(No Model.)

A. H. DOTY.

ROTARY HARROW.

No. 254,937. Patented Mar. 14, 1882.

Fig. 1.

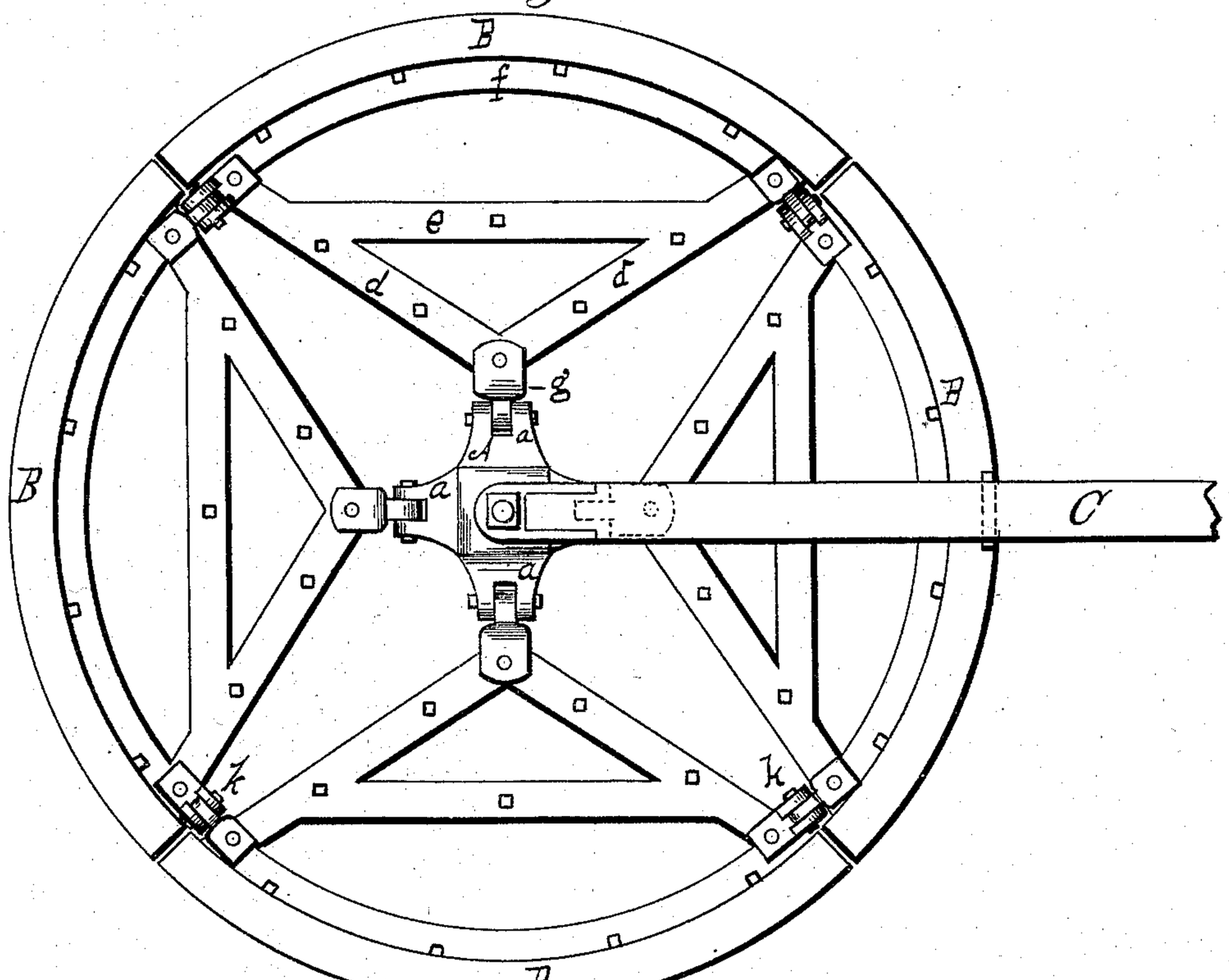


Fig. 2.

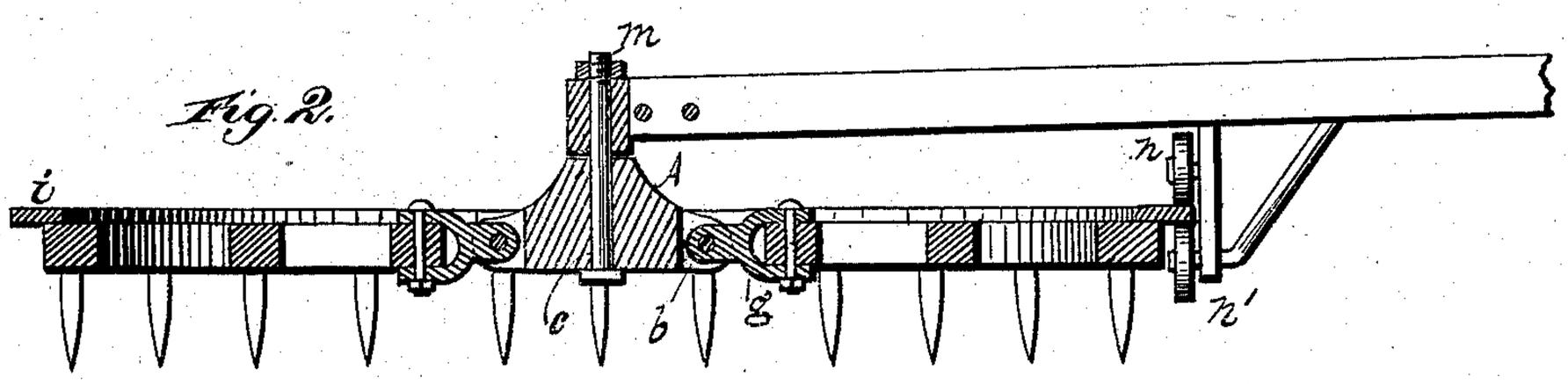
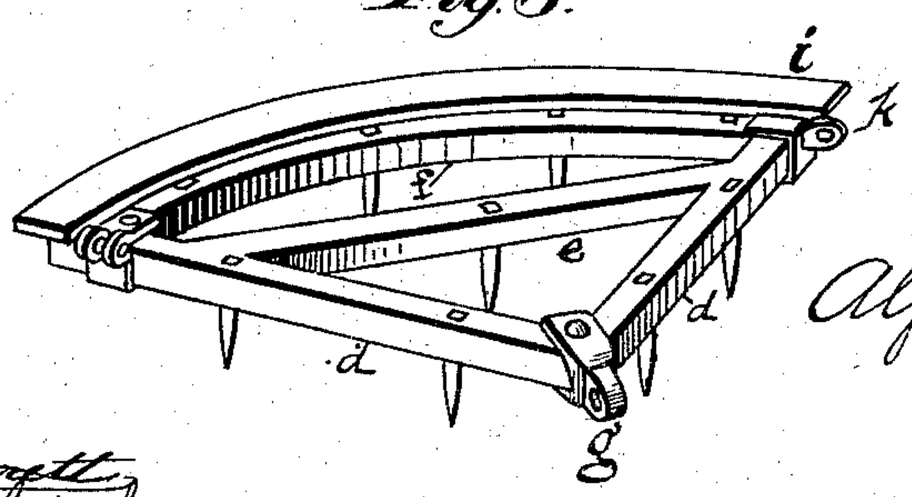


Fig. 3.



Witnesses.
Robert Everett
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By
Atty

UNITED STATES PATENT OFFICE.

ALPHONZO H. DOTY, OF MARSHLAND, WISCONSIN.

ROTARY HARROW.

SPECIFICATION forming part of Letters Patent No. 254,937, dated March 14, 1882.

Application filed July 18, 1881. (No model.)

To all whom it may concern:

Be it known that I, A. H. DOTY, a citizen of the United States of America, residing at Marshland, in the county of Buffalo and State of Wisconsin, 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 letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in that class of farming implements known as "rotary harrows;" and it has for its object to provide a harrow of the kind stated which will adapt itself to any uneven surfaces in its progress during the operation of harrowing.

My invention consists in certain improvements hereinafter shown and described, and specifically set forth in the claims.

In the annexed drawings, Figure 1 shows a plan view of my improved harrow. Fig. 2 is a cross-sectional view, and Fig. 3 is a perspective view of one of the quarter-sections of the harrow.

The letter A represents the central coupling-head, having the extending coupling-arms *a* at right angles to each other, and formed in each arm is a slot, *b*, intended to receive the coupling-iron of the sections. These slots are formed vertically, and in the arms are also holes transversely to the slots to receive coupling pins or bolts.

Centrally located in the coupling-head is the pin or bolt hole *c*, intended to receive the draw-bolt connecting the draw-beam to the harrow.

The letter B represents the sectors of the harrow, consisting of the triangular bars *d*, the cross-brace *e*, and the rim-piece *f*. At the junction of the bars *d* is fixed a clevis, *g*, formed with the projecting ends and pin-hole, by means of which they are coupled to the arms of the central coupling-head. The arc of each section equals one-fourth of the perimeter, or nearly so. On each section are securely fixed the circular pieces or flanges *i*, which project beyond the face of the segments, to which they are fixed, and at or near the junction of the bars *d* with the segments of the rim are attached hinges or links *k*, connecting the four sections together.

The letter C represents the draw-beam, connected and held to the harrow by the draw-bolt *m* in the center of the coupling-head, and provided with the anti-friction rollers *n n'*. These rollers operate on the flange of the rim (see Fig. 2) and admit of the ready movement of the harrow in its rotations. The teeth of the harrow can be arranged and set to suit the desires or convenience of the operator.

The power is attached to the draw-beam by any of the common devices now in use.

It will be observed that by the division of the harrow into quadrantal sections, hinged together at the rims and coupled to the central head, I obtain a flexibility of movement in the independent parts not otherwise obtained, and at the same time lose none of the weight requisite to a proper harrowing of the soil.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a rotary harrow consisting of quadrantal flexibly-connected sections, the combination of a continuous sectional edge and endwise-projecting flanges, a flexibly-connected central head, and a centrally-pivoted draw-beam provided with anti-friction pulleys, substantially as shown and described.

2. The combination of the centrally-pivoted draw-beam C with the central head, A, and flexibly-connected sections B, each provided with the edge and endwise-projecting flange *i*, the said draw-beam being provided with anti-friction pulleys *n n'*, substantially as shown and described.

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

ALPHONZO H. DOTY.

Witnesses:

OLE C. BRANSTAD,

W. R. MAXWELL.