(No Model.)

H. B. GOSS.

LAND ROLLER.

No. 531,925. Patented Jan. 1, 1895.

Fig. 1.

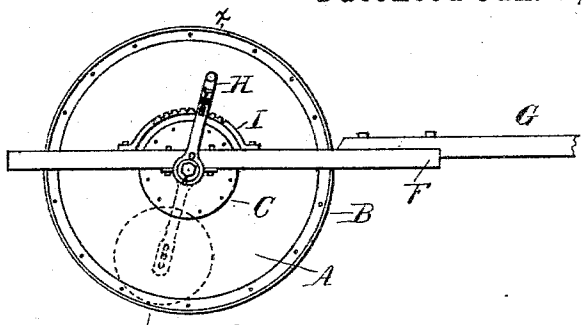


Fig. 2

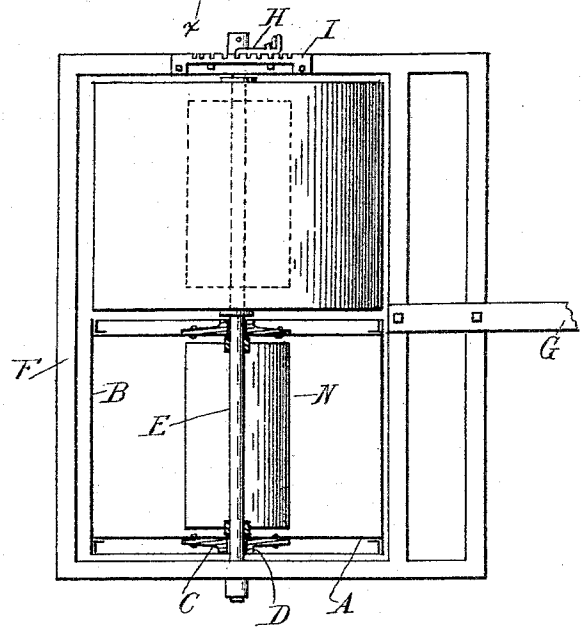
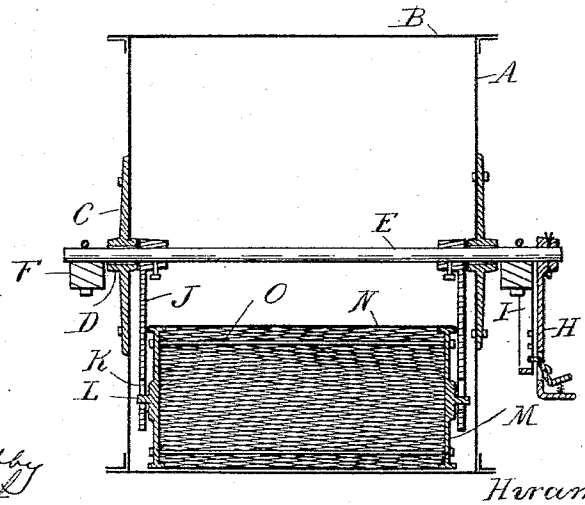


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

HIRAM B. GOSS, OF PORTLAND, MICHIGAN, ASSIGNOR OF ONE-HALF TO MATTHEW J. DEHN AND ROBERT W. ALTON, OF SAME PLACE.

LAND-ROLLER.

SPECIFICATION forming part of Letters Patent No. 531,925, dated January 1, 1895.

Application filed July 31, 1894. Serial No. 519,085. (No model.)

To all whom it may concern:

Be it known that I, HIRAM B. GOSS, a citizen of the United States, residing at Portland, in the county of Ionia and State of Michigan, have invented certain new and useful Improvements in Land-Rollers, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention consists in the peculiar construction of a hollow roller having a rolling weight supported from the frame or axle within, always maintained on the bottom of the roller so as to maintain the lightest possible draft with a given weight of roller and at the same time to prevent the tilting of the draft connection by the rocking or rolling of the weight within the roller.

The invention further consists in the peculiar construction, arrangement and combination of the various parts.

In the drawings, Figure 1 is a side elevation of my improved device showing in dotted lines the position of the interior weight. Fig. 2 is a plan view in section of the same. Fig. 3 is a vertical, central section on line *x x*, Fig. 1.

The main roller is hollow and preferably made of sheet steel, comprising the heads A and the cylindrical drum B in the end of which the heads A are secured in a suitable manner.

Centrally of the heads A are the reinforcing plates C provided with central hubs or bearings D in which is the shaft E, preferably a single shaft passing through the roller and secured at its ends to the frame F, to the lower end of which is secured the draft connection G of any suitable description.

Instead of using a single shaft it is evident that stub shafts may be used entering the ends of the roller only.

In the present state of the art hollow rollers have been constructed and in such cylindrical weights have been loosely supported, the idea being to obtain a lighter draft with a given weight of roller, but such rollers have a decided objection, which is, that in passing over uneven ground the rolling weight will be thrown up the forward face of the interior of the roller, or up the rear face thereof, that is, forward and backward of the center line which will tend to raise and lower the draft connection and thereby bring undue strain up or down upon the necks of the horses, and it has always been impossible to prevent this weight from getting caught in the roller in an angular position, so as to make it ineffective. Another objection to the present style of rollers is that the weight has to be built into the roller which makes it impracticable for manufacturers to ship them any distance. My invention is intended to overcome these objections.

The shaft E has a rotary adjustment in its bearing on the frame M and is held in its adjusted position by means of the lever H engaging in notches in the segmental bar I on the frame. Secured to this shaft within the roller are the depending arms J having vertical slots K at their lower ends, in which trunnions L engage. These trunnions are secured on heads M of a cylindrical or rolling weight N. These heads are secured together by means of the tie bolts O, passing through the weight. This weight may be formed in any suitable manner, by filling this casing with cement, stone or sand, and this can be done by the purchaser in setting it up, so that all the manufacturer has to ship is the frame with a main roller and a cylindrical casing within, thus making it possible for the manufacturer to ship such roller long distances.

The use of the device is apparent without further description. The rolling weight may be adjusted forward of the center, backward of the center and on the center as desired and rest loosely on the interior bottom face of the roller casing.

In strong ground the weight should be set forward of the center and in soft ground backward of the center to get the best effect and save the horse's neck from tilting motion.

What I claim as my invention is—

1. In a land roller, the combination with the frame and axle, of a hollow roller mounted in the frame, a cylindrical weight normally resting on the inner face of the roller, adjusting arms connected with the cylindrical weight, means for adjusting the arms, and means for locking said adjusting means in their adjusted position, substantially as described.

2. In a land roller, the combination of a hollow roller, a central shaft passing there-

through, a frame to which the ends of the shaft are rotatorily adjustably secured and to which the draft connection is applied, arms rigidly secured to the shaft within the roller, and a rolling weight pivoted in the ends of the arms, means for holding the shaft in its adjusted position on the frame, substantially as described.

3. In a land roller, the combination of the hollow roller, the central shaft, the frame to which the ends of the shaft are rotatorily adjustably secured, hangers rigidly secured to and depending from the shaft within the roller, a rolling weight having trunnions at the ends pivotally engaging in slots in the lower ends of the arms, and means for holding the shaft in its adjusted position on the frame substantially as described.

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

HIRAM B. GOSS.

Witnesses:
CHAS. J. DILLEY,
T. J. BUNDFIELD.