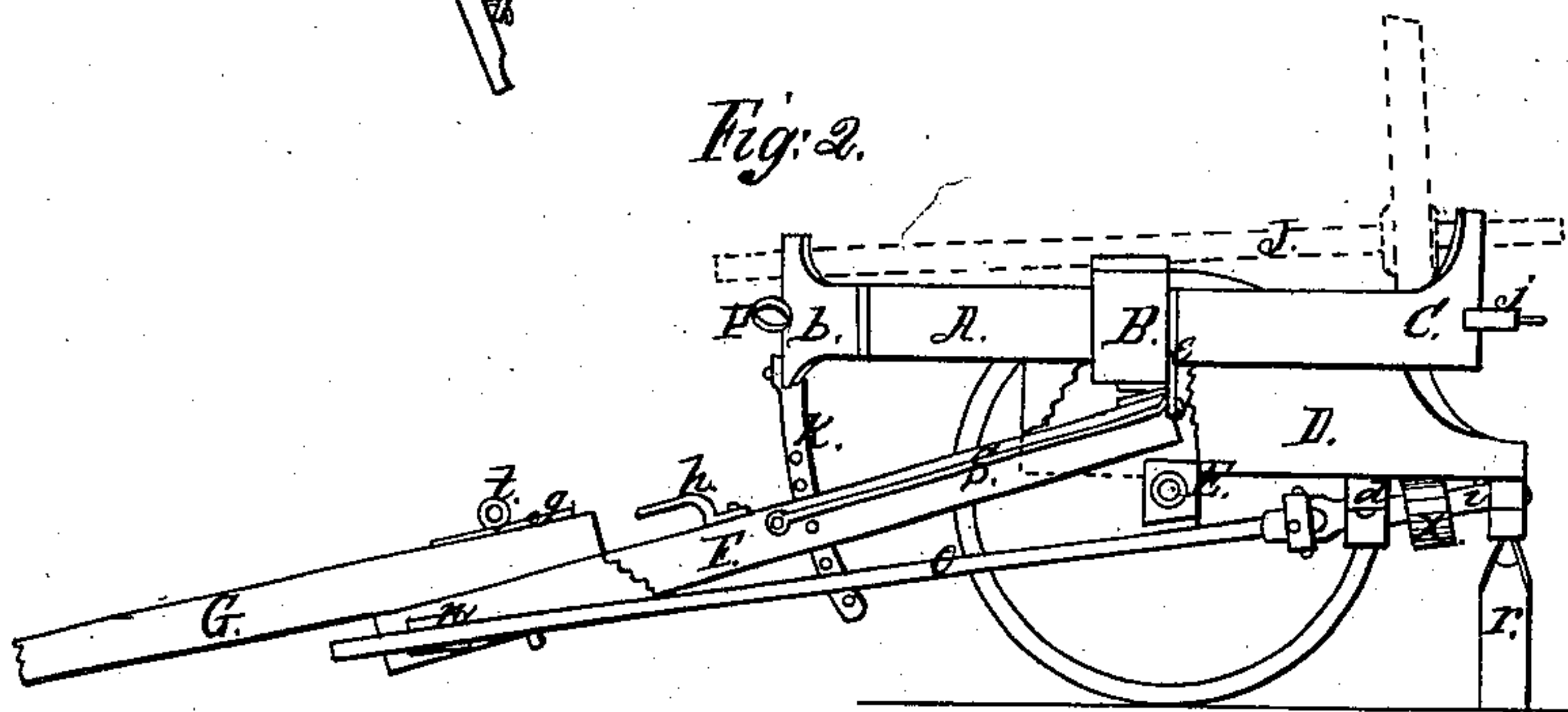
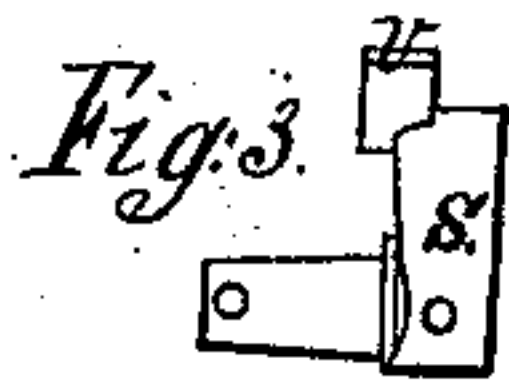
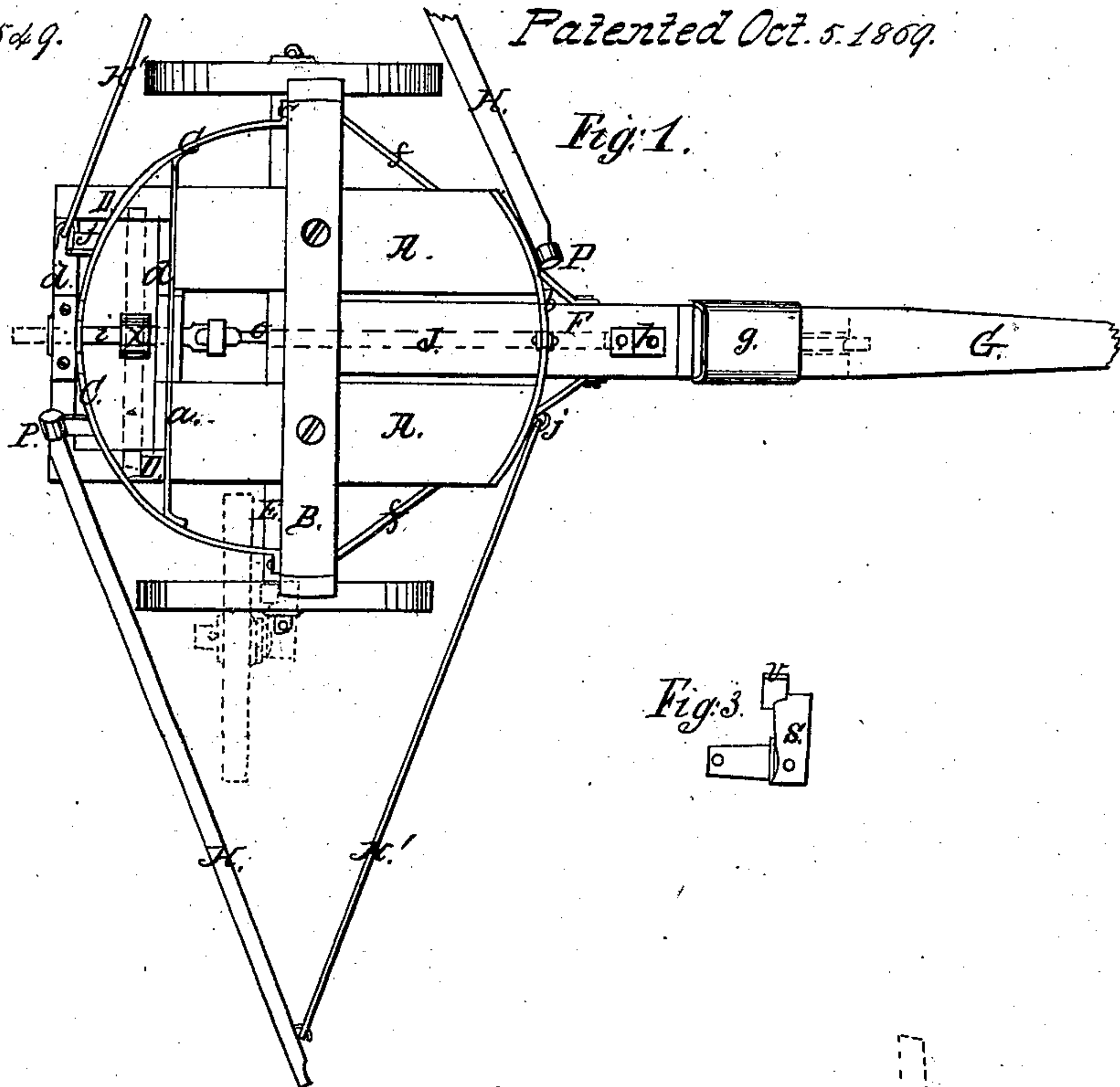


*D. Woodbury,
Horse Power.*

Nº 95549.

Patented Oct. 5. 1869.



Witnesses.

*Wm. Loughborough.
G. H. Clement.*

Inventor.

Daniel Woodbury.

United States Patent Office.

DANIEL WOODBURY, OF ROCHESTER, NEW YORK.

Letters Patent No. 95,549, dated October 5, 1869.

IMPROVEMENT IN HORSE-POWERS.

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

To all whom it may concern:

Be it known that I, DANIEL WOODBURY, of Rochester, in the county of Monroe, and State of New York, have invented certain new and useful Improvements in Horse-Powers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a plan view of my invention.

Figure 2 is a side elevation, showing the carrying-wheel removed, and a portion of the frame-work broken away.

Figure 3 is a plan view of the angle-arm *s*.

The object and nature of my invention will be understood by reference to the drawings and specification, and to enable others to make and use the same, I will describe its construction and operation.

My invention relates to that class known as "mounted horse-powers," and consists, more particularly, in improvements upon an invention patented by me, April 27, 1869.

I construct the frame of my horse-power substantially in the manner described in my former patent, using the girders *A*, transverse beam *B*, and gallows-frame *C*, the latter secured to the beam *B* at the extremities *c*.

The shaft *J*, shown in dotted lines, is "boxed" in the gallows-frame and bridge-tree *b*, in the usual manner, and carries the vertical gear that drives the pinion *z*. The shaft *J* is driven by a bull-wheel, (not shown,) in common use in this class of machines, having teeth upon the upper and lower faces.

It will be seen that I locate the gearing and gallows-frame at the rear of the machine, behind the carrying-axle, instead of at the side and over or in front of said axle, having, in fact, turned the entire frame to an angle of ninety degrees with its former position.

The objects attained in this arrangement are:

The weight of the frame and gearing is nearly balanced upon the axle.

The tumbling-rod *o* is brought out at the front of the machine, so that it may be adjusted longitudinally by a simple backward or forward movement upon the carrying-wheels, and the necessity of running said rod through the wheel, or of providing a bearing for it upon the "outrigger," as is usual, is obviated.

The carrying-wheels may be arranged to track with a common wagon, and the gearing is more readily accessible for oiling or repairs.

I am also enabled to attach the "outrigs" *H H* directly to the gallows-frame and bridge-tree *b*, which receive the strain of the draught from the bull-wheel; and the latter can be made larger in diameter than formerly, if necessary.

The frame above described, I support upon timbers

D, resting upon the carrying-axle *E*, transversely thereto, and projecting in the rear of it far enough to support the bridge-trees *d*. These timbers are substitutes for the posts used in my former invention, and do away with the braces necessary in such construction.

Upon the bridge-trees *d*, I "box" the shaft *i*, having fitted to it the pinion *z*, and to which the tumbling-rod *o* is coupled in the usual manner. These bridge-trees project somewhat below the pinion and shaft, and thus protect them from injury by accidental tipping of the machine or otherwise.

To the under side of the beam *B*, I joint the levelling-bar *F*, the outer end of which is slotted, to admit the tumbling-rod and supporting-box *n*, fig. 2.

The adjusting-segment *K* connects the frame with the levelling-bar in the usual manner.

When it is desired to remove the horse-power by attaching a team directly to it, I use the tongue *G*, which slides into the socket *g*, secured to the levelling-bar, where it is held by a pin, *t*, put through the whole. The hammer-strap is placed upon the levelling-bar, and the latter thus forms part of the tongue *G*.

The levelling-bar also assists the "outrigs" in making the machine fast, and to stiffen it one or more braces, *f*, are provided, secured at one end to said bar, and at the other to the extensions *c* of the gallows-frame, as shown in fig. 2.

The "outrigs" *H H* are arranged in the usual manner, the bars *H* entering sockets *p* and rods *H'* attached to hooks *j*, both hooks and sockets being cast or otherwise secured to the gallows-frame and bridge-tree *b*, those upon the former projecting far enough to allow the outrigs to clear the carrying-wheels, as shown in fig. 1. It will be seen that the strain upon the gallows-frame and bridge-tree *b* is thus communicated directly to the outrigs.

At the rear of the machine, I provide the swinging post *r*, fig. 2, hinged so as to turn up out of the way.

The object of this is to prevent the rear of the machine from being tipped downward by the draught upon the bull-wheel, obviating the necessity of staking down the levelling-bar *F*. If desirable, the post *r* may be braced in the direction of motion of the bull-wheel, the brace being hinged so as to admit of the post being swung up as before.

I may use upon the carrying-axle the removable angle-arm *s*, fig. 3, so formed as to slip upon the bearing, and receive the carrying-wheel upon the arm *s'*, extending at right angles to the axle, as shown in red lines in fig. 1.

By this arrangement the horse-power can be shifted by hand transversely, for such purposes as sawing logs from felled trees, digging sewers or ditches, or in any places where such movement would be desirable.

The projecting spur *v*, secured to the angle-arm *s*, and bearing at its upper end against the beam *B*, prevents the said arm from turning upon the axle.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The arrangement of the main frame *A B C*, shaft *i*, and tumbling-rod *o*, with reference to the carrying-axle and levelling-bar, substantially as herein shown and described.

2. The arrangement of the supporting-box *n*, within or upon the levelling-bar *F*, for the purposes set forth.

3. Providing the levelling-bar *F* with a detachable extension *G*, in the manner and for the purposes set forth.

4. The angle-arms *s*, having the spur *v*, constructed substantially as shown, for the purpose set forth.

5. The within-described arrangement of the hooks *j* and sockets *p* upon the gallows-frame and bridge-tree *b*, whereby the strain upon these latter is communicated directly to the outrigs.

6. Providing the gallows-frame with the extensions *c*, to which the braces *f* are attached, whereby the strain upon the former is communicated directly to the levelling-bar *F*.

DANIEL WOODBURY.

Witnesses:

A. H. BILLINGS,
F. H. CLEMENT.