(No Model.) 2 Sheets—Sheet 1.

C. L. BARRETT.

LAND ROLLER.

No. 488,980. Patented Jan. 3, 1893.

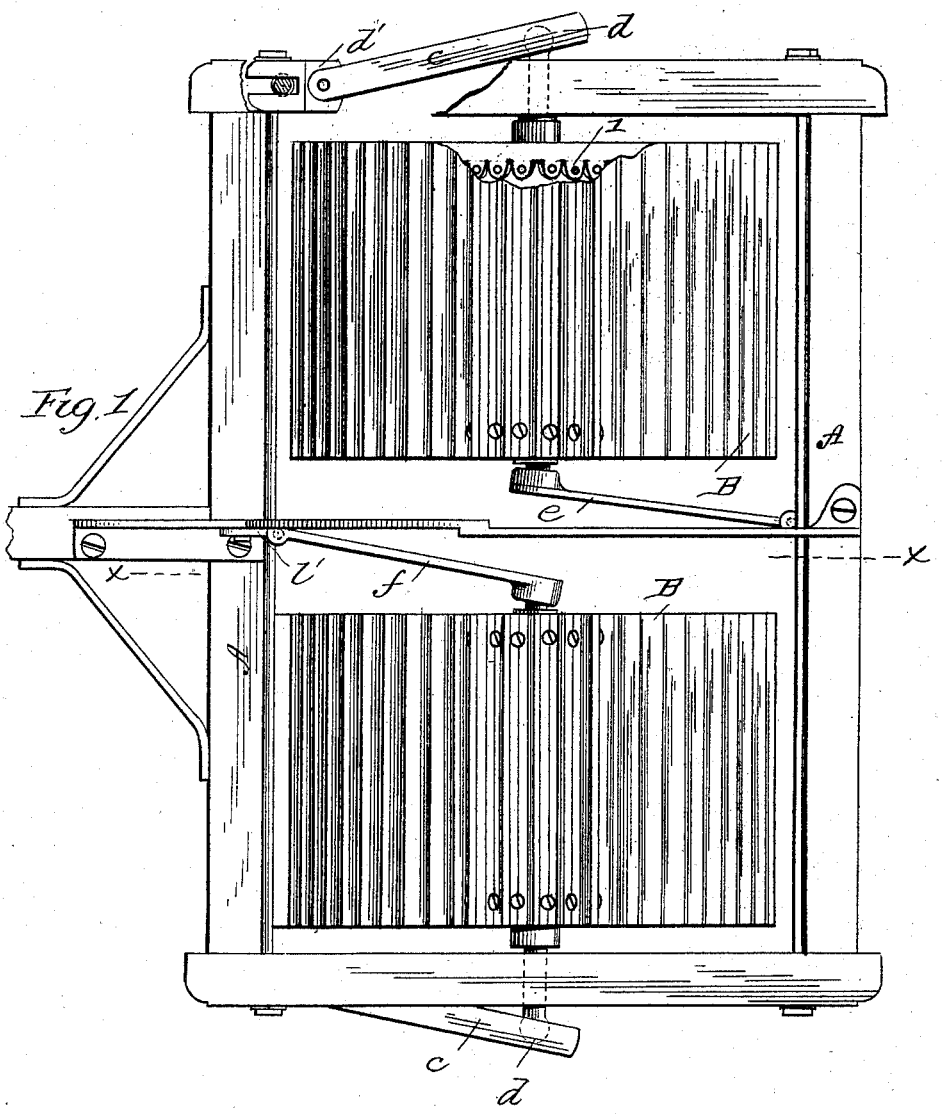


Fig. 1

Attest
Walter Middleton
F. L. Middleton

Inventor
Chas. L. Barrett
by Ellis Spear
Atty.

(No Model.) 2 Sheets—Sheet 2.

C. L. BARRETT.

LAND ROLLER.

No. 488,980. Patented Jan. 3, 1893.

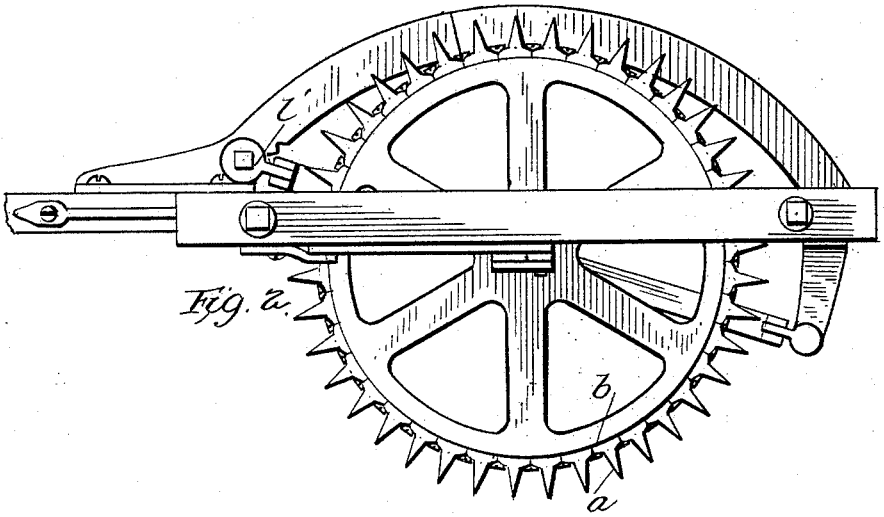
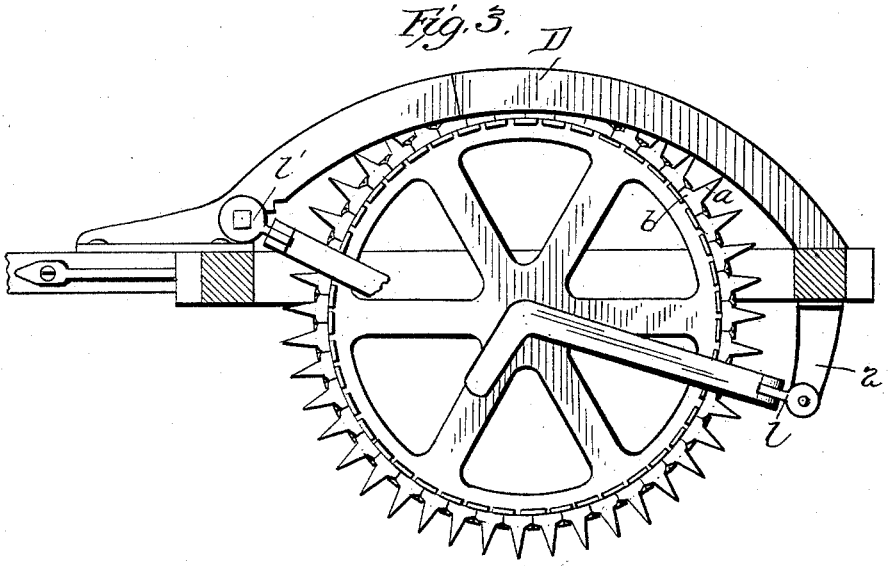


Fig. 2.

Fig. 3.



Attest
Walter Donaldson
F. L. Middleton

Inventor
Chas. L. Barrett
by Ellis Spear
Atty.

UNITED STATES PATENT OFFICE.

CHARLES L. BARRETT, OF KENT CITY, MICHIGAN.

LAND-ROLLER.

SPECIFICATION forming part of Letters Patent No. 488,980, dated January 3, 1893.

Application filed November 21, 1891. Serial No. 412,654. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. BARRETT, a citizen of the United States of America, residing at Kent City, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Rollers, of which the following is a specification.

The present invention is designed to produce a very simple but effective form of roller adapted for the crushing, pulverizing and leveling of land.

The invention relates largely to the improved details and includes the construction of the roller as well as the connections between the rollers and the frame.

In the accompanying drawings, Figure 1 is a plan view of my invention. Fig. 2 is a side view. Fig. 3 is a section on line *x*—*x* of Fig. 1.

In the figures I have represented the frame-work as of rectangular shape at A, and this incloses the rollers B, B, being connected thereto as hereinafter more particularly described. I have shown the rollers as two in number but I do not limit myself in this connection. Each is composed of heads having suitable spokes with a flanged periphery, the flanges 1 being provided with a series of openings and these heads are connected by the working periphery of the wheel which is made up of a series of castings having a central projection *a*, and a flanged base *b*. The flanges at each end are provided with recesses preferably semi-circular and through the circular opening, formed by placing a second casting along side, a headed bolt is passed, the head thereof bearing on the flanges while the screw threaded end is secured by means of a nut after the end is passed through one of the openings in the flanged periphery of the head. The periphery of the roller is made up by a continuous series of these castings held by the headed bolts as described. In case the roller should be of an unusual width it may be found necessary to have an intermediate head arranged centrally of the two outer heads. The projecting portions of the periphery serve to thoroughly pulverize the earth and crush the clogs and to put the land into condition for seeding. Each roller is mounted upon a shaft to which the roller is fixed, and each end of the shaft is provided with a ball formation which is adapted to sockets in pivoted bars secured to the frame. At the outer end this bar is shown at *c*, having its free end provided with the sockets *d*, and pivoted at its opposite end to the underside of the frame being held by a clip *d'* adjustably secured by a bolt passing through the slotted portion of said clip to the under side of the frame, said clip carrying the pivot of the bar *c*. It will thus be seen that the roller is not only free to turn with its shaft by reason of the ball and socket connection at the outer end but by reason of the pivoted connection between the frame and the bar at each outer end, the frame is allowed horizontal endwise movement independently of the rollers. The inner end of each of the roller shafts is also as has been described, provided with a ball formation fitting a socket in the bars *e*—*f*, the bar *e*, extending to the rear of the frame where it has pivoted connection with a link *l*, so as to swing horizontally and this link is pivoted to a bracket 2, depending from the frame so as to have vertical movement. The bar *f*, extends to the front of the frame and has a pivoted connection therewith through a link *l'* so as to permit of horizontal and vertical movement also. A bracing arch extends between the front and rear parts of the frame as at D, at a point intermediate of the two rollers. It will thus be seen that the frame has independent horizontal movement and also vertical movement permitting the rollers to tilt toward each other or away from each other when the inequalities of the ground necessitate this, the action being automatic, and without in any way interfering with, or putting a strain upon the frame, or the connecting parts, for the reason that the outer ends of the rollers turn in the sockets and the inner end having a connection which permits free horizontal as well as vertical movement permit such rocking or tilting movement without strain. The frame really serves only to connect the rollers and to keep them together while permitting the full power of the rollers to bear upon the land being rolled or crushed and does not in any way modify the effective work of the rollers.

I claim as my invention:

1. In combination the frame work, a pair of rollers having independent shafts, the in-

dependent bars *e*, *f*, at the inner adjacent ends of said shafts each of said bars being pivotally connected to the frame to have both lateral and vertical movement, the universal connections between the said bars and their respective roller shafts, and the arms *c* connected to the outer ends of the roller shaft by a universal joint said bars being pivoted to the frame to move laterally and held against vertical movement, whereby the frame is supported by the said laterally movable levers, and the rollers permitted to adjust themselves laterally—substantially as described.

2. The described roller, consisting of the heads and a series of castings forming the periphery, each having a central projection and flanges on each side thereof, said flanges abutting against each other, and the means passing between the adjacent flanges to hold them in place, substantially as described.

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

CHARLES L. BARRETT.

Witnesses:
C. L. HARVEY,
C. D. STEBBINS.