

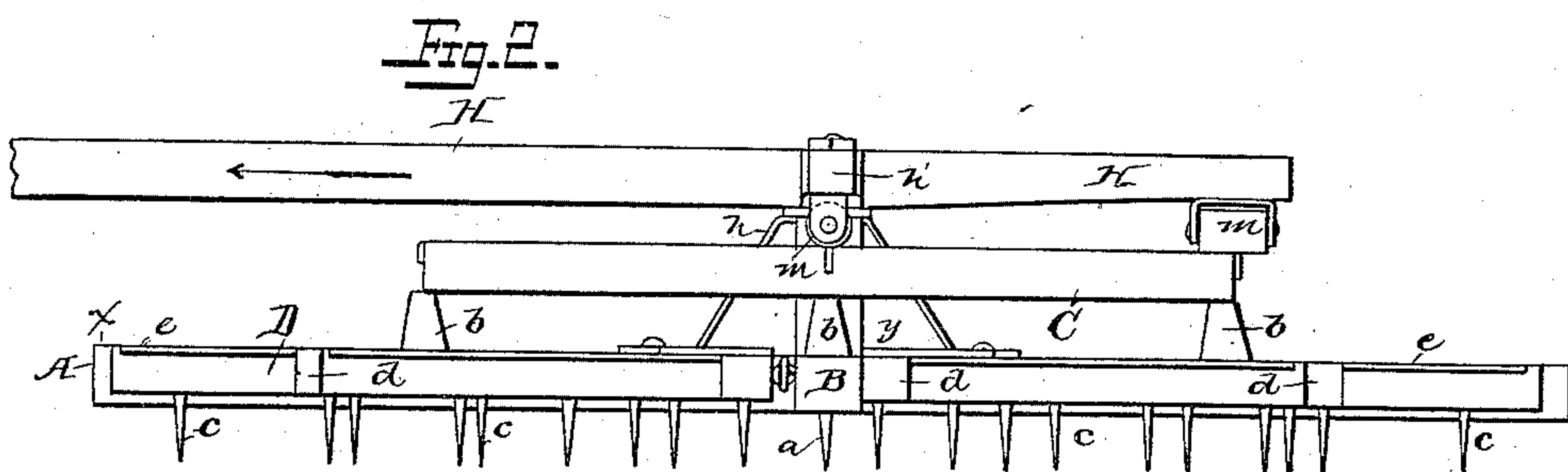
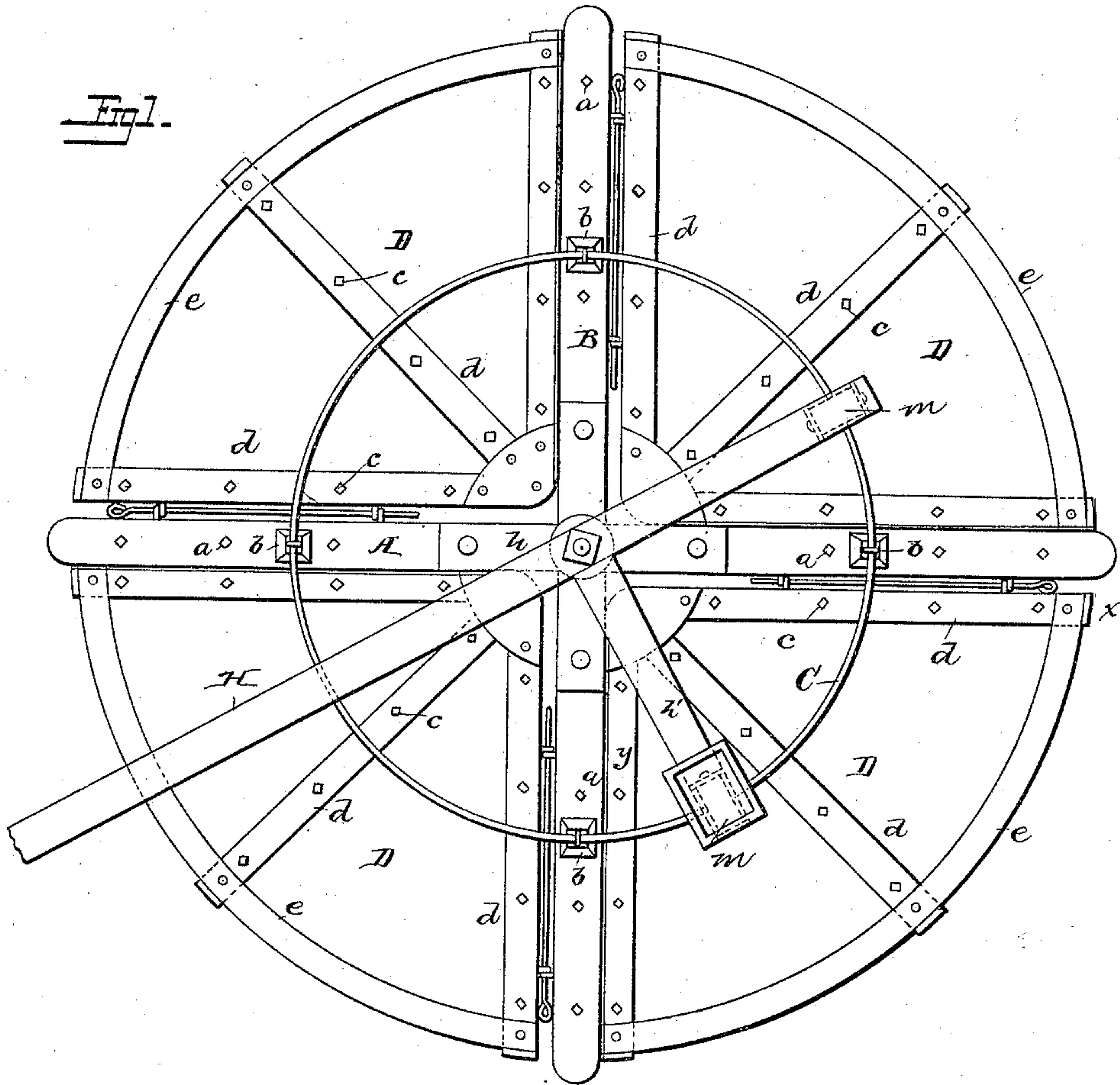
(No Model.)

J. M. PEARSON.

HARROW.

No. 335,617.

Patented Feb. 9, 1886.



Attests:

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att'y

UNITED STATES PATENT OFFICE.

JOHN M. PEARSON, OF NEOGA, ILLINOIS.

HARROW.

SPECIFICATION forming part of Letters Patent No. 335,617, dated February 9, 1886.

Application filed September 15, 1885. Serial No. 177,199. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. PEARSON, a citizen of the United States, residing at Neoga, in the county of Cumberland and State of Illinois, have invented certain new and useful Improvements in Harrows, of which the following is a specification.

My invention is a rotary harrow constructed, as fully set forth hereinafter, so as to operate effectively in breaking up the ground, whether the latter conforms to a plain surface or is irregular or rolling in its character.

In the drawings, Figure 1 is a plan of my improved harrow, and Fig. 2 is a side elevation.

The frame of the harrow consists of two bars, A B, intersecting and arranged at right angles, provided with the usual harrow-teeth, *a*, and supporting upon blocks *b* a ring, C, of metal. To this frame are connected four toothed frames, D, each consisting of three radiating bars, *d d d*, and a curved bar or plate, *e*, the radiating bars being also provided with harrow-teeth *c*. One of the bars *d* of each frame D is connected by hinged connections to one side of one of the bars A B, as shown, the arrangement being such that each frame D is pivoted upon a line at right angles to that upon which the adjacent frame is pivoted. Owing to this arrangement of pivoted frames in connection with the main frame A B, I am enabled to break up the surface of the ground, even when the latter has in it depressions, so as to impart an irregular surface to the same. Thus the main frame A B will remain upon the general surface of the ground, and the teeth *a* will break up the latter, while the frames D will sink or rise to accommodate themselves to any depressions or hillocks, the surfaces of which will be broken up by the teeth *c*.

As the frames D are hinged at right angles to each other, the sinking or rising of one end or portion of one of the frames at, say, the outer portion or end, *x*, Fig. 1, will accommodate the action of the harrow to the surface at this point, while if there should be a depression of the ground in the center of the machine the outer end, *y*, of the following frame will sink, so that the teeth will also act upon this portion of the surface. By this means,

however irregular the surface may be, the teeth of the harrow are brought to act upon all portions of the same.

The draft-pole H is pivoted to a standard or rod, *h*, at the center of the main frame, and the load-beam *h'* extends from the draft-pole at right angles to the same, as usual.

To prevent strain upon the standard *h*, and also to maintain a level arrangement of the harrow, I make use of an annular bearing-ring, C, and provide the beams H *h'* with friction-rollers *m*, which bear upon the edge of said ring, so that any draft upon the pole H in the direction of the arrow, Fig. 2, in consequence of the resistance of the teeth to the forward motion of the harrow, will have no tendency to tilt the beam and bend the standard *h*, while the two bearings or connections—one at the center and the other upon the rings C—tend to hold the harrow in its horizontal position as it is dragged upon the ground.

The blocks *b* hold the ring C in an elevated position, so that the frames D may rise above the main frame, when necessary, without contact with the ring C.

Owing to the pivotal connection between the draft-beam and the main frame of the harrow, it will be apparent that the implement is free to rotate as it is drawn forward.

I claim—

1. The combination, in a rotary harrow, of the main frame, consisting of cross-bars A B, and frames D, each pivoted to one of the cross-bars at right angles to the line upon which the adjacent frame is pivoted, for the purpose set forth.

2. The combination of a rotary harrow consisting of a main frame, and supplemental frames pivoted so as to rise and fall in respect to the main frame, a centrally-pivoted draft-bar, H, and a ring, C, secured to elevated supports and constituting a bearing for the main frame, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN M. PEARSON.

Witnesses:

JOSEPH CLINE,
W. L. BISHOP.