

LAND-ROLLER.

Patented Sept. 12, 1876.

Charles J. Ford
W A Wilcox

Alfred H. Dafford
BY *G. W. Bond*
ATTORNEY.

UNITED STATES PATENT OFFICE.

ALFRED H. UFFORD, OF COLDWATER, IOWA.

IMPROVEMENT IN LAND-ROLLERS.

Specification forming part of Letters Patent No. 182,044, dated September 12, 1876; application filed June 5, 1876.

To all whom it may concern:

Be it known that I, ALFRED H. UFFORD, of Coldwater, in the county of Franklin and State of Iowa, have invented a new and useful Improvement in Land-Rollers; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 represents a plan view of the roller, showing each individual roller, frame-work, &c.

The object of the invention is to provide a land-roller adapted to the inequalities of the ground; and consists of cylinders—three in number—mounted each in a rectangular frame, two of which are in the same lateral line, with a third roller and frame forward of the two rear ones, and so arranged that the end of the forward roller overlaps the inner ends of the two rear rollers, lying end to end with each other, as will be hereinafter described.

Letters of reference denote different parts in the drawing.

A are the rear rollers, made in the usual manner, and A' the front roller. B B are longitudinal beams in the rear of rollers A, and B' B' the longitudinal beams in the immediate front of the said rollers. C C are outside cross-beams, in which the said rollers are journaled. The beams B' are hinged each to the other, and also to the rear cross-beam D of the frame carrying the forward roller A', by a stud, *b*, made fast at one end to the beam D, the other or free end of which, being cylindrical in form, passes through the beams B, holes having been made for the purpose through the ends *b'*, which project inwardly and beyond the cross-beams C', and are made to lap each other by having portions of the timber removed, and by such connection forming a hinge, the pivotal stud *b* uniting the parts, as shown. D' is the front cross-beam of the forward roller-frame, and E the side beams of the same, and in which the roller A' is journaled. These side beams E extend forward of the cross-beam D' sufficiently far to receive the tongue-roller F, which has journals *f*, which pass through the forward ends of the cross-beams E, and by

means of which the tongue G can have the necessary vertical play required for the working of the rollers upon the uneven surface of the land, and also for connecting the free end of the tongue with the neck-yoke of the team propelling the same. H are diagonal braces, connecting the rear roller-frames with the front roller-frame. These braces H are notched into the beams B', and securely bolted thereto at their rear ends, while to the forward ends are bolted angle-irons *a*, provided with ears *a'*, which enter within openings or slots *a''*, made in the ends of the beam D'. Through the said beam ends and ears bolts *c* pass, through holes made for the purpose, thus forming hinges, which, in connection with the central hinge gives a flexibility to the roller-frames, so that the unequal surfaces of the ground can be rolled in a manner easily understood without further description.

It will be observed that each roller has its independent and separate frame, rigid by itself, yet flexible in the connections each with the other, and so constructed that the whole surface of the land is rolled, as the back rollers being in the same longitudinal line, the inner ends of each extend laterally past the ends of the front roller in such manner that the entire surface of the land is rolled.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the rollers A A A', each made to revolve within its own section, and connected together by the pivotal joints in the continuations of the beams B', and the angle-irons *a* on the braces H, as shown and described.

2. In a land-roller, the combination of cross-bars D D', beams E, tongue-roll F, pivoted braces H, and centrally-pivotal bars B', all arranged and operating as described, and for the purpose set forth.

This specification signed and witnessed this 3d day of April, 1876.

ALFRED H. UFFORD.

Witnesses:

J. H. KING,
JAS. T. McCORMICK.