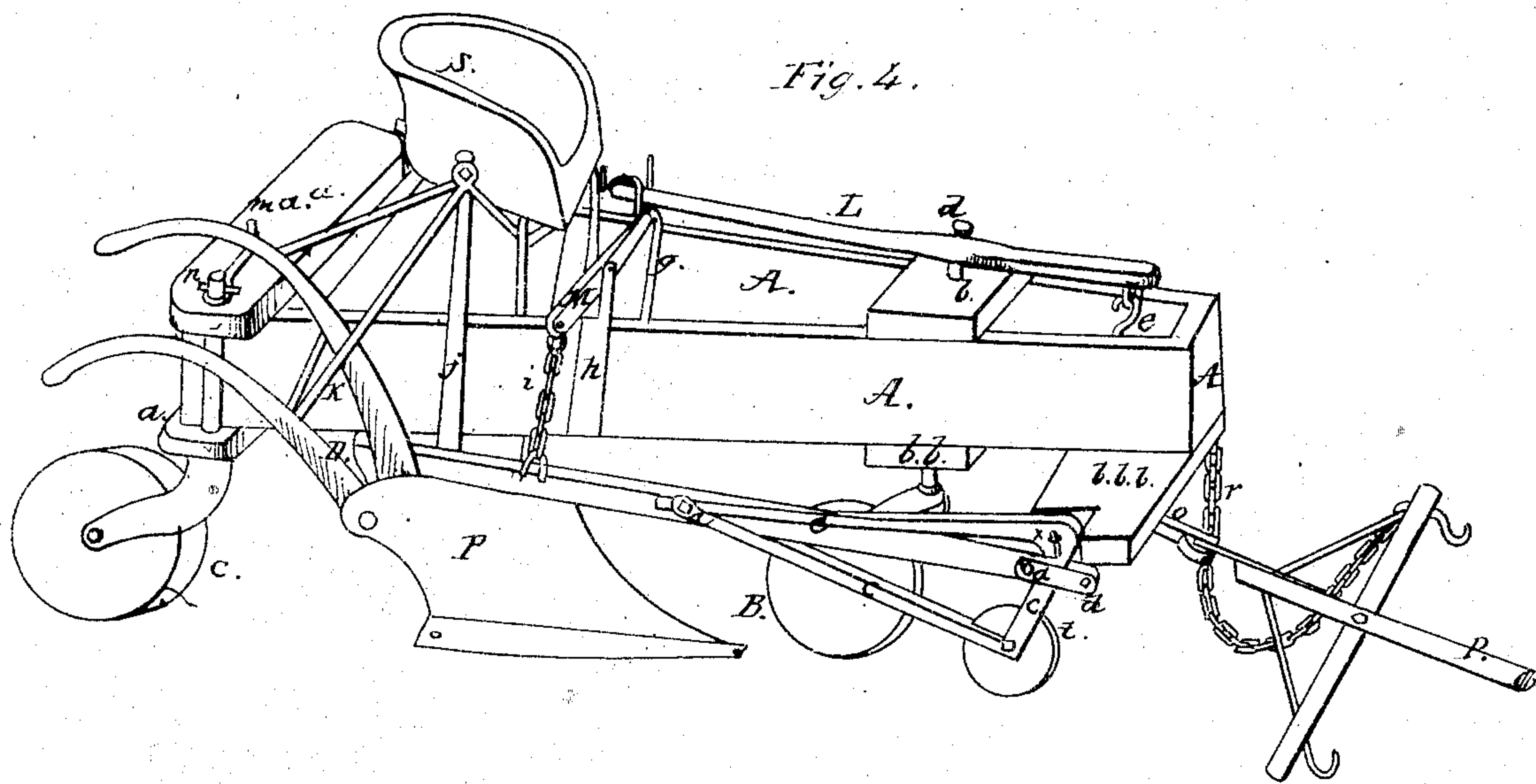
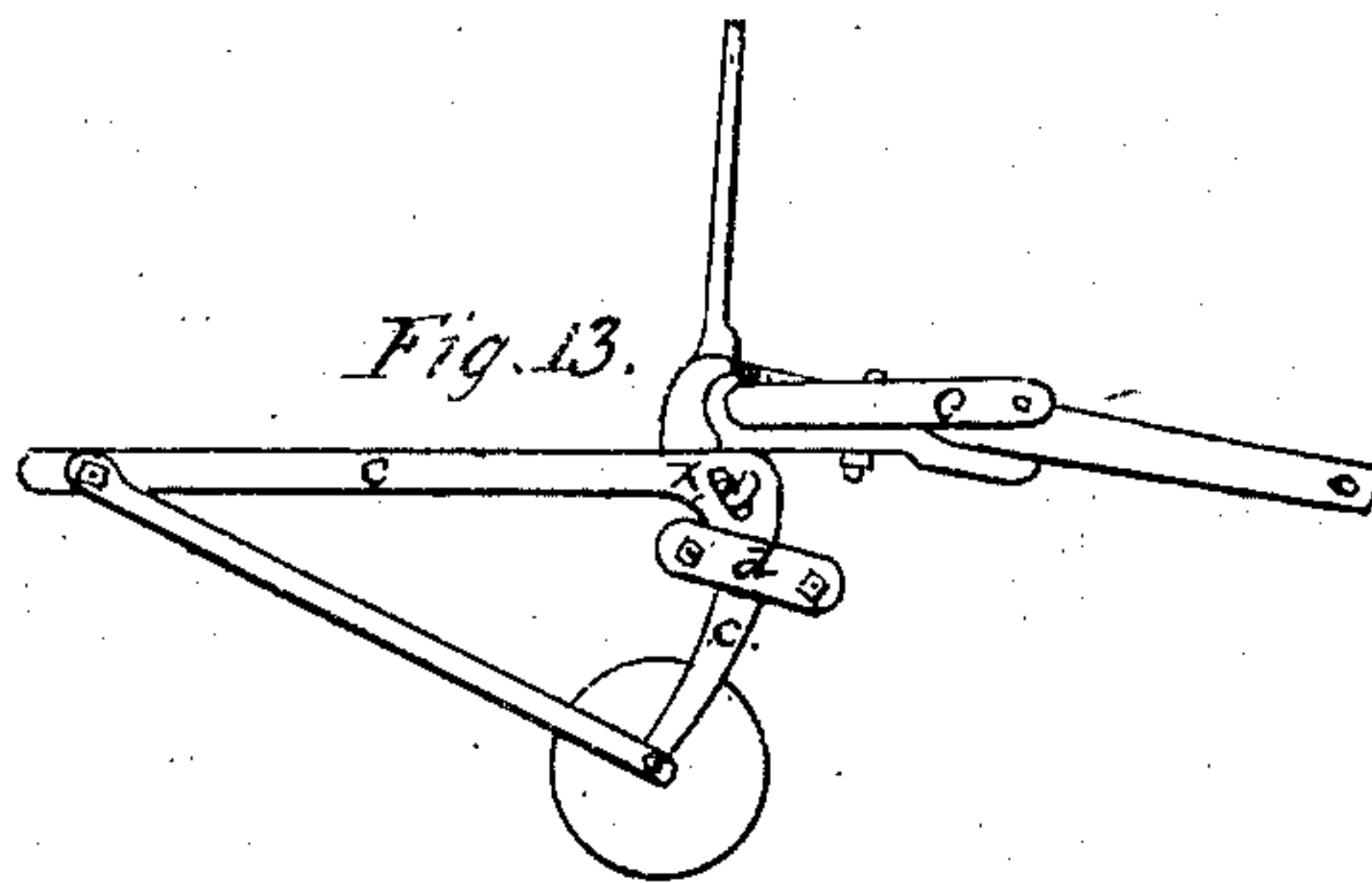
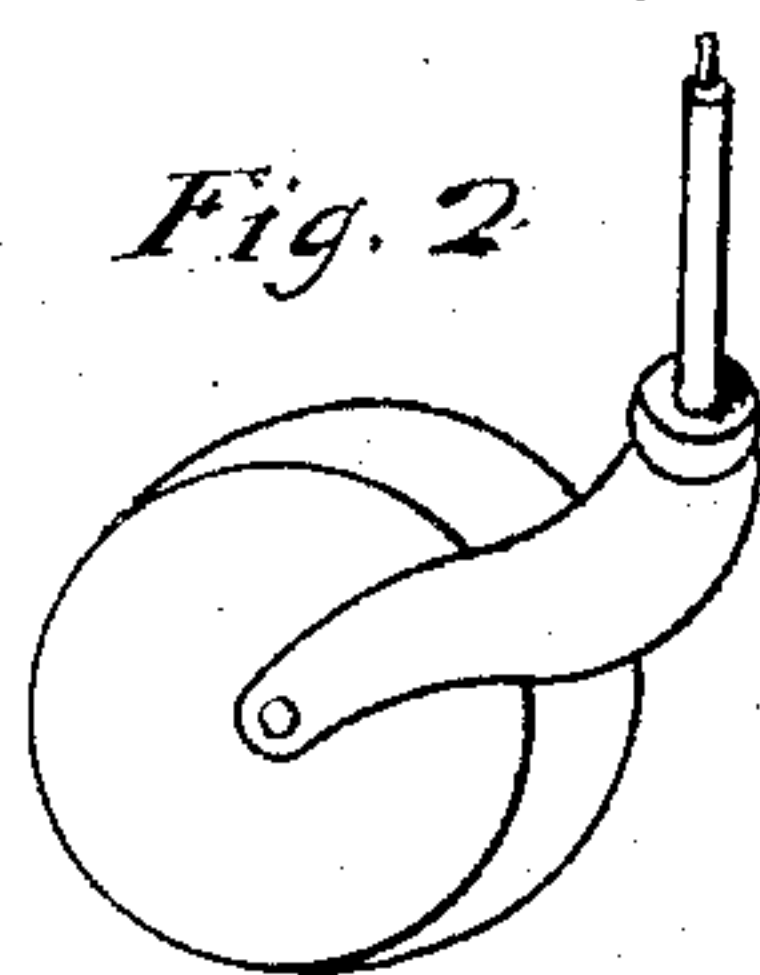
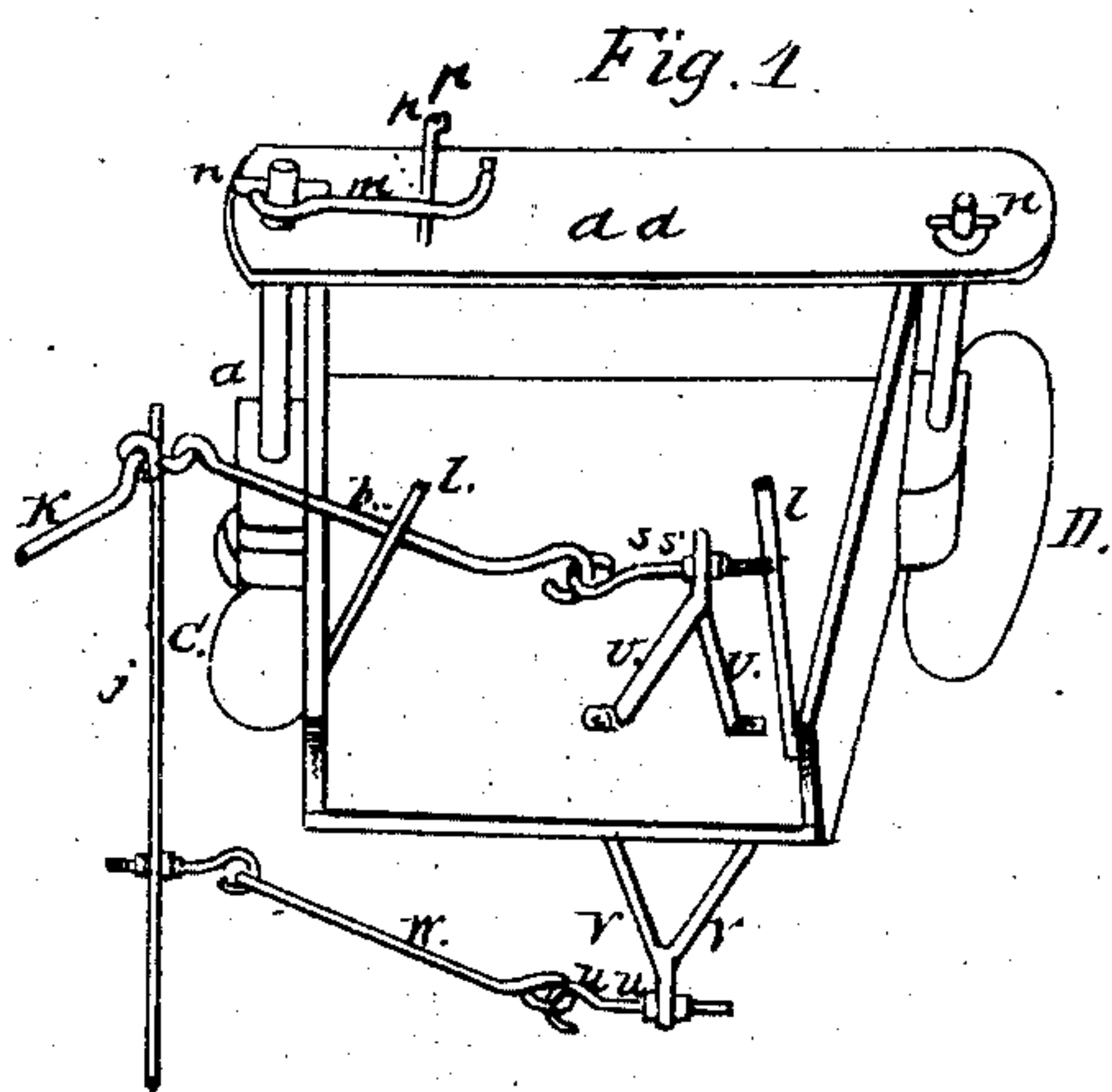


G F Willey.
 Plow-Carriage.
 N^o 76283 Patented Mar. 31, 1868.



United States Patent Office.

GEORGE F. WILLEY, OF LACONIA, NEW HAMPSHIRE.

Letters Patent No. 76,283, dated March 31, 1868.

IMPROVEMENT IN PLOUGH-CARRIAGE.

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, GEORGE F. WILLEY, of Laconia, in the county of Belknap, and State of New Hampshire, have invented a new and useful Carriage for Holding a Plough; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which drawings—

Figure 1 is a sectional view.

Figure 2 is a view of truck.

Figure 3 is a view of frames *c c c* and coupling *o*.

Figure 4 is a perspective view.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and mode of operation.

I construct first the carriage-body or frame, marked A A A in fig. 4, with the cross-pieces *a, a a, b, b b*. I then mount the carriage on three wheels or trucks, made of iron, as seen in fig. 2, and marked B, C, D, in fig. 4, the shaft of the forward truck B passing up through the centre of the cross-pieces *b b* and *b*, with the cross-piece *b b* resting on the shoulder of the truck B. On the top of the shaft of the truck B, I attach the lever L, which is held in its place by the washer *d*. I then attach the right-hand end of the lever L, as seen in fig. 4, to a hook on the end of the iron rod *e*, which rod is fastened to the bottom of the carriage A A A.

The shafts of the two hind trucks C D pass up through the cross-pieces *a, a a*, as seen in fig. 1, with the lower bar or cross-piece *a* resting on the shoulders of the trucks C D, and the tops of the shafts are kept in place by a washer constructed on the end of the lever *m*, and the washer *y* and the pins *n n* on top of the cross-piece *a a*.

On the side of the carriage A A A, I attach the upright bar *h*, with a slot in the top of the same, as seen in fig. 4, and in the slot I put the wooden lever M, and at the outer end of the lever I attach the chain *i*, and the other end of the chain I fasten to the beam of the plough P, as seen in fig. 4. Inside of the carriage I attach the iron hook *g*, and on the outside of the carriage I attach the iron hook *f*, as seen in fig. 4. In the back end of the carriage-body I attach the seat S, and which is held in its place by the upright iron rods *l l l*. I now fasten the cross-piece *b b b* to the front and bottom part of the carriage, and attach the pole marked *p* in fig. 4 to said cross-piece by means of the metallic coupling, as seen in fig. 3, and marked *o* in fig. 4. To the end of the carriage A A A, and to the end of the cross-bar of the pole *p*, I attach the chain *r*, as seen in fig. 4.

I then take any common plough, marked P in fig. 4, and attach to the beam of the plough the bottom of the metallic bar *j*, by means of a bolt, and then connect the top of the bar *j* to the plough by means of the metallic rods K K. I now fasten to the bottom of the carriage A A A the metallic braces *u u* and *v v*, as seen in fig. 1. I then connect one end of the metallic rods *s, s s* and *w, w w*, by means of screws cut on the end of the same, and nuts, as seen in fig. 1, to the braces *u u* and *v v*. The other end of the rods *s, s s* and *w, w w*, I connect in the same way to the metallic bar *j*, and thus connect the plough to the carriage. The end of the plough-beam I connect to the carriage by an iron bolt, which is fastened to the under side of the cross-piece of *b b b*, and is marked *x* in fig. 4. This bolt passes through the framework *c c c*, and a pin is put through the outer end of the bolt, and thus the end of the beam is firmly fastened to the carriage. The iron bolt is also seen in fig. 3.

The operation of my machine is as follows: The ends of the levers L and M being placed under the hooks *f* and *g*, the plough is lifted up and held from the ground. The horses now being attached to the pole *p*, and the driver on the seat, the carriage is driven on to the land to be ploughed, unhooking the levers L and M from the hooks *f* and *g*, and starting the horses or oxen. The ploughshare at once enters the ground, and continues to turn a furrow till the plough is raised by the levers L and M.

The depth of the furrow is regulated by elevating or depressing the truck *t*, by means of the frame of brass or iron *c c c*, it being held firmly in place by the clamp *d*, as seen in fig. 4.

The width of the furrow is regulated by throwing the truck C in or out, by means of the small lever *m*, as seen in fig. 1, the pin *p p* passing down through the end of the lever into the cross-piece *a a*, and holding it in place.

The chain *r* keeps the cross-bar of the pole *p* parallel with the front end of the carriage, and equal draught is thus secured on both the plough and carriage.

Whenever it becomes necessary to plough a head-land, the horses attached to the carriage are turned short to the left, and the nose of the plough acts as a pivot for the carriage, and the plough is thus brought at right angles to the furrow last ploughed, and the necessity of taking out the plough is thus avoided.

The wheels or trucks are so attached to the carriage as to allow the carriage to be started, backed, or moved into any position, at the will of the driver, he having perfect control of the carriage and plough as he sits in his seat.

By the use of my plough the labor of one person is dispensed with, and the tiresome process of walking while ploughing is obviated, and the process of ploughing otherwise much facilitated.

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

The construction of the carriage A A A, with the plough P and attachments, combined and adjusted as shown in the drawings.

CHARLES LANE,
GEORGE B. LANE.

GEORGE F. WILLEY.