W. L. PAUL.

PLOW.

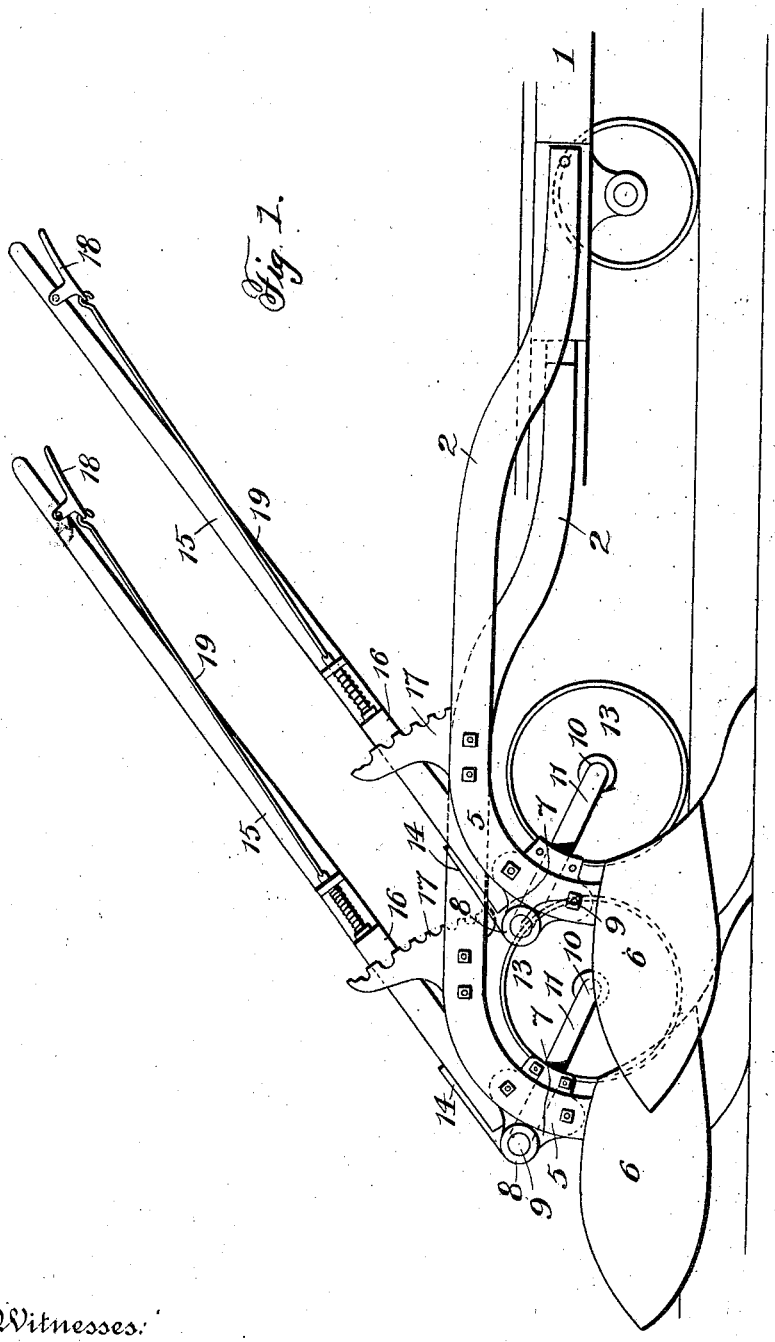
APPLICATION FILED APR. 2, 1910.

1,037,046.

Patented Aug. 27, 1912.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses:

Jas. E. Hutchinson.

H. J. Downing.

Inventor:

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By H. A. Seymour Attorney.

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2 SHEETS—SHEET 2.

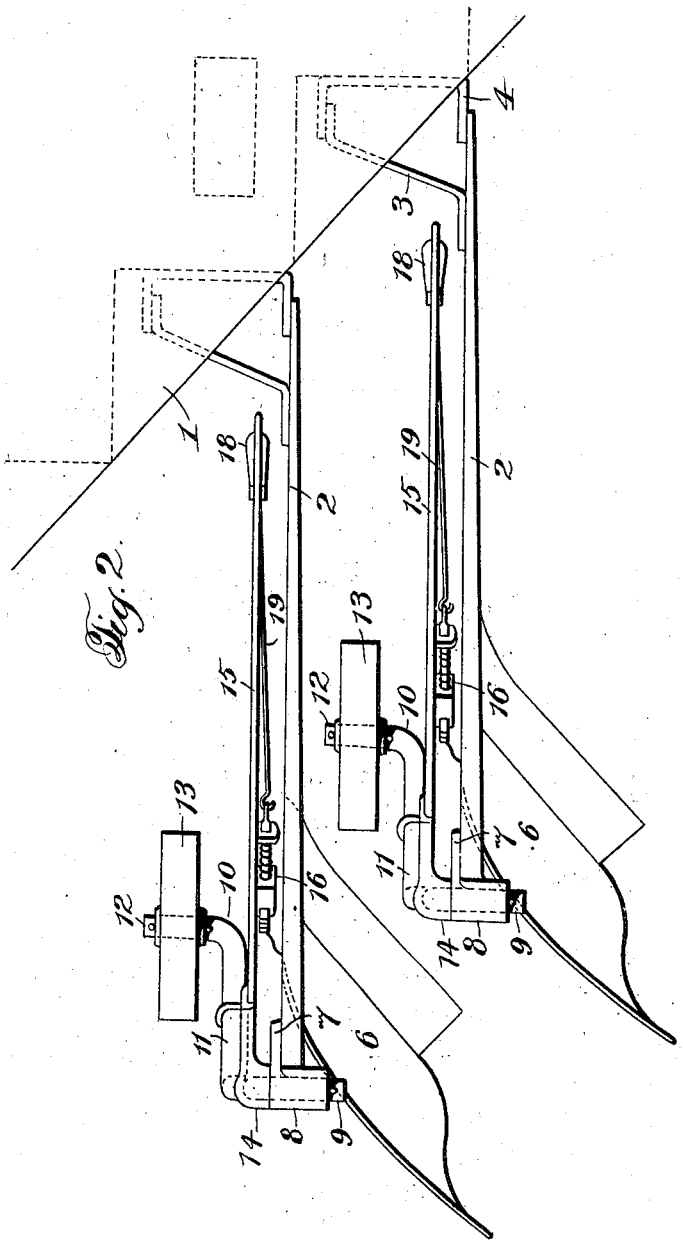

Fig. 2.

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UNITED STATES PATENT OFFICE.

WILLIAM L. PAUL, OF SOUTH BEND, INDIANA, ASSIGNOR TO OLIVER CHILLED PLOW WORKS, OF SOUTH BEND, INDIANA.

PLOW.

1,037,046. Specification of Letters Patent. Patented Aug. 27, 1912.

Application filed April 2, 1910. Serial No. 553,036.

To all whom it may concern:

Be it known that I, WILLIAM L. PAUL, of South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in 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.

This invention relates to improvements in plows and more particularly to that type known to the trade as "engine gang plows."

It has been heretofore proposed in the construction of plows of the type to which my invention relates, to connect the plow beams in pairs (one plow of each pair projecting rearwardly beyond the other) and pivotally connect the pairs of plows with a truck or platform frame. With such construction, in raising the connected plows the rear soil engaging member will be elevated considerably more than the front soil engaging member and when the lifting wheel runs over an obstruction or high place on the land, the rear soil engaging member will be thrown from its work. It has also been suggested to pivotally connect each plow independently of the others with a truck or platform frame, but with such construction, the lifting wheel has been located under or to the right of the beam and for this reason was necessarily set forwardly or ahead of the point of the share and in position to be clear of the colters, etc. Such construction gives the same difficulty of raising the plow too high in passing over high spots as above mentioned.

The object of my present invention is to obviate the difficulties and objections heretofore encountered with steam gang plows and to so construct and mount the lifting means that they may operate to raise the plows a proper distance and also so that "traction" may be utilized in assisting the raising of the plows.

With this object in view the invention consists in certain novel features of construction and combinations of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a portion of a plow structure showing an embodiment of my invention, and Fig. 2 is a plan view of the same.

1 represents a wheeled truck or platform-frame adapted for connection of its forward end with a traction engine not shown. The rear portion of the truck or platform-frame 1 is made in "stepped" formation for the attachment of a series of plow beams 2 which project successively different distances as is usual with gang plows of this type. Each beam 2 is provided at its forward end with a laterally projecting arm 3 and this arm and the forward end of the beam are pivotally connected in the same horizontal plane with a bracket 4 secured to truck or platform-frame 1. The rear end of each beam curves downwardly to form a standard 5 to which an engaging member 6 is secured.

To each standard 5, a bracket 7 is secured and provided with a bearing 8 for the upper member 9 of a Z-shaped axle 10. The depending member 11 of this axle is located at the side of the standard 5 adjacent to the landside of the engaging member and the lower horizontal member 12 of said axle is disposed rearwardly of the forward end or point of said soil engaging member. A wheel 13 is mounted on the lower horizontal member 12 of the axle and is adapted to run on the ground,—making contact with the latter in rear of the engagement of the forward end or point of the soil engaging member.

A socketed arm 14 is rigidly secured to the Z-shaped axle 10 and receives the lower end of an operating lever 15. This lever is provided with a spring pressed detent 16 to engage a toothed segment 17 secured to the plow beam and said detent is adapted to be operated by a finger lever 18 pivoted to the operating lever 15 and connected by means of a rod 19 with said detent.

With the construction and arrangement of parts above described, the lifting wheel, being located laterally from the landside portion of the soil engaging member and the beam, can be disposed comparatively close to the rear end of the beam and out of the way of the soil engaging member, colters, etc., so that when the wheel passes over an obstruction the plow will not be raised to an unnecessary height and the plow will be prevented from being raised entirely out of the ground should the lifting wheel 13 pass over a raised portion on the ground. Furthermore by mounting the wheel 13 as above de-

scribed, the traction of said wheel on the ground when axle 10 has been moved somewhat, will assist in raising the plow. Such results could not be attained with the same degree of efficiency, were the traction wheel and its operating means located under the plow beam appreciably forward of the soil engaging member. It will also be seen that the lifting levers 15 (which are fixed directly to the crank axles) extend forwardly so as to be operable from the truck platform, and that they are down-working when operated to effect the lifting of the plows.

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

1. In a gang plow structure, the combination with a truck, a plurality of plow beams pivotally connected independently with the truck, and soil-engaging members comprising the mold-boards, land-sides and points, fixed to the rear ends of said beams, an axle mounted on the rear portion of each beam and having a forwardly downwardly projecting part at the land-side side of the soil-engaging member, a lifting wheel at the free end of each axle, and a forwardly extending down-working lifter lever fixed to each axle, whereby each axle can be operated by its lever to move the lifting wheel thereon rearwardly in rear of the point of the soil-engaging member to raise the latter.

2. In a gang plow structure, the combination with a truck, a plurality of beams pivotally connected independently at their forward ends therewith, and a soil-engaging member at the rear end of each beam, of a plurality of Z-shaped axles each having its upper arm mounted on the rear portion of one of the beams and having its intermediate portion projecting downwardly and forwardly at the land-side side of the soil-engaging member on said beam, a lifting wheel mounted on the forward arm of each axle and adapted to engage the ground laterally of the land-side of the soil engaging member on the beam on which said Z-axle is mounted, and a forwardly extending down-working lifting lever fixed to each Z-axle for operating the same to move each lifting wheel rearwardly to lift each plow independently of the others.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

WILLIAM L. PAUL.

Witnesses:
EDWIN C. NICAR,
JAY E. WHITE.