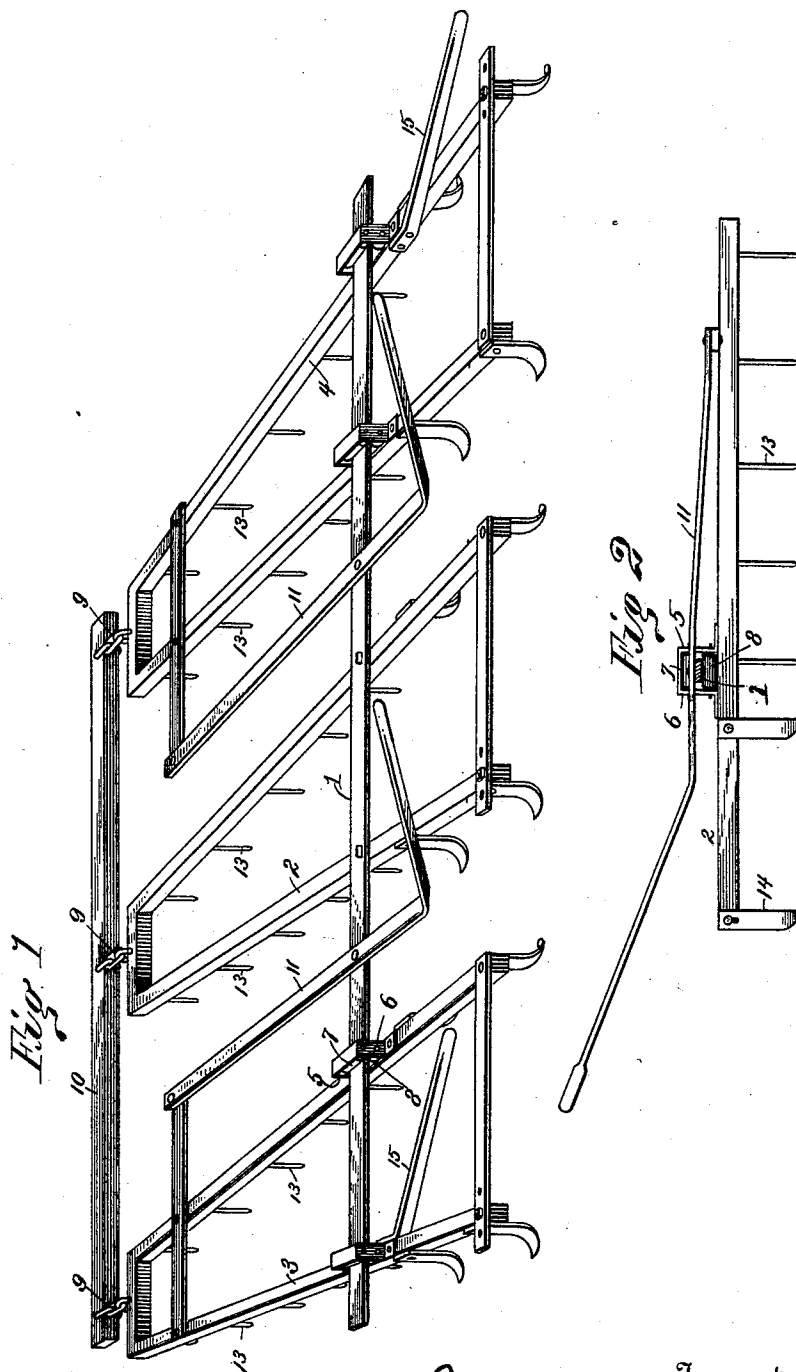


(No Model.)

J. E. BEACH.
HARROW FOR LISTED CORN.

No. 508,398.

Patented Nov. 14, 1893.



Witnesses
C. C. Burdine
H. Hume Clendenen

Inventor
John E. Beach
per *Dupont & Dupont*
Attorneys.

UNITED STATES PATENT OFFICE.

JOHN E. BEACH, OF STAFFORD, KANSAS.

HARROW FOR LISTED CORN.

SPECIFICATION forming part of Letters Patent No. 508,398, dated November 14, 1893.

Application filed November 30, 1892. Serial No. 453,569. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. BEACH, a citizen of the United States, residing at Stafford, in the county of Stafford and State of Kansas, have invented certain new and useful Improvements in Harrows; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to that particular class of harrows used for listed corn, and in which the parts are so arranged that they may be adjusted to the various widths of the spaces between the rows.

Heretofore harrows have been constructed and used in which one section could be adjusted in relation to its adjacent parts, but the same had to be adjusted to the space between the rows before starting thereon. It is often the case that the rows are not perfectly straight and true in relation to each other, and with this old form of harrow it is necessary to stop and adjust the parts to suit the exigencies of the occasion. This has been a great inconvenience and loss of valuable time, and it is the object of my invention to provide the sections of the harrow with suitable means whereby the parts can be adjusted to the various inaccuracies in the rows without stopping the forward movement of the harrow.

With the above objects in view my invention consists in the particular construction and arrangement of the various parts as shown in the accompanying drawings and fully described hereinafter and pointed out in the claims.

In the accompanying drawings which illustrate my invention: Figure 1 represents a perspective view of my complete harrow; Fig. 2 a side view of one of the harrow sections, showing the central supporting beam and also the roller bearings, whereby the movements of the section on the central supporting beam is facilitated.

On the drawings the reference figure 1 represents the central supporting beam, and this beam is fixed to a main or rigid harrow-frame

2, having its ends raised so as to straddle a row of unlisted corn.

Upon each of the outer ends of the central beam and supported thereby, is a secondary harrow-frame 3 and 4, and these frames are of similar construction as the frame 2. All of the frames are provided at their forward ends with links which are arranged to be connected to a pivoted link secured to a cross-bar 10. To this bar a single- or whiffle-tree may be secured, and power thus applied to the harrow.

Secured by a pivot on the central bar between the outer edges of the central harrow-frame and the adjacent harrow-frames, is a pair of guide-levers 15, their rear ends extending backward and upward for the convenience of the operator. Their forward ends extend nearly to the front ends of the frames, and are connected to the secondary harrow-frames by means of a link extending at right angles and secured on their upper surfaces. The said bar is pivoted to the end of the guide-lever in order to allow a limited movement thereof. Thus the harrow as a whole is guided and steadied by the operator in a manner similar to the way a plow is operated.

At a point back of their center, the secondary harrow-frames are provided with a pair of vertical plates 5 and 6 forming a box or bearing for the rollers 7 and 8 which are journaled therein. Between these rollers 7 and 8 the central supporting beam 1 is arranged to pass, and as the beam is rigidly secured to the central or main harrow-frame, the secondary frames can be moved at will either toward or from the central or main frame in order to accommodate the harrow to any inaccuracies in the row. To further facilitate such movement, I provided the secondary frames with rearwardly and upwardly extending operating handles 15, by means of which the frames can be adjusted while the harrow is moving forward, thus overcoming the necessity of stopping and adjusting the harrows.

The frames are provided with the usual downwardly projecting teeth 13, and with the plow blades or mold-shaped teeth at their rear sides.

Having thus described my invention, what I claim is—

1. The combination in a triple harrow for

listed corn, of a central or main harrow-frame, a cross-beam rigidly secured thereto and having its ends extending beyond the sides of the main frame, secondary harrow-frames
5 mounted on the two ends of the beam and adjustable thereon, and rearwardly and upwardly extending operating handles secured to the secondary harrow-frames whereby the frames may be adjusted to or from the main frame
10 while the harrow is in operation, substantially as described.

2. The combination in a triple harrow for listed corn, of a central or main harrow-frame, a cross-beam rigidly secured thereto and having its ends extending beyond the sides of the harrow-frame, secondary harrow-frames
15 mounted on the two ends of the beam and adjustable thereon, roller bearings on the secondary frames through which the beam passes, and adjusting handles secured to the secondary frames whereby the same may be adjusted toward or from the main frame while the harrow is in operation, substantially as described.

25 3. In a triple harrow for listed corn, the combination with the main or central harrow-frame, of a cross-beam secured thereto and having its ends extending beyond the sides

of the main frame, secondary harrow-frames mounted and adjustable on the ends of the beam, roller bearings on the frames through which the beam passes, guide-levers pivoted on the cross-beam and having their forward ends secured to the front ends of the secondary harrow-frames by a pivoted arm extending at right angles thereto and secured to the said frames, and adjusting handles secured to the secondary harrow-frames whereby the latter may be adjusted toward or from the main harrow while in operation, substantially as described.

4. The combination in a harrow, of a main or central harrow-frame, a cross-beam fixed thereto, secondary harrow frames supported by the ends of the beam, and operating handles fixed to the secondary frames to facilitate the adjustment of the frames toward or from the main frame, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN E. BEACH.

Witnesses:

JOHN SIMS,

WILLIAM R. KITLEN.