

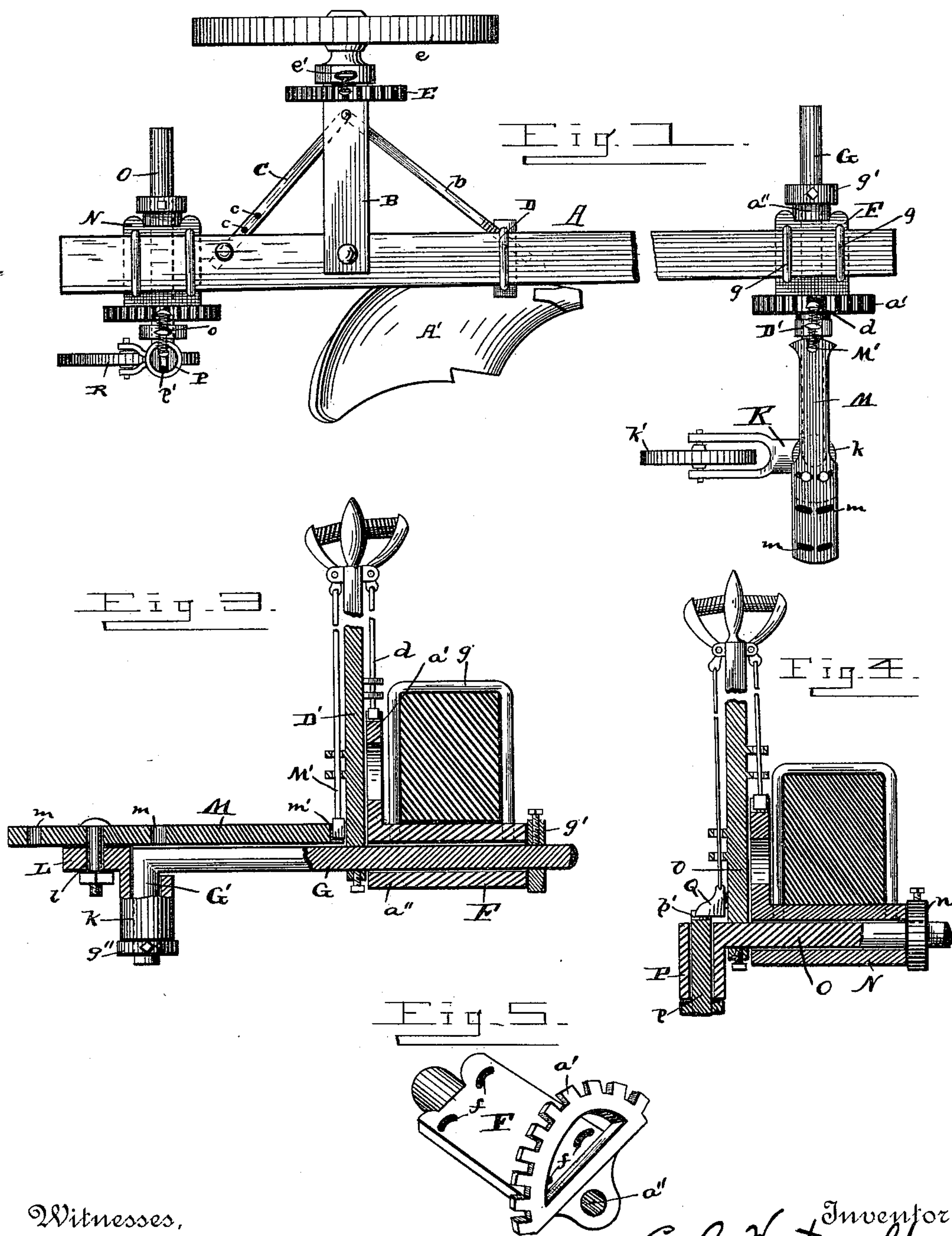
(No Model.)

2 Sheets—Sheet 1.

E. C. WESTERVELT.
SULKY PLOW.

No. 403,866.

Patented May 21 1889.



Witnesses,

P. L. Brooks,

A. E. Towell

Inventor,

E. C. Westervelt

By his Attorney

T. H. Alexander.

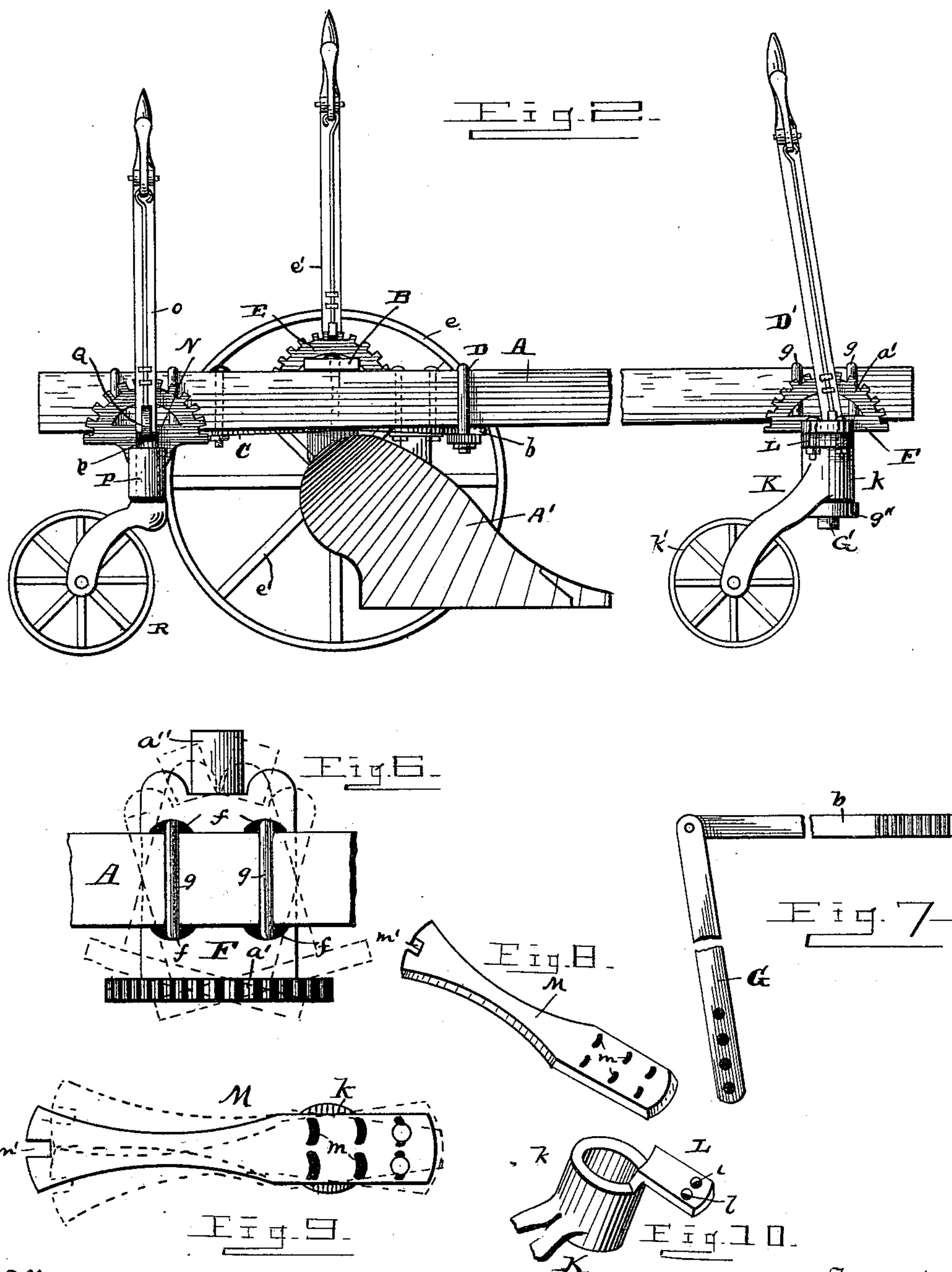
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UNITED STATES PATENT OFFICE.

EDMUND C. WESTERVELT, OF SOUTH BEND, INDIANA.

SULKY-PLOW.

SPECIFICATION forming part of Letters Patent No. 403,866, dated May 21, 1889.

Application filed November 27, 1888. Serial No. 291,957. (No model.)

To all whom it may concern:

Be it known that I, EDMUND C. WESTERVELT, of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Sulky-Plows; and I 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, which form part of this specification, in which—

Figure 1 is a plan view of my improved sulky-plow. Fig. 2 is a side elevation of the same. Fig. 3 is a detail sectional view of the mountings of the front wheel. Fig. 4 is a detail view of the mountings of the rear wheel or caster. Figs. 5, 6, 7, 8, 9, and 10 are details of the parts.

This invention is an improvement in sulky-plows, and especially upon the plow for which I obtained Patent No. 382,919, dated May 15, 1888, and its object is to improve the mountings of the front and rear wheels or casters, so that the plow can be more readily transported and turned when in service; and the invention consists in the novel construction and arrangement of parts hereinafter described, and illustrated in the accompanying drawings.

Referring to the drawings by letters, A is a beam of an ordinary plow, and A' is the plow proper.

B is a bar attached by one end to the beam above the plow and extending laterally and horizontally therefrom on the land side of the plow. *b* and C are braces pivotally connected at their outer ends to the free end of bar B, and at their other ends to the beam on opposite sides of the bar. Brace *b* has its end next the beam preferably roughened and clamped to the beam by means of an adjustable clip, D, and brace C has its end provided with a series of openings, *c c*, either of which can be engaged with the securing-bolt *d*, by which it is attached to the beam.

E is a segment mounted on the outer end of bar B and carrying a crank-axle, upon which is mounted a wheel, *e*, which can be shifted by a lever, *e'*, as described in my Letters Patent aforesaid. By reason of the adjustable

connections of braces *b* and C with the beam, bar B can be adjusted to bring its wheel parallel with the landside of the plow, even though the beam is set at an angle thereto, as is necessary in various kinds of soil and when different teams are employed. Again, this adjustment of the bar permits the wheel to be set to "gather," if so desired.

F is a casting clipped to beam A in front of clip D. This casting has a plane upper surface, and is provided with holes *ff*, preferably slotted, as shown, for the engagement of the clip-straps, so that it can be set at different angles on the beam. A tubular bearing, *a''*, is formed in the under surface of said casting, and a sector, *a'*, rises from the upper surface, and at one end thereof. The sector and bearing may be cast integral. The casting is secured by clips *g g*.

G is a shaft journaled in bearing *a''* and retained therein by a lever, D', which has a perforated boss at base, by which it is slipped on the shaft and retained by a set-screw, as shown. On the opposite end of the shaft is an adjustable collar, *g'*, provided with a set-screw. Lever D' is on the side next sector *a'* and has a spring-controlled catch, *d*, engaging the sector, so that by means of the lever and sector the shaft can be held in different positions. The lever is on the furrow side of the beam, and outside the lever-shaft G is bent downward into a short stud, G', upon which is journaled the perforated boss *k* of a bifurcated yoke, K, in which is mounted a caster or wheel, *k'*.

g'' is a nut or collar on stud G' below boss *k*, by which the latter is retained on the stud and the yoke and wheel permitted a free lateral swinging movement on the stud, and the wheel can be elevated or lowered by shifting shaft G by its lever D'.

L is a bracket formed with or connected to boss *k* and extending laterally therefrom, and perforated at *ll*. This bracket rises above shaft G.

M is an arm provided with a series of pairs of openings, *m m*, by which it is bolted to bracket L. This arm extends inward toward lever D' and its inner end or head is rounded, as shown, and provided with a notch, *m'*,

which, when the arm is parallel with the horizontal portion of shaft G, is engaged by a spring-catch, M', on lever D'. When thus engaged, the roller or wheel lies parallel with the furrow. By shifting the position of the collar and lever on shaft G the latter can be shifted in bearing a'' so as to bring the caster closer to or farther from the beam; but, as the sector a' is immovable, lever D' must be kept close to it, and it becomes necessary to lengthen or shorten arm M. This is provided for by the series of openings shown.

N is a plate similar to F, having a sector and tubular bearing, as shown, and clipped to the beam in rear of the plow.

O is a shaft mounted in said casting, and provided with an adjusting-lever, o , having a spring-catch engaging the sector and a retaining-collar, n . Outside lever o the end of the shaft is formed into or provided with a vertical tubular socket, P, in which is journaled the stem p of the yoke of the caster-wheel R. The projecting upper end of stem p is vertically notched at p' , and when the wheel is at right angles to the shaft or parallel with the furrow or the sector the notch p' is engaged by a catch, Q, on lever o and locked in such position. Wheel R can thus be elevated or lowered by lever o , and by disengaging catch Q it is permitted to swing around horizontally.

By having the front and rear casters vertically adjustable, as described, the driver can, by means of their respective levers, raise or lower the front or rear end of the beam and plow, or both, as may be desired. The object in permitting the casters to swing laterally when released is to permit the quick and ready turning of the plow, and as it is moved forward after turning the casters swing around parallel therewith and are locked in such position by the catches until disengaged in making the next turn.

By adjusting the rear wheel so that the land-side of the plow clears the land a turn can be made to the right or toward the furrow, which it is impossible to do with ordinary attachments without great inconvenience. I have thus provided adjustments for every part of the plow. The castings must be adjustable in order to set the plow to turn different widths of furrow.

As the catches for the segment and the roller are both on the same lever, the operator can readily elevate or lower the roller and at the same time release it, if desired.

The plate F being angularly adjustable, as shown, can be set to cause the plow to cut a wider or narrower furrow by setting the wheel k' to run toward or from the beam when the lever M is engaged by the catch.

Having described my invention, I claim—

1. The combination of the plow-beam and an angularly-adjustable casting mounted thereon, with the shaft, its lever and locking-sector therefor, and a caster-wheel connected to said shaft, but capable of an independent lateral swinging movement below the same, and the devices for locking said wheel, substantially as specified.

2. The combination of a plow, a casting secured to the beam thereof, and a short shaft journaled in said casting, and a lever for shifting said shaft, with a caster-wheel loosely connected to and swinging below said shaft and vertically adjusted thereby, and the devices for locking said caster-wheel independently of its movement by the shaft, substantially as described.

3. The combination of the casting having a bearing in its under surface and a sector on one end, and the shaft mounted in said bearing, with the caster-wheel yoke connected to and swinging horizontally beneath said shaft, and the lever on said shaft, and its catches for respectively engaging the sector and locking the swinging yoke, substantially as described.

4. The combination of the casting, the shaft journaled therein having a depending stud, G', and the lever and sector for adjusting said shaft, with the caster-wheel yoke having a perforated boss mounted on said stud, a bracket rising from said boss, and a locking-arm secured to said bracket, and a catch on said lever engaging and locking said arm, all substantially as and for the purpose described.

5. The combination, with a plow, of a casting secured to the beam thereof and angularly adjustable thereon, the shaft journaled in bearings on said casting, and the caster-wheel connected to said shaft, and the mechanism for adjusting and locking the caster-wheel independently of the shaft, substantially as set forth.

6. The combination of the plow, the bar B, extending to the landside thereof, the wheel adjustably mounted on the end of said bar, and the adjustable braces for said bar respectively clipped and bolted to the beam, with the pair of castings F and N, respectively in front and in rear of the plowshare, the adjustable horizontal shafts journaled in said castings, the front and rear swinging caster-wheels on said shafts, and the locking devices for said wheels, all constructed and arranged substantially as specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

EDMUND C. WESTERVELT.

Witnesses:

JAMES DU SHANE,
JEANIE ANDERSON.