(No Model.)

O. T. OWENS.

GANG PLOW.

No. 548,386. Patented Oct. 22, 1895.

Fig. 1.

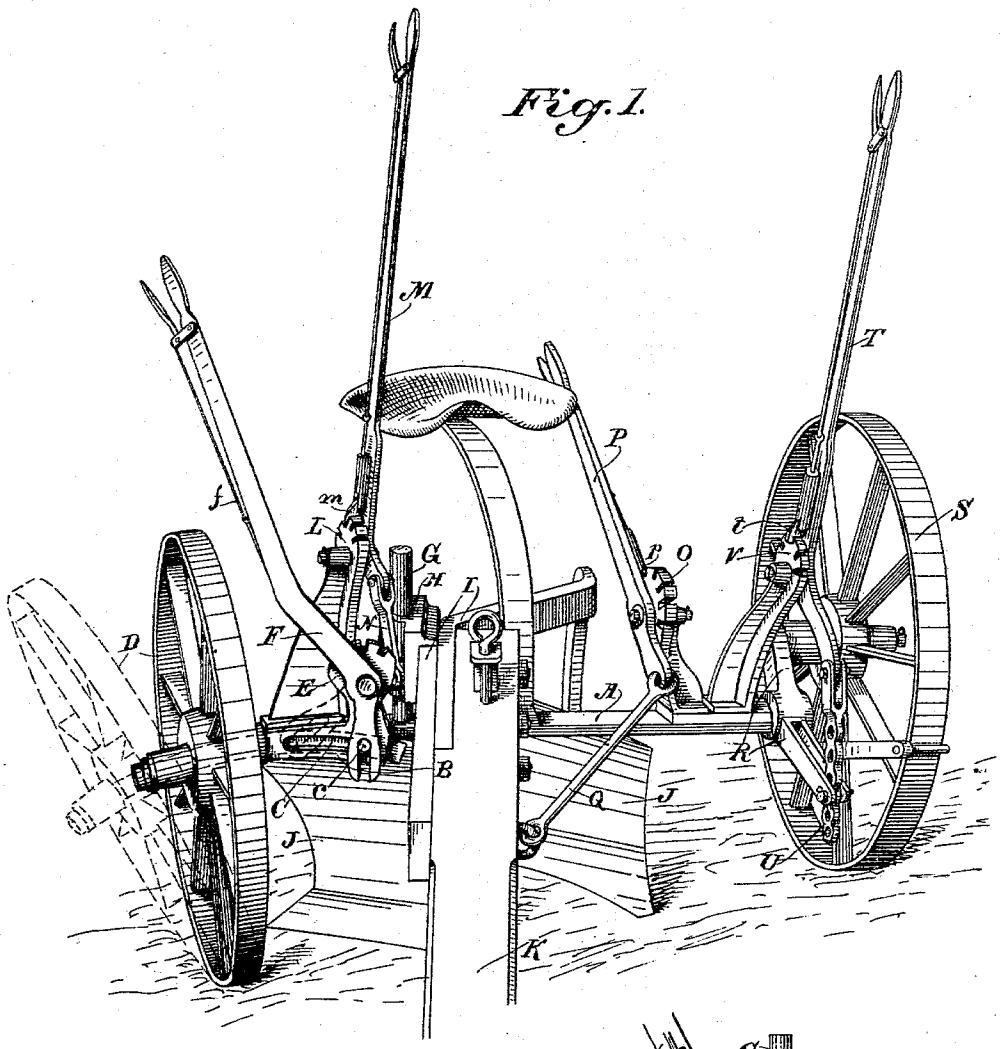


Fig. 2.

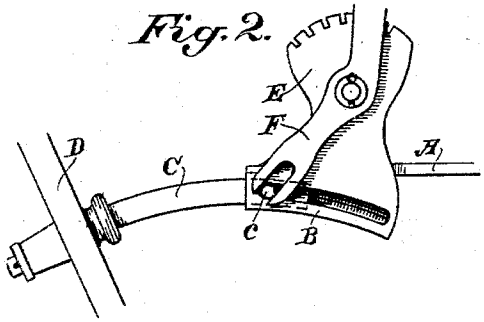
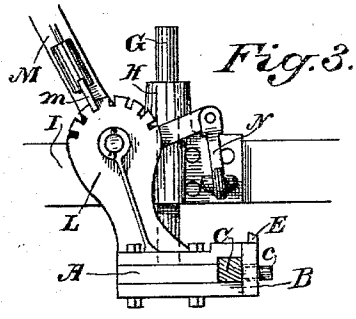


Fig. 3.



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UNITED STATES PATENT OFFICE.

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GANG-PLOW.

SPECIFICATION forming part of Letters Patent No. 548,386, dated October 22, 1895.

Application filed June 26, 1895. Serial No. 554,109. (No model.)

To all whom it may concern:

Be it known that I, OWEN T. OWENS, a citizen of the United States, residing at Livermore, county of Alameda, State of California, have invented an Improvement in Gang-Plows; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of gang-plows in which the wheel which travels in the furrow previously made is adapted to be set at various angles to suit the inclination of the ground, and in which also the plow-bottoms are adapted to be raised off the ground for transportation and the tongue to be turned about a pivotal center to allow the horses and plow to follow the curves in the furrows.

My invention consists in the novel means for connecting and adjusting the inclined wheel, the novel means for lifting the plow bottoms, and the novel means for swinging the tongue, all of which I shall hereinafter fully describe by reference to the accompanying drawings, in which—

Figure 1 is a perspective view of my gang-plow. Fig. 2 is a detail elevation of the connection of the inclinable wheel. Fig. 3 is a detail of the sleeve connection with the pivot-post.

A is the axle-bed of the plow. To it, near one end, is secured the slotted box B, in which the axle-arm C of the inclined wheel D is adapted to fit and slide by means of a pin or stud *c* on its end fitting in the slot of the box B.

Pivoted to a rack E, rising from the axle-bed, is a lever F, the lower end of which is connected with the stud or pin *c*, and said lever is provided with the usual controlling-pawl *f*, which engages the rack E. By operating this lever, which is within reach of the driver on his seat, the axle-arm C is drawn in or out of the slotted box B, whereby the inclination of the wheel D may be varied to suit the inclination of the ground. This adjustment of the wheel may be effected without loss of time and without trouble during the movement and operation of the plow, so that it need not be stopped nor trouble taken to remove bolts and other fastening devices in order to effect a fresh adjustment. It is desirable in effecting this adjustment, especially where it is done during the movement of the implement, that the wheel D shall turn to its several inclinations with the exercise of the least amount of power, and to this end it is apparent that if the wheel should be able to turn about its tread or lower portion as a center it will effect its adjustments in the easiest manner, as no power will be required to move the lower portion of the wheel against its bearing on the ground, as would be the case if it turned about any other point as a center. To effect this desirable result the axle-arm C is curved to the radius of the wheel, and while this is the best construction I do not confine myself to it, as the reverse may be the case, the axle-arm being straight and traveling in curved slots in the box, which I deem an equivalent of the curved axle-arm.

Rising from the axle-bed A is a fixed pivot-post G, upon which is fitted and adapted to move vertically a sleeve H, to which the shanks I of the plow-beams J are fastened, said shanks being also fastened at their forward ends to the pole or tongue K.

Rising from the axle-bed is a rack L, to which is pivoted a lever M, having a pawl *m*, engaging said rack.

The lever M is a bell-crank lever, and its short or horizontal arm is connected by a link N with the sleeve H, to which the plow-bottom shanks are attached. The lever M is within reach of the driver, and by its operation the plow bottoms are raised entirely clear of the ground for transportation.

Secured near the other end of the axle-bed A is a rack O, to which is pivoted a lever P, having a pawl *p*, engaging said rack. The lower end of this lever is connected by a link Q with the tongue or pole K.

By operating the lever P, which is readily effected by the driver from his seat, the pole or tonge K is swung about the pivot-post G, thereby enabling the plow and horses to conform to the necessary curves of the furrow in following a meandering course.

Upon the landside end of the axle-bed is mounted upon the usual crank-axle arm R, the

landside-wheel S, and said wheel is adjusted to level the plow by means of a lever T, connected to the crank-axle arm by a link U, said lever being pivoted to a rack V and having a pawl *t* engaging said rack.

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

1. In a gang plow, the combination of the axle-bed, the inclinable wheel on the furrow side, the axle arm of said wheel, a sliding connection between said axle arm and the axle-bed, guides whereby said connection is controlled to turn the wheel about its tread as a center, and a lever for operating the sliding connection to change the inclination of the wheel.

2. In a gang plow, the combination of the axle-bed, the inclinable wheel on the furrow side, the curved axle arm of said wheel, a box in which said curved axle arm is fitted and adapted to slide whereby the wheel may be inclined, and means for sliding the axle arm in its box.

3. In a gang plow, the combination of the axle-bed the inclinable wheel on the furrow side, the curved axle arm of said wheel, a box in which said curved axle arm is fitted and adapted to slide whereby the wheel may be inclined, and a lever connected with said axle arm for sliding it in its box.

4. In a gang plow, the combination of the axle-bed, a pivot post rising therefrom, a sleeve mounted and adapted to slide vertically upon the pivot post, the plow bottoms having their shanks attached to said sleeve, a lever and a link connecting the lever with the sleeve whereby it is raised and the plow bottoms lifted and lowered.

5. In a gang plow, the combination of the axle-bed, a pivot post and a rack rising therefrom, a sleeve mounted and adapted to slide vertically upon the pivot post, the plow bottoms having their shanks attached to said sleeve, a lever pivoted to the rack and a link connecting the lever with the sleeve whereby it is raised and the plow bottoms lifted and lowered.

6. In a gang plow, the combination of the axle-bed a pivot post rising therefrom, a sleeve pivoted upon said post, the plow bottoms having their shanks attached to the sleeve, the pole attached to the shanks of the plow bottoms, the pivoted lever P and the link Q connecting said lever with the pole whereby the pole is moved through an arc in a horizontal plane.

7. In a gang plow, the combination of the axle-bed, a pivot post rising therefrom, a sleeve pivoted upon said post and adapted to rise vertically thereon, the plow bottoms having their shanks attached to the sleeve and the pole attached to the shanks of the plow bottoms, a lever and connections for vertically raising the sleeve, and another lever and connections for swinging the pole about the pivot post as a center.

In witness whereof I have hereunto set my hand.

OWEN T. OWENS.

Witnesses:
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