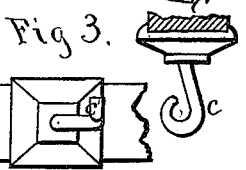
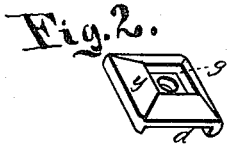
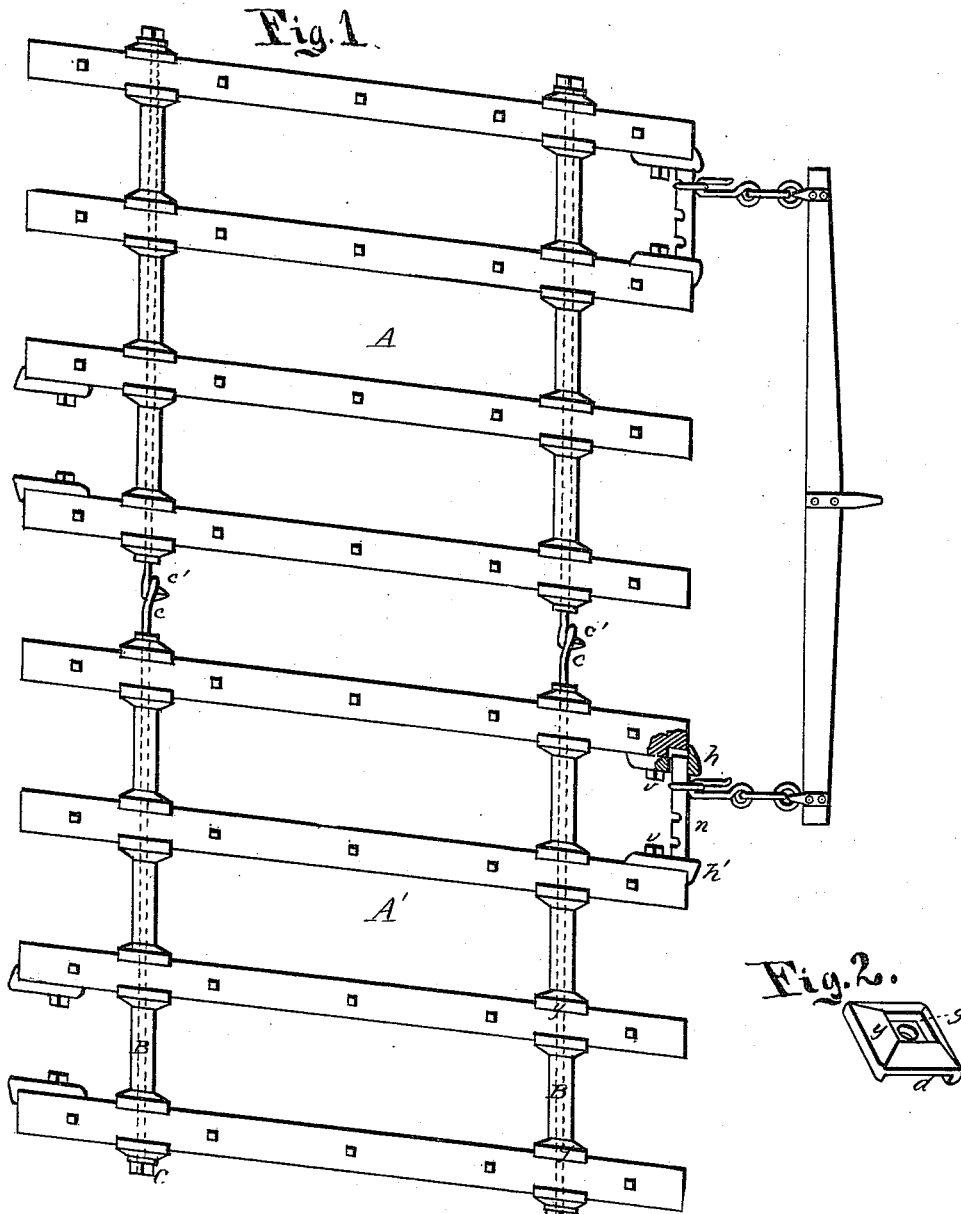


J. CHAMBERLAIN & H. H. SEIPLE.

Harrow.

No. 165,790.

Patented July 20, 1875.



WITNESSES  
*Robert Everett*  
*George C. Uphaus*

INVENTORS  
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ATTORNEYS

# UNITED STATES PATENT OFFICE.

JAMES CHAMBERLAIN AND HENRY H. SEIPLE, OF MELMORE, OHIO.

## IMPROVEMENT IN HARROWS.

Specification forming part of Letters Patent No. **165,790**, dated July 20, 1875; application filed May 1, 1875.

*To all whom it may concern:*

Be it known that we, JAMES CHAMBERLAIN and HENRY H. SEIPLE, both of Melmore, in the county of Seneca and State of Ohio, have invented a new and valuable Improvement in Harrows; and we 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 our harrow, and Figs. 2 and 3 are detail views of the same.

Our invention has relation to harrows; and it consists in novel means for uniting, strengthening, and otherwise improving that class of harrows called double or sectional, as hereinafter described and claimed.

A A' of the drawings represent sections of our double harrow, adapted for use in an acute angle with the line of draft. These sections are united by hooks *c c'*, the latter of which has a crank form and a V-shaped point, as shown, by means of which we are enabled to connect and disconnect the sections at will. The main or teeth-holding bars are separated from each other and held in position by means of the cross-bars B and bolts C, which said bolts are passed through the main bars and longitudinally through the cross-bars. At the various points of junction between the cross-bars and main bars we arrange metallic washers or clamps, which are marked *y* on the drawings, and are illustrated fully in Fig. 2. These washers are usually constructed of cast metal, and are formed with a groove, *d*, to clasp the main beam, and a recess, *g*, to receive the end of the cross-bar. An opening in the center provides for the passage of a bolt, C.

It will be readily perceived that when the draft is applied and the harrow is moved, as it necessarily must be, in a diagonal position,

these washers will become clamps to bind the main bars and the cross-bars together with great rigidity.

Our means for attaching whiffletrees to the harrow are as follows, to wit: In the head of the inner side of the left-hand main bar we cut a small slot or groove, and insert therein a metallic draw-bar, marked *h*. This bar has a transverse slot formed in its side to receive the serrated bar *n*. On the inner side of the adjoining main bar we attach another draw-bar, *h'*, the front end of which extends forward, and is bent over the end of the main bar in the same manner as bar *h*, but it is not inserted in a slot like the bar last mentioned. A transverse slot is also formed in the bar *h'*, to receive one end of the serrated bar *n*. Both of these bars *h* are held in position and made removable by bolts marked *v* on the drawings.

The serrations upon the bar *n* enable us to connect a cross-bar or whiffletree at any desired point, and thereby regulate the position of the harrow with reference to the draft-animals, either to the right or left, at will.

What we claim as new, and desire to secure by Letters Patent, is—

1. In a harrow, the perforated clamps or washers *y*, provided with the recesses *d* and *g* on opposite sides, in combination with the hooked rods C, passing through the longitudinal and cross bars, substantially as described, and for the purpose set forth.

2. The draw-bars *h h'*, in combination with a slotted main bar and the serrated cross-bar *n*, constructed and arranged substantially as specified.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

JAMES CHAMBERLAIN.  
HENRY H. SEIPLE.

Witnesses:

J. J. CROUSE,  
HENRY MELROY.