

(No Model.)

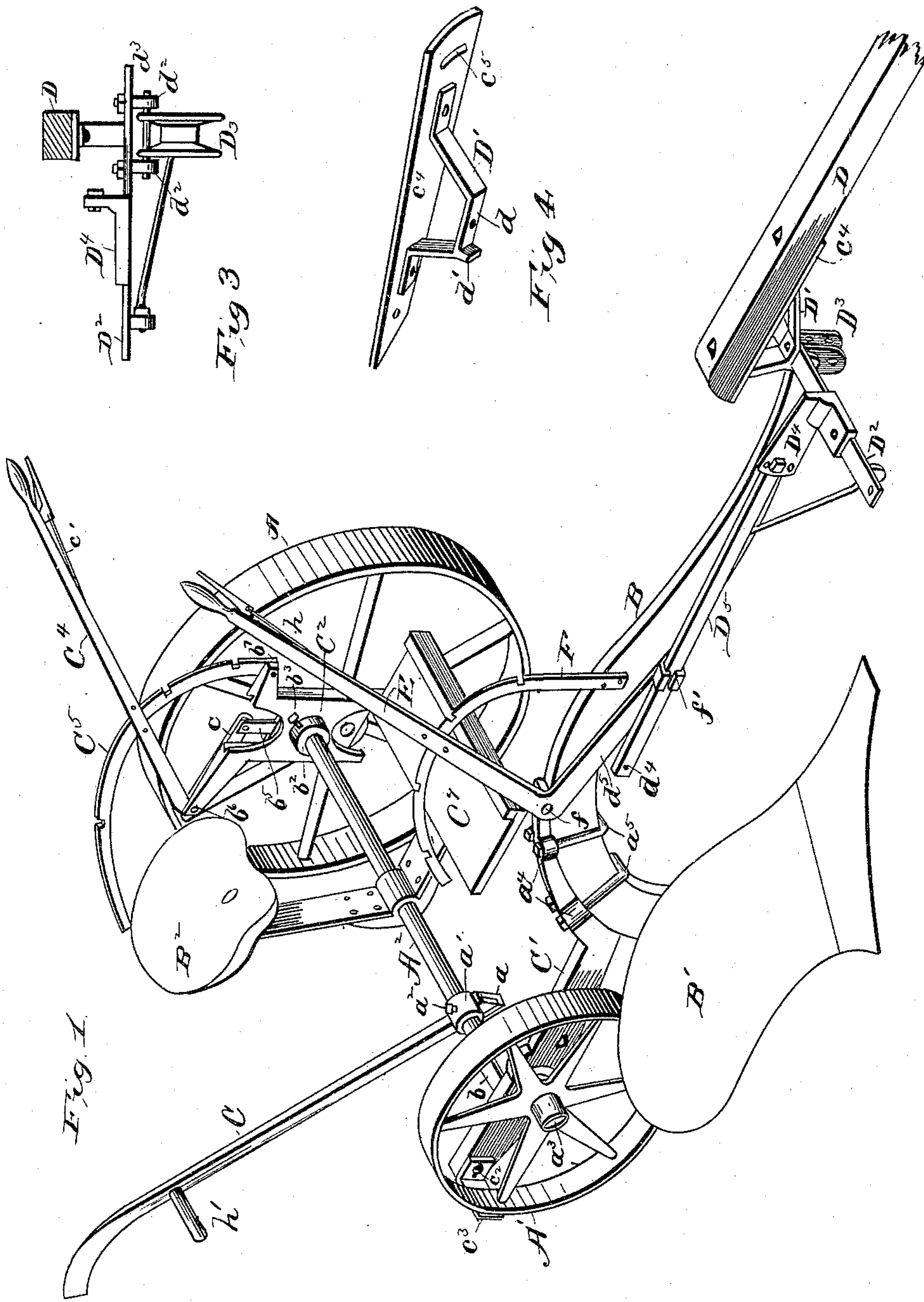
2 Sheets—Sheet 1.

S. ROCKAFELLOW.

SULKY PLOW.

No. 324,788.

Patented Aug. 18, 1885.



Witnesses:
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G. B. Towles.

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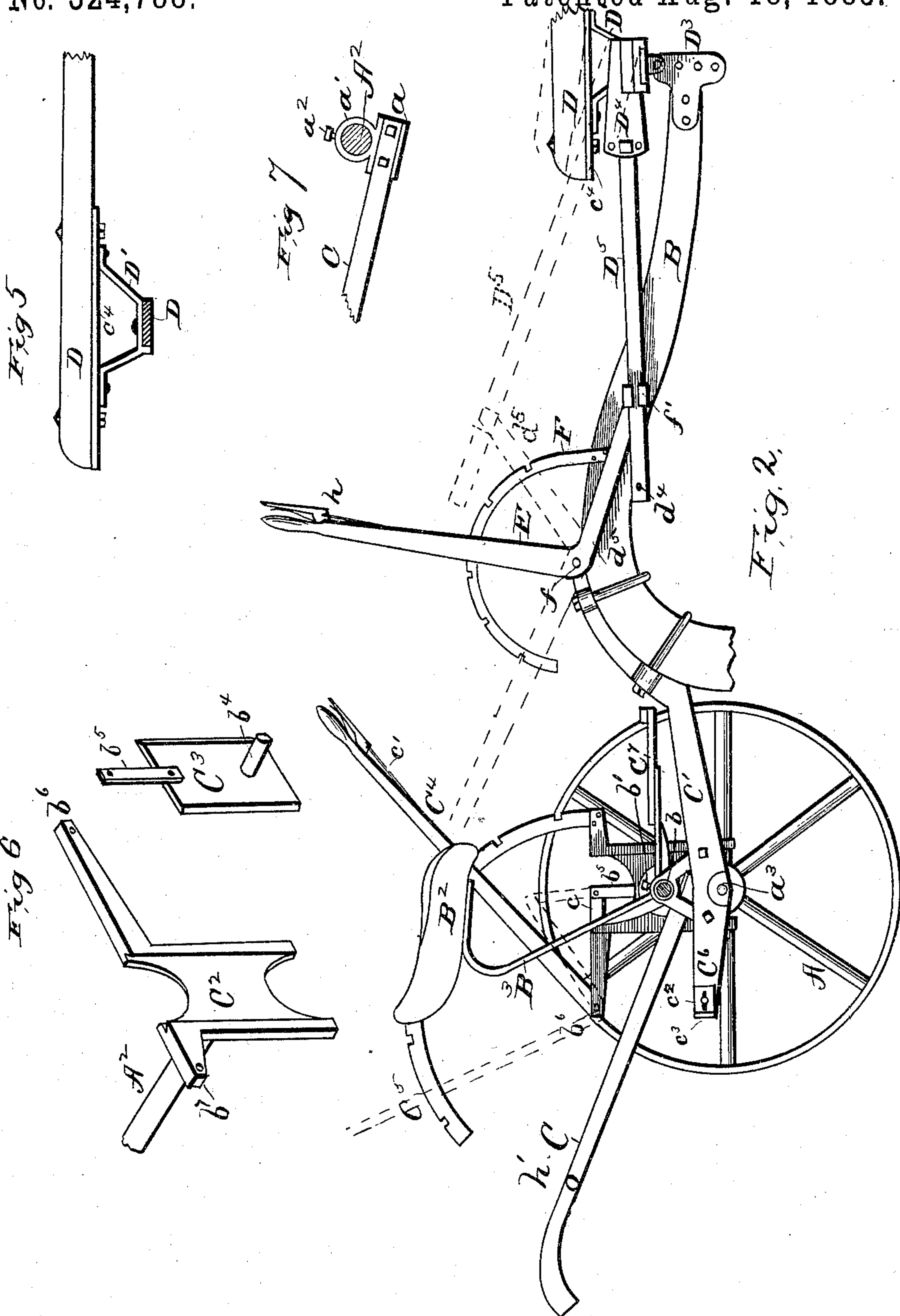
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Inventor
Samuel Rockafellow
by W. Purvis
Atty.

UNITED STATES PATENT OFFICE.

SAMUEL ROCKAFELLOW, OF MUSCATINE, IOWA, ASSIGNOR OF ONE-HALF
TO WILLIAM G. REEVE, OF PERU, ILLINOIS.

SULKY-PLOW.

SPECIFICATION forming part of Letters Patent No. 324,788, dated August 18, 1885.

Application filed March 17, 1885. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL ROCKAFELLOW, a citizen of the United States of America, residing at Muscatine, in the county of Muscatine and State of Iowa, have invented certain new and useful Improvements in Sulky-Plows, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to sulky-plows; and it consists of devices for leveling the plow, and of devices for regulating the depth of the cut of the plow, and for adapting it to be drawn by two horses or by three horses, and for operating the plow by a person when riding on the sulky or when walking behind the plow, all as hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a perspective view of my improved plow. Fig. 2 is a side view with the plow and furrow-wheel removed. Fig. 3 is a front view of the tongue and the clevis attachments. Fig. 4 is a perspective view of the tongue-iron detached. Fig. 5 is a side view of the tongue attached to the equalizing-bar. Fig. 6 represents views of the guide and slide-plates detached. Fig. 7 represents a section through the axle, showing the handle attachment.

A is the large sulky-wheel, A' is the furrow-wheel, and A² is the sulky-axle. B is the plow-beam, B' is the plow, and B² is the driver's seat mounted on the spring-bar B³. C is a handle attached to the sulky-axle by means of the flanged plate *a*, upon the upper portion of which is formed a collar, *a'*, to fit over the axle, and is provided with a set-screw, *a²*, for adjusting and holding the handle in any required position.

The furrow-wheel A' is journaled on a spindle, *a³*, bolted on the arm C', the forward portion of which is provided with the yoke-lugs *a⁴*, and is curved to fit the rear portion of the plow-beam, and is firmly attached to the beam by means of the yokes *a⁵*. The wheel-arm C' is provided with the axle-bearing *b*, which may be formed on or made separate and bolted to the arm. This bearing is provided with a set-screw, *b'*, and is for the purpose of and is adapted for carrying and holding one end of the sulky-axle in position. The other end of

the sulky-axle is held in a hub, *b²*, provided with a set-screw, *b³*, which hub is formed on or attached to a plate, C². The vertical edges of this plate are provided with flange-guides to receive the slide-plate C³, the outside of which is provided with a wheel-spindle, *b⁴*, bolted to the plate, upon which spindle is journaled the large sulky-wheel. To the upper middle portion of the slide-plate is pivoted a bar, *b⁵*, to the upper end of which bar is pivoted the end of a bell-crank lever hereinafter described. On the upper portion of the plate C² are formed the arms *b⁶* *b⁷*.

C⁴ is a hand-lever, the lower portion of which forms a bell-crank, *c*, and is pivoted at the elbow to the arm *b⁶*, and the end of the crank-lever is pivoted to the bar *b⁵*.

C⁵ is a notched sector, the lower end of which is pivoted to the arm *b⁷*, and this sector extends through a guide on the lever C⁴, the upper portion of which is provided with a spring-pawl, *c'*, adapted to catch in the notches in the sector C⁵.

The wheel-arm C' is extended backward, forming the scraper-arm C⁶, to which is attached the scraper *c³* by a bolt inserted through a slot, *c²*, formed in the scraper to take up the wear upon the scraper and to enable it to be adjusted in the required position to the furrow-wheel.

C⁷ is a foot-board provided with the foot-rod, which foot-board is attached and supported in any suitable manner in position for the driver's feet to rest on it.

D designates the rear portion of the tongue, to which is bolted a plate, *c⁴*, the forward end of which is provided with a slot, *c⁵*, through which the forward bolt is inserted to allow oscillatory movement of the tongue. To the under side of the tongue-plate *c⁴* is bolted the plate D', bent downward, forming the bearing portion *d* and the projecting flange *d'*.

D² is an equalizing-bar provided with the lugs *d²*, and with a series of bolt-holes to receive the bolt extended through the bearing *d*, which bolt fastens the tongue-iron D' to the bar D². This bar and the tongue-iron D', attached as described, are hinged to the clevis D³ of the plow by means of a bolt, *d³*, inserted through holes in the clevis and the bar-lugs

d^2 . It is evident that the equalizing-bar may be hinged to lugs or plates attached to the plow-beam instead of the clevis.

D^4 is a flanged plate bolted to the bar D^2 .
5 The back end of this plate is provided with a series of holes for the purpose hereinafter named.

D^5 is a bar, the forward portion of which is bolted to the plate D^4 , and the rear end is provided with a stop-pin, d^4 .
10

E is a hand-lever, on the lower portion of which is formed the bell-crank lever d^5 . This lever is pivoted at the elbow to a lug, f , formed on the forward end of the wheel-arm C' , and the end of the lever is pivoted to a slide, f' , on the bar D^5 .
15

F is a notched sector, one end of which is bolted to the plow-beam. This sector is extended through a guide attached to the side of the lever E , which lever is provided with a spring-pawl, h , adapted to catch and hold in the notches of the sector.
20

The operation of the plow is as follows: The plow is adjusted in a vertical position by means of the hand-lever C^4 and its connecting devices. When the plow is cutting a furrow and the wheel A' is running in the furrow, the lever is drawn backward in positions indicated by dotted lines in Fig. 2 of the drawings, which lowers the other end of the sulky-axle and places it in a level position. And it is evident that by the forward or backward movement of the lever, as required by the lay of the surface of the ground, the plow may be readily adjusted in a vertical position, and it is held in that position by means of the spring-pawl c' in the notches of the sector C^5 . The handle C is provided with a sub-handle, h' , on the side. This handle and hand-piece are used for operating the plow by the operator when walking, and when the tongue is removed, the handle being adjustable to any required height by means of the collar and set-screw. The flange-plate to which the handle is bolted affords additional strength to sustain the heavy pressure required in operating the plow. The sub-handle h' is used in pulling the plow backward. The plow is adjusted to the required depth or height by the forward and backward movement of the lever E and its connecting devices. The point of the plow is raised by the backward movement of the lever and is lowered by the forward movement of the lever.
50

To raise the plow entirely out of the ground for turning and for transporting the plow, the lever is drawn backward to nearly a horizontal position, as shown by dotted lines in Fig. 2 of the drawings. 55

The series of holes in the plate D^4 are for adjusting the plow for deep or shallow plowing. For deep plowing the bolt which connects the plate with the bar D^5 is placed in the upper hole of the plate D^4 , and for shallow plowing the bolt is placed in the lower hole. For medium depth of plowing the bolt is placed in the middle hole. 60 65

The plow may be readily adjusted to be drawn by two horses or by three horses, and it is readily convertible from the one to the other by locating the tongue on the bar, as required. 70

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

1. The combination, with the sulky-axle A^2 , of the furrow-wheel arm C' , secured rigidly to the plow-beam, and the axle-bearing b , formed on or attached to the arm, substantially as and for the purposes described. 75

2. The combination, with the sulky-plow axle, of the adjustable collar a' , having the set-screw a^2 , the flange-plate a , and the handle C , substantially as and for the purposes described. 80

3. The combination, with the plow-beam B , of the equalizing-bar D^2 , hinged to the beam, the slotted plate c^4 , and the tongue-iron D' , bolted to the bar and to the tongue, substantially as and for the purposes described. 85

4. The combination, with a plow-beam, B , and the equalizing-bar D^2 , hinged to the beam, of the plate D^4 , having a series of holes, the bar D^5 , the slide f' , and the crank-lever E , substantially as and for the purposes described. 90

5. In a sulky-plow, the furrow-wheel arm C' , rigidly attached to the plow-beam, and with the wheel-spindle a^3 , and having the portion C^6 extended backward beyond the spindle, in combination with the scraper c^3 , attached to the extended arm, substantially as and for the purposes described. 95 100

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

SAMUEL ROCKAFELLOW.

Witnesses:

H. A. DANIELS,
BENJ. J. WILLIAMS.