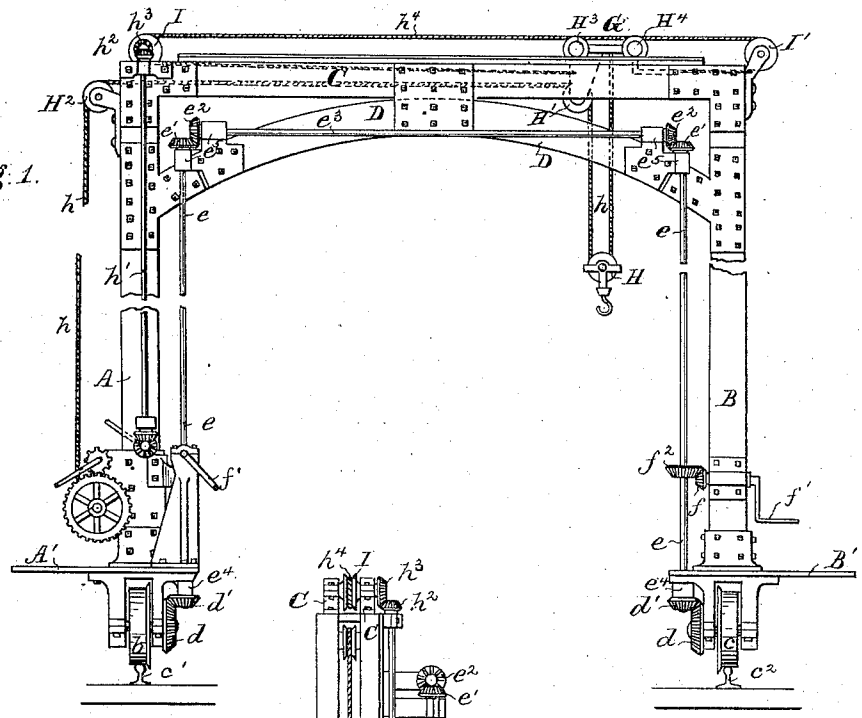


Fig. 2.

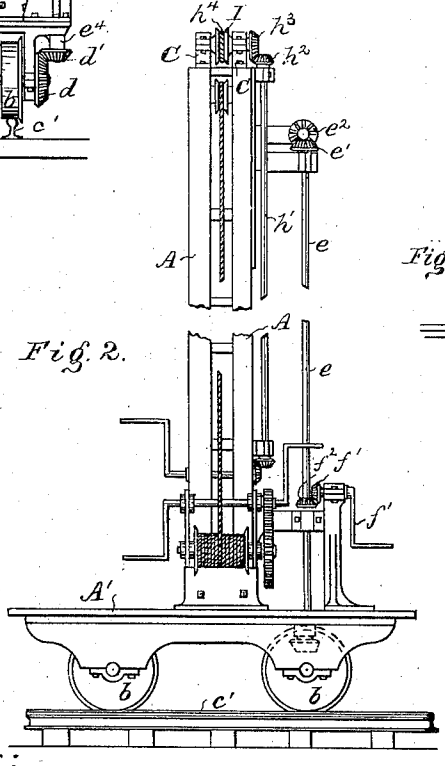
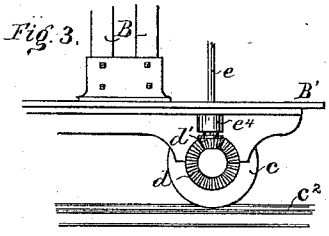


Fig. 3.



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UNITED STATES PATENT OFFICE.

ADAM REITZ, OF ST. LOUIS, MISSOURI.

PORTABLE ARCH-DERRICK.

SPECIFICATION forming part of Letters Patent No. 305,476, dated September 23, 1884.

Application filed August 8, 1884. (No model.)

To all whom it may concern:

Be it known that I, ADAM REITZ, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Portable Arch-Derrick, of which the following is a specification.

My invention relates to improvements on derricks such as are generally used in stone-yards for raising, transferring, loading, and unloading heavy stones; and the improvements principally refer to a former patent issued to me, dated May 13, 1884, No. 298,405, in which an arch is used.

My improvements consist in using an arch for strengthening the derrick, in combination with the parts for moving the same over a tramway, and with a movable carriage for moving the stone laterally from one side to the other under the derrick.

To more fully describe my improvements reference is had to the accompanying drawings, in which Figure 1 is a front view of the derrick, clearly showing the arch with the carriage. Fig. 2 is a side view, clearly showing the derrick resting on a platform supported on wheels driven by gearing and running on a rail. Fig. 3 represents the bevel-gearing.

Similar letters refer to similar parts throughout the several views.

A and B are the two legs, standards, or supports resting on platforms A′ and B′, respectively. *b b* and *c c* are wheels supporting the platforms A′ and B′, which wheels run on rails c' c^2, laid on ties in the usual way. The legs A and B are held together at the top by beams or joists C C, and strengthened by an arch, D, which acts as a brace as well as adding strength to the cross-beams. The legs A B, beams C C, and arch D may be made of wood or metal, as desired. One of the wheels under each platform has keyed to its axle a bevel-gear, *d d*, which mesh with a bevel-gear, d' d', of the vertical shafts *e e*, which latter are provided with a bevel-gear, e', each, at the top, which mesh with the bevel-gears e^2 e^2 at each end of the horizontal shaft e^3. The shafts *e e* are journaled at their lower end in bearings e^4 e^4 beneath the platforms A′ B′, respectively, and at their upper end in bearings e^5 e^5 at each end of the arch D, said bearings e^5 e^5 supporting the shaft e^3 also. (See Fig. 1.)

f is a bevel-gear turned by a crank, f', and meshes with a bevel-gear, f^2, for moving the derrick forward and back on the rails. The shafts *e e* and e^3 are placed some distance out from the arch and on the inside of the legs, to bring them in proper position to engage the gearing of one of the wheels *b* and *c*.

F is a crab of the ordinary crank, drum, and gearing.

G is a carriage, its wheels running on rails laid on top of the cross-beams. Any suitable carriage may be used. In the drawings, in the carriage shown the weight is suspended from the sheave H, and is raised by the rope or cable *h*, passing over the pulleys H′ and H^2 and around the drum, by a crank and gearing. The pulley H′ is suspended from the carriage supported by wheels H^3 H^4, traversing on rails on top of the beams. Motion in or out is given to the carriage by means of the upright shaft h' and bevel-gears h^2 h^3, which cause the wheel or pulley I to revolve and draw either on the upper part of the rope or cable *h*, which passes over the pulley I′, is attached to the outer extremity of the carriage, or at the lower part of the rope or cable, which is fastened to the inner extremity of the carriage.

The platforms A′ and B′ may be made sufficiently large to accommodate several workmen.

I am aware that a portable derrick having a carriage is not new; but

What I claim is—

1. In a portable derrick, the arch D, legs A and B, platforms A′ and B′, wheels *b b* and *c c*, gearing *d d*, d' d', e' e', and e^2 e^2, and vertical shafts *e e* and horizontal shaft e^3, all combined as herein shown and described, and for the purpose set forth.

2. A portable arch-derrick resting upon platforms A′ B′, supported upon wheels *b* and *c*, driven by suitable gearing, the movable carriage G, and winding mechanism, combined and arranged as herein shown and described, and for the purpose set forth.

ADAM REITZ.

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