(No Model.)

P. A. FOMINAYA.

PLOW.

No. 267,648. Patented Nov. 14, 1882.

Fig. 1.

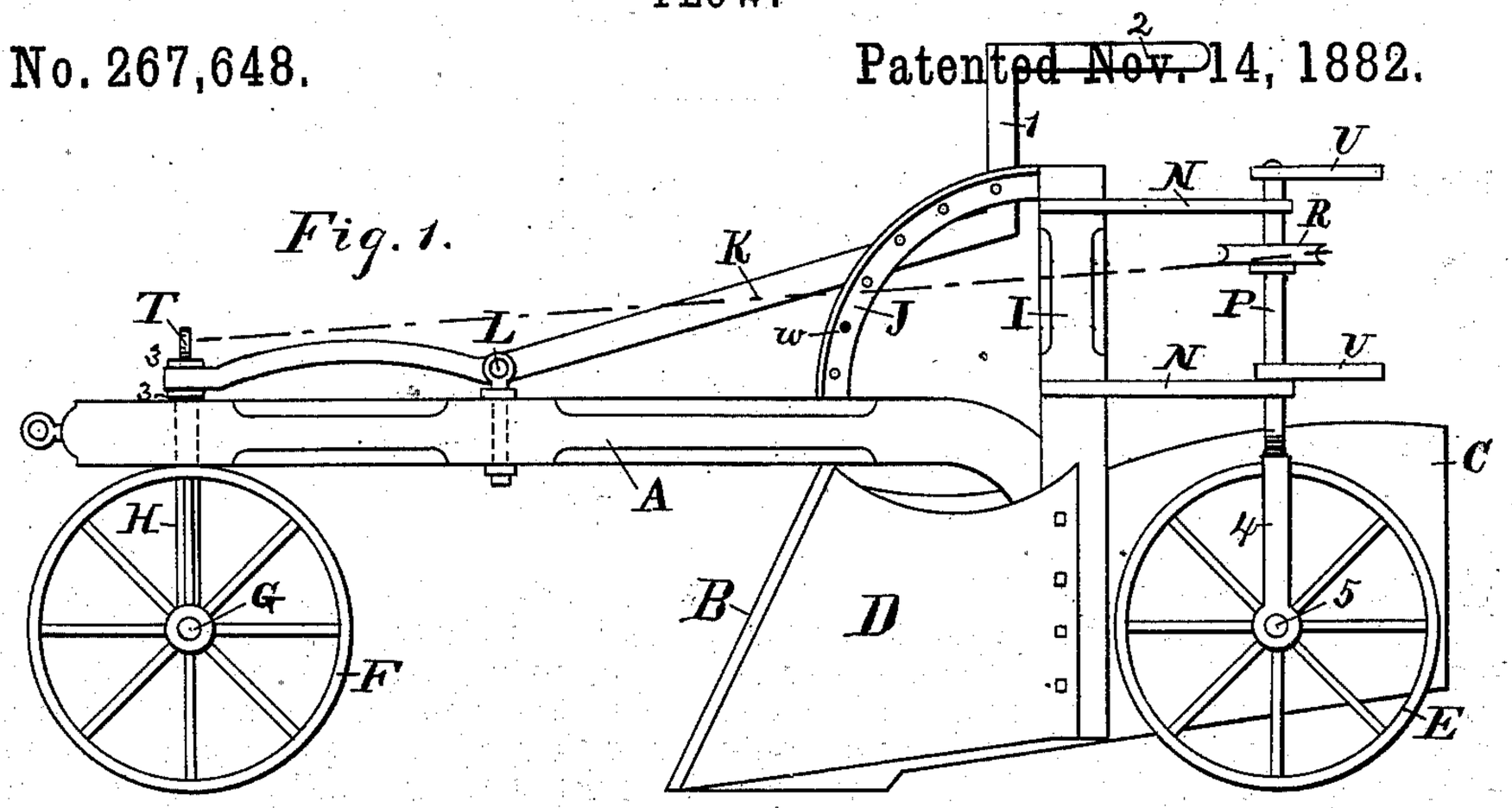


Fig. 2.

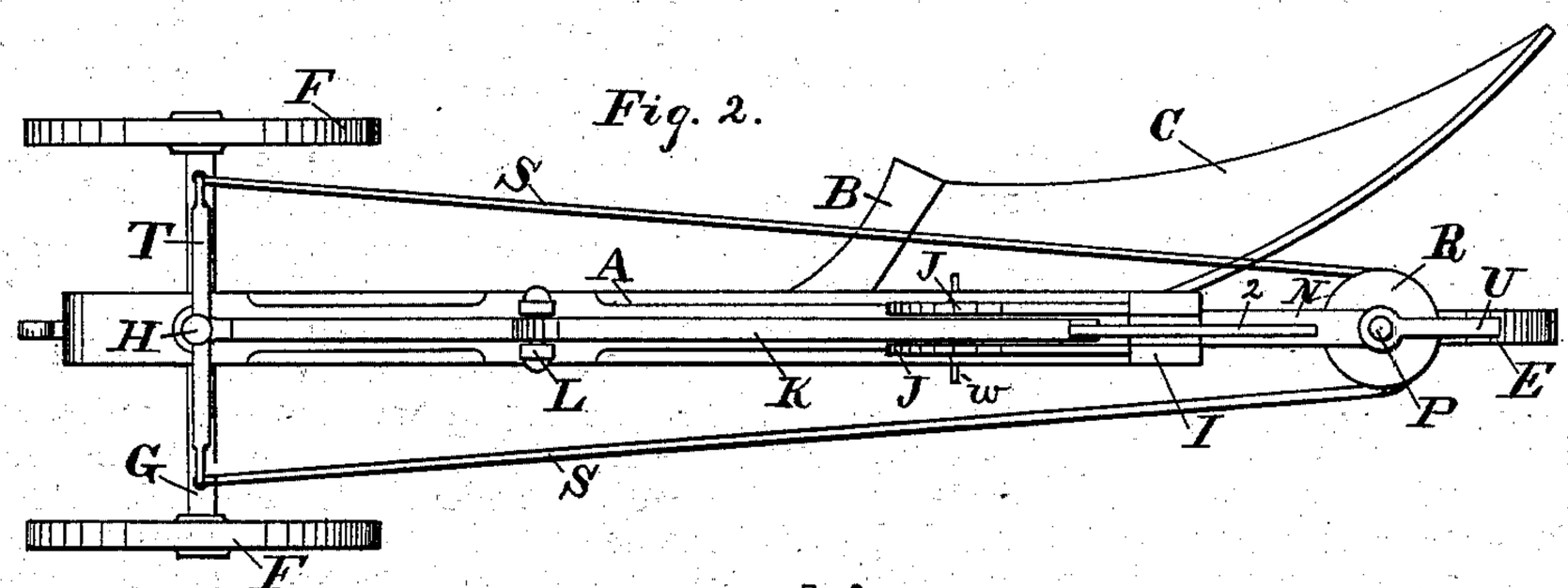
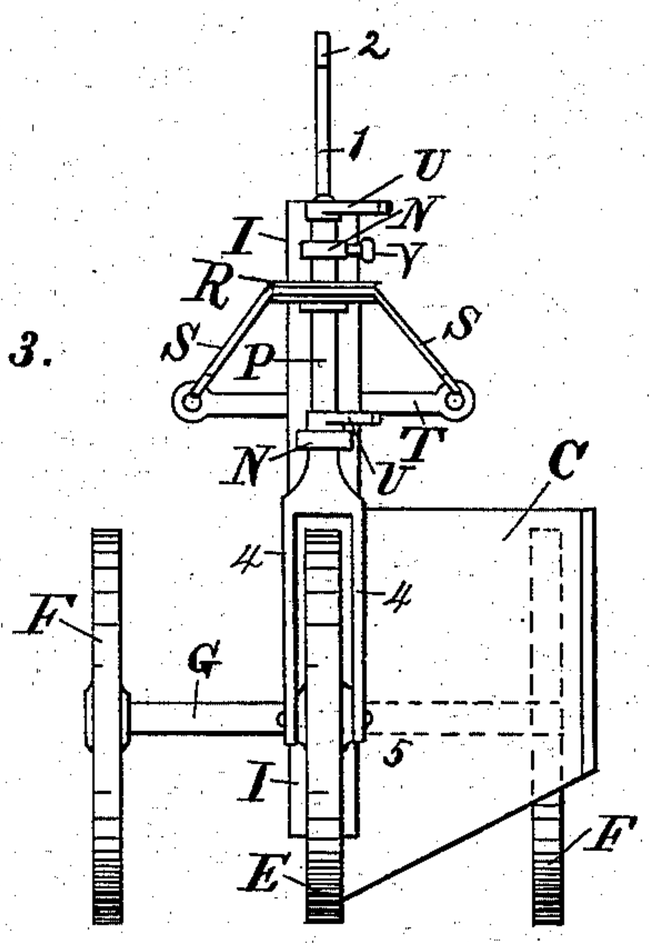


Fig. 3.



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UNITED STATES PATENT OFFICE.

PEDRO A. FOMINAYA, OF HAVANA, CUBA, ASSIGNOR TO CARLOS MARES, OF BALTIMORE, MARYLAND.

PLOW.

SPECIFICATION forming part of Letters Patent No. 267,648, dated November 14, 1882.

Application filed August 31, 1882. (No model.)

To all whom it may concern:

Be it known that I, PEDRO A. FOMINAYA, a citizen of Havana, Cuba, have invented certain new and useful Improvements in Plows, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to a wheel-plow for breaking up land.

I will first describe the construction of the parts, their arrangement and connection with each other, their operation, and the advantages resulting therefrom, and will then designate the parts and combinations constituting the invention.

In the accompanying drawings, Figure 1 is a side view of the plow. Fig. 2 is a top view of the plow. Fig. 3 is a rear end view.

The letter A designates the beam; B, the cutter; C, the mold-board; D, the landside.

The letter E designates a single wheel, which is in the rear and on a line with the cutter. This wheel is intended to run on the bottom of the furrow, and serves when plowing as a steering-wheel, and when not plowing, but when moving the plow, serves as a motor-wheel on which the plow rides.

At the front end of the beam are two wheels, F, mounted on an axle, G, which has at its center an upright bolt, H, passing loosely through the beam. This bolt may partly turn in its bearing in the beam, and thereby the axle and wheels F are so pivoted that they may be turned to change the direction of the moving plow. The bolt H and beam A have vertical movement with respect to each other—that is, if the wheels be on the ground, the front end of beam has an up-and-down movement by sliding on the bolt, by which (as will be presently explained) the plow may be lifted entirely from the ground.

An upright post, I, is secured to the rear end of the beam, and to this post the landside D is bolted.

Two partly circular or segment-shaped bars, J, are placed upright and alongside of each other, with a space between. One end of each of these bars is attached to the beam, and the other end of each to the top of the post. The bars have holes for the insertion of a loose pin, *w*.

A lever, K, is pivoted at L on top of the beam. A portion of the rear end occupies the space between the two upright segment-shaped bars, and said lever is then bent upward at 1, and then by an angular bend projects to the rearward, as at 2. This rear projecting part 2 constitutes a handle. The front end of the lever loosely grasps the bolt H between two collars, 3, rigidly fixed to the bolt, whereby, while the bolt may turn freely in the grasp of the lever, the said bolt or the end of the beam will be moved vertically up or down, according as the lever is raised or depressed. If the handle 2 at the rear end of the lever be depressed, the effect is to lower the front end of the beam, and thereby tip the plow-point and cutter down to enter the ground. If the said handle be raised, the effect is to elevate the front end of the beam and cause the weight to rest upon the wheels, and thereby lift the plow entirely from the ground, in which position the plow may, by means of the three wheels, be moved over the road to any place.

Two horizontal arms, N, are rigidly attached to the post and project rearward. Each arm has a bearing, through which the tiller-post P of the steering-wheel turns. This tiller-post cannot, however, move endwise through the bearings. The lower end of the tiller-post is bifurcated, as at 4, to straddle the steering-wheel, and a pin, 5, passes through the bifurcation on each side of the wheel and through the hub of the wheel.

A pivot-pulley, R, is mounted on the upper part of the tiller-post, and a chain, S, passes partly around this pulley, and one end of the chain is attached to one end of a horizontal guide-bar, T, on top of the bolt H, and the other end of the chain is attached to the opposite end of the said guide-bar. By this arrangement it will be seen that when the tiller-post and steering-wheel are partly turned, the front wheels and axle are likewise turned, thereby changing the direction in which the plow is to move.

Two guide-levers, U, are attached to the tiller-post, and by these the latter may be turned, and they also serve for raising the plow.

A set-screw, V, is provided in one of the horizontal arms, and the end of this screw may be made to press against the tiller-post and,

by holding the latter rigid, prevent lateral motion of the steering-wheel when the plow is in operation.

It will be seen I dispense with the two plow-handles usually employed. Thus, when not lifting the plow, at least one and frequently both hands may be free. When my plow reaches the end of a furrow, an upward movement of the lever-handle raises the plow off the ground. The lever is kept up by placing the loose pin *w* through holes in the upper part of the segment-shaped bars under the lever. The plow may then be moved on three wheels to the point where the front end of the next furrow is to be made. Any direction can be given to the plow by the three wheels and steering device. The up-and-down movement of the lever regulates the depth of the cut which the plow will make in the land. By my plow more work can be done in heavy soil with less manual attendance than any plow of which I have knowledge.

The shape of the cutter, mold-board, and landside are immaterial so far as the working of my invention is concerned, for whatever may be the alleged advantages of plows of different makes, or plows having cutter and mold-board shaped differently from mine, this invention is applicable to all of them.

Having described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a plow, the combination of the beam B, the front wheels and their axle, an upright bolt, H, attached to the axle passing loosely through the beam and having on top a horizontal guide-bar, T, a pivot-pulley, R, at the rear end of the plow, and a chain, S, passed around the pulley and having its ends attached at opposite ends of the guide-bar, as set forth.

2. In a plow, the combination of the front wheels, a bar, T, to guide the front wheels, a rear steering-wheel, E, having a tiller-post, a pivot-pulley on the tiller-post, and a chain passed around the pulley and having its ends attached at opposite ends of the guide-bar, as set forth.

3. In a plow, the combination, with the mold-board and landside, of a steering-wheel at the rear, a tiller-post directly connected to the steering-wheel, and guide-levers attached to the tiller-post, as set forth.

4. In a plow, the combination of the beam A, an upright post, I, secured to the rear end of the beam, horizontal arms N, rigidly attached to the upright post, a tiller-post having its bearings in the arms, and a steering-wheel adapted to be guided by the tiller-post, as set forth.

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

PEDRO A. FOMINAYA.

Witnesses:
JOS. A. SPRINGER,
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