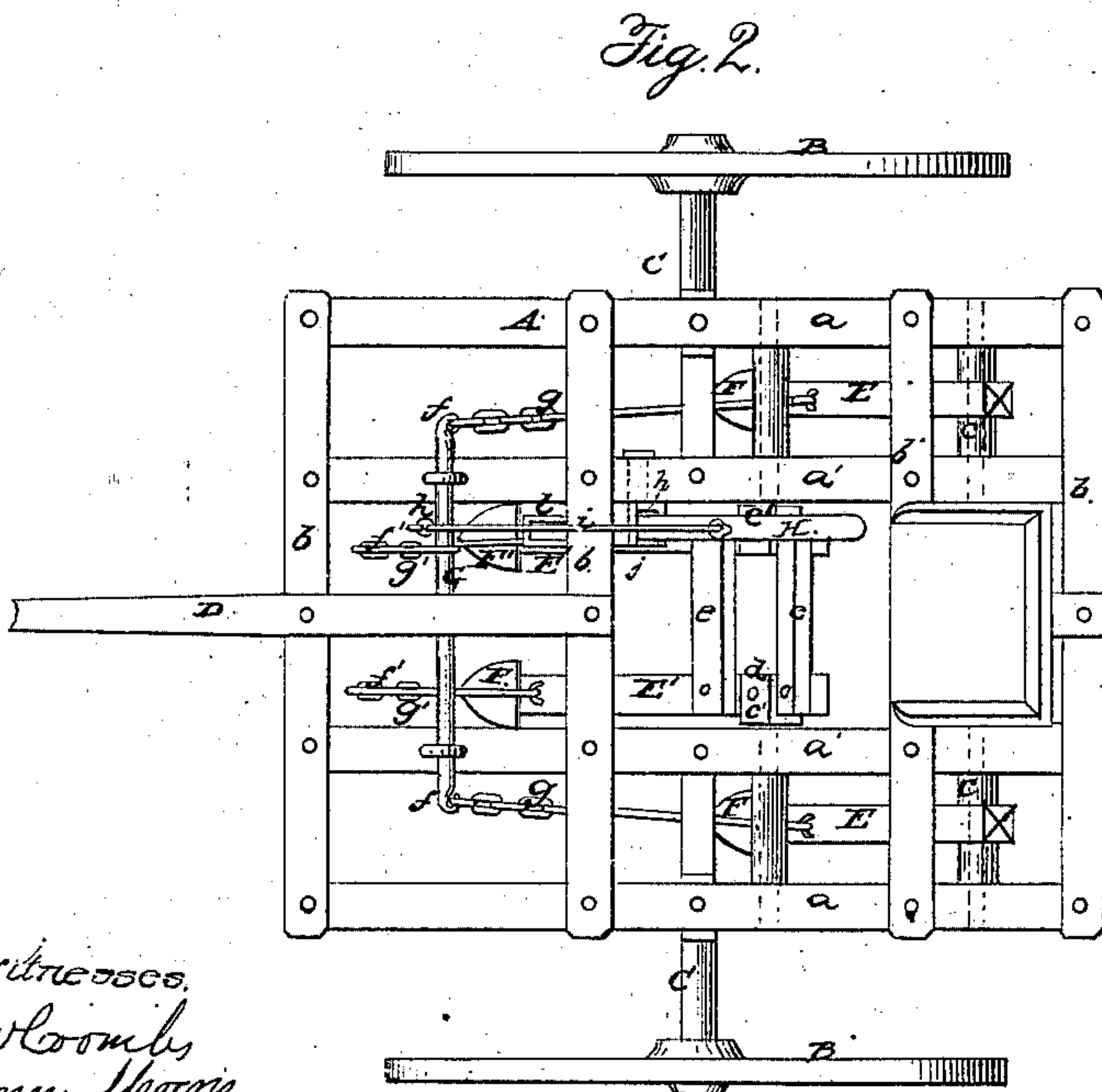
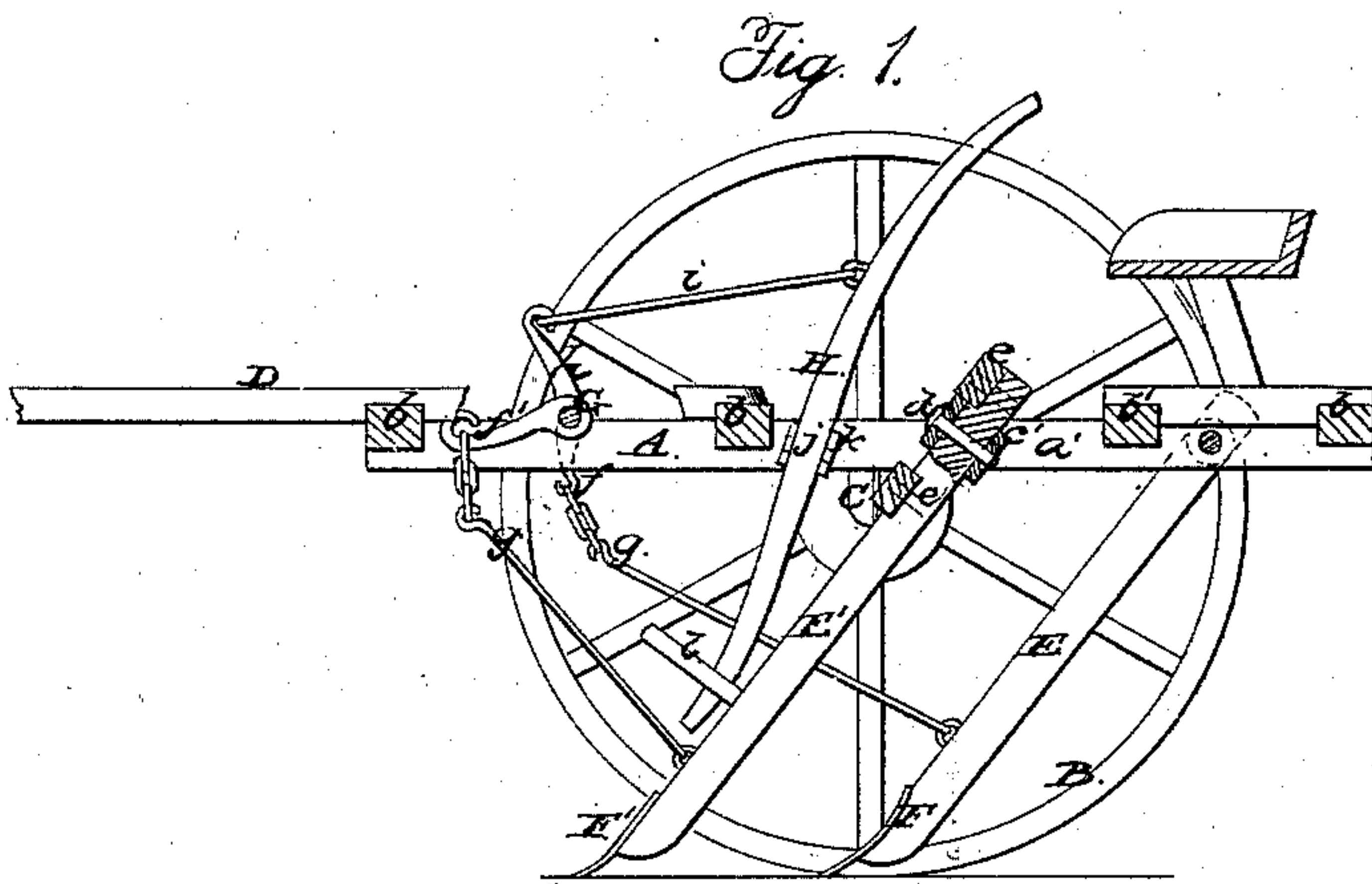


F. BARNEY.
Wheel-Cultivator.

No. 43,470.

Patented July 12, 1864.



Witnesses.
J. W. Brown
Henry Morris

Inventor.
Frank Barney
per [Signature]
Attorneys

UNITED STATES PATENT OFFICE.

FRANK BARNEY, OF BLOOMINGTON, ILLINOIS.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 43,470, dated July 12, 1864.

To all whom it may concern:

Be it known that I, FRANK BARNEY, of Bloomington, in the county of McLean and State of Illinois, have invented a new and Improved Cultivator; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a longitudinal vertical section of my invention. Fig. 2 is a plan or top view of the same.

Similar letters of reference in both views indicate corresponding parts.

This invention consists in the application of a hand-lever, in combination with a triple crank-shaft and with the hinged standards of the front and rear plows, in such a manner that by the action of said lever the front shares can be moved laterally, and at the same time by the combined action of the lever and crank-shaft the front and rear shares can be raised from the ground simultaneously at any moment.

To enable those skilled in the art to make and use my invention, I will proceed to describe it.

A represents a frame, made of wood or any other suitable material, and supported by two wheels, B, which have their bearings on the ends of the stationary axle C. A draft-pole, D, serves to draw the cultivator through the field, and the frame A is elevated to such a height above the ground that it passes over the growing plants, partly by the large size of the wheels and partly by curving the ends of the axle C downward. The frame A is composed of four (more or less) longitudinal bars, *a a'*, and a similar number of cross-bars, *b b'*, and the longitudinal bars *a a'* form the bearings for the gudgeons *c* of the standards E, to which the rear plows, F, are secured, and for the forked swivel-brackets *c'*, which sustain the standards E' of the front plows, F'. The standards E of the rear plows are secured to their gudgeons *c*, so that they swing up and down in a vertical plane, but are not capable to move in a lateral direction independent of the frame A; but the front standards, E', are

secured to the forked brackets *c'* by means of pivots *d* in such a manner that they swing in a vertical and in a lateral direction, and to prevent them from moving one independent of the other they are connected by brakes *e*, secured to the same by means of pivots, so that they do not interfere with their lateral motion.

G is a crank-shaft, which has its bearings in suitable boxes attached to the longitudinal bars *a'* of the frame A. The ends of this shaft form cranks *f*, which connect by chains and rods *g* with the rear standards, E, and two arms, *f'*, which are rigidly secured to the same, connect by chains and rods *g'* with the front standards, E'. Another arm, *h*, which extends upward from the crank-shaft G, connects by a rod, *i*, with a hand-lever, H, which has its fulcrum on a pivot, *j*, in a swivel-bracket, *k*, inserted into one of the longitudinal bars, *a'*. The lower end of this lever is connected to one of the front standards, E', by means of a staple, *l*, or in any other suitable manner, and its top end is in convenient position to be operated from the driver's seat.

By depressing the hand-lever H in the direction of the arrow marked near it in Fig. 1 all the plows are raised out of the ground simultaneously, and by moving the upper end of the lever in a lateral direction a lateral motion can be imparted to the front plows in either direction, and said plows can thus be accommodated to the sinuosities of the rows.

This plow is very simple in its construction. It is easily operated, and all its parts are so arranged that they are not liable to get out of repair.

What I claim as new, and desire to secure by Letters Patent, is—

The hand-lever H, with its swivel-fulcrum *k*, in connection with the crank-shaft G, hinged rear standards, E, and swivel front standards, E', all constructed and operating in the manner and for the purpose substantially as herein specified.

FRANK BARNEY.

Witnesses:

JAMES LONG,
ROBERT SHEPHERD,
JOHN SMILEY.