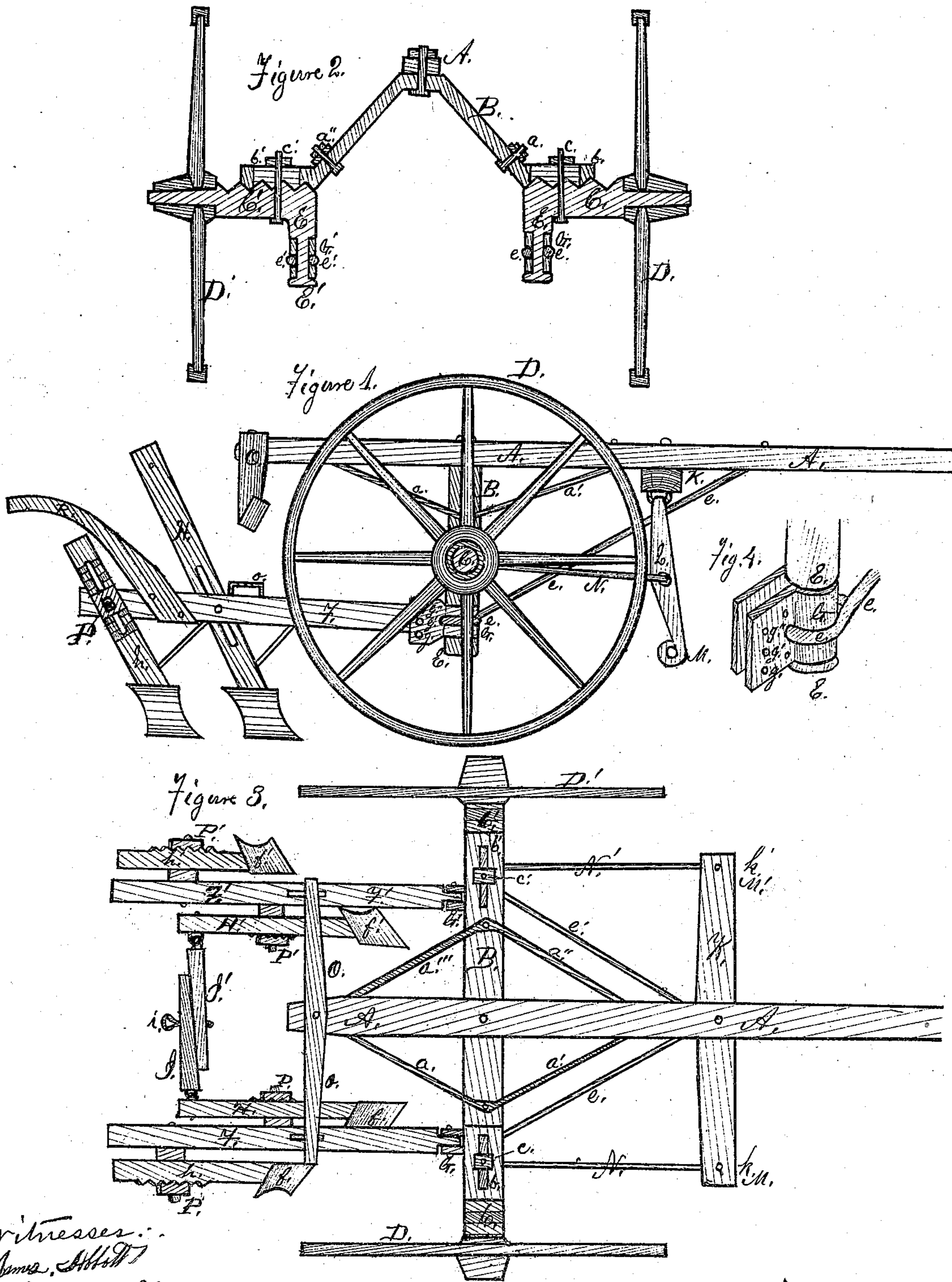


W. B. Raper,

Corn Flow.

No. 28,708.

Patented Jan. 11. 1870.



Witnesses:
James. Allist
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Inventor:-
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UNITED STATES PATENT OFFICE.

WILLIAM B. RAPER, OF CARTHAGE, ILLINOIS.

IMPROVEMENT IN CORN-PLOWS.

Specification forming part of Letters Patent No. 98,708, dated January 11, 1870.

To all whom it may concern:

Be it known that I, WM. B. RAPER, of Carthage, in the county of Hancock and State of Illinois, have invented a new and useful Improvement in Corn-Plows; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which—

Figure 1 is a side elevation of my plows. Fig. 2 is a vertical section through wheels of same. Fig. 3 is a top view or plan of same. Fig. 4 is a perspective view of the double-hinged joint on end of plow-beams.

My invention is of that class of corn-plows which pass over a row of plants and plow both sides, being drawn by two horses and supported by two wheels.

My improvements consist of, first, an improvement in the arrangement of the two sets of wheels, together with the plows and their connected parts with the central frame, so that the two sets of wheels and plows can be set nearer together or apart, as required; second, means and arrangements relative to adjusting the depth of the plows and their distance apart; third, arrangement of the double-tree and its parts; fourth, general construction and arrangement of parts to make a complete corn-plow. This is made substantially as shown and set forth.

A is the tongue or draft-pole. B is the main cross part, forming, with pole A, the main frame. Part B is bent down at its ends, so as to form an arch over the row of plants. To its ends *b b'* are attached the parts C C', bearing the wheels D D'. Braces *a a' a'' a'''* can be used to strengthen the frame formed by parts A and B. D D' are wheels on parts C C'. The joint between the parts B and C is formed with notched or ratcheted surfaces on the two joining faces, made to fit into each other at any adjustable point for some distance, so as to be firmly held, when bolted, and enable the width of the wheels and plows borne by parts C C' apart to be varied to suit the work to be done. Parts *b b'* have slotways cut in them for the bolts in parts C C' to move in in adjusting.

From part C descends pivot-arm E. On this is hinged the end of the plow-beam F by means of a part, G, which is hinged to each of the parts, to part E giving side motion,

and to part F giving vertical range of movement. The part G has a series of holes, *g g'*, for the attachment of the plow-beam F at different heights, to regulate the depth of the plows.

One, two, or more plows of any desired form can be attached to beam F by standards H H', to cultivate one side of a row of plants, the other side being operated on by a like arrangement of parts from part C'. The plow-standards H H' can be made in duplicate with different forms of plows—as “diamonds,” “shovels,” &c.—which may readily replace each other. The plow-standards H, &c., are joined to the beam F by a manner of arrangement to secure adjustability, like that of the parts B and C, so each plow may be regulated in depth independent of beam F.

Handles can be attached to the back ends of each beam F F' and turned to one side, so the plowman can walk on one side of the row of plants and guide them. The backward strain of the plows on part E is braced by a part, *e*, extending forward from it to the tongue A, to act as a tie.

Between the top ends of standards H H' is a part, I, connecting them. This is hinged at each end to one of the standards. This part is formed of two parts, I and I', one of which is attached to each standard. These slide over each other endwise, and are fastened at several points by a set-screw, *i*, which enables the width of the two sets of plows apart to be varied.

The double-tree K is attached to the tongue A by a pivot or pin. At its ends *k k'* are hinged dependent parts L L', which bear the single-trees M M' at their lower ends, furnishing low points of draft for the horses and a high point at which the double-tree crosses the row of plants.

From the middle parts of L L' extend backward draft-rods N N' to parts C C'. On these the draft comes, and causes the double-tree to be forced forward, instead of backward, by the strain of horses.

At the back end of the tongue there can be parts O O', extending to the sides with hooks on their ends, by which the plow-beams F F' and plows may be suspended by eyes or staples from them, when, in moving, it is not desired to have the plows in operation.

The term “two sets of wheels and plows”

used in this specification is intended to mean two sets of parts consisting of the wheel and plows of each side.

What I claim is—

In corn-plows, the combination and arrangement of the several parts—viz., the ratcheted joints B C C', by which the two sets of wheels and plows are adjusted toward or from each other, the downward-pointing arms E E', with their double-hinging parts G G', having their series of holes *g g' g''*, &c., the ratcheted

manner of adjusting the plow-standards *h H h' H'* up and down on the plow-beams F F', and the double-tree having dependent parts L L', to bear the single-trees M M', and draft-rods N N', reaching back to the wheel-frame B, all substantially as set forth.

WM. B. RAPER.

Witnesses:

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