

WILLIAM J. CORDILL.
Improvement in Harrows.

No. 126,186.

Patented April 30, 1872.

Fig. 1.

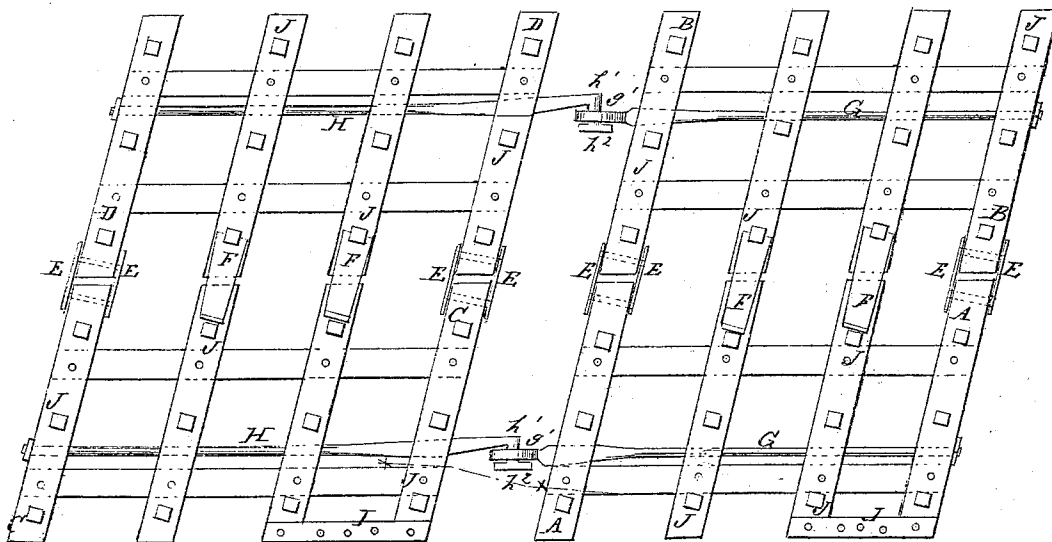


Fig. 2.

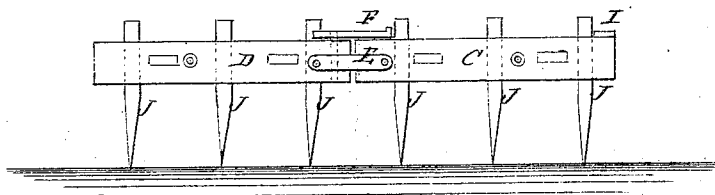
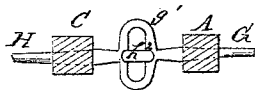


Fig. 3.



Witnesses:

Chas. Nida
Geo. W. Mabee

Inventor:

W. J. Cordill

PER

Munnell
Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM J. CORDILL, OF BLUE EARTH CITY, MINNESOTA.

IMPROVEMENT IN HARROWS.

Specification forming part of Letters Patent No. 126,186, dated April 30, 1872.

Specification describing a new and useful Improvement in Harrows, invented by WILLIAM J. CORDILL, of Blue Earth City, in the county of Faribault and State of Minnesota.

Figure 1 is a top view of my improved harrow. Fig. 2 is a side view of the same. Fig. 3 is a detail section of the same taken through the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved harrow, which shall be simple in construction, convenient in use, and effective in operation, being so constructed as to adapt itself to the surface of uneven ground; and it consists in the construction and combination of the various parts of the harrow, as hereinafter more fully described.

The body or frame of the harrow is made in four parts, A B C D, each of which is formed by rigidly connecting four, more or less, longitudinal bars by means of cross-bars framed to them. The frames A B C D are arranged in pairs, A B and C D, the longitudinal bars of the frame of each pair being placed end to end and connected and hinged to each other by short bars E, the ends of which are pivoted to the opposite sides of the adjacent ends of two or more of said longitudinal bars, as shown in Figs. 1 and 2. F are stop-plates or bars, which are rigidly attached to the upper side of the inner ends of two or more of the longitudinal bars of one frame of each pair of frames so as to overlap the upper side of the inner ends of the longitudinal bars of the other frame of said pair of frames, as shown in Figs. 1 and 2, so as to prevent the adjacent ends of the frames of each pair from sinking down below a certain fixed limit, while allowing their outer ends to drop down to conform to the surface of the ground. The bars or plates F should be made of such a length as to rest against the adjacent

harrow-teeth, as shown in Figs. 1 and 2. The pairs A B and C D of the frames are connected and hinged to each other by the bars or rods G H. The rods G, two or more of which are used, are attached to one pair of frames, as A B, and the rods H, two or more of which are used, are attached to the other pair of frames, as C D. The inner ends of the rods G have vertical cross-heads *g'* formed upon them which are slotted vertically to receive the hooks or pivots *h'* formed upon the inner ends of the rods H. Upon the ends of the pivots *h'* are formed horizontal cross-heads *h''*, which cross the slotted cross-heads *g'* of the rods G and keep the said pivots from working out of their slots.

By this construction the pairs of frames when in working position will be securely connected and hinged to each other, but by turning either of said pairs into a vertical position the cross-heads *h''* of the pivots *h'* may be slipped out of the slots of the cross-heads *g'*, disconnecting the pairs of frames, and allowing either pair to be used as a single harrow, if desired.

To the ends of the longitudinal bars of the forward frame of each pair of frames is attached a bar or plate, I, for the attachment of the draft, several holes being formed in each plate so that the draft may be adjusted to cause the teeth J to track closer together or further apart, as may be desired.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A harrow, formed of one or more pairs of sections, connected by side plates E E and stop-plates F, relatively arranged and applied, as and for the purpose set forth.

WILLIAM J. CORDILL.

Witnesses:

PHILIP McLAUGHLIN,
AZOR P. HESS.