R. NATION.

Wheel-Plow.

No. 42,258. Patented Apr. 5, 1864.

Fig. 1.

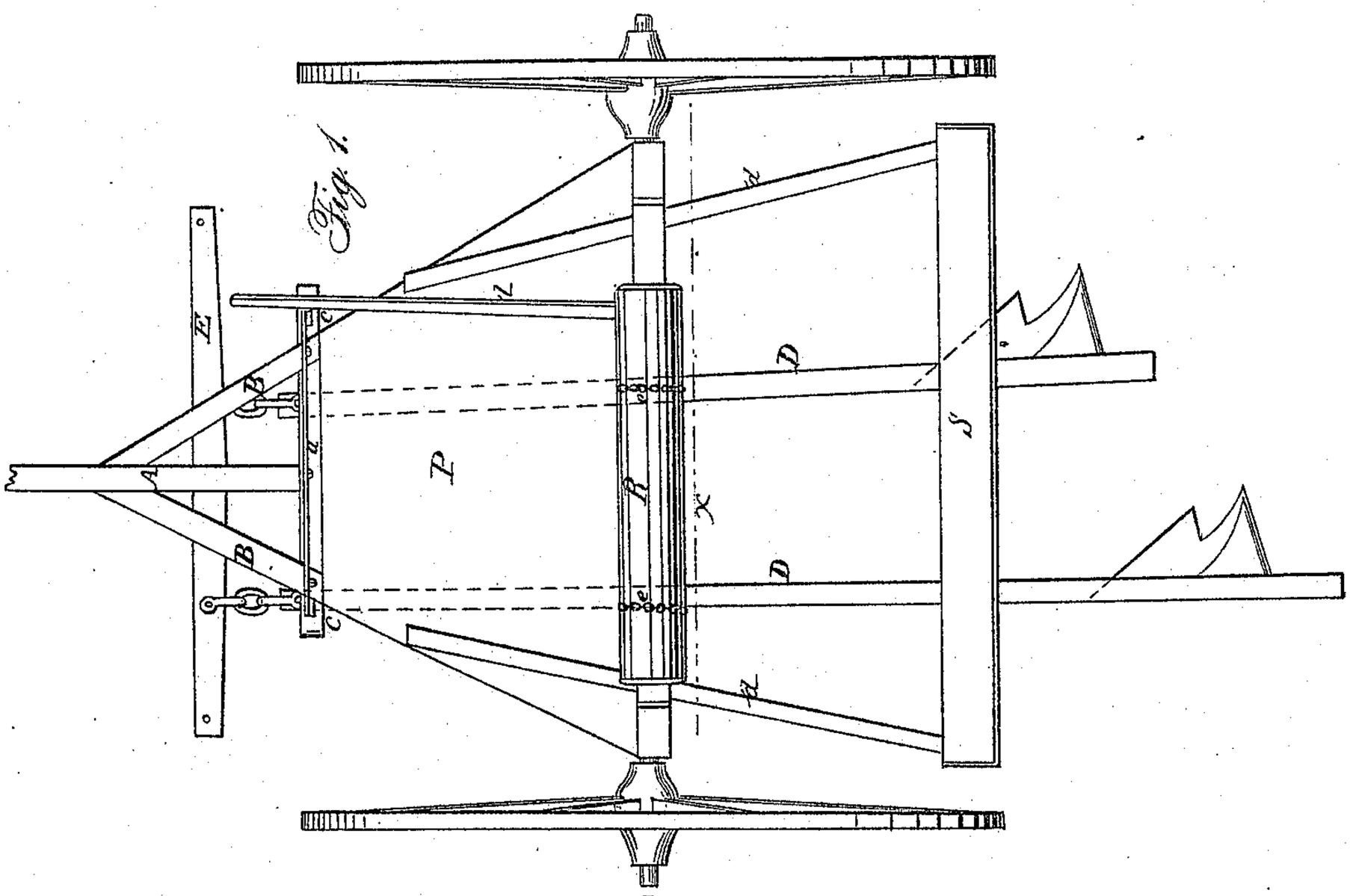
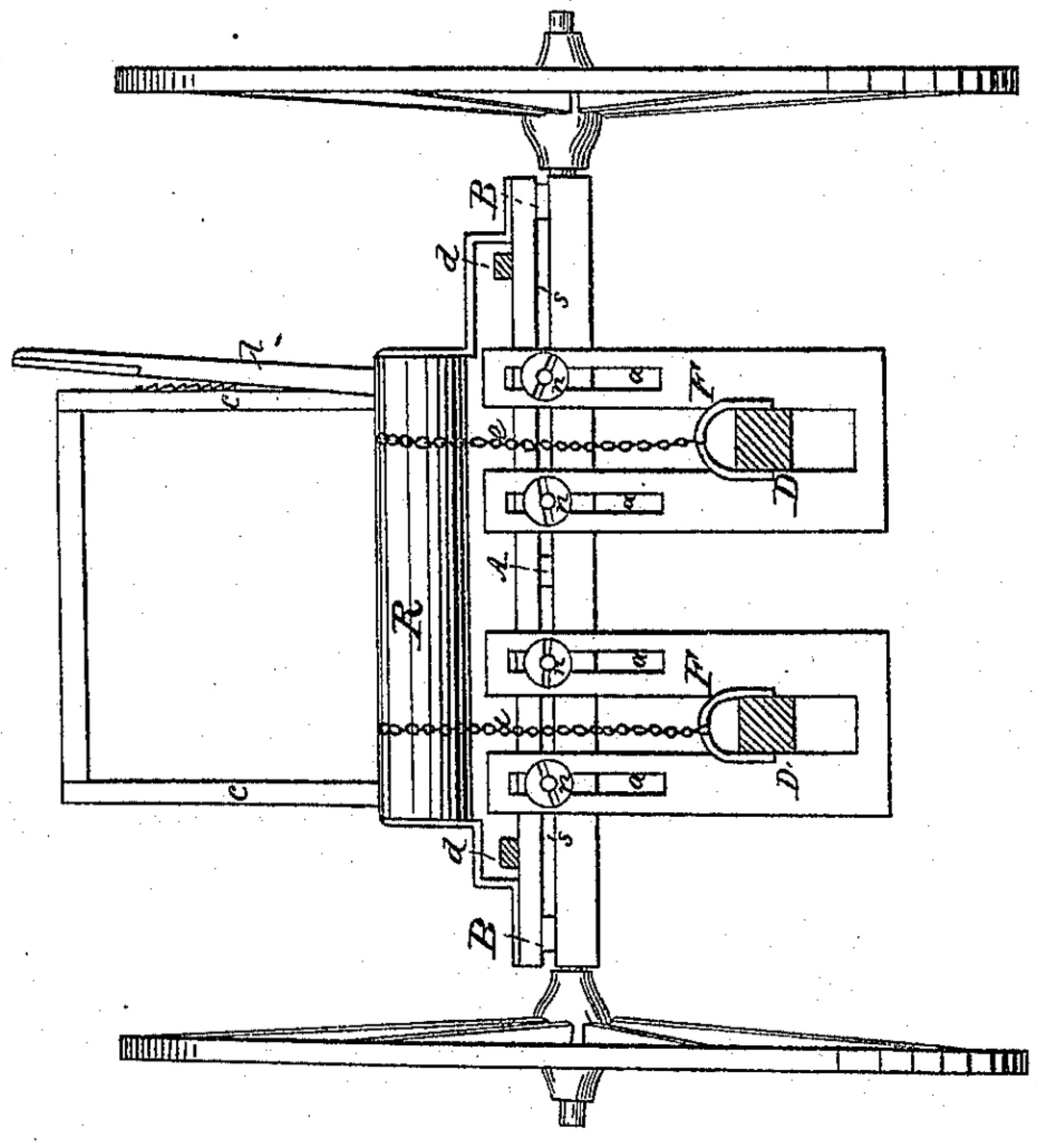


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

ROBERT NATION, OF CHEBANSE, ILLINOIS, ASSIGNOR TO HIMSELF AND JAMES N. ORR.

IMPROVEMENT IN GANG-PLOWS.

Specification forming part of Letters Patent No. 42,258, dated April 5, 1864.

To all whom it may concern:

Be it known that I, ROBERT NATION, of Chebanse, county of Iroquois, and State of Illinois, have invented a new and useful Improvement in Gang-Plows; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and the letters and figures marked thereon, which form part of this specification.

In said drawings, Figure 1 represents a plan or top view of my invention, and Fig. 2 a transverse sectional view at the line *x* in Fig. 1.

Similar letters of reference in the different figures denote the same parts of my invention.

The nature of my invention consists in a gang-plow, wherein the draft upon the plows is applied to the end of the plow-beams in the ordinary manner, while at the same time the connections between said beams and the axle of the machine are such as to allow a free and independent action of the plows, so that although the wheels should drop into any sudden depression in the surface of the ground, or should pass over any impediment or obstruction, as a stone or the like, the plows shall be entirely unaffected thereby, making furrows of uniform and equal depth.

It further consists in an arrangement whereby, when the ground to be plowed is level and free from obstructions, the plows may be gaged or adjusted so as to plow to any desired depth, and also whereby the plows may be adjusted laterally so as to vary the width of the furrows as desired.

It also consists in a novel arrangement for raising the plows entirely from the ground when passing from one field to another, and also to adjust the plows from time to time to adapt them to the inequalities of the ground and ease them through difficult places.

To enable those skilled in the art to understand how to construct and use my invention, I will proceed to describe the same with particularity.

A represents the tongue of my gang-plow, which extends back beneath the platform P to the axle H, to which it is rigidly attached. The braces B B are attached at one end to the tongue, and, extending back, are also attached to the axle H. These braces, together with the tongue, constitute the support of the platform P.

Directly above the axle H, and upon the rear ends of the tongue A and braces B B, is bolted the thick plank or beam G, which is thus incorporated into and becomes a part of the axle, leaving the two longitudinal slots *s s*.

The seat S is supported upon the springs *d d*, which are attached at the front ends to the braces B, and which rest upon the plank G, as shown.

D D represent the plow-beams, to which the plowshares are attached, and which extend forward beneath the axle, their front ends being provided with the ordinary clevis, to which the double-tree E is attached in the usual manner. Thus the depth of the furrows can also be regulated by raising or lowering the double-tree in the clevises.

F F represent guides which are attached to the axle by means of bolts passing from the front through the slots *s s* in the axle, and also through the slots *a a* in the arms of the guides F F, which are secured firmly by means of the nuts *n*. Through the vertical slots or openings *f f* the beams D D pass. The guides F serve only to control the plows from lateral movements, as the slots *f f* extend below the plow-beams D D, so as not to affect or control the vertical movements of the same. Thus if one of the wheels should pass over a stone or other obstruction the guides F could rise without affecting the plow-beams, and also should the wheel pass through a hole its sinking would not affect the plow-beams. When, however, the ground to be plowed is level and free from obstructions, the guides F F, by means of the slots *a*, can be raised so as to support the beams and gage the plows to any required depth. By means of the slots *s s* in the axle the plow-beams may also be adjusted laterally, so as to plow the furrows of any desired depth.

R represents a roller, arranged as shown, directly over the axle, to which one end of the chains *e e* are fastened, said chains passing down and being also attached to the plow-beams, as shown. The lever *l* is fastened to the roller, whereby said roller is moved to operate upon the plow-beams. The lever is kept

in place by means of the ratchet-surfaces upon said lever and the frame *c*. By this arrangement the operator, by moving the lever *l* during the operation of the machine, can constantly control and adjust the plows at different occasions; and by means of the chains and the roller the adjustment can be effected in a much nicer and more perfect manner than could possibly be done by a simple lever operating directly upon the beams. This arrangement of a lever alone would answer when it was desired to raise the plows from the ground entirely, or when a sudden and considerable movement was desired; but the various and nice touches and manipulations which would be necessary in controlling and adjusting the plows during the operation of plowing, could not and cannot be performed with a lever alone, while it can readily be seen that by the interposition of the roller and chains, rapid, slight, and uniform movements may be given to the beams, obviating the sudden and violent jerks obtained by the lever alone.

Having described my improvement in gang-plows, I will now specify what I claim as new therein and desire to secure by Letters Patent:

The combination and arrangement, in a gang-plow, of the plow-beams D D, the guides F F, provided with the slots *a a*, the axle H, provided with the slots *s s*, the chains *e e*, the roller R, and lever *l*, all constructed and operating as and for the purposes herein delineated and set forth.

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