

(No Model.)

H. CLAWSON.
PLOW SULKY.

No. 526,805.

Patented Oct. 2, 1894.

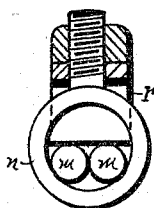


Fig. 4.

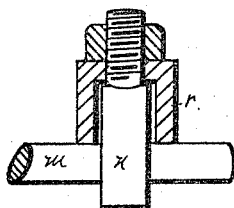


Fig. 5.

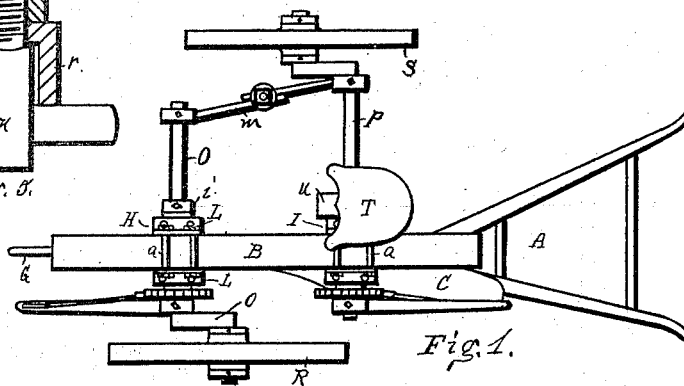


Fig. 1.

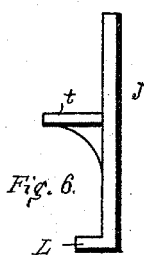


Fig. 6.

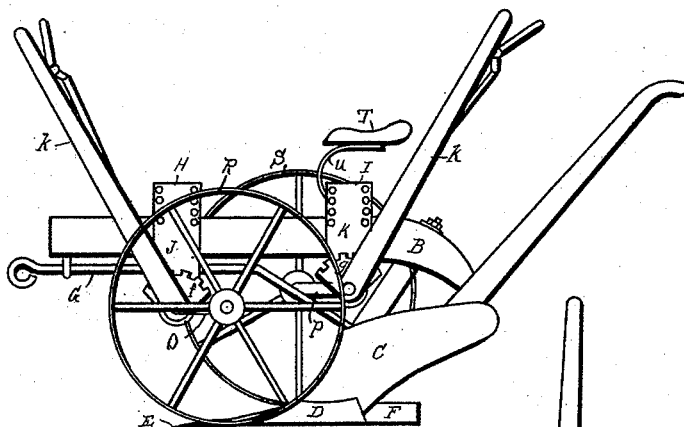


Fig. 2.

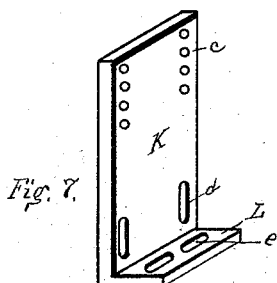


Fig. 7.

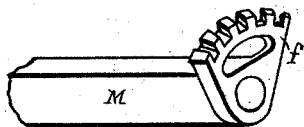


Fig. 8.

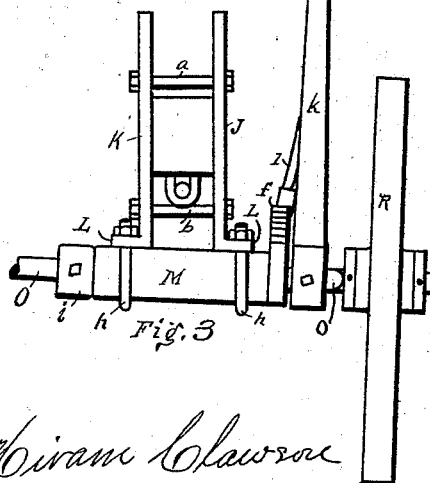


Fig. 3.

Hiram Clawson

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PLOW-SULKY.

SPECIFICATION forming part of Letters Patent No. 526,805, dated October 2, 1894.

Application filed October 16, 1893. Serial No. 488,333. (No model.)

To all whom it may concern:

Be it known that I, HIRAM CLAWSON, of Clawson, Ohio, have invented certain new and useful Improvements in Plow-Sulkies, of which the following is a specification.

My invention relates to that class of plow sulkies that are attachable to ordinary plows, and the object of my improvement is to provide such universal adjustment of its respective members in relation to each other, and to the plow, as to secure the greatest efficiency in operation, and adapt it to be used on plows of widely different patterns. These objects are attained in the following described manner as illustrated in the accompanying drawings, in which—

Figure 1 illustrates a plan of the sulky attached to the plow; Fig. 2, a side elevation thereof; Fig. 3, a front elevation of the front axle and its bearing; Figs. 4 and 5, elevations of the brace rod clamp. Figs. 6, 7 and 8 illustrate details of construction.

In the drawings, A represents a plow, in which B is the beam; C, the mold board; D, the share; E, the point; F, the heel or land side, and G the center draft rod. Axle bearings H and I, attached to the plow beam near its opposite ends, consist of similar plates J and K clamped against opposite sides of the beam by bolts *a* and *b* that extend through holes *c* and slots *d* therein. Integral flanges, or feet, L project outwardly from the bottom of the plates and contain slots *e*. The flanges on the plates of the rear bearing extend outwardly at right angles therefrom and in the same horizontal plane. The flanges on the plates of the front bearing are inclined, the one on the land side of the beam upwardly and the other downwardly, to coincide with a plane slightly elevated on the land side above horizontal.

Similar sleeves M and N provided on one end with integral segmental racks *f* and *g* and having a flattened top surface are adjustably secured to the under side of the respective bearings H and I by staple shaped clamp bolts *h* that encircle the sleeves and extend through the slots in the flanges. Similar axles O and P are formed, by a double bend at one end, in the shape of a crank, whereon the ground wheels R and S of equal size are journaled.

The opposite ends thereof are inserted through the respective sleeves from opposite sides of the beam, the front wheel being located on the mold board side of the beam to travel in the preceding furrow made by the plow and the rear wheel being on the opposite or land side of the plow. Collars *i*, with set screws, placed on the axles bear against the point of the sleeves and permit the end adjustment of the axles therein.

Hand levers *k* and *l* secured on the axles by collars and set screws bear against the opposite end of the sleeves contiguous to the segmental racks thereon. Detent catches *l* on the levers engage with the notches in the segmental racks to retain the axial adjustment of the axles by the levers.

Brace *m* consists of two rods that adjustably overlap each other at one end and are secured by the other ends respectively to the extremity of the front axle, and to the rear axle, at a point near where the crank bend therein is formed.

The clamp shown in Figs. 4 and 5 consists of eye bolt *n* that encircles the overlapping brace rods and by means of a nut on its shank clamps them securely together and against the E shaped washer *r*. Integral step *t* projects horizontally from the land side plate of the rear axle bearing to support the seat T, by means of the spring seat bow *u* being fastened thereon. The extension of the front axle beyond the land side of the beam forms a convenient foot rest for the driver.

In operation, the rear axle remains horizontal; the front axle slants downwardly toward the furrow to incline the wheel thereon outwardly at the top from a vertical position, that it may track more easily in bottom of the preceding furrow, and against the land without tendency to climb out of the furrow. Said wheel may be adjusted by its sleeve on the bearing more or less sheering to the direction of the plow, to cause it to tend toward the land side of the furrow. The rear wheel should be adjusted in the same manner slightly forward of the position where it would travel parallel to the furrow, to counteract the excessive lateral pressure of the land side. When the wheels and axles are properly adjusted laterally and both

slightly sheering to the direction of the plow, both wheels are prevented from being deflected rearwardly by the tension of the brace rods. The axles may be adjusted axially in the sleeves in either direction, each independently of the other by means of the hand levers, to adjust the plow on the wheels in any desired vertical angle either to regulate its depth in the ground or to transport it from place to place.

By lifting the front wheel from the ground, the plow point acts as a pivot on which to turn the corners in either direction while the rear wheel describes an arc on the ground from the point as a center, and in the direction the plow is turned. Plow beams are usually fixed at a lateral angle to the line of draft. The beam of a three horse plow is deflected to one side of the line of draft, while that of a two horse plow is usually deflected to the opposite side. The pivotal horizontal adjustment of the axle sleeves on the respective bearings compensates for this difference in direction of the beams of different plows without disturbing the position of the hand levers in relation to the segmental racks on the sleeves.

The plates that form the bearings are of sufficient length, and are provided at the top and bottom with a series of holes and with slots for the passage of the clamping bolts at such distance apart above and below the beam, as to adapt them to plow beams of excessive vertical cross section, and either with or without center draft rods. In the case of narrow iron or steel beams blocks may be inserted, if desired, under the plates on the sides of the beam to increase the width of the bearings for the sleeves. On curved metal beams the rear bearing may project rearwardly of the curve in the beam, to avoid obstructing the throat of the plow in front of the standard.

It is preferable to locate the crank and wheel of the rear axle forward while that of the front axle is turned in a rearward direction. The axles may be turned in the sleeves by the hand levers and secured by the segmental racks to any position desired for the cranks and wheels. The position of the axle bearings on the beam may be changed to different positions along the beam until the most favorable position is secured to balance the plow in relation to the wheels, and to ob-

tain the lightest possible draft therefor, and increased facility of turning corners. It is evident that this device is equally applicable to right or left hand plows.

Having fully described my improvements, what I claim as my invention, and desire to secure by Letters Patent, is—

1. In a plow sulky, the combination with two similar crank shaped axles having similar ground wheels journaled thereon, similar sleeves adapted to the insertion of the respective axles therethrough, and provided at one end with integral segmental racks, of bearings adapted to be detachably and adjustably secured to a plow beam and toward its opposite ends, means to adjustably secure the sleeves to the respective bearings, and levers adjustably secured to the respective axles and adapted to engage with the racks, whereby the axles may be rotatively and independently adjusted in the sleeves.

2. In a plow sulky the combination with two similar crank shaped axles, provided with ground wheels at one end, two bearings adapted to be adjustably and detachably secured to and near the ends of a plow beam respectively, of means to adjustably secure the opposite ends of the axles to the respective bearings with the rear axle horizontal and from the land side of the plow, the front axle slanting downwardly from the opposite side of the plow to incline the front wheel outwardly from a vertical position, both axles being pivotally and independently adjustable on the bearings to different angles with the plow beam whereby the direction of the ground wheels may be converged.

3. A plow sulky having in combination, crank shaped axles perpendicular to ground wheels thereon, bearings therefor and adapted to secure the axles to the front and rear portions of a plow beam with the respective ground wheels on the furrow and land side thereof, the front axle being extended beyond the land side of the beam and an extensible brace spanning the distance between the extremity of the axles and on the land side of the beam.

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