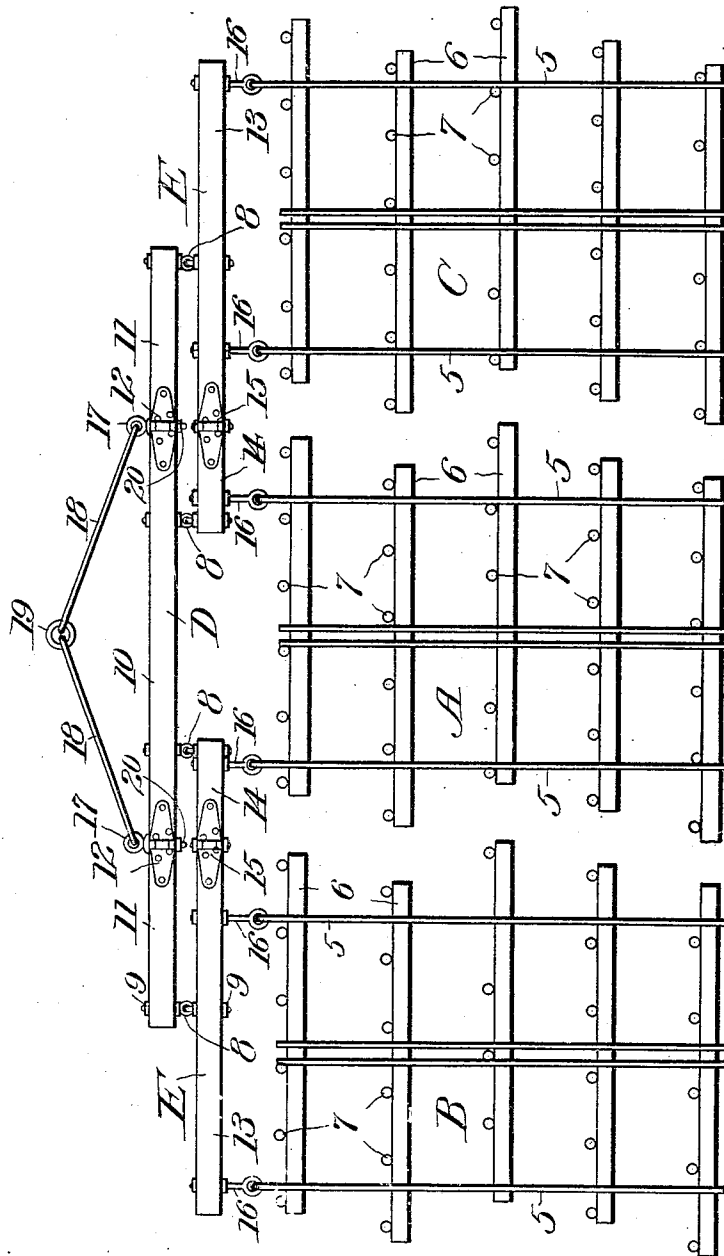


941,104.

J. E. SCOTT.
HARROW EVENER.
APPLICATION FILED MAY 5, 1909.

Patented Nov. 23, 1909.
2 SHEETS—SHEET 1.

Fig. 1.



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941,104.

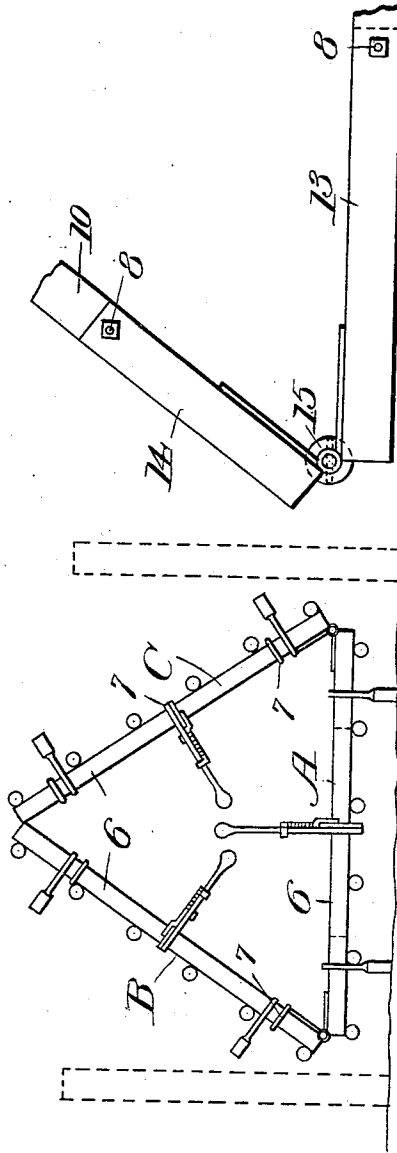
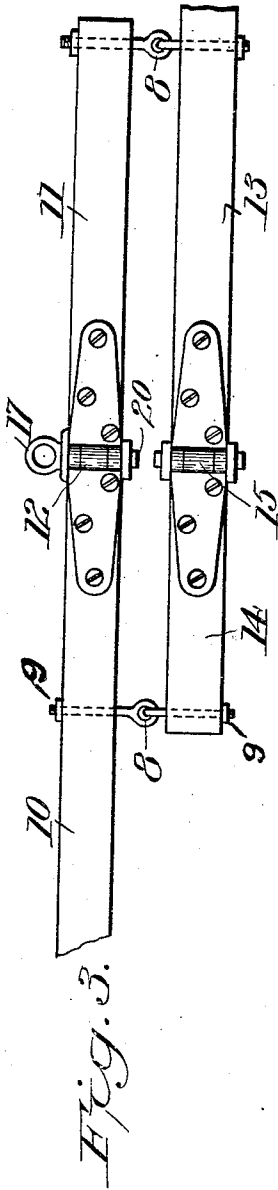


Fig. 2

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UNITED STATES PATENT OFFICE.

JOHN EWING SCOTT, OF HILLSDALE, ILLINOIS.

HARROW-EVENER.

941,104.

Specification of Letters Patent.

Patented Nov. 23, 1909.

Application filed May 5, 1909. Serial No. 494,129.

To all whom it may concern:

Be it known that I, JOHN EWING SCOTT, a citizen of the United States, residing at Hillsdale, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Harrow-Eveners, of which the following is a specification.

This invention relates to harrows, and it has particular reference to an improved evenor or draft equalizing device adapted to be used in connection with a harrow that is composed of a plurality of sections for the purpose of enabling the harrow, including the evenor or equalizer to be folded for the purpose of enabling the device to pass readily through an opening, such as a gateway, which is of a width less than that of the harrow when the latter is extended to its full capacity.

Other objects of the invention are to simplify and improve the construction and operation of this class of devices.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawing has been illustrated a simple and preferred form of the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawing—Figure 1 is a plan view of a harrow constructed in accordance with the invention. Fig. 2 is a view of the harrow folded for passing through a gate. Fig. 3 is a detail plan view of the draw-bar and adjacent parts, the view being in elevation. Fig. 4 is a detail elevation of the draw-bar, showing the parts folded.

Corresponding parts of the several figures are denoted by like characters of reference.

For the purpose of illustration there has been shown in the drawings a harrow composed of three sections, viz: a central or middle section A, and two outer or side sections B and C. These harrow sections may be of any suitable well-known and approved construction and they have been shown as being composed of frames including longitudinal frame-bars 5 and cross-bars 6, said

frames being equipped with suitably constructed earth-engaging teeth 7.

The evenor is composed of a draw-bar D and two hitching-bars E, E, which latter are connected with the rear side of the draw-bar by flexible connections consisting of pairs of eye-bolts 8, 8, which are linked together as shown, the shanks of said eye-bolts being fitted in suitable apertures in the members of the evenors where they are secured by means of nuts 9.

The draw-bar D, comprises a central section 10, and two end sections 11, which are securely connected with the ends of the central or intermediate section 10 by means of hinges 12. Each of the hitching bars E is composed of a relatively long outer section 13, and a relatively short inner section 14, which are connected together by means of hinges 15; the inner sections 14 are connected with the central or intermediate section 10 of the draw-bar, near the ends of said central section, by the flexible connections including the eye-bolts 8, 8; in like manner, that is to say by flexible connections composed of eye-bolts 8, 8, the outer sections 13 of the hitching-bars are connected with the outer sections 11, of the draw-bar near the outer ends of said outer sections; the arrangement being such that the hinges connecting the sections 11 with the section 10 of the draw-bar D, shall be in alinement with the hinges connecting the sections 13 with the sections 14, of the hitching bars E.

The outer harrow sections B and C, are flexibly connected with the outer members 13 of the hitching bars E, by means of eye-bolts 16 or in any other suitable and convenient and well-known manner; one harrow section being attached to or connected with each of the members 13; the central harrow section A, is in like manner connected with the inner sections or members 14 of the two hitching bars E, E. In this manner a harrow-body will be formed possessing great flexibility and capability of adjusting itself to rough and uneven ground. The end members 11 of the draw-bar D, are provided adjacent to their inner ends where the hinges 12 are located with eyes or staples 17, which are connected by link rods 18, with a link or clevis 19, to which the draft may be attached; the eyes 17 with which the link rods are connected may appropriately be formed upon the forward ends of the pintles 20, which serve to connect the leaves that

combine with said pintles to constitute the hinges 12.

From the foregoing description taken in connection with the drawings hereto annexed, the operation and advantages of this invention will be readily understood by those skilled in the art to which it appertains. It will be readily seen that one or both of the outer harrow-sections B and C may be folded or raised to a position above the central section A, thus greatly reducing the width of the harrow and enabling it to pass through a gateway not greatly exceeding in width the width of a single harrow-section. It is obvious that the improved construction of the evener enables the latter to be folded with the harrow sections, as clearly indicated in the drawings. When the harrow sections are extended for operation the evener will operate efficiently to equalize the draft upon the several sections, and the hinges or joints in the evener will enable the latter to flex and yield when the harrow is passing over rough, hilly and uneven ground, thus furnishing a harrow which will be particularly adapted to operate upon rough and hilly soil.

Having thus described the invention, what is claimed is:

1. A draft-bar comprising a central section and two end members hingedly connected therewith; a pair of hitching bars each composed of two hingedly connected members, one of which is flexibly connected with an end-member of the draft-bar, and the two

remaining sections being flexibly connected with the central member of the draft-bar; a harrow section connected flexibly with the two hitching-bar sections that are connected with the central section of the draft-bar; and harrow sections flexibly connected with the hitching bar sections that are connected with the end-members of the draft-bar.

2. In a sectional harrow, an evener comprising a draft-bar composed of a central section and two end-members hingedly connected therewith; a pair of hitching bars each composed of an inner member and an outer member hingedly connected therewith, the inner members of the hitching bars being flexibly connected with the central member of the draft-bar and the outer members of the hitching bars being flexibly connected with the end members of the draft-bar; a harrow section flexibly connected with the inner members of the hitching bars, and harrow sections connected, one with each outer member of the hitching bars; the hinges in the hitching bars being disposed in longitudinal alinement with the hinges in the draft-bar, and the pintles of the latter hinges being provided with eyes at their forward ends.

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

JOHN EWING SCOTT.

Witnesses:

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ROY C. PALMER.