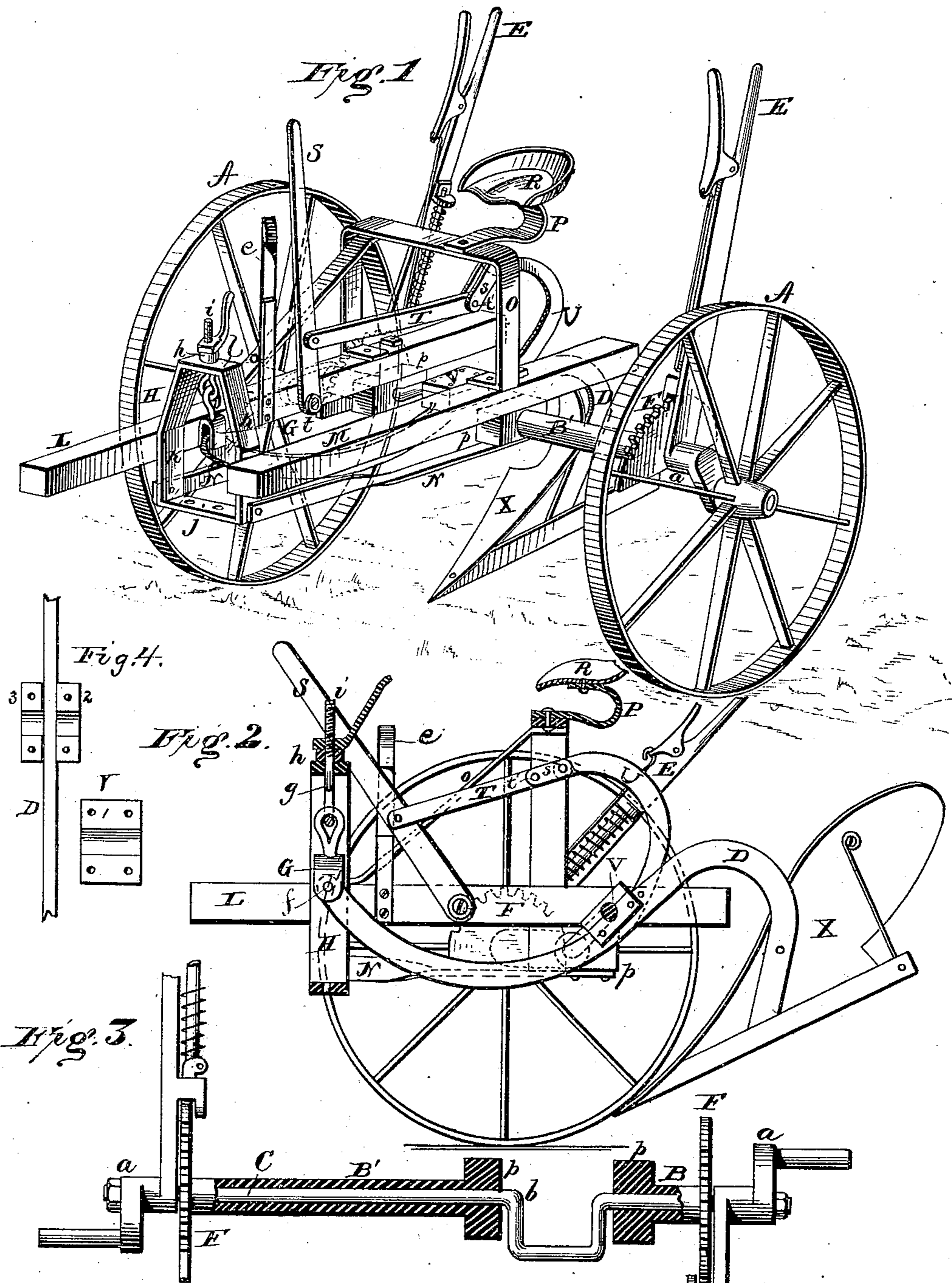


(No Model.)

H. E. REEVES.
Sulky Plow.

No. 240,925.

Patented May 3, 1881.



Witnesses.
Frank L. Ouraud
Chas. S. Hyer.

Inventor.
Homer E. Reeves
by his attorney
E. S. Doolittle

UNITED STATES PATENT OFFICE.

HORACE E. REEVES, OF FORT DODGE, IOWA, ASSIGNOR TO GEORGE B. SHERMAN, OF SAME PLACE.

SULKY-PLOW.

SPECIFICATION forming part of Letters Patent No. 240,925, dated May 3, 1881.

Application filed October 19, 1880. (No model.)

To all whom it may concern:

Be it known that I, HORACE E. REEVES, a citizen of the United States, residing at Fort Dodge, in the county of Webster and State of Iowa, have invented certain new and useful Improvements in Sulky-Plows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in sulky-plows, being an addition to those set forth in my Patent No. 230,497, July 27, 1880.

The objects of my present improvements are to increase the facility of guiding, raising, and lowering the front end of the plow-beam to give the plow greater freedom and promptness of action in swinging back on meeting an obstruction, and to simplify the usual means by which these objects are sought to be accomplished.

The mechanisms constituting my improvements are illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view thereof; Fig. 2, a side view, and Fig. 3 a detail view, of the crank-axle and its bearings. Fig. 4 is a detail view of the clamp in three parts, showing the connection of the lower parts with the plow-beam, and also showing the inner portion of the top part and the parts grooved to form a bearing for the crank-axle.

Similar letters refer to similar parts throughout the several views.

A represents the wheels, the crank-axes *a* of which are attached to and rotate upon the ends of the axle-shaft C.

To the inner ends of the upper arms of crank-axes *a* are rigidly attached the spring-levers E, which move along the outer sides of and operate upon the arched notched plates F. The plates F are fixed to the outer ends of the hollow or sleeve axles B B'. The construction of these levers and their operation upon the land-side and furrow are the same as shown and

described in my Patent No. 230,497, and are not, therefore, particularly set forth here.

C is an axle-shaft having a double crank, *b*, situated to one side of its center, on the furrow side of the plow, and in such a position as to bring the plow the required distance from the furrow-wheel. The opposite ends of the double-crank axle pass through sleeves B B' and also through the hollow wheel-axes *a*, in both of which it is free to rotate when the plow is raised or lowered. The double crank has also a bearing, and rotates in clamp V, by which it is firmly joined to the plow-beam D. The clamp V is constructed of three grooved plates, 1 2 3, as shown in Fig. 4, 1 being the top plate and 2 and 3 the bottom plates. The lower ones are provided with lugs, and bolted to opposite sides of the plow-beam at a point shown in Figs. 1 and 2. The clamp as thus constructed and arranged forms a bearing, in which the axle C, located above the plow-beam, freely rotates, and also securely connects the beam and double-crank axle, so that both may be raised together. The plow-beam D, backward from the clamp V, curves abruptly upward and then downward, and has attached to its lower end the plow X. From the clamp forward the plow-beam has first a slight downward and then an upward curve, and at its forward end is attached by a break-pin, *f*, to a swivel, G, hung in the yoke H. The swivel G has a screw-pin, *g*, which extends upward through the yoke, and is there provided with a washer, *h*, and tail-nut *i*, by means of which it can be raised and lowered, and with it the plow-beam D. The yoke H is somewhat triangular in form, and is constructed of the lower cross-piece, *j*, the side arms, *k k*, and the upper cross-piece, *l*. It is supported in a frame consisting of the tongue L, the wooden beam or bar M, and the twisted metallic braces N N. The rear ends of the frame L M N N are firmly secured to the bosses *p p* of the sleeves B B'.

On the frame L M N N there is also supported an upright seat-frame, O, composed of two vertical side arms and cross-piece. The lower ends of the arms are turned at right angles therewith, and one end is bolted to the

tongue L and the other to the beam M. It is further strengthened and supported by the brace *o*, bolted at one end to the tongue L and at the other end to the under side of the upper cross-piece of the seat-frame.

From the seat-frame O projects upwardly the curved standard P, to which is attached the seat R.

On one side and to the front of the driver's seat is a hand-lever, S. It is attached at its lower end to the inner side of tongue L by pivot *t*. It is sustained or held firmly in place when the plow is raised from the ground, and supported while turning, or when not in use, by means of a vertical spring, *e*, bolted to the tongue L, near the yoke H, and having its upper end beveled, with a notch to receive and hold said lever. To the inner side of this lever, and a short distance above where it is pivoted to the tongue, is secured the arm T. This arm is connected by a link-joint, *s*, to the curved semicircular arm U. The link-joint *s* and the arm T are united by a wooden break-pin, *t'*. The lower end of arm U is securely attached to the plow-beam D by the same bolts that hold the plates of clamp V to the plow-beam.

The operation of the plow is as follows: The wheels are lifted and lowered and held in place, in guiding and turning the plow, by means of the levers E and notched plates F, as is usual in this class of plows. By means of hand-lever S, connected with arms T U and plow-beam D, the driver is enabled to raise the plow while turning, and the same arrangement obviates the necessity of locking the lever when the plow is in use. When the plow meets an obstruction the plow-beam D, double-crank axle, and curved arm and hand-lever, all yield at once and simultaneously to the pressure. If the obstruction is small, sufficient yield is allowed, by reason of the peculiar arrangement of the parts above mentioned and the connection of the plow-beam to the swivel, to permit the plow to be raised without breaking the break-pin; but if the obstruction is considerable, the yield cuts the break-pin, and the plow is cleared at once of the obstruction, and by reason of the

construction of the curved arm will be raised, if necessary, as high as the driver's seat. The hand-lever is not locked, and the slightest obstruction is at once responded to by the lever and its connections.

The screw-pin *g* and the tail-nut *i* on the upper end of the swivel G are used to adjust the plow to a level and retain it in that position while at work, thus overcoming the tendency of said plow to ride upon its point or nose.

I provide two or more holes in the lower cross-piece, *j*, of the yoke H, to provide for the adjustment of the clevis to one side or the other, in order that the plow may take in more or less land, as desired.

Having thus described my invention, what I claim as new is—

1. The combination of the hollow sleeves or casings B B', the notched plates F, rigidly attached thereto, and the double-crank axle C, substantially as described.

2. The yoke H, provided with the swivel G, screw-pin *g*, and tail-nut *i*, in combination with the plow-beam D, substantially as described.

3. The combination of the lever S, vertical spring-catch *e*, jointed straight arm T, curved arm U, and plow-beam D, substantially as described.

4. The combination of the jointed bar or arm T, lever S, curved arm U, and break-pins *f* and *t'*, whereby, in meeting an obstruction, the plow and beam are made free to rise clear from the ground, and, if necessary, as high as the driver's seat.

5. The combination of lever S, arm T, curved arm U, clamp V, and plow-beam D, substantially as described.

6. The combination of the yoke H, supporting-frame L M N N', and sleeves B B', the latter provided with the bosses *p p*, to which the rear end of the supporting-frame is secured.

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

HORACE E. REEVES.

Witnesses:

GEO. B. SHERMAN,
D. A. WELLER.