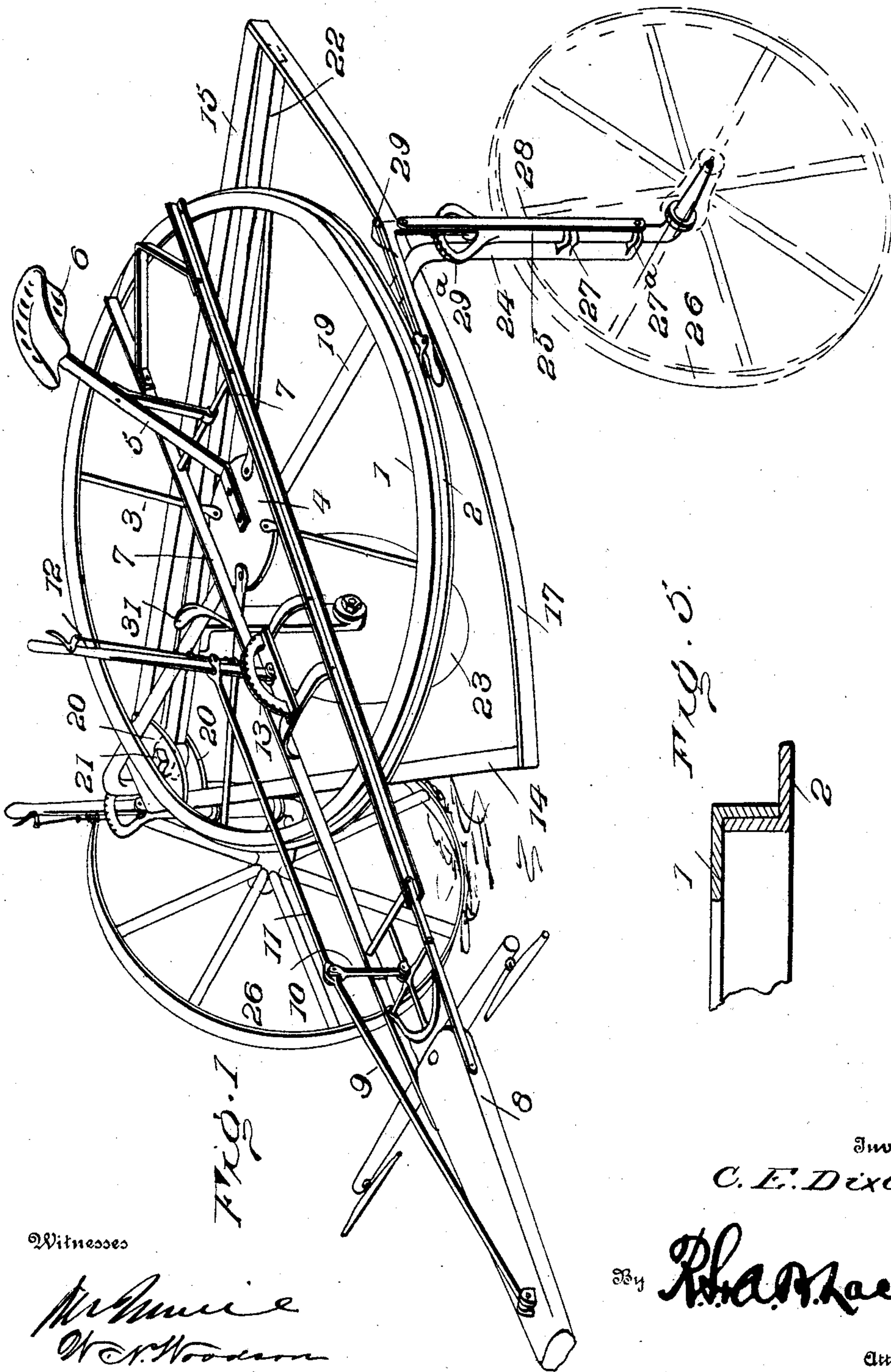


No. 866,632.

PATENTED SEPT. 24, 1907.

C. E. DIXON.
REVERSIBLE DISK PLOW.
APPLICATION FILED APR. 15, 1907.

2 SHEETS--SHEET 1.

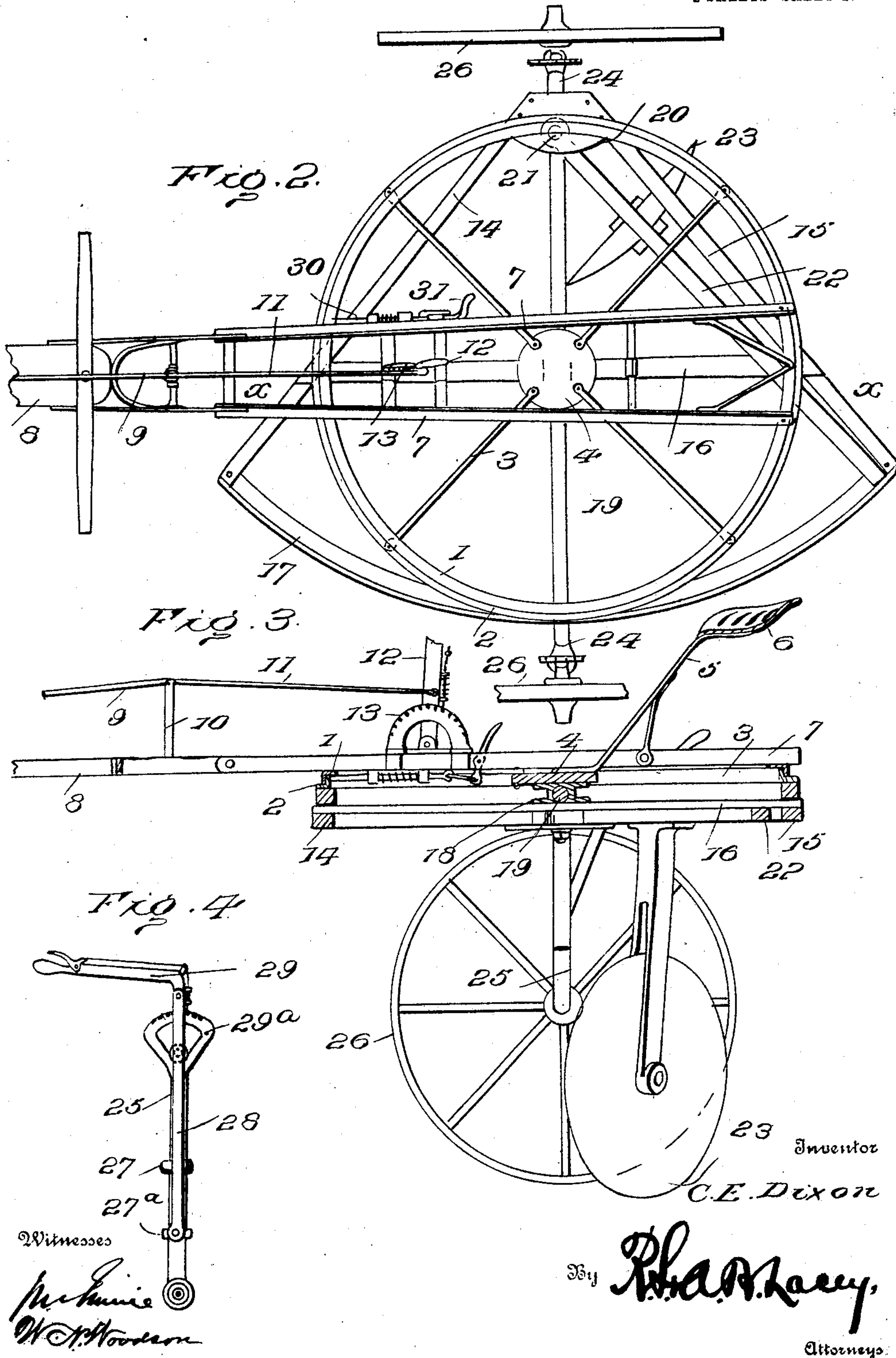


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2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

CHARLES E. DIXON, OF FOREST GROVE, OREGON.

REVERSIBLE DISK PLOW.

No. 866,632.

Specification of Letters Patent.

Patented Sept. 24, 1907.

Application filed April 15, 1907. Serial No. 368,311.

To all whom it may concern:

Be it known that I, CHARLES E. DIXON, a citizen of the United States, residing at Forest Grove, in the county of Wahington and State of Oregon, have invented certain new and useful Improvements in Reversible Disk Plows, of which the following is a specification.

This invention contemplates certain new and useful improvements in sulky plows, and the invention has for its object a simple, light, durable and efficient construction of plow by the operation of which the soil will be turned all in one direction leaving no dead furrows, thereby promoting the crop raising capabilities of the field, and whereby a side hill may be plowed both ways, where with other plows the plowing operation may be performed one way only.

With this and other objects in view as the description proceeds, the invention consists in certain constructions, arrangements and combinations of the parts which I shall now hereinafter fully describe and then point out in the appended claims.

For a full description of the invention and the merits thereof, and also to acquire a knowledge of the details of construction, of the means for effecting the result, reference is to be had to the following description and accompanying drawings in which:

Figure 1 is a perspective view of a plow embodying the improvements of my invention: Fig. 2 is a top plan view thereof on the plane of the supporting frame work: Fig. 3 is a longitudinal sectional view, with parts in side elevation, the section being taken substantially on the line $x-x$ of Fig. 2: Fig. 4 is a detail side elevation of one of the lever connections for raising and lowering the entire plow on its traveling wheels: Fig. 5 is a detail fragmentary sectional view, on an enlarged scale, of the two rings that together form the supporting frame work.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The supporting frame work of my improved plow comprises upper and lower concentric rings 1 and 2 preferably constructed of angle iron, the upper ring 1 being relatively revoluble around the lower ring, while the latter is relatively stationary. A series of radial angle iron braces 3 extend inwardly from the upper ring 1 and are connected at their inner ends to a centrally located supporting plate 4 upon which the spring standard 5 of the driver's seat 6 is mounted. 7 designates the two spaced angle iron bars of the reach which extends across and is supported on the upper ring 1, being secured thereto, and the said reach is connected in a pivotal manner at its front end to the draft tongue 8 which may be arranged for two, three or four horses, as desired. A link rod 9 is connected to the tongue and to an upright post 10 on the front end of the reach,

said post being in turn connected by a rod 11 to the balancing handle lever 12 fulcrumed on two of the cross braces of the reach and provided with a detent adapted for locking engagement with the quadrant 13.

The plow frame embodies two beams 14 and 15 that are disposed substantially at right angles to each other, being rigidly connected together at their adjacent ends. The said plow frame embodies an intermediate cross beam 16 and a curved beam 17 connecting the outer ends of the beams 14 and 15 at the land side of the plow. The intermediate cross beam 16 is rigidly secured, as by the casting 18, to the axle 19, and the lower ring 2 is supported upon or by the plow beam, being secured thereto in any desired manner. Upper and lower plates 20 are secured to the frame beams 14 and 15 at the vertex of the angle thereof, and a connecting bolt 21 extends through said plates and serves as a pivot for a plow beam 22, one end of which is inserted between said plates and is pivotally connected to the bolt 21. The opposite end of the plow beam 22 is supported upon and guided by the curved cross beam 17 of the plow frame, the latter being of angle iron as shown. The plow beam 22 carries one of more disks 23, one disk being shown in the present instance, although it is to be understood that my invention comprehends the use of a gang. The beam 22 is free to move or spring on its king bolt 21 back and forth between the two beams 14 and 15 of the plow frame, and in operation the said beam rests against either one or the other of said beams 14 and 15 as the case may be, according to the direction in which the plow is traveling.

The axle 19 is provided with downwardly extending ends 24 adapted for vertical sliding connection with the upwardly projecting portions 25 of stub axles that are formed with spindles upon which the traveling wheels 26 are journaled. The downwardly extending ends 24 of the axle 19 are formed with upper and lower guide sleeve 27 and 27^a, and to the lowermost sleeve, a fulcrum bar 28 is pivotally connected at its lower end. A hand lever 29 is fulcrumed intermediate of its ends on the fulcrum bar 28, and its lower end has a pivoted connection with the upper end of the stub axle 25. The lever 29 carries a detent designed for engagement with the quadrant 29^a also formed on the upper end of the stub axle 25. By manipulating the two levers 29, this lever construction being provided on both sides of the plow, it is evident that the entire plow may be lifted or lowered on its traveling wheels. By the specific arrangement set forth, the plow may be raised by moving the hand levers 29 to the position illustrated in Figs. 1 and 4 and lowered for work by swinging the levers rearwardly.

In the practical operation of my improved plow, the entire frame work is lowered so as to bring the disk or disks 23 into operative position, and the plow travels across the field to form a furrow. At the end of the fur-

row the plow is reversed, first depressing the hand levers 29 and then swinging the horses around so as to reverse the tongue end for end, this construction being permitted, while the wheels remain stationary, owing to the construction and arrangement of the two rings 1 and 2. Then the travel is reversed, and as soon as the plow starts, the plow beam 22 will swing from the position in which it has been located, to the opposite position where it will rest against the other beam of the plow frame and the plowing is continued. In order to hold the two rings connected together so as to prevent the revoluble movement of one upon the other until the proper time, I have provided a spring pressed latch 30 which is adapted to extend through registering apertures in the two rings. This latch may be retracted by a foot lever 31 located in proper relation to the driver's seat 6.

Having thus described the invention, what is claimed as new is:

- 20 1. In a plow, the combination of a traveling support, a plow frame carried by said support and embodying diverging members, a plow beam pivotally mounted between said members and adapted to swing against one or the other of said members according to the direction of travel of the
- 25 plow, a disk carried by said plow beam, a tongue mounted on said support, and means for reversing the tongue end for end on the support.
- 30 2. In a plow, the combination of a traveling support including the traveling wheels and an axle, a plow frame carried by said support and embodying two diverging beams extending obliquely to the axle, a plow beam mounted to swing in a horizontal plane between said frame beams, and a tongue revolubly mounted on said support.

3. A plow, comprising a traveling support embodying concentric rings, one of which is mounted to revolve on the other, the latter being relatively stationary, a plow frame carried by said stationary ring, a plow beam mounted to swing in a horizontal plane within the frame, a disk carried by said plow beam, and a tongue supported on the revoluble ring.

4. A plow, comprising a supporting frame work embodying upper and lower concentric rings, the latter being relatively stationary and the former revoluble on the latter, a tongue supported on said upper ring, a plow frame connected to the lower ring and embodying two transversely extending diverging beams and a curved cross beam connecting the outer ends of the diverging beams, a plow beam pivotally connected at one end between the adjacent ends of said beams and supported and guided at its opposite end on the curved beam, the said plow beam being free to swing between the two diverging beams and limited in its swinging movement by contact with said beams, and a disk carried by said plow beam.

5. A plow comprising a supporting frame work embodying horizontally disposed members, one of which is adapted to revolve on the other, the said other member being relatively stationary, an axle connected to the stationary member, traveling wheels with which said axle has a vertically adjustable connection, a plow frame connected to the stationary member, a freely swinging plow beam mounted in said frame, a disk carried by said plow beam, means for raising and lowering the axle on the traveling wheels, and a tongue supported on the revoluble member.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES E. DIXON. [L. S.]

Witnesses:

ALBERT A. DIXON,
W. H. HOLLIS.