

J. C. CENTER.

Harrow.

No. 77,354.

Patented April 28, 1868.

Fig. 1

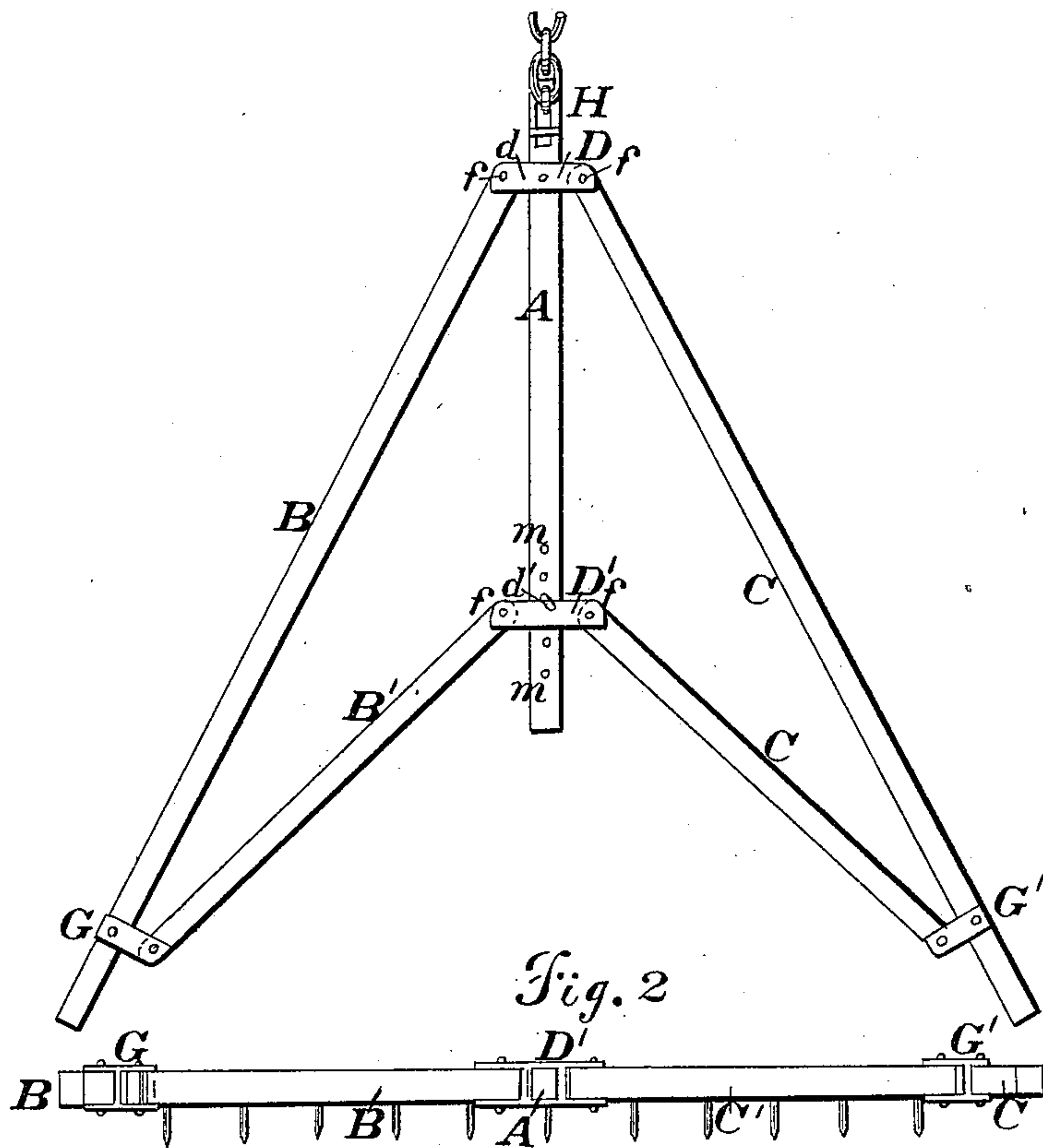


Fig. 2



Fig. 3

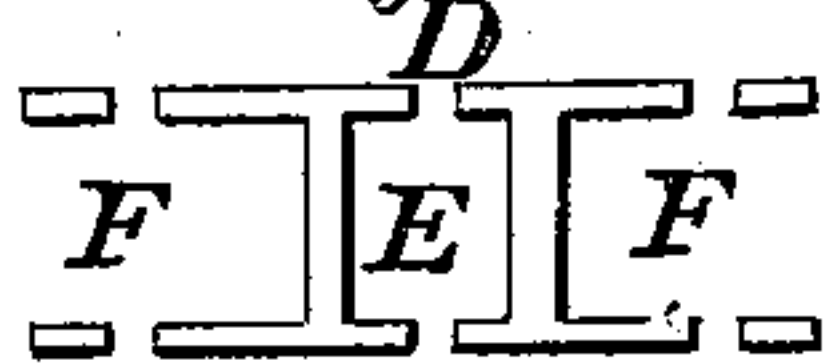
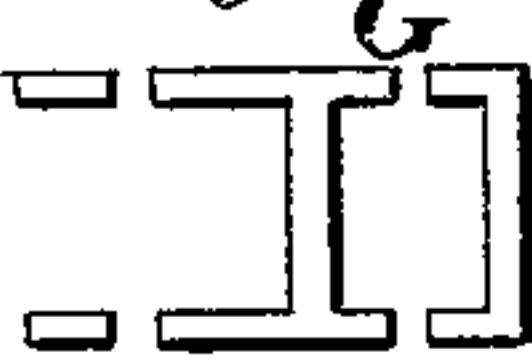


Fig. 4



Witnesses:

P. Hutchins
G. A. Mariner

Inventor:

J. C. Center

J. B. Larcher
His Attorney

United States Patent Office.

J. C. CENTER, OF BATH, ILLINOIS.

Letters Patent No. 77,354, dated April 28, 1868.

IMPROVEMENT IN ADJUSTABLE HARROW.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. C. CENTER, of Bath, in the county of Mason, and State of Illinois, have invented a new and useful "Adjustable Harrow;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is the plan, and

Figure 2 rear side elevation of the harrow.

Figures 3 and 4 are sections of hinges.

Similar letters of reference in the several figures denote similar parts of the machine.

The nature of my invention consists in a draught-beam or beams, to which harrow-frames, each consisting of two arms or beams, are so hinged and so arranged as to form an adjustable harrow. It consists also in the peculiar arrangement of the hinges connecting several parts of the said harrow, as also in the mode of adjusting the said parts.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A is a draught-beam. B B' and C C' are the arms or frame-beams, forming triangles with beam A. D D' are the hinges, connecting beams B B' and C C' with beam A, by means of stationary bolt *d* and a movable bolt, *d'*. Said hinges consist of a square case, E, and two pairs of open flanges, F F, the beam A passing through the case E, and bolted fast to it, while beams B C and B' C' are put in and bolted at their ends to the open flanges F F, so as to freely revolve around the bolts *f f*. Beams B and B', as also C and C', are connected by similar hinges, G G', at their ends, the said hinges consisting also of a square case, with but one pair of flanges, so that B and C pass through the square cases of those hinges, and are bolted fast to them, while beams B' and C' are bolted to the flanges, at their ends, and can revolve around the bolts. The beam A is provided with several holes, *m m*, for the movable bolt *d'*, the change of place of which adjusts the harrow for different widths. Frame-beams B B' and C C' are provided with harrowing-teeth, and the beam A may be provided with a few teeth also. A hook, H, or some other suitable device, is secured to the fore end of the beam A, to hitch the horses.

It is evident, from the above description, that by changing places of the bolt *d'*, along the draught-beam A, the frames of the harrow can be spread out more or less, thus adjusting the harrow to any desirable width.

It is obvious that if desired, there may be two draught-beams used—these beams being hinged to each other—the side beams being attached on one side to one of the draught-beams, and those on the other side to the other draught-beam, and thus permit the side beams to have a vertical movement also, to adapt the harrow to uneven ground, or allow it to enter hollows and pass along on ridges, without raising a portion of the teeth from the ground, the same as is common in ordinary hinged harrows, the adjustment of the wings or side beams being the same as already described.

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

1. The harrow, consisting of one or two draught-beams, A A', and frame-beams B B' and C C', hinged together as described, and arranged and operating substantially as set forth.

2. The hinges D D' and G G', constructed as described, in combination and connection with the parts of the harrow, substantially as herein described and specified.

J. C. CENTER.

Witnesses:

WILLIAM R. BIRCH,

J. H. MITCHELL.