J. Huy,

File Driver.

No. 109623. Patented Nov. 29. 1870.

Fig. 1

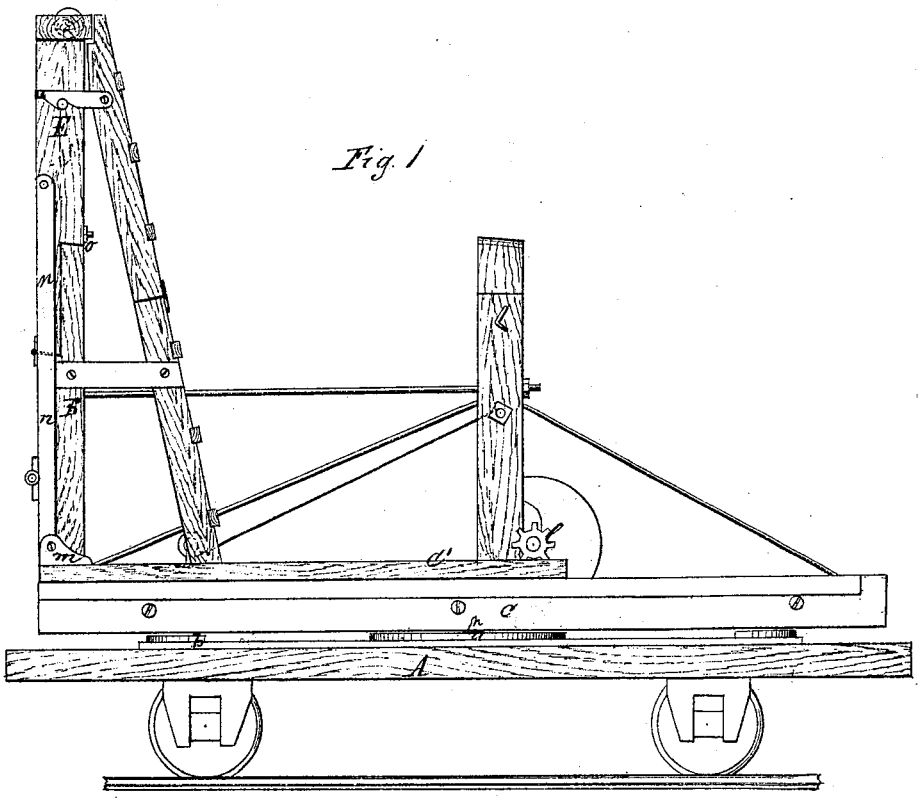


Fig 2.

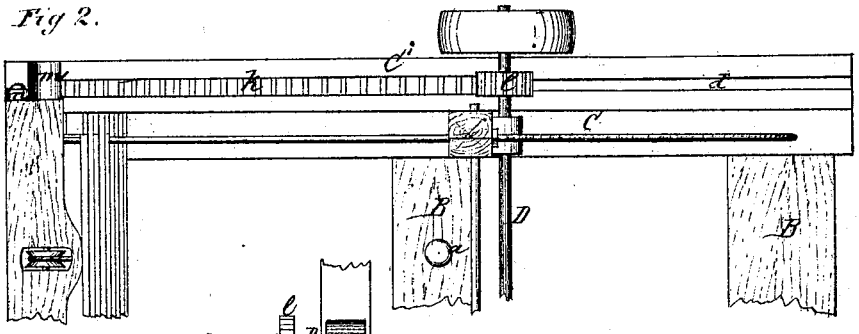
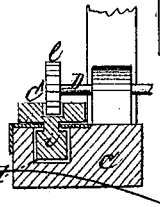


Fig 3.



Witnesses:

H. J. Smith

Thos. D. P. Arnaud.

Jacob Huy. Inventor

by Munn & Co

his Attorneys.

# UNITED STATES PATENT OFFICE.

JACOB HUY, OF WHISTLER, ALABAMA.

## IMPROVEMENT IN PILE-DRIVERS.

Specification forming part of Letters Patent No. **109,623**, dated November 29, 1870.

*To all whom it may concern:*

Be it known that I, JACOB HUY, of Whistler, in the county of Mobile and State of Alabama, have invented a new and Improved Machine for Raising and Lowering Weights; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side elevation. Fig. 2 is a plan of one side; and Fig. 3 is a transverse vertical section showing the groove in the side piece.

This invention has for its object the raising and lowering of weights generally, with special application to the raising and lowering of the hinged upper section of a frame that may be used as a pile-driver or as a wrecking-machine for restoring to their proper positions engines and cars that have run off railway-tracks.

In the drawings, A is an ordinary platform railway-car.

B is a rectangular frame pivoted centrally at the point *a* to the car A.

*h* is a curved iron bar, that is attached to the upper side of the car A near its front end, and that extends entirely across said car, on which bar the frame A rests, the frame being provided with suitable rollers, which roll over the bar as the frame rotates on its pivot. This arrangement admits of turning the frame in any direction required for the accomplishment of its work.

In the upper surfaces of the side pieces *c* of the frame B grooves *d* are cut, running the whole length of the side pieces.

C′ is an iron carriage, from the under side of which ribs *i* project downward and enter said grooves. On the upper side of the carriages C′ are formed cogs *k;* or the cogs may be made separate from the carriages and bolted to them.

D is a shaft, mounted transversely of the frame B and bearing toothed wheels *l*, which engage with the cogs of the carriages C′.

Motion is intended to be communicated to the shaft D in any suitable manner, probably from a steam-engine to be placed upon the car A, and, if desired, to be connected with the car-wheels, in order that both the car and the machinery may be driven by the same engine. The rotation of the shaft D moves the carriage C′ either forward or backward in the ways along the sills *c*. Blocks *m* are attached to and project upward from the carriages C′. To the blocks *m* are jointed the extremities of rods *n*, which are jointed at their opposite ends to the upper sections of the frame E, that is stepped in the frame B at the front end of the latter. The upper and lower sections of the frame are hinged together at *o*. By rotating the shaft D in one direction the upper section is lowered and folded by the side of the lower one. On rotating the shaft D in the opposite direction the upper section is elevated again. The frame is thus fitted to run under bridges which are too low for it to pass when raised to its full height.

The frame E may be used as the guideway of a pile-driver, and may be provided with a ladder made in sections, by which to ascend to its top; or the upper section of the frame may be extended horizontally and be furnished with pulleys at its outer ends, over which ropes may pass, having grappling-hooks attached to their extremities, by which to lay hold of displaced cars for the purpose of enabling the engine on the car A by means of the ropes to replace said cars on the track. The same apparatus may conveniently be applied to loading heavy articles—such as cotton-bales, castings, &c.—on cars or ships, and for unloading the same. For these various uses the swinging of the frame B upon the car A increases its adaptability.

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

1. The combination of the grooved sills C, toothed carriages C′, sliding therein, shaft D, provided with cog-wheels *e*, gearing with the rack *k* of the carriages, connecting-rods *n*, and frame E, made in sections which are hinged together, substantially as and for the purpose specified.

2. The sills *c*, provided with the ways *d*, and combined with the carriages C′, provided with the ribs *i* and friction-rollers *h*, substantially as and for the purpose described.

JACOB HUY.

Witnesses:

ROBERT BENSON,

W. B. ALLEN.