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PATENTED MAR. 6, 1906.

G. R. MARRIAGE.  
GANG PLOW.

APPLICATION FILED AUG. 8, 1905.

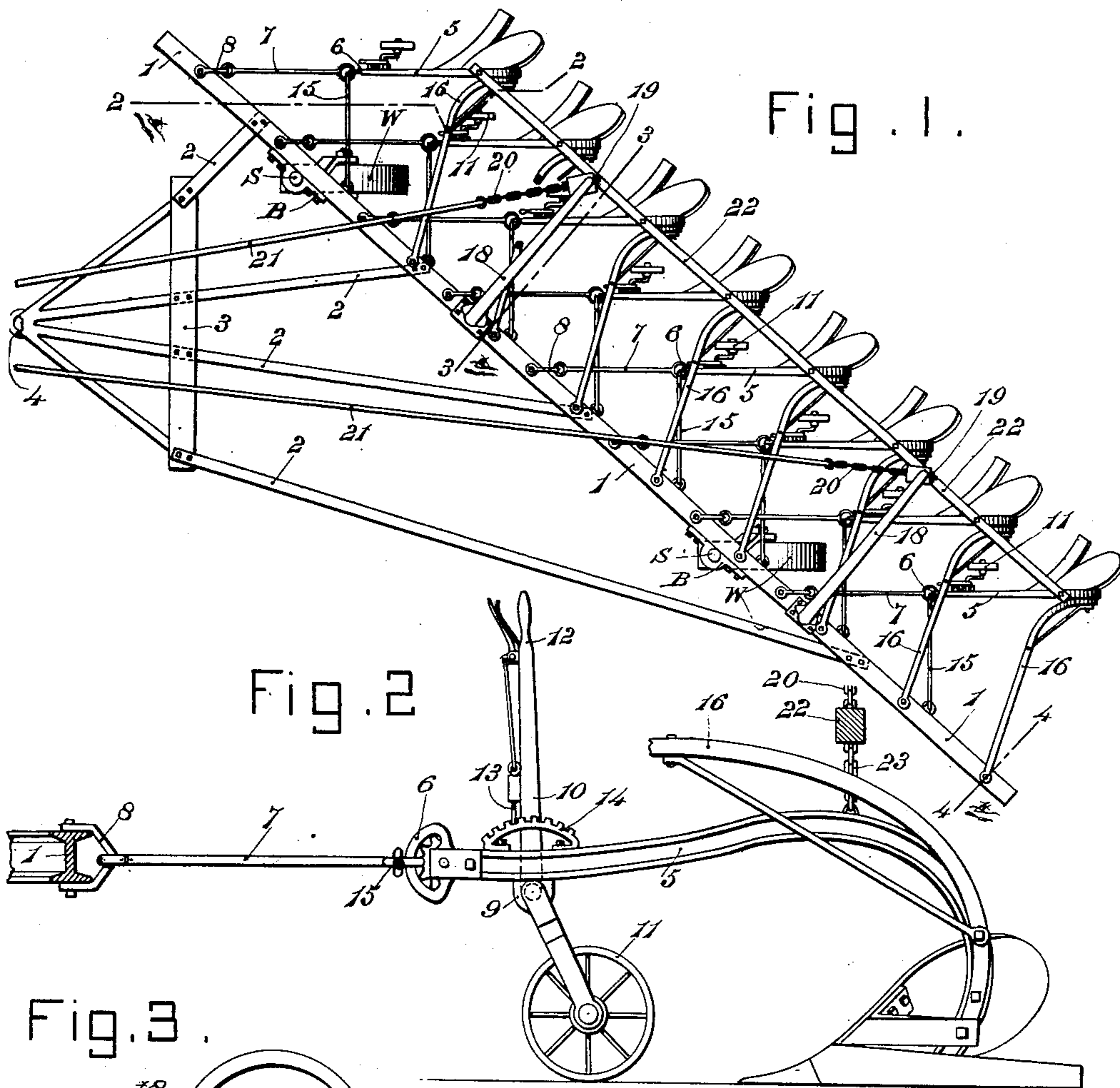


Fig. 1.

Fig. 2

Fig. 3.

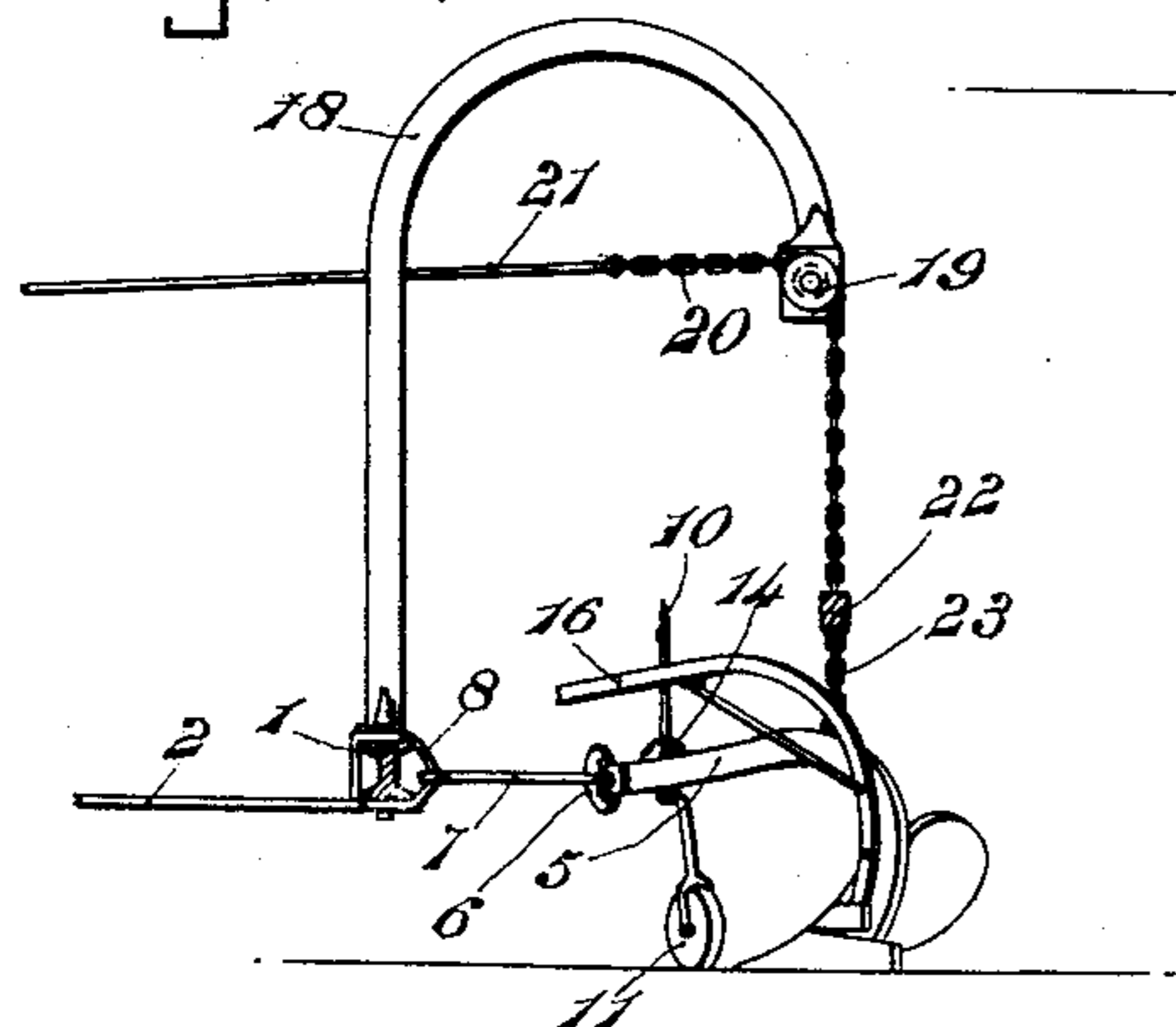
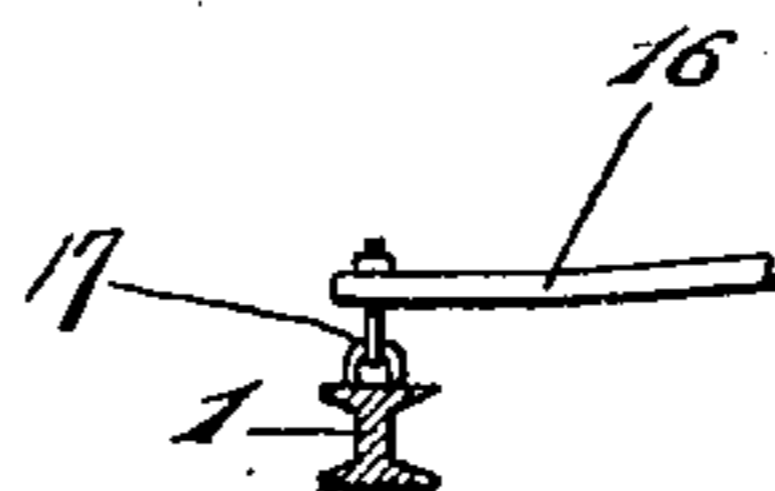


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## GANG-PLOW.

No. 814,552.

Specification of Letters Patent.

Patented March 6, 1906.

Application filed August 8, 1905. Serial No. 273,253.

*To all whom it may concern.*

Be it known that I, GEORGE R. MARRIAGE, a citizen of the United States, residing at Mullinville, in the county of Kiowa and State of Kansas, have invented a new and useful Gang-Plow, of which the following is a specification.

This invention relates to gang-plows, and especially to that class of gang-plows which are intended and adapted to be operated by power, such as a traction-engine; and the object of the invention is to simplify and improve the construction and operation of this class of plows.

With these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claim.

In the accompanying drawings has been illustrated a simple and preferred form of embodiment of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations, and modifications within the scope of the invention may be resorted to when desired, when such changes may be made without departing from the spirit or sacrificing the efficiency of the device.

In said drawings, Figure 1 is a top plan view of a gang-plow constructed in accordance with the principles of the invention. Fig. 2 is a sectional view, enlarged, taken on the plane indicated by the line 2 2 in Fig. 1. Fig. 3 is a sectional view taken on the plane indicated by the line 3 3 in Fig. 1. Fig. 4 is a sectional detail view taken on the line 4 4 in Fig. 1.

Corresponding parts in the several figures are indicated throughout by similar characters of reference.

This invention is applicable to gang-plows of that class which include a plurality of plow units. In Fig. 1 of the drawings a gang composed of eight units has been shown; but it will be understood that the invention is not limited in this respect.

The main beam or draft-beam 1 of the device has been illustrated as a flanged beam of iron or steel of the usual I shape, it being

understood that other forms of beams may be adopted when desired. Said main beam or draft-beam is disposed obliquely with relation to the line of draft and preferably at an angle of less than forty-five degrees to said line of draft, it being obvious, however, that the exact position or degree of obliquity at which said draft-beam is maintained may be greatly varied without departing from the principles of the invention. Said main beam is provided with boxes or bearings B B, in which are journaled the shanks S of casters W, upon which the beam is supported a suitable distance above the ground in such a manner as to yield readily to draft exercised in the proper direction. Said beam is also provided with forwardly-extending and converging draft-bars 2 2, which are connected and spaced by means of a transverse bar 3 and which are suitably connected at their converging points by means of a link 4, which is to be connected with a traction-engine or with such power as may be utilized for the propulsion of the gang-plow.

The gang, as above stated, has been illustrated as being composed of eight units, each consisting of a plow of any suitable construction, including a beam 5, having at its front end a clevis 6, connected by a link 7 with the draft-beam, which latter is provided at suitable intervals with clevises, as 8, for the attachment of the draft-links 7. Each of the plow-beams is provided with a depending lug 9, upon which is fulcrumed, preferably adjacent to the right-hand side of the beam, a lever 10, carrying at its lower end a ground-engaging wheel 11 and terminating at its upper end in a handle 12, whereby it may be manipulated, said lever being provided with a stop 13, engaging a quadrant 14, whereby the lever and its related parts may be retained at various adjustments.

The front end of each plow-beam is connected with and spaced from the draft-beam 1 by means of a link 15, disposed, preferably, at right angles to the link 7. Curved reinforcing-rods 16 also extend from the rear ends of the several plows obliquely to the draft-beam 1, with the upperside of which the said reinforcing-rods are connected by means of interengaging eyes or links 17, which will admit of the reinforcing-rods having a loose or hinge movement with relation to the draft-

beam. The rear ends of the reinforcing-rods are, however, fixedly connected with the respective plows.

Supported securely upon the draft-beam 1 are rearwardly-craned davits 18, at the free ends of which are supported guiding devices, such as pulleys 19, over which flexible elements, such as chains 20, are guided, the upper ends of said flexible members being connected with forwardly-extending draft-rods 21, while the lower ends of said flexible members support a transverse bar 22, having depending chains or flexible supporting elements 23, one of said elements being connected with each of the plow units. The draft-rods 21 simply serve to connect the flexible elements 20 with some suitable power, whereby the transverse bar and its related parts may be raised or lowered, said power being usually connected with and operated by the engine whereby the gang-plow is being propelled.

It will be seen that under the construction herein described any desired number of plow units may be connected together for operation by means of a single draft-beam, which practically constitutes the frame of the device. It will be further seen that each of the plow units is connected flexibly and independently with the draft-beam, so that it may operate absolutely independently of the other units constituting the gang, this being of extreme importance when the land is rolling, inasmuch as the plow units under this construction will be enabled to make furrows of even depth, the importance of which is well understood. The distance to which each plow shall be permitted to enter the soil will be primarily governed by the plow lifting and supporting mechanism, including the lifting-bar 22 and the means for raising and

lowering the same; but each plow is capable of independent adjustment by means of the ground-engaging wheel 11 and the means provided for the adjustment of the latter. When desired for transportation, the entire gang of plow units may be elevated above the ground by the lifting mechanism described.

While in the drawings only a single lifting-bar 22 and one pair of derricks 18 have been shown, I would have it understood that especially in plows of large capacity this mechanism may be duplicated. In most cases, however, it will be preferred to support the main draft-beam upon a single pair of casters whereby the manipulation of the device as a whole will be facilitated.

The device is of simple construction, and a machine of large capacity may be produced and operated at a moderate expense.

Having thus described the invention, what is claimed is—

In a gang-plow, a frame consisting of a single obliquely-disposed beam, rotary supporting means for said beam, a plurality of plow units including beams, links connecting the front ends of the plow-beams with the draft-beam, spacing members connecting the front ends of the plow-beams with the draft-beam, spacing members connected rigidly with the plow units and flexibly with the draft-beam, and means for effecting vertical adjustment of the front ends of the individual plow-beams to thereby effect adjustment of the points of the individual plows.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEORGE R. MARRIAGE.

Witnesses:

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