(No Model.)

E. H. WAGENER.

GANG PLOW.

No. 581,401. Patented Apr. 27, 1897.

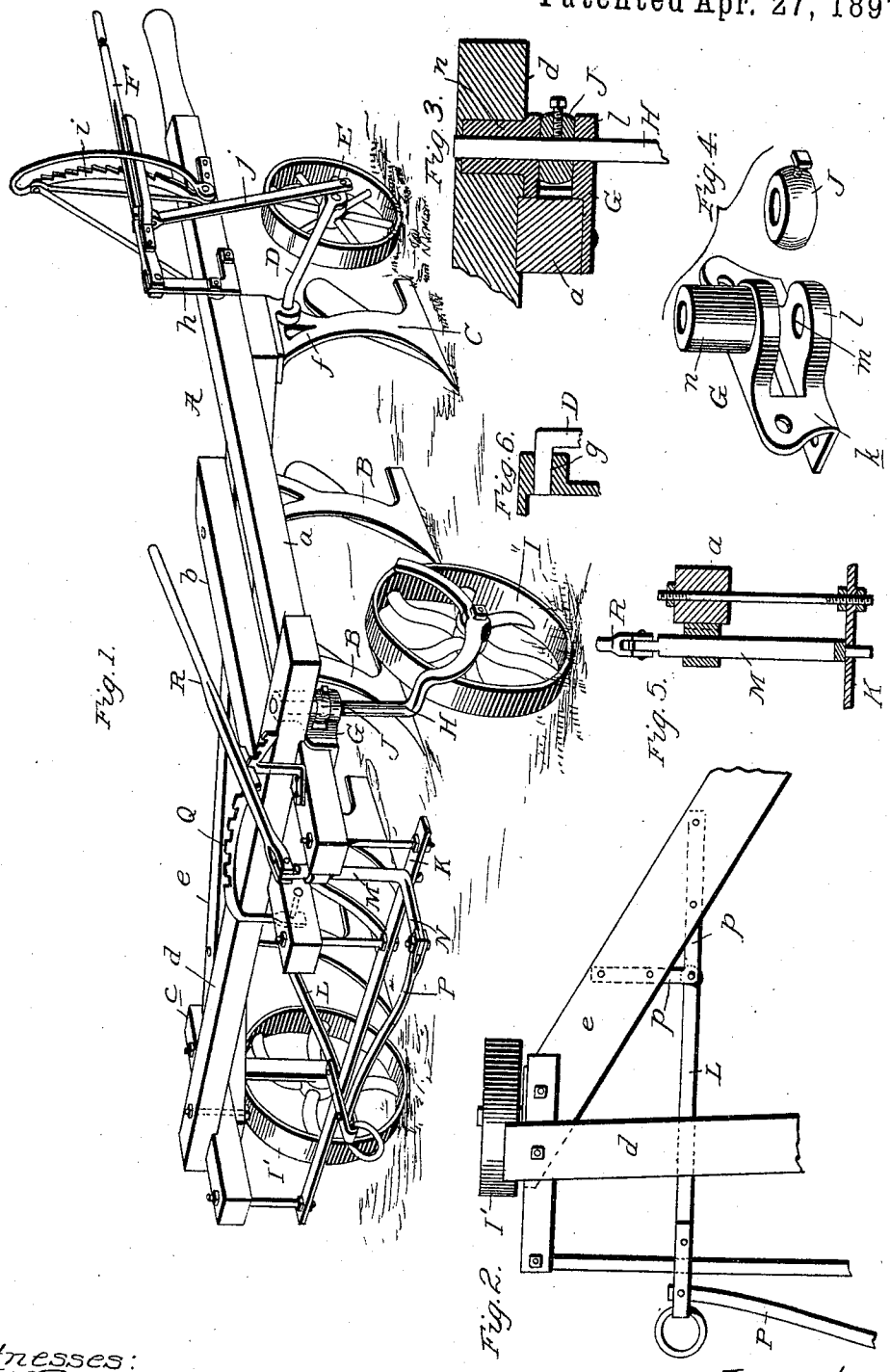

Fig. 1.

Fig. 3.

Fig. 4.

Fig. 6.

Fig. 5.

Fig. 2.

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ERNEST H. WAGENER, OF MODESTO, CALIFORNIA.

GANG-PLOW.

SPECIFICATION forming part of Letters Patent No. 581,401, dated April 27, 1897.

Application filed November 27, 1896. Serial No. 613,605. (No model.)

To all whom it may concern:

Be it known that I, ERNEST H. WAGENER, a citizen of the United States, residing at Modesto, in the county of Stanislaus and State of California, have invented certain new and useful Improvements in Gang-Plows; and I do 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.

My invention relates to improvements in gang-plows; and it has for one of its objects to provide a gang-plow embodying means whereby the plowman is enabled to direct the course of the plow while walking in a position of safety behind the swivel-wheel.

Another object of the invention is to so construct the standard of one of the plows that it may be used for effecting a strong and durable connection of the brake and gage wheel with the plow-frame, and still another object is to provide a swivel-box which affords a long bearing for the shank of the swivel-wheel and one which may be connected in a strong and durable manner with the plow-frame.

With the foregoing ends in view the invention will be fully understood from the following description and claims when taken in conjunction with the accompanying drawings, in which—

Figure 1 is a perspective view of my improved plow complete. Fig. 2 is a detail plan illustrating the connection of the pulling or draft rod to the frame. Fig. 3 is an enlarged detail section taken through the frame and swivel-box. Fig. 4 comprises perspective views of the swivel-box and the collar, which is arranged in the swivel-box and is designed to be adjustably fixed on the shank of the swivel-wheel. Fig. 5 is a detail enlarged section illustrating the manner in which the lever connected with the pulling or draft rod is mounted, and Fig. 6 is a detail enlarged section illustrating the manner in which the hanger of the brake and gage wheel is connected to the standard of one of the plows.

In the said drawings similar letters designate corresponding parts in all of the several views, referring to which—

A indicates the main frame of the plow, which is preferably of wood, although it may be made of metal when desired. This frame is preferably of the ordinary construction, and comprises the longitudinal bars *a b c*, the transverse bar *d*, and the rear bar *e*, which are connected together by bolts and nuts or other suitable means in the ordinary manner. The rear bar *e* serves for the connection of the five (more or less) plows, four of which (indicated by B) may be of the ordinary construction. The fifth plow C, however, differs from the plows B in that it is provided in its standard *f* with the transversely-disposed aperture *g*, which is designed to receive the angular branch at the forward end of the hanger D of the brake and gage wheel E. This manner of connecting the hanger D with the frame A and forming a bearing for said hanger is very strong and is much more durable and lasting than that connection in which the angular branch of the hanger is journaled in one of the bars of the frame.

For raising, lowering, and adjustably fixing the wheel E to brake the plow or gage the depth of the furrows I preferably provide the lever F, which is fulcrumed upon a support *h*, rising from bar *a*, and is adapted to engage the rack *i* and the link *j*, which connects the lever F and the hanger D, as shown in Fig. 1.

G indicates the improved swivel-box of the plow, which is cast or otherwise formed in one piece. This box G comprises the body *k*, which is of angular form in cross-section and is designed to be connected to one side and the bottom of the frame-bar *a*, the horizontal lugs *l*, which have alined apertures *m* and the sleeve *n*, which rises from the upper lug *l* and bears in the frame-bar *d*, as shown. This sleeve *n*, in addition to materially strengthening the connection of the box G to the frame, forms a long bearing for the shank H of the swivel-wheel I, which serves, in conjunction with the wheel I′, to support the frame and thereby strengthens the connection of said shank with the frame. The said shank H is secured in the box G in such a manner as to permit it to turn by the collar J, which is secured upon the shank and arranged between the lugs of the box, as illustrated.

K indicates a transversely-disposed bar which is hung from the forward ends of the

frame-bars *a b c*, and L indicates the draft or pulling rod, to which the draft-animals are attached. The draft or pulling rod L bears and is designed to move on the bar K, and it is pivotally connected at its rear end to the bars *p*, which are fixedly connected to the frame-bar *e*, as illustrated. The pulling or draft rod L is designed to be adjusted, when it is desired to change the course of the plow, through the medium of the mechanism shown in Figs. 1 and 5. Such mechanism comprises the vertical rock-shaft M, which is arranged in a bearing *r*, connected to the frame-bar *a*, and is journaled at its lower end in the bar K, and is provided adjacent to such lower end with the angular arm N, the link P, which connects said arm N, and the rod L, the rack Q, which is mounted upon and connected to the frame, and the lever R, which is pivotally connected to the upper end of the rock-shaft M, and is designed to engage the rack Q and thereby adjustably fix the course of the plow. The lever R is arranged adjacent to and extends in rear of the swivel-wheel I, and it will therefore be seen that the plowman is enabled to change the course of the plow while walking in a safe position in rear of the swivel-wheel, which is an important advantage and a desideratum in this class of devices.

With all of its advantages as pointed out in the foregoing it will be observed that my improved plow is very simple and may be therefore produced almost, if not quite, as cheaply as the ordinary gang-plow.

I have in some respects specifically described the construction and relative arrangement of the parts of my improved plow in order to impart a full, clear, and exact understanding of the same. I do not desire, however, to be understood as confining myself to such specific construction and arrangement, as such changes or modifications may be made in practice as fairly fall within the scope of my invention.

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

1. In a gang-plow, the combination of a main frame supported upon wheels and having one of said wheels connected with it in a swiveled manner, the draft or pulling rod connected at its rear end in a pivotal manner with the frame so as to permit its forward end to swing in a horizontal plane, the vertically-disposed rock-shaft journaled in bearings at the forward portion of the main-frame end having the angular arm a link connecting said arm and the forward portion of the draft or pulling rod, the handle connected with the vertically-disposed, rock-shaft, and means for adjustably fixing said handle, substantially as specified.

2. In a gang-plow, the combination of a frame having bars *a*, *d*, disposed at an angle to each other and also having said bar *d*, arranged upon the bar *a*, and extending beyond the same, the bearing-box formed in one piece and comprising the angular body portion *k*, conforming to and connected to one vertical side of the bar *a*, the lugs *l*, arranged at one side of the vertical branch of the body *k*, and having vertically-disposed apertures, and the sleeve *n*, rising from the uppermost lug *l*, and arranged in the extended portion of the frame-bar *d*, the wheel having the shank journaled in the lugs *l*, and sleeve *n*, of the box, and the collar fixed on said shank and interposed between the lugs *l*, substantially as specified.

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

ERNEST H. WAGENER.

Witnesses:
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