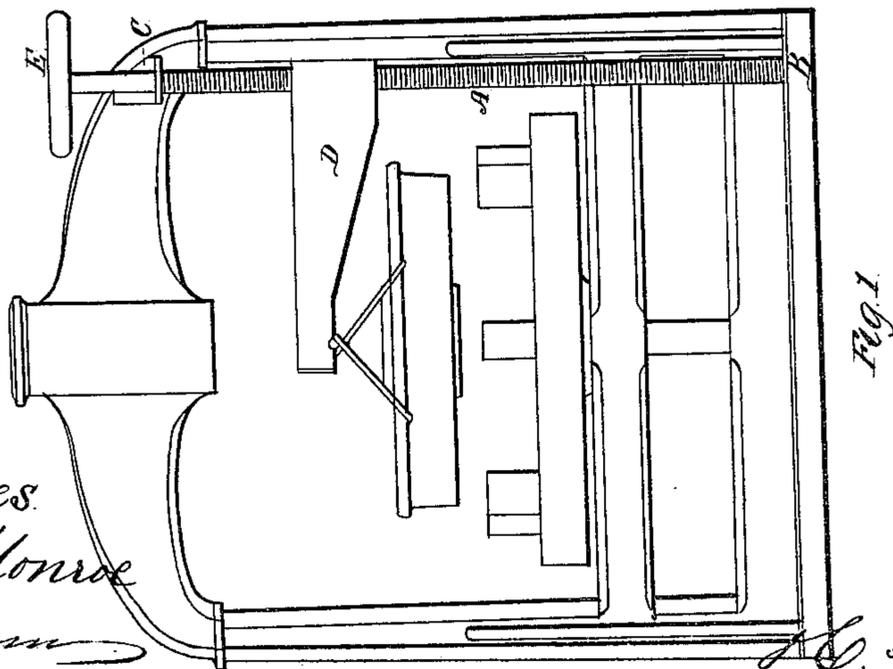
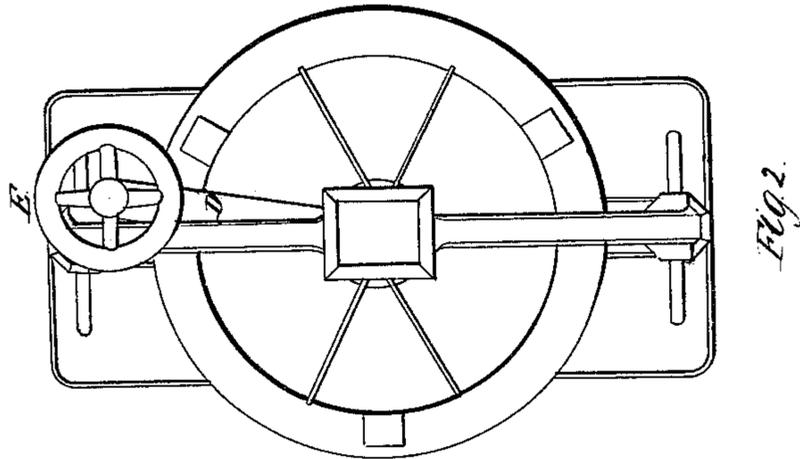
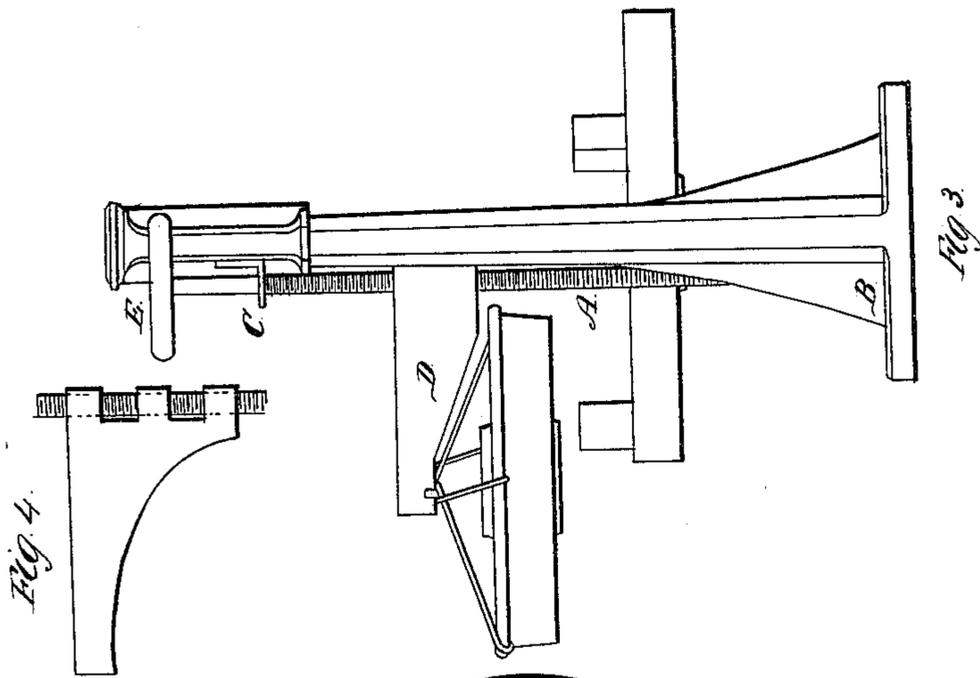


H. I. Stover,

Hoisting Apparatus.

No. 91,283.

Patented June 15, 1869.



Witnesses.
N. E. Monroe
H. W. Wernham

H. I. Stover

United States Patent Office.

HENRY D. STOVER, OF NEW YORK, N. Y.

Letters Patent No. 91,283, dated June 15, 1869; antedated June 2, 1869.

IMPROVEMENT IN HOISTING-APPARATUS.

The Schedule referred to in these Letters Patent and making part of the same.

Know all men by these presents:

That I, HENRY D. STOVER, of the city, county, and State of New York, have invented a new and useful Improvement in "Hoisting-Apparatus," whereby great convenience and safety are secured in lifting pieces of work to and from machines when the same are being constructed; and I do hereby declare the following to be a clear and exact description of the invention, reference being had to the accompanying drawings, and letters of reference thereon, so that any skilled in such matters can construct and use the same.

Figure 1 represents my device as attached to a machine for boring out the centres of car-wheels.

Figure 2 is a view as seen in looking down upon the machine.

Figure 3 is an elevation at right angles to fig. 1.

Figure 4 is a view of the lifting-arm and nut.

Like letters refer to like parts in all the views.

Before any further description, I would here remark that I have merely chosen the boring-mill to illustrate one of the simplest methods of attaching my invention to a tool where weights are to be frequently changed; but I deem the invention as applicable to any other machine where hoisting-apparatus is required.

As will be readily seen from the drawings, my invention consists of a vertical screw, of sufficient length to reach between the two extremes, through which the weights are to be moved, and placed in such proximity to the machines from and to which the weights are to be moved, as that the lifting-arm, which may be of any desired length to swing the work from the machine, can easily reach over the centre of the machine, and, in lifting the work, may also swing clear of the machine, whenever desired.

A, figs. 1 and 3, represents the vertical screw, its lower end working in a step in the bed-plate of the

boring-mill B, and its upper end supported by a bracket connected with the frame, as at C, figs. 1 and 3.

Upon this screw, a nut, having one side prolonged to form a lifting-arm, as at D, travels, by the rotation of the screw, or by hand, as shown in the drawings, where a hand-wheel, E, is represented at the upper end of the screw; or it may be done by any other suitable mechanism, either by gearing or belting, as desired.

This nut D, to serve as a lifting-device, requires to be of considerable depth, that is, more than is necessary to give the requisite strength of thread-screw. It may be made in two or more parts, as a forked bracket, having the nut formed through the end of the forks, as shown at fig. 4. In this manner, any desired width of base for such a bracket may be had, without making the arm unwieldy or unnecessarily heavy.

At the outer extremity of this nut, suitable hooks or eyes, as at I, figs. 1 and 3, for attaching the lifting-links F, or chains, may be provided.

I am aware of the patent of William Maher, December 23, 1856, for hoisting-apparatus. This I do not claim; but, having described my invention,

What I claim as new, and desire to secure by Letters Patent of the United States, is—

The combination, with a boring-machine, B, or other machine having a rest-bed for heavy bodies, of the vertical screw A, hand-wheel E, and lifting and swinging nut D, when constructed, arranged, and operated substantially in the manner as shown and described, and for the purpose set forth.

H. D. STOVER.

Witnesses:

A. MOORE,
H. S. MILLER.