(No Model.)

F. GRIMES.

LAND ROLLER.

No. 383,807. Patented May 29, 1888.

Fig 1

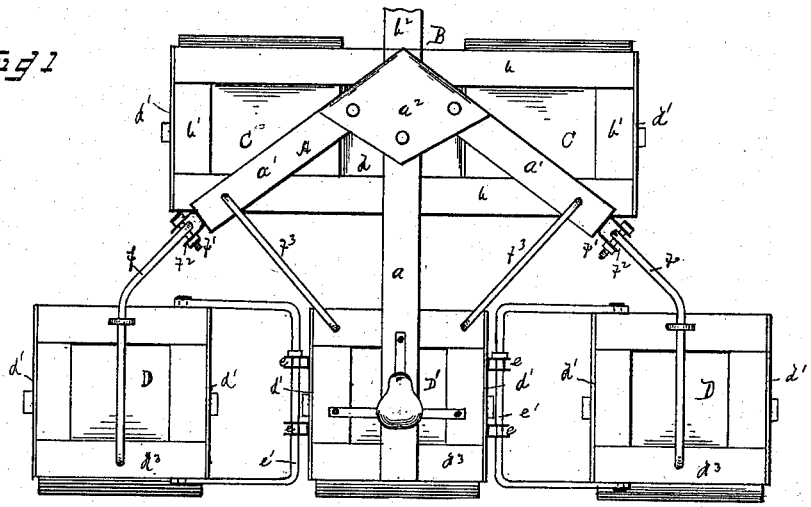


Fig 2

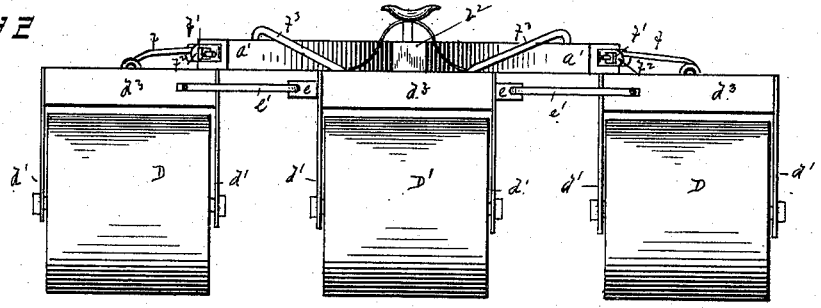
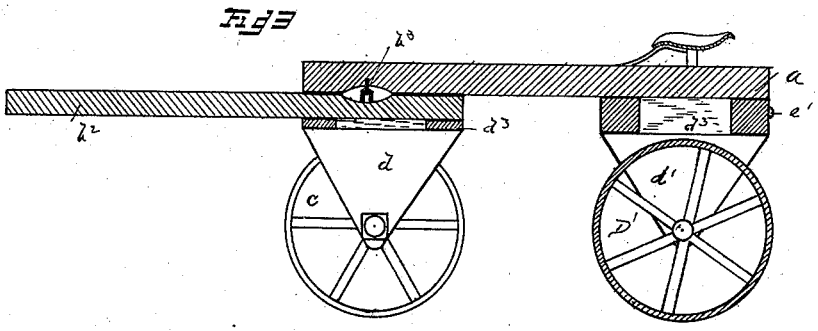


Fig 3



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UNITED STATES PATENT OFFICE.

FRANKLIN GRIMES, OF RICHLAND STATION, PENNSYLVANIA.

LAND-ROLLER.

SPECIFICATION forming part of Letters Patent No. 383,807, dated May 29, 1888.

Application filed February 27, 1888. Serial No. 265,355. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN GRIMES, a citizen of the United States of America, residing at Richland Station, in the county of Lebanon and State of Pennsylvania, 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.

This invention pertains to certain new and useful improvements in land-rollers, having for its object the production of a land-roller having simple and highly-efficient means for rolling uneven ground or soil by constructing the parts of the land-roller in hinged or pivoted sections, each connected to but independent of the other, so that each section or roller can readily conform to any inclination in the earth over which it passes.

The invention therefore comprises the detail construction, combination, and arrangement of parts, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of my invention. Fig. 2 is a rear view thereof, and Fig. 3 is a sectional view.

Referring to the drawings, A indicates the main frame of my improved land-roller, the same consisting preferably of a central bar, a, and two divergent bars, $a'a'$, connected at their forward ends to the forward end of said bar a, the meeting ends of these bars being preferably covered by a cap-piece, a^2, as shown.

B is a front supplemental frame, composed of two longitudinal bars, $b\,b$, connected at their ends and center by short cross-bars b'. The central cross-bar, b', is connected to the rear end of a tongue or pole, b^2, which is pivotally secured to the forward end of the frame A by means of two connecting links or staples, b^3, so as to permit the supplemental frame B to have a pivotal movement with relation to said frame A.

C C are two rollers pivotally secured between downwardly-projecting hanger-plates d d, the upper ends of which are secured to the supplemental frame B, said rollers being free to revolve between said hanger-plates under the supplemental frame without coming in contact therewith.

A series of three or more rollers, D D′, are disposed in rear of the supplemental frame B, and are designed to normally occupy a transverse plane parallel therewith. Each of these rollers D D′ is pivotally secured between two hanger-plates, d' d', attached at their upper ends to the side bars of preferably square-shaped frames d^3 d^3. The frame of the central rail-roller, D′, has rigidly secured thereto the rear end of the central bar, a, of the frame A, and to the side bars of this frame are secured apertured ears or plates e e, through the apertures of which are passed U-shaped bars e' e', the outer ends of which are loosely secured to the front and rear bars of the frames b^3 b^3 by means of screws passed through loosely-fitting apertures thereof. In lieu of making these bars U-shaped, the side arms thereof can be connected directly to each apertured ear or plate e, and the connecting-bar (shown as being passed through the apertures of said ears or plates) can be dispensed with, as is obvious.

Through central staples secured to the upper surfaces of the front and rear bars of the frames b^3 b^3 are passed brace-rods $f\,f$, which are slightly curved at their forward ends, and are loosely secured by means of nutted bolts f' to apertured plates f^2, attached to the outer rear ends of the divergent bars a' a'.

The frame of the central roller, D′, is held in position by short inclined brace-rods $f^3\,f^3$, secured thereto and to the divergent bars of the frame A. Over the frame of the rear central roller, D′, is secured the operator's or driver's seat G, the brace-bars g of which are attached to said frame and to the central bar, a, of the frame A.

It will be observed that the rollers C C of the supplemental frame B occupy the space between each two rollers of the rear series a short distance in front thereof, and that the central roller, D′, occupies the space between the two front rollers, C C, but in rear thereof, whereby the rollers of one series pass over that portion of the earth not affected by the rollers of the other series.

From the foregoing description it will be seen that the outer rollers of the rear series have a pivotal movement, which permits them to conform to any inclination in the earth's

surface, so that either one or both of said end rollers can be upon a hill or inclination without affecting the other central roller.

By reason of the hinged connection between the central roller, D′, and the end rollers it will be seen that by removing the nutted bolts connecting the curved brace-rods *f* to the frame A either one of said end rollers can be turned over onto the central roller, D′, so as to diminish the space occupied by the rear series of rollers in passing through a narrow space, which feature is a desideratum in this class of inventions. Said rollers, when so placed upon the central roller, rest upon the seat thereon.

I claim as my invention—

In a land-roller, the combination of the roller-frame, the supplemental frame connected thereto and carrying rollers, the rear series of rollers, the U-shaped arms pivotally connecting the end rollers of said series with the central one thereof, the brace-rods secured to the frames of said end rollers and removably connected to said roller-frame by nutted bolts, and the brace-rods f^3, connecting said central roller to said roller-frame, substantially as shown and described.

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

FRANKLIN GRIMES.

Witnesses:

MARIA E. BECKER,

THOS. L. BECKER.