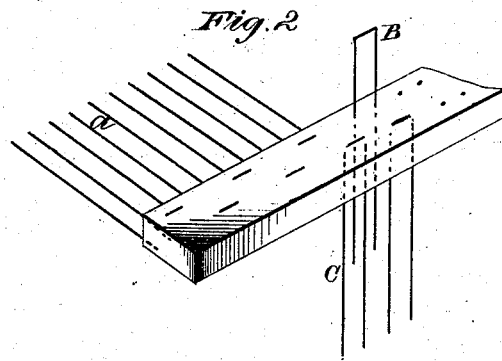
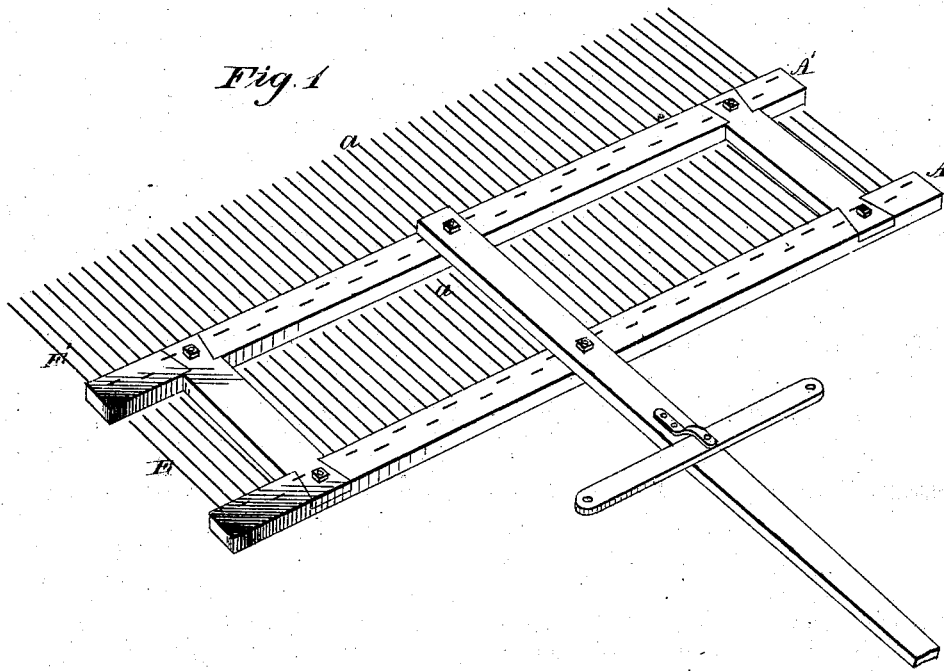


C. K. CHRISPENSEN.
Smoothing Harrow.

No. 196,969.

Patented Nov. 13, 1877.



Witnesses;
James J. Wilkows
Auster G. Sprunger

Inventor
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UNITED STATES PATENT OFFICE.

CHRISTIAN K. CHRISPENSEN, OF NEWARK TOWNSHIP, ROCK COUNTY, WIS.

IMPROVEMENT IN SMOOTHING-HARROWS.

Specification forming part of Letters Patent No. **196,969**, dated November 13, 1877; application filed April 28, 1877.

To all whom it may concern:

Be it known that I, CHRISTIAN K. CHRISPENSEN, of Newark township, in the county of Rock and State of Wisconsin, (Beloit P. O.,) have invented a new and useful Improvement in Smoothing-Harrows, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a perspective view of my wire smoothing-harrow, and Fig. 2 a view showing how to bend and insert the wire teeth.

The object of my invention is to furnish a wire brush with which to smooth the field before or after planting.

In the drawing, E E' represent two series of wire teeth, *a a*, bent back to the proper slant. B is a No. 6 hard spring-wire, four feet in length, bent to its proper form, which makes a double tooth nearly two feet in length. The teeth B are inserted in the scantlings A A', two inches apart, as shown at C. Two rows of teeth should be so inserted in each scantling that when they are bent back, as

shown at E E', they should be one inch apart, which makes a perfect wire brush with twelve No. 5 wire teeth per foot in each scantling. It should also have a seat attached, which I have not shown in the perspective view, Fig. 1.

It will be seen from the foregoing that this harrow can be constructed with simple No. 5 or 6 hard spring-wire and common scantling.

It is obvious that this harrow can be constructed large enough to sweep twelve or fourteen feet in width.

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

A smoothing-harrow composed of the frame A A' and the series E E' of small straight wires arranged closely together, as and for the purpose described.

CHRISTIAN K. CHRISPENSEN.

Witnesses:

JAMES T. WILKINS,
AUSTIN G. SPRINGER.