2 Sheets—Sheet 1.

J. R. McCORMICK.

Gang and Sulky Plows.

No. 199,083. **Patented Jan. 8, 1878.**

Fig. 1.

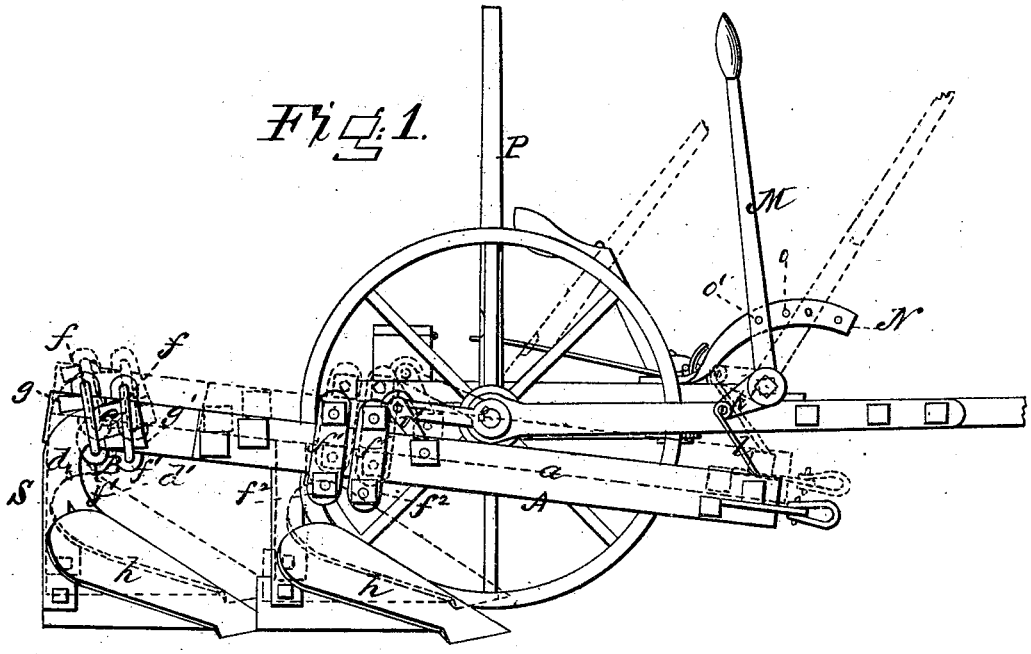
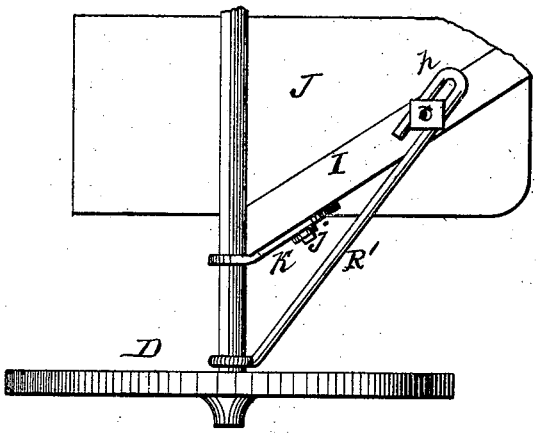


Fig. 2.



WITNESSES

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2 Sheets—Sheet 2.

J. R. McCORMICK

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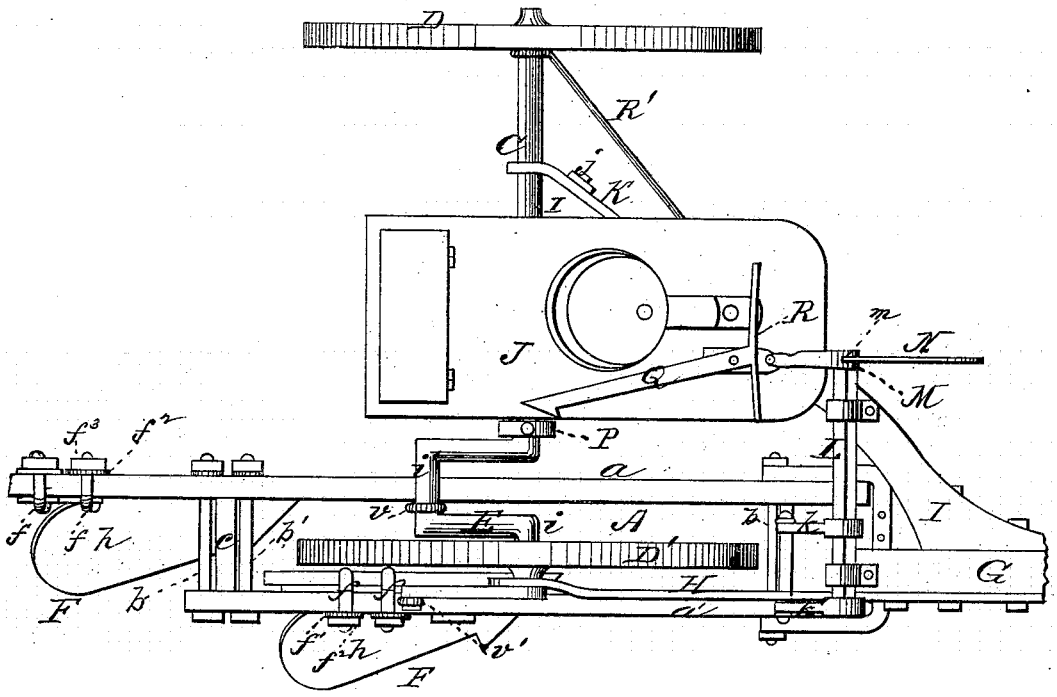
Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN R. McCORMICK, OF GEORGETOWN, TEXAS.

IMPROVEMENT IN GANG AND SULKY PLOWS.

Specification forming part of Letters Patent No. **199,083**, dated January 8, 1878; application filed June 30, 1877.

To all whom it may concern:

Be it known that I, JOHN R. McCORMICK, of Georgetown, in the county of Williamson and State of Texas, have invented a new and valuable Improvement in Gang and Sulky Plows; and I 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, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of my invention; Fig. 2, a detail view thereof; and Fig. 3, a top view of the same.

This invention has relation to improvements in gang and sulky plows; and it consists in an axle having the double crank of the transporting-wheel journaled upon the outer bend of said crank, working between the side beams of the plow-frame, and the connecting-rods pivoted, respectively, to the said side bars and to the end and inner bend of said crank.

It also consists in a plow-beam frame having plows upon its side bars, the one in advance of the other, and an axle having the double crank of the transporting-wheel arranged on said axle and working between the side bars upon solid ground between the furrows of said beam-frame.

The mechanical means by which I attain these desirable results are hereinafter fully explained.

In the annexed drawings, the letter A designates the beam of my improved gang and sulky plow, composed of the usual spaced parallel beams *a a'*, connected at their front ends by cross-bars and metallic braces *b b'*. The inner beam, *a'*, is considerably longer than the outer one, and is connected therewith by means of braces *c c'*. The plow-standard S is composed of a vertical post, *d*, to which the heel of the land-side is secured, and of an inclined concave piece, *d'*, to which the mold-board and land-side are each attached. The upper end of post *d* is bent over to the front, as shown at *e*, nearly or quite at right angles with its length, and serves as a means of attachment to the beam. This is accomplished by means of clamps B, composed of a U-shaped rod, *f*, a clamp-plate, f^1, perforated to receive the ends of said rod, and suitable nuts f^2, applied upon the ends of the said rod. By loosening these nuts the plows may be adjusted to the front or rear relative to each other, and their distance apart regulated at pleasure. The "bite" of the plow-point is regulated approximatively by means of wedges *g' g*, applied the one above and at the rear edge of the tang *c* and the other below and at the front edge of the post *d*. These wedges also hold the plows to their adjustment when they are subjected to strain.

The standards of my plows are made, preferably, of wrought-iron, though I may employ any of the usual materials or combinations thereof in their construction.

The mold-board *h* of my improved plows is a plane surface—that is, is straight from front to rear—and is especially fitted for breaking up tough, sticky soils, as it affords no sunken parts wherein soil can accumulate to the manifest increase of friction and decrease of effectiveness of the plow.

C designates the axle of two transporting-wheels, D D', the first of which is applied to the axle in the customary manner, and the latter at the outer bend *i* of a double crank, E. Wheel D', as shown in Fig. 3, travels between the side rails *a a'* of the beam A, and is thus always between the furrows cut by the plows F on solid ground. The beam A is connected to the axle by the rods *v v'*, the lower ends of which are pivoted, respectively, to the side rails *a a'*, and their upper ends, respectively, to the inner bend *i'* of the crank and to the outer end thereof. The pole G is rigidly secured to the front end of a strong metallic beam, H, precisely in front of wheel D', and is connected to the remaining extremity of said axle by a hound-shaped beam, I, that carries the platform J, upon which the driver's seat is mounted. The axle has an oblique slotted metallic plate, K, rigidly secured thereto, which is adjustably clamped to hound I by a clamp-screw, *j*. By loosening the screw and throwing the axle slightly back, the plows will be "landed," or take more land, an opposite effect being obtained by drawing the said axle to the front.

L designates a rock-shaft, having its bearings in front of wheel D' upon the pole and hound I, and having two radial arms, *k k'*, ex-

tending downward at each side of said pole. These arms are connected with the front end of beam A by means of pivoted rods *l*. Shaft L is provided upon one end with an operating-lever, M, having a longitudinal slot, *m*, through which extends a metallic adjusting-arc, N, rigidly secured to the platform aforesaid. This arc is provided with spaced perforations *o*, that register with corresponding perforations *o'* in the slotted part of the said lever M. This latter and the arms *k k'* aforesaid are at right angles, or nearly so, to each other, and when the former is thrust to the front the corresponding end of the beam will be raised, and the bite of the plows upon the ground correspondingly lessened. A reverse movement of this lever will have an opposite effect—that is, the penetration of the plows into the ground will be increased.

The axle aforesaid is provided with an operating-lever, P, rigidly secured thereto, through the medium of which and of the double crank and arms above described the plow-beam and plows are raised out of and lowered into the ground. This lever, when thrust to the front, engages a catch, Q, having a transverse foot-plate, R, by means of which the plows are held in the raised position.

In order to remedy the bad effects of a side draft, the axle next the wheel D is provided with a collar, to which is rigidly secured a metallic rod, R'. This rod is provided at its front end with a longitudinal eye, *p*, by means of which and a set-screw or other equivalent device it is adjustably clamped to the hound I. This adjustability is rendered necessary because the axle aforesaid is adjustable relative to the length of the machine.

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

1. The combination, with the plow-beam frame A, having plows F upon its side bars, the one in advance of the other, and axle C, having the double crank E, of the transporting-wheel D', arranged on said axle, and working between the side bars *a a'* upon solid ground between the furrows of said beam-frame, substantially as specified.

2. The combination, with the axle C, having the double crank E, of the transporting-wheel D', journaled upon the outer bend of said crank, working between the side beams *a a'* of the plow-beam frame, and the connecting-rods *v v'*, pivoted, respectively, to the said side bars and to the end and inner bend of said crank, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOHN ROBERT McCORMICK.

Witnesses:
NAT. Q. HENDERSON,
R. H. MONTGOMERY.