2 Sheets--Sheet 1.

J. W. PRICE.

Harrow.

No. 167,932. Patented Sept. 21, 1875.

Fig. 1.

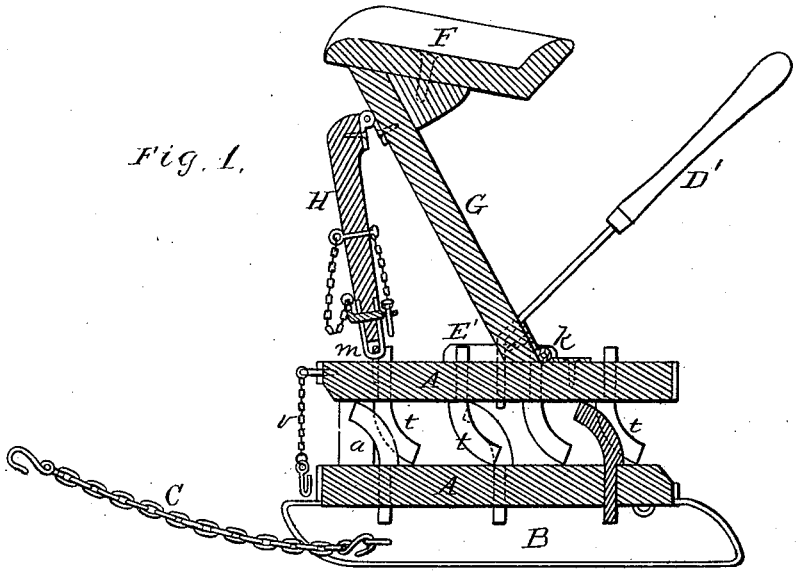
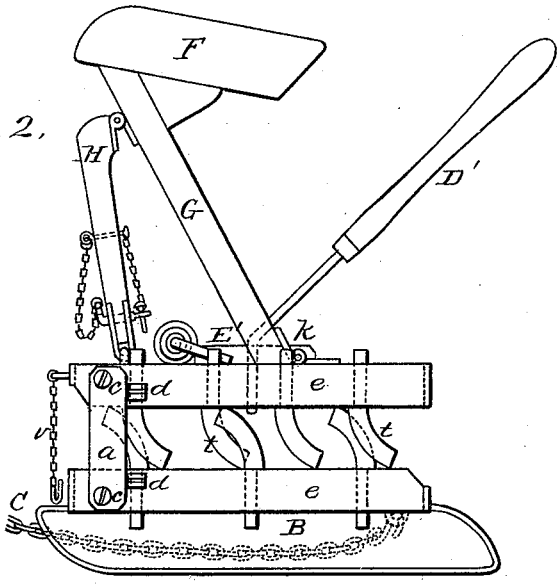


Fig. 2.



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2 Sheets--Sheet 2.

J. W. PRICE.

Harrow.

No. 167,932. Patented Sept. 21, 1875.

Fig. 4.

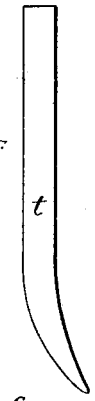
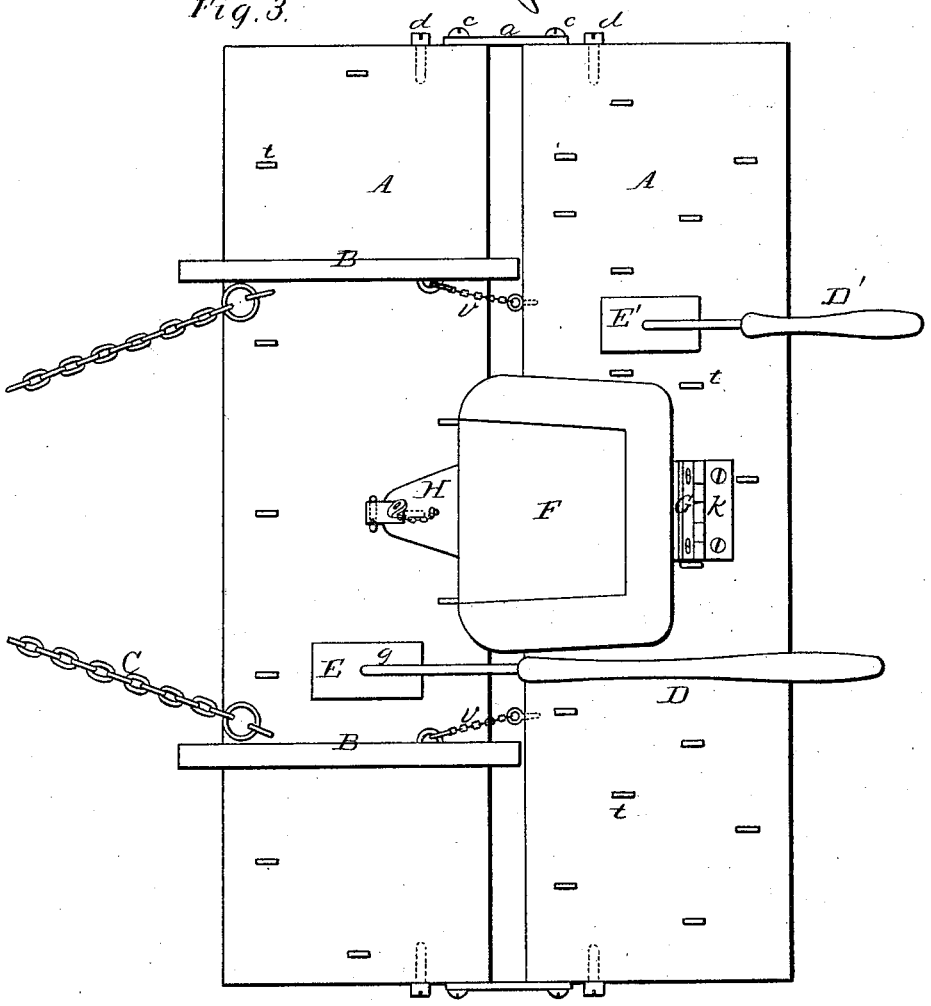


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOSEPH W. PRICE, OF BRYAN, OHIO.

IMPROVEMENT IN HARROWS.

Specification forming part of Letters Patent No. **167,932**, dated September 21, 1875; application filed July 24, 1875.

To all whom it may concern:

Be it known that I, JOSEPH W. PRICE, of Bryan, in the county of Williams and State of Ohio, 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 longitudinal vertical section of my harrow. Fig. 2 is a side view of the same, and Fig. 3 is a plan view thereof. Fig. 4 is a detail view.

This invention has relation to harrows; and it consists in the construction and novel arrangement of the coupling devices, whereby the two sections are connected and the seat-standards folded, as hereinafter fully shown and described.

In the accompanying drawings the letters A A indicate the two sections of the harrow, consisting of two heavy planks, arranged one in rear of the other, and separated by an interval, *b*, about equal to the depth of the teeth. The sections are arranged transversely, and are connected at their ends by the bars or plates *a*, which are pivoted to the sections by screws *c* in such a manner as to hold the bars closely against the ends of the sections, but not so tightly as to prevent the pivotal movement. In this manner are formed hinges, whereby the sections may be folded together with the teeth inside. *d d* indicate lugs or stops, whereby, when the sections are folded, the bars *a* are kept vertical, and said sections directly one over the other. The connection of the bars *a* is still further strengthened by the end caps or plates *e*, which also serve to prevent the ends of the sections from splitting. B B indicate runners, which extend, at a suitable distance apart, across the front section or plank in the direction of the draft, and are firmly secured thereto by means of bolts or otherwise. The front ends of the runners are rounded up in the ordinary manner of sled-runners, so as to raise the harrow-front over clods or rough ground, and the rear ends of the runners, which are on the upper surface of the plank, are rounded down in a similar manner, so that when this section is turned upside down, with the other section on top of it, the entire weight will be borne upon these runners, which thus offer means of ready transportation from place to place. C designates the draft-chain, which is secured to the front section. D indicates a lever, the end *g* of which is somewhat bent, as shown in the drawings. This lever is designed to be stepped in a bearing or bushed block, E, which is secured to the front section, at one side of the seat, and to extend backward, so that the operator, walking behind and bearing down, can raise the front part of the front section, and by raising the rear end of the lever the front edge of the front section will be inclined downward, the rear edge being tipped up. D′ represents a short lever, which is stepped in a bearing, E′, in the rear section, and serves to tip or incline the same in a manner similar to that above described with relation to the front section. This tipping motion will generally relieve the teeth from trash or rubbish that would otherwise cause them to clog; but if it fails, the front section may be, by means of its lever, turned backward against the rear section and cleaned at leisure. So, also, the rear section may be tipped upward and forward until it leans against the front section, when it can be readily cleaned. It is seldom, however, that this is necessary. The teeth *t* are made of steel and curved to the rear, the edge which is convex being in front; therefore, the teeth strike the ground like runners, and, being sharp in front, cut their way through clods, soil, and other obstructions in a very effective manner.

More teeth are provided in the rear than in the front section, and the arrangement is such that no two teeth cut in the same line, and the teeth being about twice as near together in the rear section as they are in the front section, the clods become more subdivided as the harrow passes from front to rear over them. F designates the seat, from which its rear standard G extends backward and downward, and is hinged to the rear section at about its middle portion, as indicated at *k*. H is a

front prop, which is hinged to the seat-standard G, and, inclining forward, is secured by a staple and strap, or otherwise, to the front section. In order that the front prop may be suitably secured when detached from the front section in folding, a staple or fastening, *m*, is also secured to the rear section, in front of the standard G. Short connecting-chains *v v* serve to hold the rear section level with the front, when desired.

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

1. The combination, with a folding harrow consisting of two transverse sections, of a folding seat, substantially as specified.

2. The folding harrow-seat, having the hinged standard G and front prop H hinged to said standard, substantially as specified.

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

Witnesses: JOS. W. PRICE.

A. BRANNAN,

WILLIAM STAUGH.