O. B. COLCORD.

Field-Roller.

No. 64,748. Patented May 14, 1867.

Fig. 1.

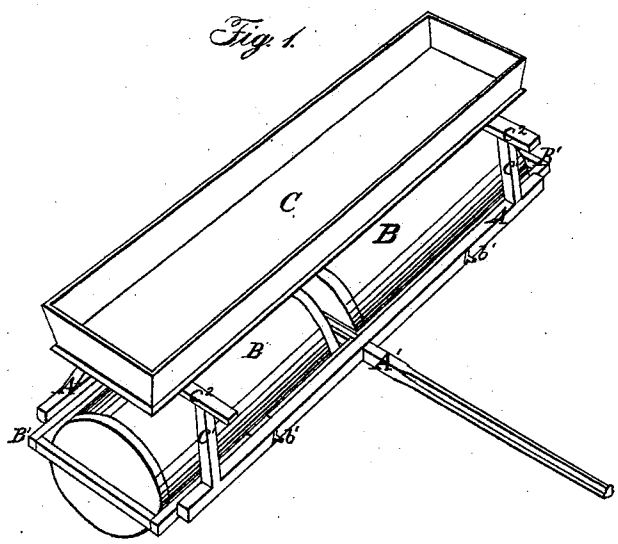


Fig. 4.

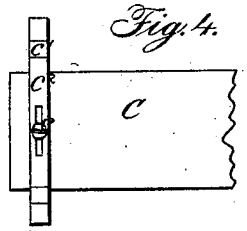


Fig. 2.

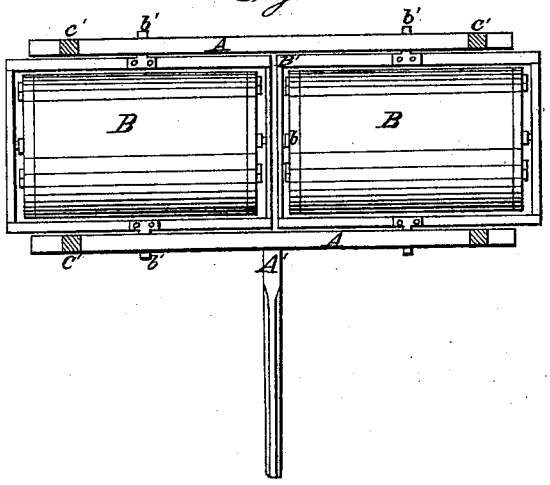
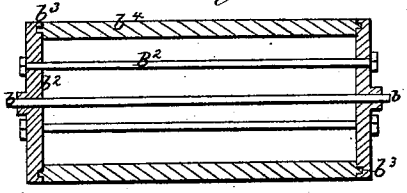


Fig. 3.



Witnesses:

S. M. Randolph

Chas. H. Boyle

Inventor:

C. B. Colcord

By his Atty

M. Randolph & Co

AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS.)

United States Patent Office.

O. B. COLCORD, OF GREENVILLE, ILLINOIS.

Letters Patent No. 64,748, *dated May* 14, 1867.

IMPROVEMENT IN FIELD-ROLLERS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, O. B. COLCORD, of Greenville, in the county of Bond, and State of Illinois, have invented a new and useful Improvement in Field-Rollers; and I do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates, firstly, to the self-adjusting rollers, the peculiar construction of which is such that while at work they act independently of each other, and conform themselves to the inequalities of the surface of the field. Each of the rollers has a separate frame, which is pivoted by axles on its side beams so as to allow a vertical longitudinal play to each roller, independently of the other, so as to enable the rollers to reach down into dead furrows, or over sudden elevations or convexities of the field surface, thus remedying a defect that has hitherto existed in all field-rollers. Secondly, the invention relates to the construction of the rollers; and thirdly, to the adjustability of the ballast-box arrangement.

To enable those skilled in the art to make and use my improved roller, I will proceed to describe its construction and operation.

Figure 1 of the drawings is a perspective elevation of the improved roller.

Figure 2 is a horizontal section, taken immediately above the rollers.

Figure 3 is a central longitudinal section of one of the rollers.

Figure 4 is a sectional plan of the bottom of the ballast-box and the beam on which it rests, showing the adjustable arrangement.

A is the framework of the machine, and A′ is the tongue to which the motive power is attached. B B are the rollers, which revolve on their axles *b b*, the said axles having their bearings in the oscillating frames B^1 B^1. These oscillating frames have journals b^1 b^1 secured to their side beams in such a manner as to have their bearings in the side beams of the frame A. As the rollers B B revolve around their axles *b b* in being drawn over the surface of the field, they will have an undulatory or oscillating motion around the journals b^1 b^1. This is the principal point of this invention, and the independent vertical motion of each end of both rollers permits them to reach down into dead furrows, or to rise over small obstructions or convexities, and thus touch and roll ground that would be inaccessible to a single roller, or even two rollers, arranged in every respect like these, with the exception of the oscillating motion. The rollers B B are formed of two cast-iron heads b^2, each of which has an annular mortise, b^3, formed in its inner face, concentric with its periphery; and into these mortises the ends of the staves b^4 are inserted in such a manner as to bring the exterior surface of the staves flush with the periphery of the heads. The heads are then securely held together by means of the screw-bolts B^2, passing entirely through from head to head. The ballast-box C is supported on the frame C^1 C^2, which is erected upon the frame A. The beam C^2, as clearly shown in fig. 4, has a slot, which permits the set-screw *c*, when loosened, to be moved backward or forward; and the ballast-box may in this manner be set vertically over the axles *b b*, or before or behind them, as may be required for a proper adjustment of the weight that is to be contained therein.

Having described my invention, what I claim is—

1. The combination and arrangement of the frame A with the oscillating frames B^1 B^1, substantially as described and set forth.

2. I claim the adjustable device C *c* C^2, for the purpose of changing the ballast-box forward or backward, substantially as described.

In testimony of which invention I hereunto set my hand and seal this second day of November, A. D. 1866, in presence of—

O. B. COLCORD. [L. S.]

Witnesses:

J. M. RANDOLPH,

CHAS. H. BOYLE.