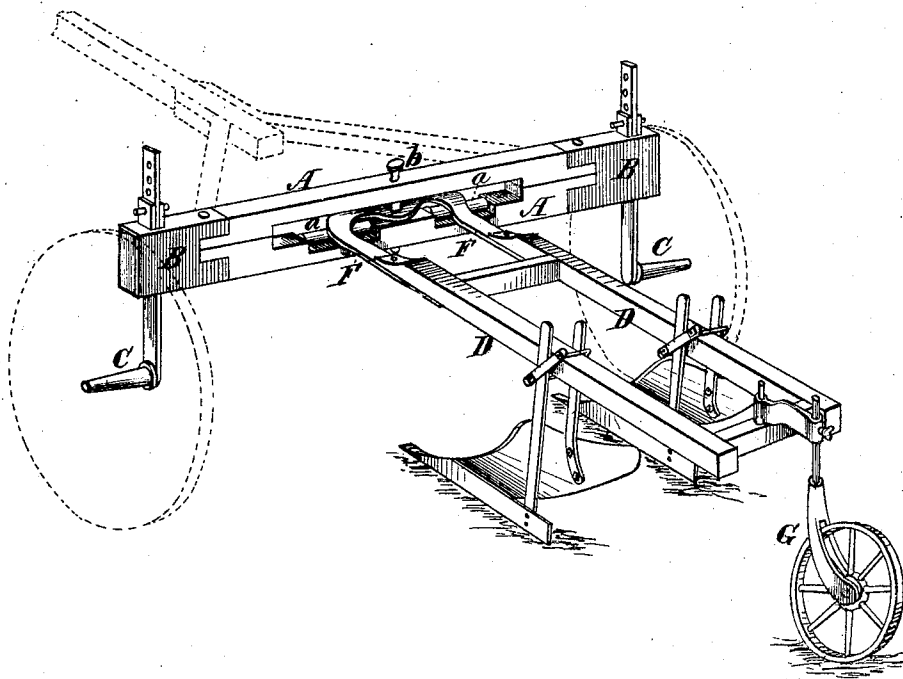


M. W. HARRIS.

Improvement in Plows.

No. 128,482.

Patented July 2, 1872.



Witnesses.

A. D. Littleton
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UNITED STATES PATENT OFFICE.

MILTON W. HARRIS, OF DES MOINES, IOWA.

IMPROVEMENT IN GANG-PLOWS.

Specification forming part of Letters Patent No. 128,482, dated July 2, 1872.

SPECIFICATION.

I, MILTON W. HARRIS, of Des Moines, Iowa, have invented an Improved Gang-Plow, of which the following is a specification:

The object of my invention is to mount two or more adjustable gang-plows upon a frame-beam and connect the same with a carriage in such a manner that the plows will be held steady in the soil by means of a circular plate and a double axle, as hereinafter fully set forth.

Figure 1 of my drawing is a perspective miniature view of my double axle and circular plate, and illustrates the manner in which they are formed, combined, and operated in a complete gang-plow.

A A represent the two parts of the double axle. They are made of hard wood, and may vary in length and thickness. B B are metal sockets incasing the ends of the wooden axles. They are secured to the axle with bolts in such a manner as to bind the two separate pieces A A firmly together. Oblong holes are formed in the upper and lower sides of the sockets for the purpose of admitting and securing adjustable studs. C C are common adjustable stud-axles, with the wheels thereon indicated by dotted lines. The long and upright arms of the stud-axles pass up through the sockets B B. Ears project aside of the hole in the tops of the sockets. These ears, and also the arms of the studs, are perforated to allow bolts to be passed through the ears and the arms. By this means the axle and frame-beam and plows thereto attached can be readily raised and lowered, and the soil plowed various depths,

as may be desired. D D represent a frame-beam. It is made of hard wood, and may vary in dimensions. F F represent my bent iron plate, connected with the front end of the beam, and passed forward through the open slot of the double axle. A common king-bolt passes through the axle and the plate and pivots the frame-beam to the carriage. This plate F F may vary in shape, to suit the fancy. It is designed to perform the function of the fifth-wheel in a carriage, and may be a full circle or a segment. *a a* are small rollers, journaled in the axle in such a manner that the plate F F will rest upon and roll over them as the relative positions of the double axle and frame-beam are changed from a right angle. A pole is rigidly fixed to the axle, as indicated by dotted lines, and governs the direction of the carriage and plows thereto attached. G is a common caster-wheel, attached to the rear end of the frame-beam in such a manner that it can be adjusted and set to run in or out of the furrow.

Claim.

I claim as my invention—
The double axle A A, the rollers *a a*, the plate F F, the king-bolt *b*, the frame-beam D D, made, combined, and operated in a gang-plow, substantially as described, and for the purposes specified.

MILTON W. HARRIS.

Witnesses:

W. H. SHAW,
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