C. W. STROMBECK.

Harrow.

No. 162,205. Patented April 20, 1875.

Fig 1.

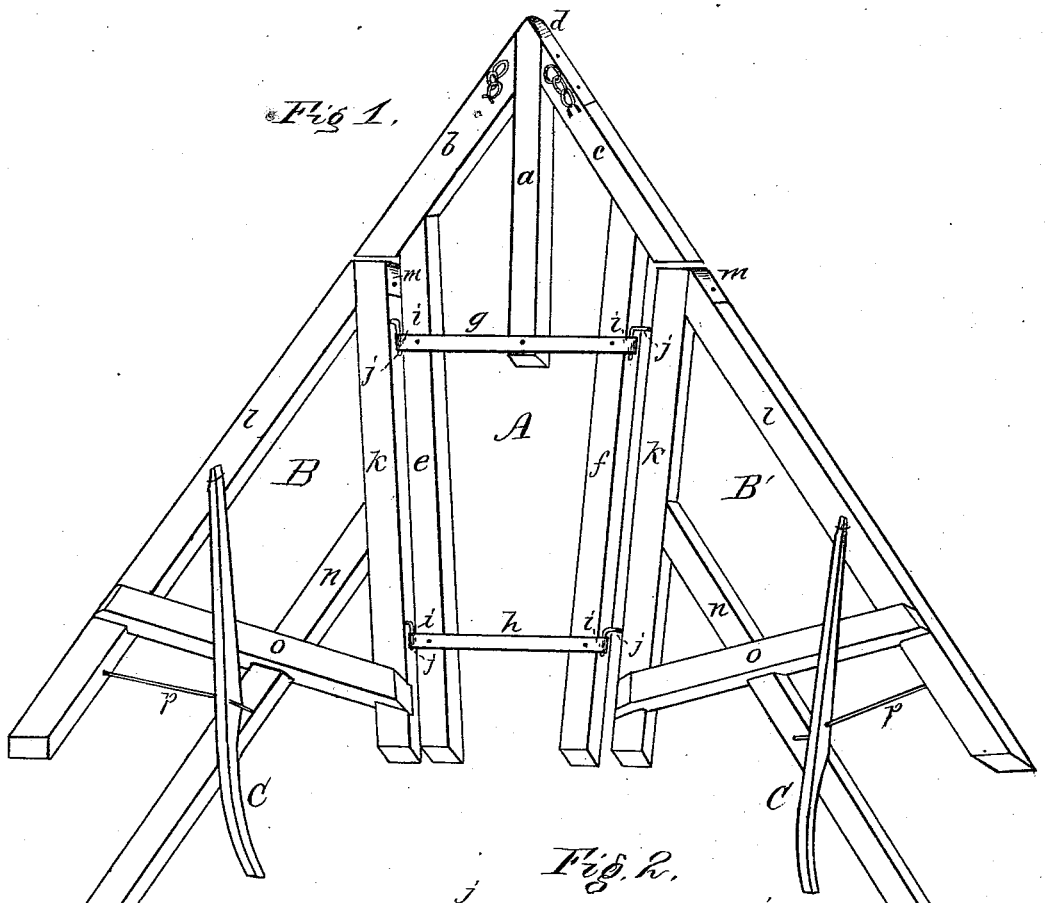
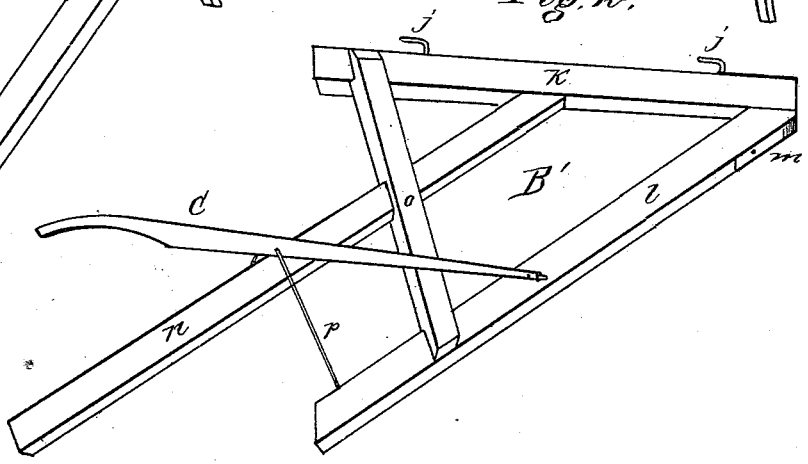


Fig 2.



WITNESSES

Nat E Oliphant

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By

INVENTOR

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UNITED STATES PATENT OFFICE.

CHARLES W. STROMBECK, OF SYRACUSE, INDIANA.

IMPROVEMENT IN HARROWS.

Specification forming part of Letters Patent No. **162,205**, dated April 20, 1875; application filed March 15, 1875.

To all whom it may concern:

Be it known that I, CHARLES W. STROMBECK, of Syracuse, in the county of Kosciusko and State of Indiana, have invented a new and valuable Improvement in Harrows; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a plan view of my improved harrow. Fig. 2 is a detached view of one of the wings.

This invention has relation to harrows; and consists in the manner of locking the hinged wings to the center piece or middle section, as will be hereinafter more fully set forth.

In the drawings, A represents the middle or main section of the harrow, formed of the center beam *a*, to which the angular side pieces *b c* are tenoned, the same meeting at a point with the center beam *a*, around which is securely fastened a metal plate, *d*. Projecting from the side pieces *b c* are two beams, *e f*, the same being braced, and connecting each with the center beam *a* by brace-plate *g*. Another brace-plate, *h*, also connects the two side pieces at their rear ends, as shown in Fig. 1. Upon each end of these brace-plates are formed eyes *i*, into which bolts *j* are inserted, the same being connected to the side pieces *k k'* of the wings B B'.

It will be seen, with this manner of connecting the wings to the main section A, there is no danger of their becoming detached, as the inner ends of the side pieces *b c* prevent any end motion of the wings, and cannot, therefore, be removed from the main section A without first swinging them around in a vertical position, so that the ends or junction of the angular arms *k l* will be free from contact with the ends of the side pieces *b c*. The wings B B' are the same in form and construction, and are composed of two angular side pieces, *k l*, meeting at a point around which is secured a metal strengthening-plate, *m*.

Connected to the side piece *k*, equidistant from its ends, is a long beam, *n*. These pieces *k l* and beam *n* are securely braced by a cross-piece, *o*, mortised into the same. Handles C C', the ends of which are secured to the side pieces *l l'*, project upward, and are braced by suitable rods *p p* to the beam *n* and side piece *l*.

The harrow-sections thus constructed possess great strength and rigidity, also being much lighter draft on the team, and as the weight is not on all parts alike, the teeth will not become dull so soon. Another great advantage presents itself in the manner of hinging the wings to the middle or main section, so that they may be laid over when it is necessary to get around any obstructions, and at the same time, when swung back, are securely locked to the center or middle section by the shoulders thereon.

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

In combination with the center piece or middle section A, presenting shoulders upon the rear ends of the side pieces *b c*, the wings B B', hinged thereto, and converging inwardly from the line of dratt, substantially as and for the purpose set forth.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

CHARLES W. STROMBECK.

Witnesses:

ZACHARIAH HENDRICKSON,

FRANCIS LANDER.