W. C. MOORE.

HARROW.

No. 186,865. Patented Jan. 30, 1877.

Fig 1

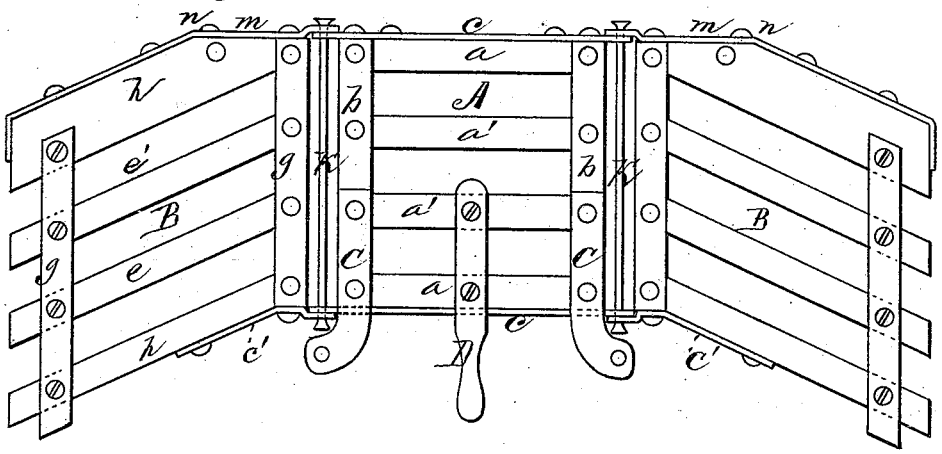
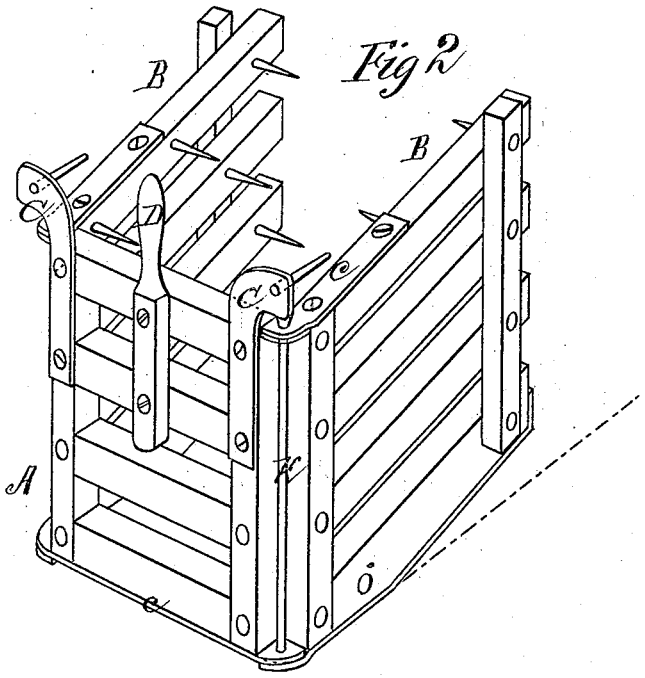


Fig 2



WITNESSES

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WILLIAM C. MOORE, OF CAIRO, PENNSYLVANIA.

IMPROVEMENT IN HARROWS.

Specification forming part of Letters Patent No. **186,865**, dated January 30, 1877; application filed December 2, 1876.

To all whom it may concern:

Be it known that I, WILLIAM C. MOORE, of Cairo, in the county of Union and State of Pennsylvania, 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 drawings is a representation of a plan view of this invention. Fig. 2 is a side view of the harrow turned up, and resting on its runner-wings.

This invention has relation to harrows; and it consists, mainly, in certain improvements upon my harrow patented August 1, 1876, as follows: In the curved irons extending to the rear and bearing the teeth, to cover the deficiency in this respect between the body portion and wings, where the hinges occur, as hereinafter shown and described.

This harrrow is formed in three sections, hinged to each other in any suitable manner, usually by means of bolts and straps, which will allow the lateral sections or wings to swing around at right angles to the middle section or body when the latter is lifted by its rear end into an upright, or nearly upright, position.

The letter A designates the middle or body section. This is rectangular, and consists of the transverse bars *a a'*, tenoned or framed into the side bars *b*. To the front bar *a* is secured a strap or straps, *c*, the same being also secured to the ends of the side bars *b*, which are flush with the forward face of said front bar. To the rear transverse bar is attached a similar strap. B B represent the lateral sections or wings. These consist of longitudinal bars and cross-bars, which extend obliquely outward and to the rear. The oblique cross-bars *e e'* of each wing are framed or tenoned into the inner longitudinal bar *g* thereof, the outer longitudinal bar *h* being usually located above the cross-bars and pinned or bolted thereto. To the rear oblique bars of the wings are attached hinge-straps *c'*, which are connected at their ends to the projecting ends of the hinged straps *c* of the middle section by the hinge-bolt K. The oblique front bars *h* are beveled in front at their inner ends to form runners when turned upright on their front edges, as described in my Letters Patent above referred to, and are shod with straps *m*, forming shoes. These straps are connected at their inner ends with the projecting ends of the strap or straps *c* of the front bar of the middle section by the hinge bolt K. The shoes *m* are bent at *n*, to extend along the beveled portions of the edges of the front bars across the ends of the inner longitudinal bars *g*, which, being framed thereto, are even and flush therewith. In this construction the straps serve to bind the frame together in front in a secure manner, giving it, when turned upright to be run along or off the field on its runner-wings, a strong draft-connection, and at the same time providing, by means of the inner bar *g*, a square support upon the shoe for the forward ends of the transverse bars. To the longitudinal bars of the middle section are attached the curved irons C, which, being extended to the rear and bent outward, as shown, afford arms for working teeth in the line of the hinges between the section where this harrow would otherwise be deficient. Instead of this arrangement the bent tooth-bearing irons may be attached to the lateral sections and turned inwardly.

The rear end of the middle section, being the part lifted in bringing the implement into the running position, may be provided with a handle, D, or lever, to facilitate this operation.

I am aware that it is common to construct the inner ends of the tooth-bars of hinged harrows so that they shall intersect along the hinge-space between the frames, and to provide these intersecting rods with teeth. I do not claim such construction.

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

The rearwardly-extending curved or bent arms C, in combination with a folding harrow adapted to bear teeth in rear of the hinge-space between the sections, substantially as specified.

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

WILLIAM C. MOORE.

Witnesses:

C. W. PAWLING,

H. P. ALLEN.