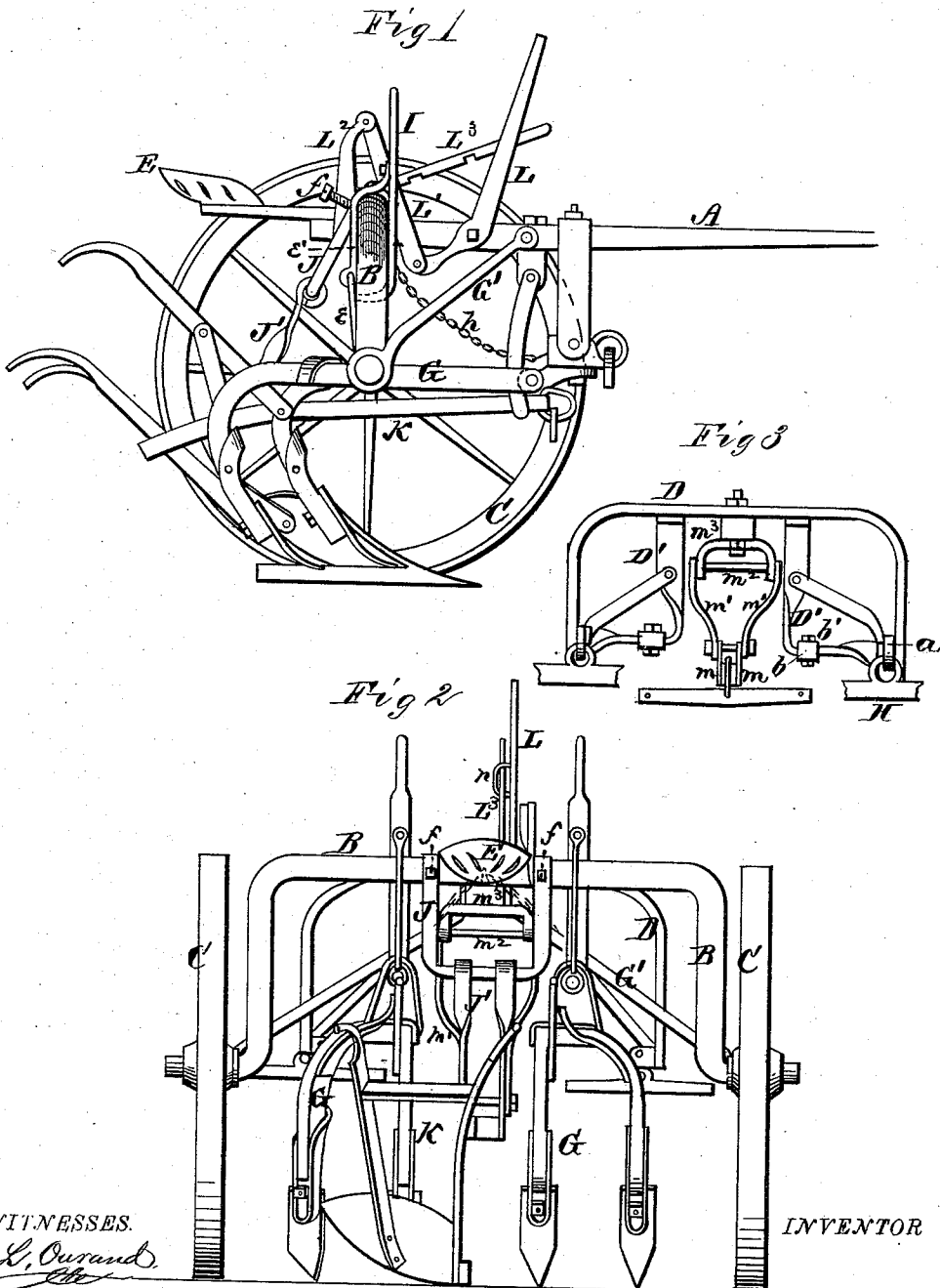


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Patented Sept. 8, 1874.



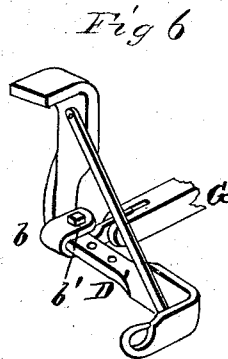
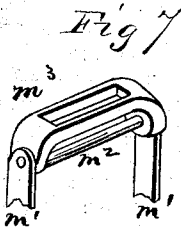
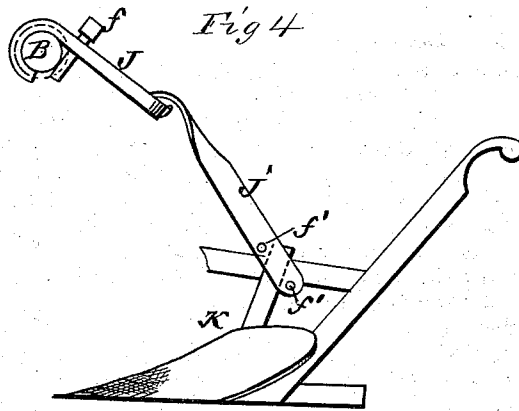
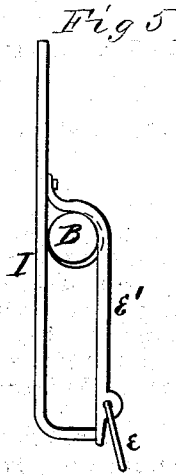
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UNITED STATES PATENT OFFICE.

ADOLPH F. CARLSON, CHARLES SHIPPS, AND WILLIAM CAMRON, OF
ATTICA, INDIANA.

IMPROVEMENT IN WHEEL PLOWS AND CULTIVATORS.

Specification forming part of Letters Patent No. 154,835, dated September 8, 1874; application filed
March 23, 1874.

To all whom it may concern:

Be it known that we, ADOLPH F. CARLSON, CHAS. SHIPPS, and WILLIAM CAMRON, of Attica, in the county of Fountain and in the State of Indiana, have invented certain new and useful Improvements in Wheel Plow and Cultivator; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The nature of our invention consists in the construction and arrangement of a combined breaking and corn plow, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation of our plow. Fig. 2 is a rear view of the same. Fig. 3 is a front view, showing the double-tree and its attachments. Figs. 4, 5, 6, and 7 are detached views of certain parts thereof.

A represents the tongue, on top of which, near the rear end, is firmly bolted the center of the axle B. The ends of the axle are bent downward at right angles for a suitable distance, and from the extreme lower ends project suitable spindles, upon which the wheels C C are placed. The axle is braced from the inner end of each spindle by a brace, G', to the tongue A. E is the driver's seat, attached on the rear end of the tongue A. D represents the double-tree, pivoted on top of the tongue, and having its ends bent downward, as shown. To each end of the double-tree D is attached a bent and twisted bar, D', one end of which is riveted or bolted to the under side of the double-tree, a short distance from the side of the tongue, and extends vertically downward, then twisted and bent to pass horizontally to the end of the double-tree, near which it is again twisted, bent forward, and fastened to the lower end of the double-tree. The lower front end of the bar D' forms a hook, a, to which the single-tree H is connected. To the horizontal part of the bar D' is attached a

hook-coupling, b, which passes under the bar and the hook part, around the front edge to the top of the same, and fastened by a pin, b', the whole so arranged as to allow the coupling to turn on the pivot. The rear end of the coupling b is twisted and pivoted in a vertical slot in the front end of the beam of the cultivator-plow G.

The cultivator-plows G G may be constructed in any of the known and usual ways, and therefore need no description here.

These plows, by means of the couplings b, as described, can be moved up and down, and laterally, on the pivots b'. They may also be adjusted out or in, as desired, by simply changing the pivot-pins b' in different holes upon the bar D'. Each plow G is provided with a bail, e, which is connected to a bent bar or rod, e', attached to a lever, I. The rod e' and lever I form together a rectangular frame, which passes over the axle B, the rod fitting in a groove on the rear and under side thereof. When the plows G are in use, the levers I I are raised to a perpendicular position, and slide down on the axle as far as the rod e' will permit. By raising the lever up to the lower end, and then turning it over backward, it will be held in this position, and hold the plow up out of the ground. To the outer end of one of the bars D' in the double-tree is attached one end of a chain, h, which passes back under the axle over the rear end of the tongue, and forward again under the axle, its other end being attached to the outer end of the other bar, D'. On the tongue is a pin, i, upon which either one of the links of the chain, at or near the middle, may be attached. By means of this chain and pin the draft of the horses may be perfectly equalized. J represents a stirrup, the ends of which are bent in hook form, and placed in circumferential grooves on the axle B, one upon each side of the tongue, and they are held in said grooves by means of set-screws f f. These set-screws only prevent the stirrup from coming off the axle, but do not in any way interfere with its turning on the axle. In the stirrup J are hung two arms, J' J', the lower ends of which are connected by pins f' f', one above and the other below the beam of a breaking-plow, K, and the former of said

pins in front of, and the latter in rear of, the standard of said plow. The front end of said plow-beam has two short bars or ears, m , attached, one on each side, and to these are pivoted curved bars m^1 , the upper ends of which are pivoted, by a pin or bolt, m^2 , to the downward bent ends of a longitudinally-slotted bar, m^3 , attached to the under side of the tongue A. By adjusting the bar m^3 to the right or left the plow K is adjusted to take more or less land, as desired. On the side of the tongue A is pivoted a hand-lever, L, the lower end of which is, by a rod, L^1 , connected with an arm, L^2 , projecting from the stirrup J. By means of this lever, and its connections, the plow K is raised to any desired height, and held by means of a latch, L^3 , catching in a pin or loop, n , on the side of the lever L. H' is the double-tree, at the front end of the beam of the breaking-plow K.

In breaking ground, the breaking-plows are used alone; but in cultivating the breaking-plows are removed, and the cultivating-plows are put on instead, so as to form a straddle-row cultivator.

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

1. The bent and twisted bars D', attached

to the double-tree D, which has its ends bent downward, forming a convenient attachment, to which to couple the cultivator-plows G and the eveners H, substantially as herein set forth.

2. The combination of the bent double-tree D, bent and twisted arms D', hook-couplings b, pins or bolts b' , and the cultivator-plows G, substantially as and for the purposes herein set forth.

3. The combination of the cultivator-plow G, bail e, rod or bar e' , lever I, and the axle B, provided with a groove on its under and rear side, all substantially as and for the purposes herein set forth.

4. The combination of the circumferentially-grooved axle B, stirrup J, with hooks formed at its ends, the set-screws f , adapted to carry bars J' J', pins f' , and breaking-plow K, all substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 3d day of February, 1874.

ADOLPH F. CARLSON.
CHARLES SHIPPS.
WILLIAM CAMRON.

Witnesses:

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THOMAS MILFORD.