J. HARDY.

Wheel-Plow.

No. 29,843. Patented Aug. 28, 1860.

Fig. 2.

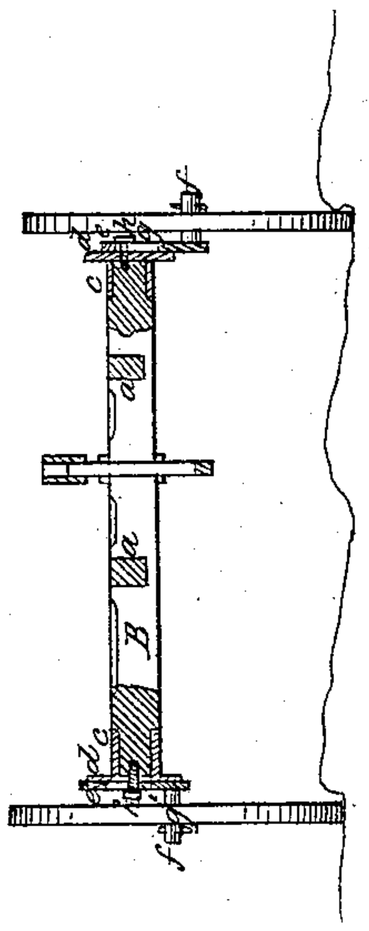


Fig. 1.

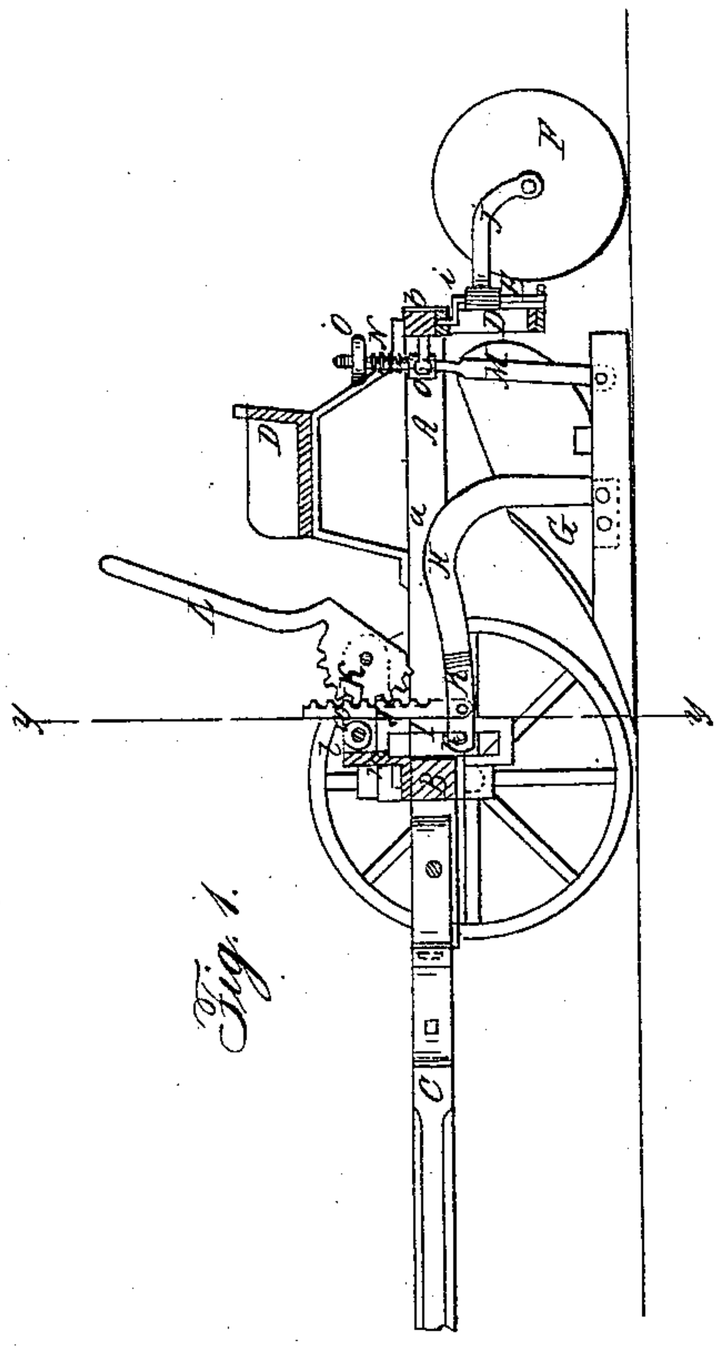
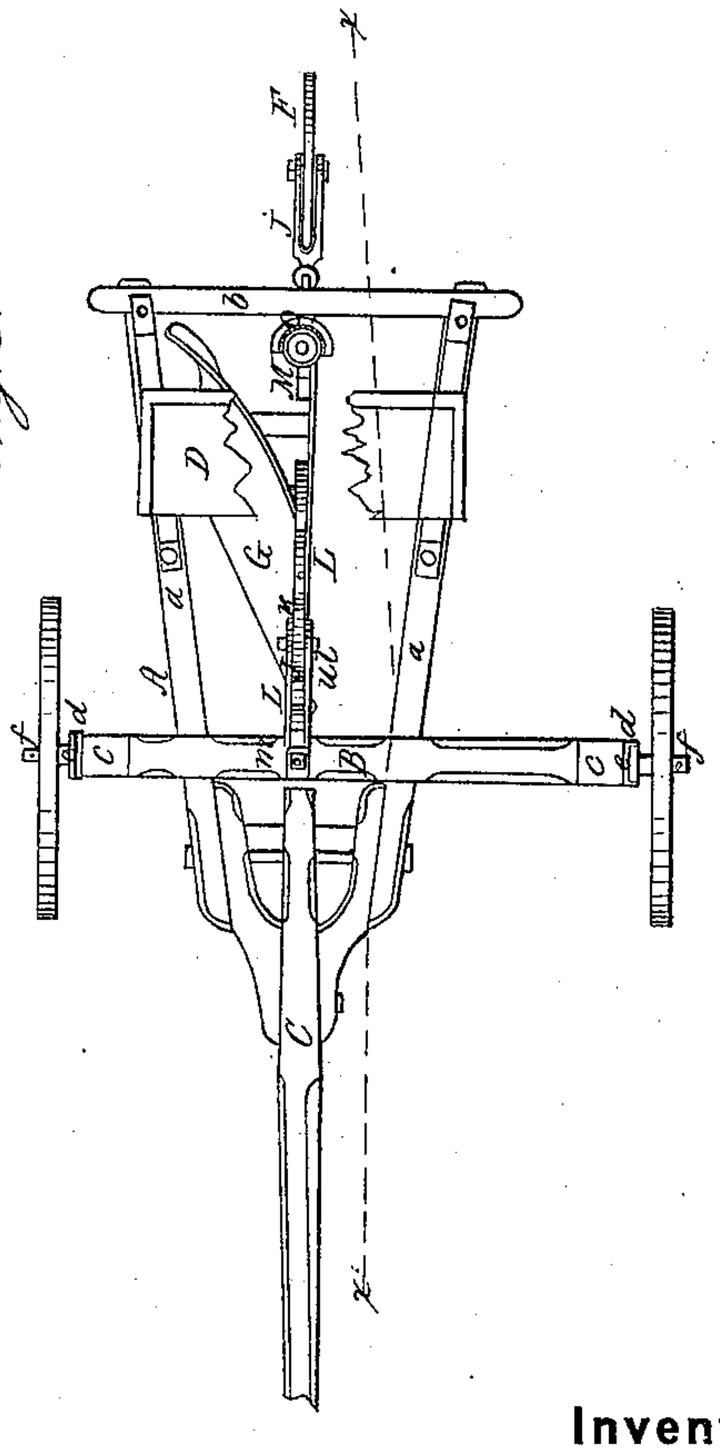


Fig. 4.

Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOSEPH HARDEY, OF MOLINE, ILLINOIS, ASSIGNOR TO O. CHAMBERLAIN AND W. H. BABCOCK, OF SAME PLACE.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. **29,843**, dated August 28, 1860.

To all whom it may concern:

Be it known that I, JOSEPH HARDEY, of Moline, in the county of Rock Island and State of Illinois, have invented a new and Improved Sulky or Carriage Plow; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *x x*, Fig. 3. Fig. 2 is a transverse vertical section of the same, taken in the line *y y*, Fig. 1. Fig. 3 is a plan or top view of the same. Fig. 4 is a sectional view, showing the manner of adjusting the wheels.

Similar letters of reference indicate corresponding parts in the several figures.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the frame of the machine, which may be formed of two longitudinal bars, *a a*, having an oblique position relatively with each other, and their back ends connected by a traverse-bar, *b*.

To the front parts of the bars *a a* an axle, B, is secured transversely, and the draft-pole C is fitted between the front ends of the bars *a a*, in front of the axle B. On the back parts of the bars *a a* the driver's seat D is placed.

To the ends of the axle B metal heads *c c* are secured, each head having a vertical guide-plate, *d*, at its outer end, in which slides *e* are fitted, one in each plate *d*. The slides *e* are fitted in the guide-plates *d* by a dovetail, formed by having the edges of the slides *e* made oblique or of bevel form, and having the sides of the plates *d* bent in corresponding form. The slides *e* have the arms *f* of the wheels C attached to them, and each slide has an oblong vertical slot, *g*, made through it, through which slots and into the blades *e* screws *h* pass. (See Figs. 2 and 4.) By this arrangement it will be seen that each wheel may be adjusted higher or lower, as may be required.

To the traverse-bar *b*, to its under side, a metal stirrup, D, is secured, and in this stirrup a vertical arbor, E, is fitted, on which a slide, *i*, is placed, said slide having a forked arm, *j*, attached to it, in which a wheel, F, is placed.

G is a plow, which is secured to a curved metal beam, H. The front end of this beam is slotted, and has two saws, *k k*, passing transversely through it, between which a vertical guide-bar, I, is fitted. This guide-bar I is permanently attached to the axle B.

To the front end of the beam H the lower end of a rack, J, is secured, the upper part of said rack passing between plates *l l*, which are secured to the upper part of the guide-bar I, and a bar, *m*, attached to the axle B. Between the plates *l l* there is also placed a roller, *n*, against which the back of the rack bears, and there is also secured between the plates *l l* a geared sector, K, which meshes into the rack J.

The sector K has a handle, L, connected with it, which handle extends back to the seat D, or within reach of the driver thereon.

To the back part of the plow G there is attached a standard, M, the upper part of which is of cylindrical form and passes through a swivel-socket, *o*, on the traverse-bar *b*. A spiral spring, N, is placed on the standard M, and a nut, O, is fitted on the standard above the spring.

From the above description it will be seen that the driver may at any time elevate and depress the front end of the plow G by actuating the handle L; and it will also be seen that the back part of the plow is allowed to adjust itself horizontally by means of the spring, the latter preventing any undue pressure on the plow—a contingency which would occur were a rigid attachment applied to the rear end of the plow and the front end or share of the plow depressed below the level of the back part.

In consequence of the caster-wheel J being connected to the slide *i* the frame and plow are allowed to rise and fall when at work to conform to the irregularities of the surface of the ground, and at the same time said wheel is allowed to support the rear end of the machine when the latter is being drawn from place to place and the plow is elevated above the surface of the ground.

When the machine is at work either wheel,

by relaxing the screw *h*, which secures its slide *e* in its plate *d*, may be adjusted so as to run in the furrow, and thereby cause the machine to work in a horizontal position. (See Fig. 2.)

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

The arrangement of the axle B, plow G, beam H, guide-bar I, rack J, sector K, standard M, caster-wheel F, arbor E, and frame A, all as herein shown and described, for the purpose set forth.

JOSEPH HARDEY.

Witnesses:
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