Damron, Massey & Whitman. Cultivator & Plow.

PATENTED

JAN 7 1868

73081

Fig. 1.

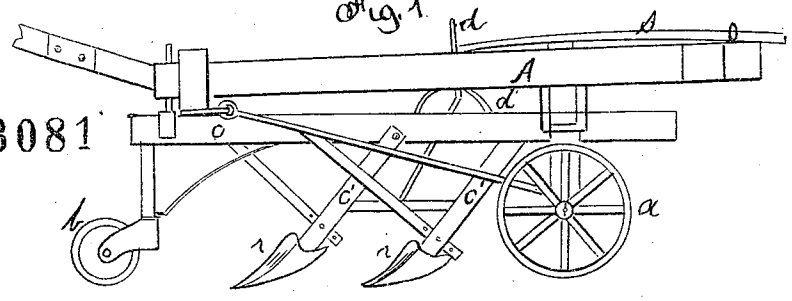
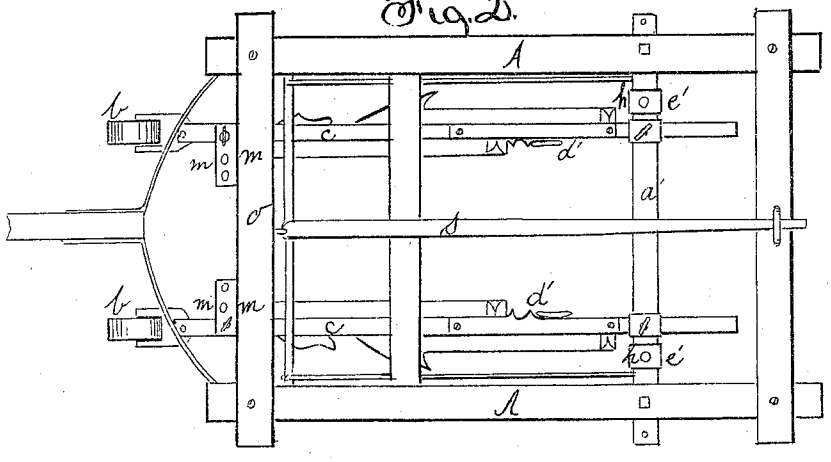


Fig. 2.



Witnesses,
R. S. Turner
Walter E. Stumph

William G. Damron,
Robert M. Massey
Lorenzo H. Whitman by
Brown & Beadle Attys.

Fig. 3

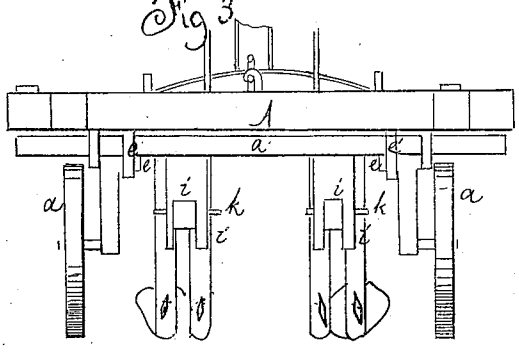
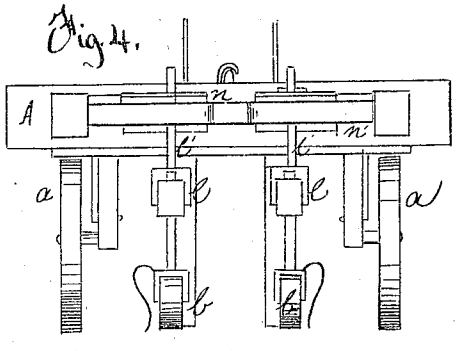


Fig. 4.



United States Patent Office.

WILLIAM H. DAMRON, ROBERT H. MASSEY, AND LORENZO F. WHITMAN, OF MACOMB, ILLINOIS.

Letters Patent No. 73,081, *dated January* 7, 1868.

IMPROVEMENT IN CULTIVATOR AND PLOUGH.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that we, WILLIAM H. DAMRON, ROBERT H. MASSEY, and LORENZO F. WHITMAN, of Macomb, in the county of McDonough, and State of Illinois, have invented a new and improved Cultivator and Plough; and we do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention consists chiefly of devices for rendering the beams and supporting-wheels of a cultivating-machine adjustable laterally, in such manner as to convert the apparatus into a gang or subsoil plough, as will hereinafter more fully appear.

To enable others to make and use our invention, we will now proceed to describe its construction and operation.

A represents the framework of the machine, of ordinary construction, supported by means of the wheels *a a*, connected with the cross-bar *a'*, and the caster-wheels *b b* secured to the front ends of the plough-beams *c c*. The said plough-beams run longitudinally of the frame A, and to them are pivoted the plough-shanks *c'*, which are susceptible of elevation and depression, in the usual manner, by means of the lever *d* and rack *d'*. The wheels *a a* revolve on axles projecting from the lower ends of wrists *e e*, Figure 3, which are connected with the cross-bar *a'* by means of sliding chases *e'*, in such manner that the said wheels are laterally adjustable on the cross-bar *a'*, and may be fixed at any desired points thereon by means of set-screws *h h* operating in connection with one of each pair of the chases *e'*. The purpose of making the wheels thus adjustable is that they may both be set on the same side of one of the plough-beams, the other plough-beam being removed, and the cultivator thus turned into a gang-plough, in the operation of which the wheels will run on the unbroken ground. The rear ends of the plough-beams *c c* are sustained in the crotches *i i*, which are also adjustable on the cross-bar *a'*, in like manner as the chases *e'*. Said crotches are pierced with horizontal holes *i'*, in the direction of the length of the cross-bar *a'*, by means of which holes and the pins *k k*, the rear ends of the plough-beams may be set at various heights. The front ends of the plough-beams *c c* are also embraced by crotches *l l*, the shanks *l' l'* of which pass vertically upward through corresponding orifices *m'*, Figure 2, in the projecting flanges *m* of the guide *n*, that reciprocates horizontally in the slot *n'* of the front cross-beam *o* of the frame A. The shanks *l' l'* may be shifted in the orifices *m'*, as may be desired. The advantage of making the plough-beams thus laterally adjustable is at least twofold: first, the ploughs may be made to throw dirt to or from the plants by simply shifting the beams to the sides opposite those where they are represented in the drawings; second, the beams may be set without the side pieces of the frame, and thus made to throw dirt against trees or other vegetable growths too high to be straddled by the machine. By making them vertically adjustable, if both ploughs are placed on one side, and near the rear end of the beam, and the latter let down in the crotches *e' e'*, a subsoil plough is obtained.

It will be observed that the ploughs are made with cutting-edges *r* projecting some distance forward of their curved sides. These edges are for the purpose of making a smooth cut, so that none of the soil shall, by them, be thrown to either side, to the injury of the plants. They also act as fenders to prevent clods from passing over the front edge of the plough upon the plants. The guide *n* is operated by the lever *s*, pivoted to one of the cross-beams of the frame.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of the wheel *a* with the wrist *e*, sliding chases *e'*, and cross-beam *a'*, as and for the purpose described.

2. The combination of the plough-beam *c* with the sliding crotches *i*, the cross-beam *a'*, the guide *n*, and slotted cross-beam *o*, substantially as set forth.

3. The combination of the plough-beam *c* with the crotches *i*, provided with the holes *i'* and pins *k*, as and for the purpose set forth.

WILLIAM H. DAMRON,
ROBERT H. MASSEY,
LORENZO F. WHITMAN.

Witnesses:
SAM'L WILSON,
DAVID MARTIN.