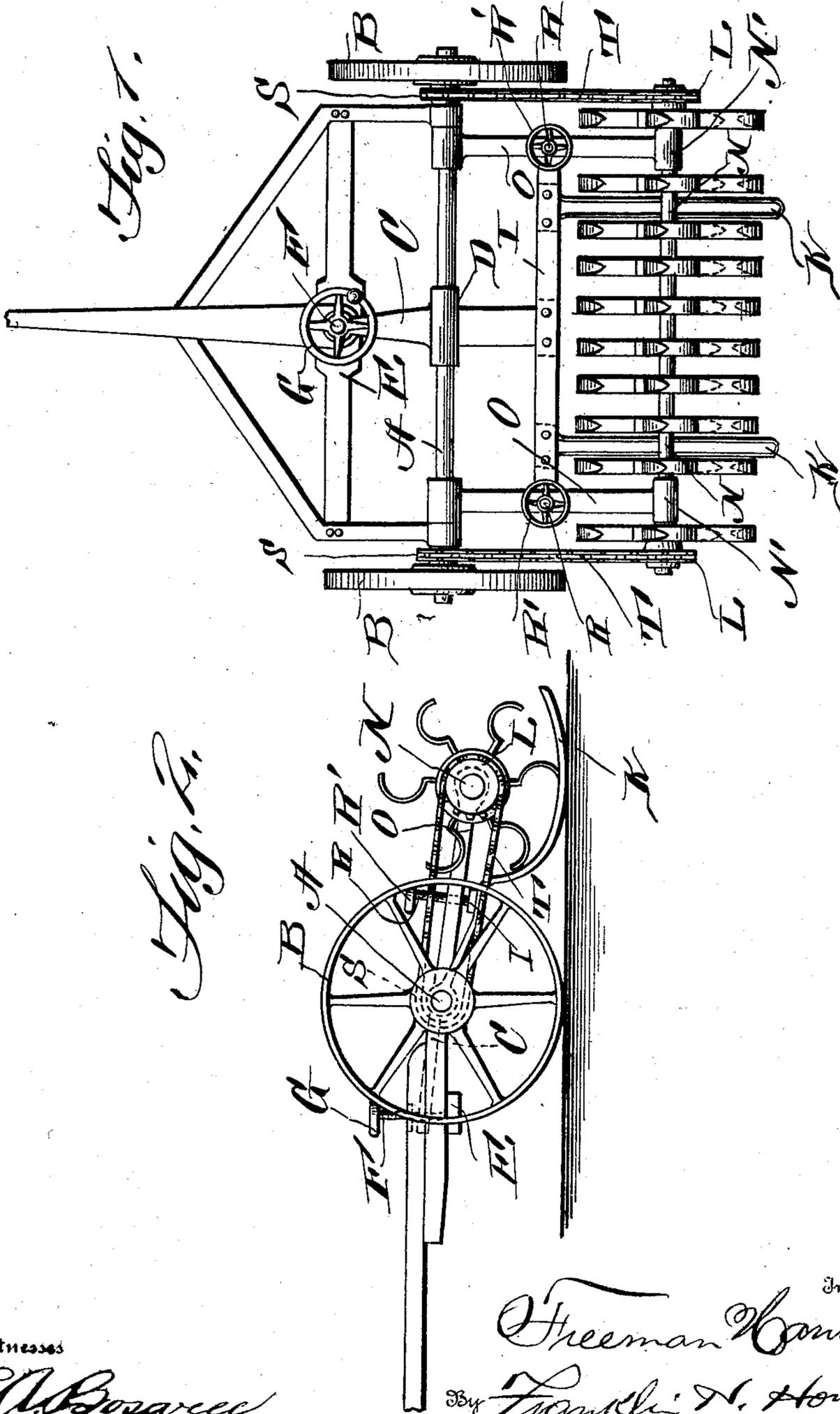


No. 842,653.

PATENTED JAN. 29, 1907.

F. HANSON.
ROTARY HARROW.
APPLICATION FILED OCT. 15, 1906.



Witnesses
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UNITED STATES PATENT OFFICE.

FREEMAN HANSON, OF HOLLIS CENTER, MAINE.

ROTARY HARROW.

No. 842,653.

Specification of Letters Patent.

Patented Jan. 29, 1907.

Application filed October 15, 1906. Serial No. 339,041.

To all whom it may concern:

Be it known that I, FREEMAN HANSON, a citizen of the United States, residing at Hollis Center, in the county of York and State of Maine, have invented certain new and useful Improvements in Rotary Harrows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in harrows; and the object of the invention is to produce an apparatus of this nature in which the rack or frame, carrying a rotatable shaft upon which the spring-teeth are adapted to rotate, is made to be adjustable and in the provision of shoes and means for raising and lowering the same.

My invention comprises various other details of construction and combinations and arrangements of parts, which will be hereinafter fully described and then specifically defined in the appended claims.

I illustrate my invention in the accompanying drawings, in which—

Figure 1 is a top plan view of my harrow, and Fig. 2 is a side elevation.

Reference now being had to the details of the drawings by letter, A designates the axle of the apparatus, upon which the wheels B are journaled.

C designates a beam having a bearing member D, through which the axle passes, said beam being adapted to tilt upon the axle. The forward end of the beam is provided with a screw F, which passes through a threaded aperture therein and is adapted to rest upon the frame E of the apparatus, and a hand-wheel G is fixed to said screw, whereby the latter may be turned. Said beam supports the cross-piece I, to which the shoes K are fastened, which latter are

curved, as shown in Fig. 2 of the drawings, and are positioned intermediate two sets of the sprocket-wheels L, which are fixed to the shaft N. Said shaft N is journaled in bearings N' upon the arms O, the inner ends of which are pivotally mounted upon the axle.

R R designate screws, each of which passes through one of said arms, and each is adapted to engage the upper face of the cross-piece I at its ends, whereby the arms may be raised and lowered as the screws are turned in one direction or another by means of hand-wheels R', which are fixed to said screws. Sprocket-wheels S are fixed to shaft A, and sprocket-chains T pass about said sprocket-wheels and also sprocket-wheels L, which are fixed to the shaft N, whereby the shaft N may be given a rotary movement as the axle is rotated.

The adjustment of my improved harrow will be readily understood and is as follows: When it is desired to tilt the beam C, whereby the shoes may be raised and lowered, the wheel G is rotated in one direction or another, and when it is desired to adjust the harrow it may be done by the manipulation of the wheels R', causing the arms to be raised or lowered.

What I claim is—

In combination with a driving-axle and wheels mounted thereon, a frame supported by the axle, a beam pivotally mounted upon the axle, a cross-piece connected to said beam, shoes fixed to said cross-piece, means for tilting the beam, arms pivotally mounted upon the axle, a rotary harrow mounted upon said arms, means connected with the driving-shaft for operating said harrow, adjusting-screws carried by said arms and adapted to bear against said cross-piece, as set forth.

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

FREEMAN HANSON.

Witnesses:

PERCY S. TARBOX,
EVERETTE E. PIERCE.