

J. HILL & J. G. STEWART.

Improvement in Revolving Harrows.

No. 122,251.

Fig. 1.

Patented Dec. 26, 1871.

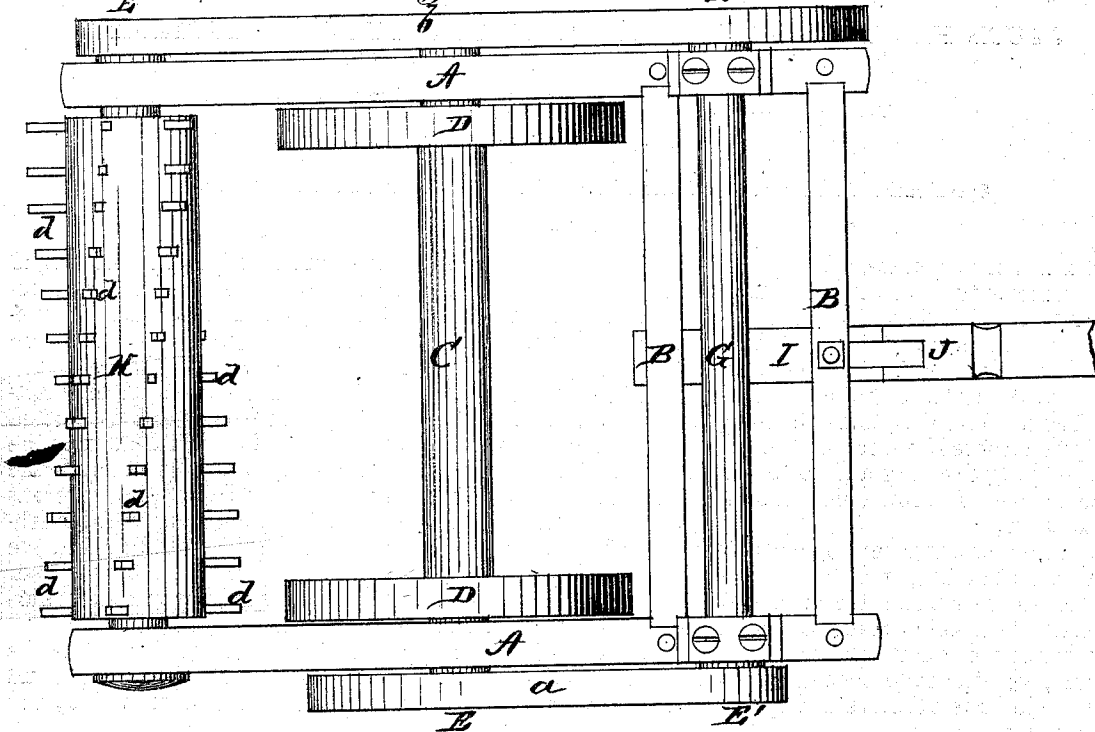
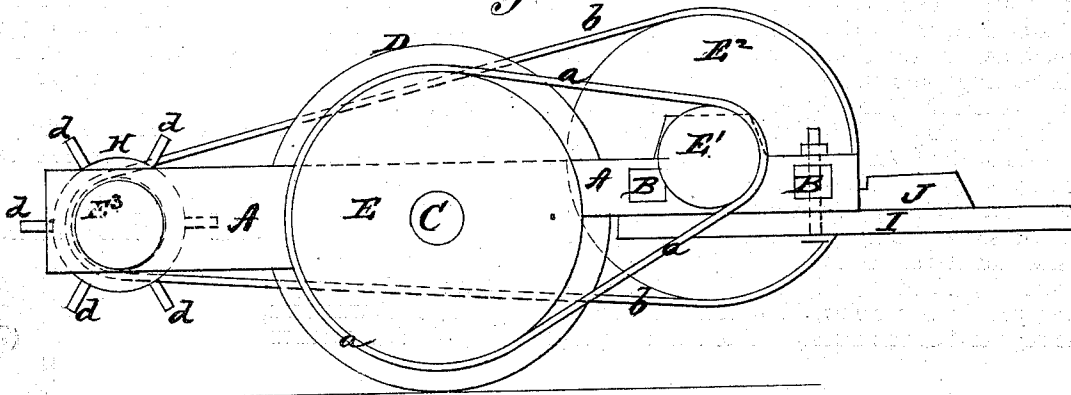


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

JACOB HILL AND JAMES G. STEWART, OF JONESVILLE, INDIANA.

IMPROVEMENT IN REVOLVING HARROWS.

Specification forming part of Letters Patent No. 122,251, dated December 26, 1871.

To all whom it may concern:

Be it known that we, JACOB HILL and JAMES G. STEWART, of Jonesville, in the county of Bartholomew and State of Indiana, have invented certain new and useful Improvements in Cylinder or Revolving Harrows; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon which form a part of this specification.

The nature of our invention consists in the construction and arrangement of a "revolving harrow," as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a plan view, and Fig. 2 a side view of my machine.

A A represent two parallel side beams, connected at or near their front ends by means of two cross-bars, B B, and with these form the frame of our machine. In the side beams A A an axle, C, has its bearings, and on said axle are mounted the driving-wheels D D, one on each end of the axle inside of the frame. Upon one end of the axle C, outside of the frame, is a large pulley, E, connected by a belt, *a*, with a small pulley, E¹, on the end of a shaft, G, placed in suitable journal-boxes across the front end of the frame. On the opposite end of this shaft is a large pulley, E², connected by a belt, *b*, with a pulley, E³, on one of the journals of a roller, H, which is mounted in the rear end of the frame. This roller is pro-

vided with several series of spirally-arranged harrow-teeth, *d d*, and when the machine is in motion this roller obtains a very rapid rotating movement. The tongue I is secured in the center on the under side of the cross-bars B B. Between the tongue I and the front cross-bar B is inserted a stepped sliding-block, J, which is slotted longitudinally, so that the bolt which secures the tongue to said cross-bar will pass through the same. By adjusting this block at the different steps, or, in other words, increasing or diminishing the distance between said cross-bar and the tongue, the frame is thrown more or less over backward, and hence the depth at which the harrow-teeth *d d* will work readily regulated.

This harrow is perfectly balanced, and, as the driving-wheels are inside of the frame, the ground packed by them will at once be loosened by the roller.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The combination of the frame A B, roller H with spirally-arranged harrow-teeth *d d*, tongue I, and slotted-stepped sliding-block J, all constructed and arranged substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

JACOB HILL.
JAS. G. STEWART.

Witnesses:

T. F. EREINGER,
W. Y. SHUMATE.

(73)