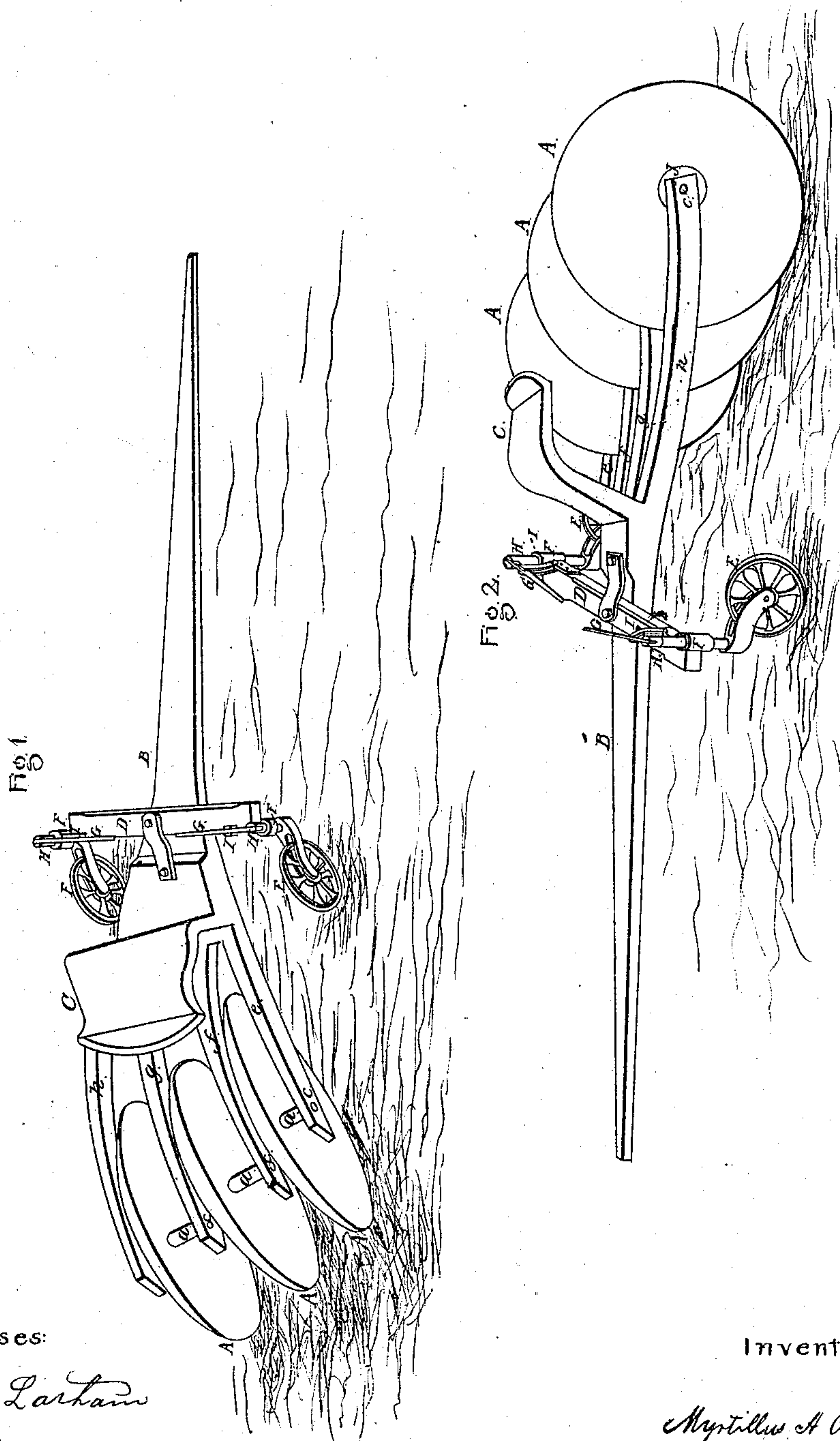


M. A. & I. M. CRAVATH.
REVOLVING PLOW.

No. 66,802.

Patented July 16, 1867.



Witnesses:

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MYRTILLUS A. CRAVATH AND ISAAC M. CRAVATH, OF BLOOMINGTON,
ILLINOIS.

Letters Patent No. 66,802, dated July 16, 1867.

IMPROVEMENT IN REVOLVING PLOUGH.

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

Be it known that we, MYRTILLUS A. CRAVATH and ISAAC M. CRAVATH, of the city of Bloomington, in the county of McLean, State of Illinois, have invented a new and useful implement, to be named and known as the Revolving Plough; and we 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—

Figure 1 is a perspective view of the implement from the rear and furrow side.

Figure 2 is a side elevation of the same, taken on the land-side of the implement, as in the act of ploughing.

A A A are the ploughs; *a a a* are the axles; B is the frame of the implement; *e f g h* are the arms; C is the seat; D is the whiffle-tree; E E are the wheels; F F are the slides; G G are the bent levers; H H are the swivels; I I are the curved straps; J is the concave flange on axle *a*. The ploughs A A A are constructed each of a single plate of steel, circular in form and concave in shape, with the edge sharpened with the bevel on the outer or convex side, and provided with an axle, *a*, through its centre upon which to revolve. Said axle has a journal at each end, and a concave flange, J, near one end adjoining the journal. Said flange is secured to the outer or convex side of the ploughs A A A by means of bolts. The ploughs A A A are secured to the frame B by the journals being passed through the holes in the end of the arms *e f g h*, as shown at *c*. The frame B, to which the ploughs A A A are attached, is constructed with a tongue of common shape, having arms *e f g h* attached, of different shapes and lengths, according to the number of ploughs designed to be used. The seat C is placed forward of the ploughs A A A on frame B, the weight of the driver being used to enforce the action of said ploughs. The whiffle-tree D is forward of the seat C on frame B. The wheels E E are of the common caster pattern, and are attached to the whiffle-tree D by means of the slides F F, and are operated by means of the bent levers G G; said levers being attached to the wheels E E by means of the swivels H H, and being also attached to the slides F F by means of the curved straps I I. The ploughs A A A can be used singly or any desired number can be used together; they can be more or less concave, according to the size of the ploughs, and the width and depth of the furrow desired to be ploughed. A plough three feet in diameter, concaved to a six-foot circle, will cut and thoroughly pulverize a furrow-slice nine inches in width and fourteen inches in depth. The arm *e* on frame B, for the size of the plough herein mentioned, may be two and a half feet in length; size two inches by four at the extreme end, and fixed at an angle of about twenty degrees from the centre line of the tong; the axle of the plough being set at right angles with arm *e*. The arm *f* is curved so as to bring it to the same angle with arm *e*, at the place where it receives the axle *a*; the arm *f* being long enough to admit of placing the second plough about nine inches in rear of the first, and holding one journal of each axle of the first and second ploughs; the same operation to be repeated as often as another plough is added.

The operation is as follows: The levers G G are lowered, sufficient weight placed upon the seat C to cause the ploughs A A A to enter the earth to the required depth. As it advances the resistance of the earth causes the said ploughs to revolve. The furrow-slice is cut on a curved line; the ploughs A A A, revolving at an angle of about twenty degrees from the line of draught, move the furrow-slice to the right, the revolving or centrifugal motion of the same lifting and thoroughly pulverizing the soil. The weight of the furrow-slice on the rear of the concave, and the pressure on the front of the convex at entering the earth, compensate for the ploughs revolving at an angle to the line of draught. In turning the implement the levers G G are lifted and carried over until the curved straps I I rest against the swivels H H.

We claim—

1. The plough A, combined with the axle *a*, constructed as herein mentioned, as a new article of manufacture.
2. The arms *e f g h*, of different lengths and shapes, as shown, for the purpose of combining and operating two or more ploughs.
3. The combination of the slides F F, the bent levers G G, the swivels H H, the curved straps I I, or any equivalent device to operate the wheels E E, in the manner set forth, for the purpose herein mentioned.

In testimony of which invention we hereunto set our hands.

MYRTILLUS A. CRAVATH,
ISAAC M. CRAVATH.

Witnesses:

JOHN T. WALTON,
GEO. T. HERITAGE.