C. EDWARDS & H. H. JUNKIN.

FLEXIBLE DRAW BAR FOR TRACTION ENGINES.

APPLICATION FILED MAR. 10, 1913.

1,080,429.

Patented Dec. 2, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

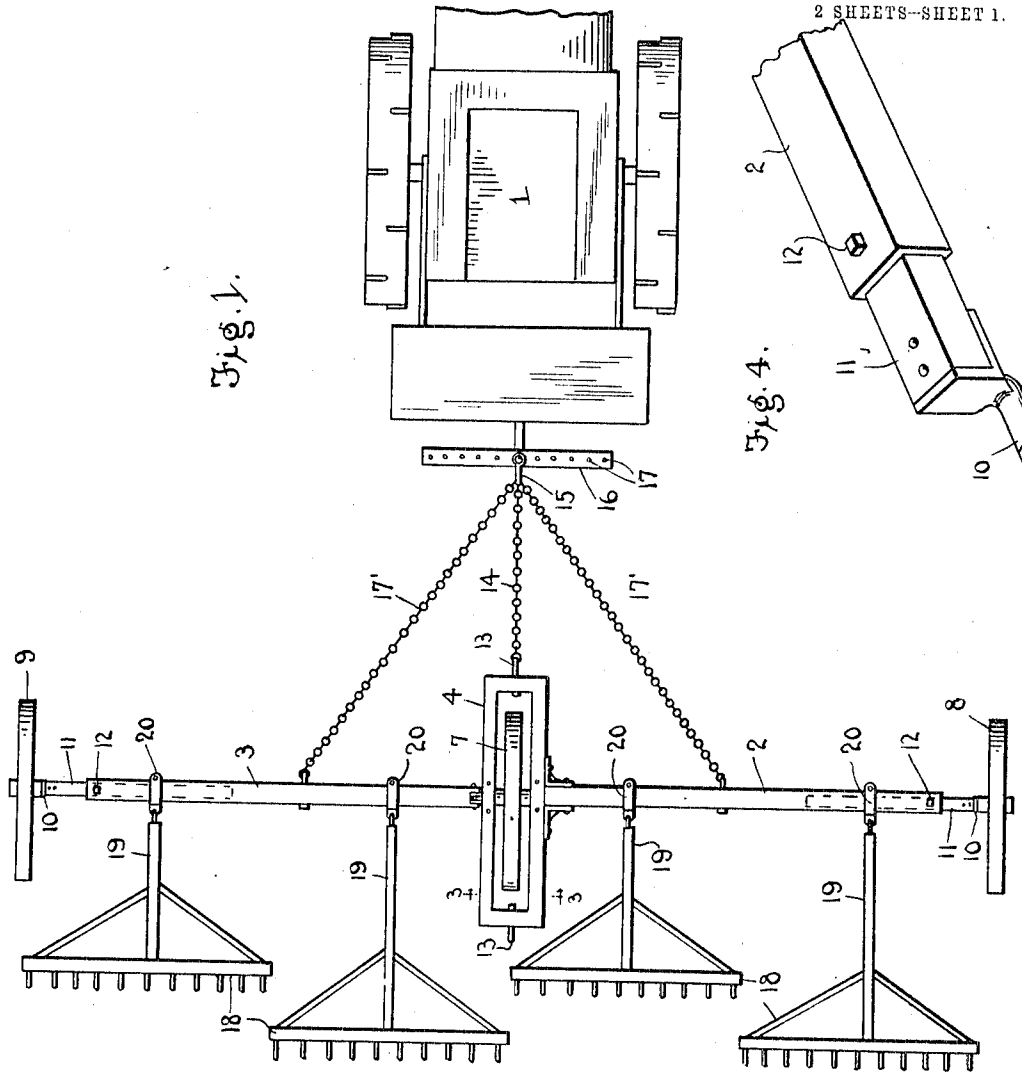


Fig. 4.

Fig. 3.

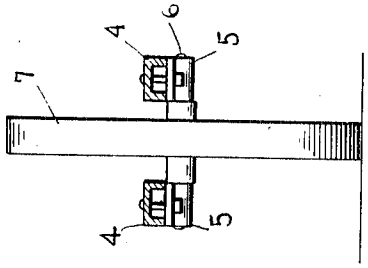
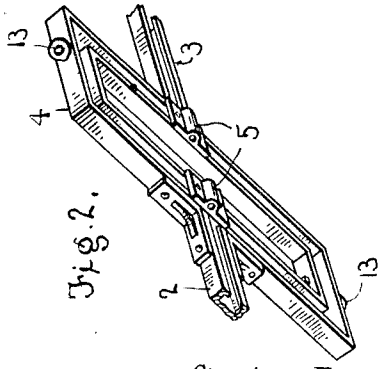


Fig. 2.



Witnesses

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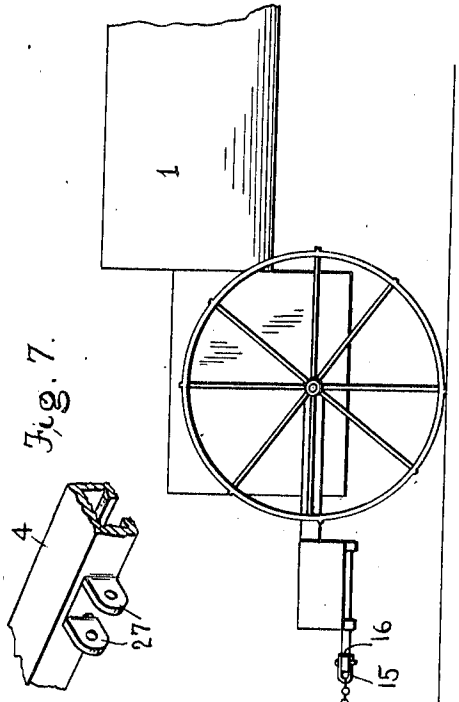


Fig. 7.

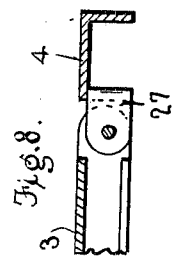


Fig. 8.

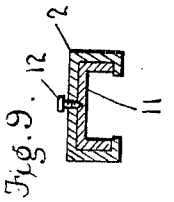


Fig. 9.

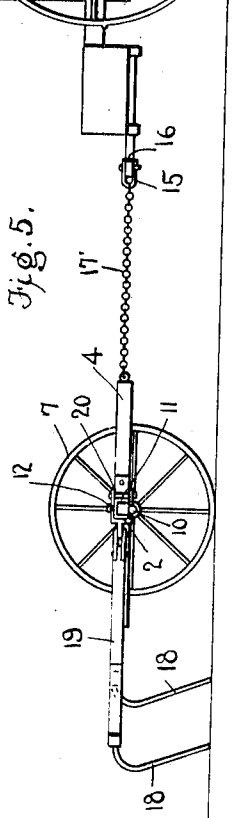


Fig. 5.

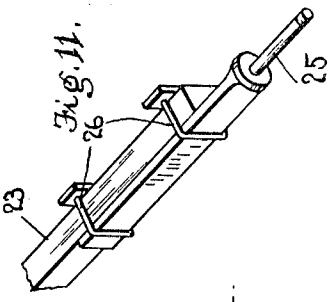


Fig. 11.

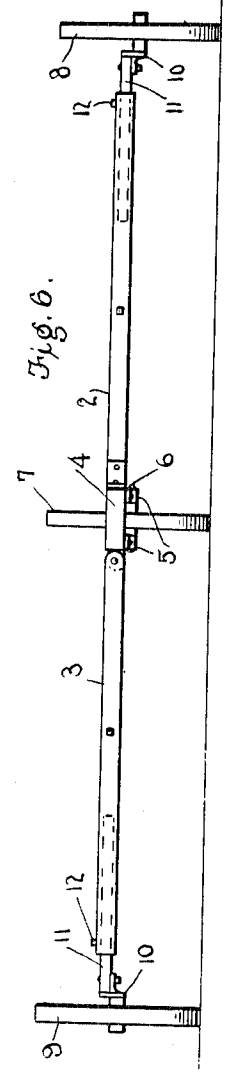


Fig. 6.

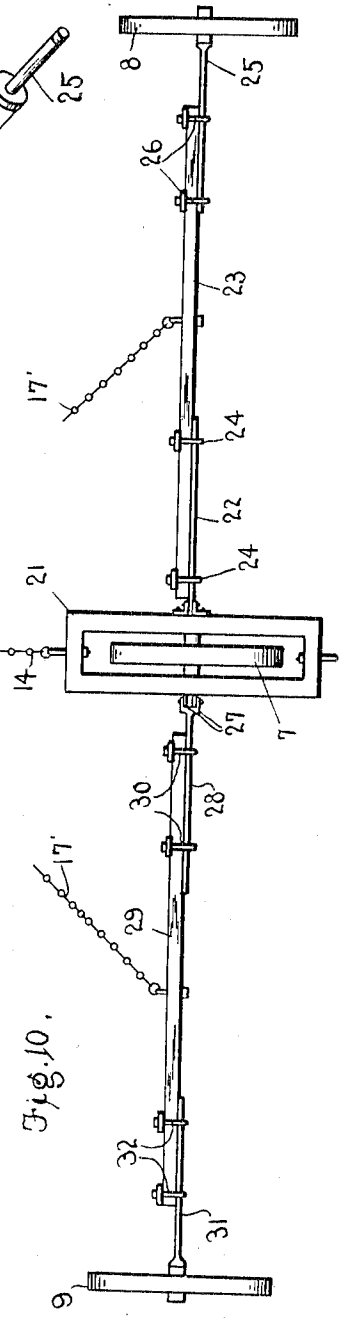


Fig. 10.

Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES EDWARDS AND HENRY H. JUNKIN, OF DRAYTON, NORTH DAKOTA.

FLEXIBLE DRAW-BAR FOR TRACTION-ENGINES.

1,080,429. Specification of Letters Patent. Patented Dec. 2, 1913.

Application filed March 10, 1913. Serial No. 753,375.

To all whom it may concern:

Be it known that we, CHARLES EDWARDS and HENRY H. JUNKIN, citizens of the United States, residing at Drayton, in the county of Pembina and State of North Dakota, have invented certain new and useful Improvements in Flexible Draw-Bars for Traction-Engines; and we 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.

This invention relates to farming machinery and consists essentially in an attachment or drag which is adapted to be removably, adjustably and flexibly attached to a traction engine or other draft appliances.

The principal object of the invention is in the provision of a device of the character described which is composed of two alining sections supported upon wheels, one section of which is hinged or otherwise movably connected to a central yoke or frame to permit the same to automatically adjust itself vertically, said yoke and sections being flexibly attached to the traction engine or draft appliance, whereby the land operating devices carried by and movably attached to the bars of the sections are adapted to adjust themselves over uneven ground.

A further object of the invention is in the provision of means for adjusting the outer wheels of the device, whereby the length of the same can be properly adjusted in respect to the land operating implements.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and claimed.

In the accompanying drawings: Figure 1 is a top plan view of the complete invention showing the same attached to a traction engine the latter being broken away; Fig. 2 is a perspective view of the lower side of the central frame of the device with the wheel detached therefrom; Fig. 3 is a transverse section of the central frame taken on the line 3—3 of Fig. 1; Fig. 4 is a detail perspective view of one end of the bars of the device showing the stub axles for the wheel attached thereto; Fig. 5 is a side elevation of the complete machine with the outer wheel removed therefrom; Fig. 6 is a rear elevation of the complete device with the land operating implements removed therefrom; Fig. 7 is a detail perspective view showing a section of the central frame to which the movable bar of the device is attached; Fig. 8 is a transverse section of the central frame showing a portion of the movable bar and the manner in which the same is attached to the frame; Fig. 9 is a transverse section of one of the bars and a portion of the stub axle located therein showing the means whereby the latter is properly adjusted; Fig. 10 is a top plan view of a modification of the invention; Fig. 11 is a perspective view showing the stub axle secured to one end of the bars with reference to Fig. 10.

In the illustrative embodiment of the invention, 1 represents a traction engine of conventional design to which the invention is adapted to be conveniently, detachably and adjustably secured, although any other form of draft mechanism may be employed in carrying out the invention.

The invention primarily consists of a drag in the form of two longitudinal bars 2 and 3 connected by a centrally disposed rectangular shaped yoke or frame 4, the latter being provided with bearings 5 within which is mounted a shaft 6 carrying a wheel 7.

Projecting at right angles from one side of the yoke or frame 4 and rigidly secured thereto is a bar 2 to the outer end of which is adjustably secured a wheel 8 as clearly shown. To the opposite side of the yoke or frame 4 and hingedly attached thereto is the bar 3 which is in alinement with the bar 2 and to the outer end of said bar 3 is adjustably secured a wheel 9.

The bars 2 and 3 of the device are U-shaped in cross section as clearly shown in the drawings to render strength and lightness to the same and further for the purposes now to be described.

The stub axles 10 upon which the wheels 8 and 9 are mounted are provided with extensions 11 which are slidably located within the outer ends of the bars 2 and 3, said extensions being held in an adjusted position in respect to the bars by binding screws 12 whereby the wheels can be properly secured to the ends of the bars.

The frame or yoke 4 is preferably constructed of metal and is U-shaped in cross section and to the opposite ends of the same are secured eyes 13 whereby one end of the chain 14 may be attached thereto, the opposite end of said chain being secured to a

clevis 15 which is adapted to be adjustably secured along a bar 16 provided with a series of openings 17 said bar being rigidly attached to the rear end of the traction engine. Also attached to the clevis 15 are the ends of two chains 17' which lead to and are secured to the bars 2 and 3, whereby the entire device is flexibly attached to said engine. By the employment of the two eyes 13 secured to the opposite ends of the frame or yoke 4, the device may be reversed when desired and likewise attached to the traction engine.

Adjustably secured along the length of the bars 2 and 3 are a plurality of land operating devices 18 which in the present form are shown as rakes for contact with the ground but it is evident that any suitable land operating device or machine may be substituted therein such as disks, drills, harrows or other cultivators or a combination of the same. The land operating devices 18 are hingedly secured to the bars 2 and 3 by extensions 19 and are adjustable upon the same by the employment of clips 20.

In Figs. 10 and 11 a modification of the invention is shown which carries out the same principle of the invention but is somewhat differently constructed, the same consisting of a rectangular shaped yoke 21 substantially the same construction as that shown in Fig. 4. As shown rigidly projecting from one side of the yoke 21 is a plate 22 and adjustably secured upon said plate is a bar 23 by means of clips 24 and likewise adjustably secured to the outer end of said bar is a stub axle 25 by means of clips 26. To the opposite side of the yoke or frame 21 are secured two lugs 27 between which are pivoted the projecting end of the bar 28 the latter being adjustable along the length of the inner end of the bar 29 by clips 30, and to the outer end of said bar 29 is adjustably secured a stub axle 31 by means of clips 32.

The device constructed as last described is attached in a like manner to the traction engine and the bars 23 and 29 are preferably constructed of hard wood but it is evident, however, that the same could be of metal without departing from the nature of the invention.

By the construction as herein shown and described and the particular manner of attaching the same to a traction engine or other draft appliance it is evident that the land operating devices will be automatically adjustable upon the surface of the ground at an even height therefrom, and further the construction of the device is particularly adapted for making a turn with the traction engine. It is also to be desired that the land operating implements when drawn along the surface of the ground will not crowd upon one another notwithstanding the direction in which the traction engine is traveling.

By the employment of the central wheel 7 carried by the frame or yoke 4 the use of long bars either metal or wood is dispensed with and further that the various parts of the device may be readily and easily taken apart or changed in width.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the claimed invention.

Having particularly described our invention, what we claim is:—

In a device of the character described, the combination with a centrally disposed yoke, of a wheel mounted therein, a bar rigidly secured to and projecting at right angles from one side of said yoke, outwardly disposed lugs projecting from the opposite side of said yoke, a bar one end of which is pivoted to said lugs, whereby the last named bar is adapted to automatically adjust itself vertically, said bars being U-shaped in cross section and in alinement with one another, stub axles having projections adapted for sliding engagement with the outer portions of said bars, means carried by said bars for securing said projections in an adjusted position in respect to the outer ends of the bars, wheels mounted upon said stub axles, means for securing land treating devices, said means adjustable along the length of said bars between the wheels carried by the outer ends of the bars, and flexible means leading from the yoke and also diagonally from both beams with their outer ends secured to a clevis, the latter being adapted to be adjusted to the rear end of a traction engine or other draft appliance, whereby the device is adapted to ride over the ground and evenly support land operating devices.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

CHARLES EDWARDS.
HENRY H. JUNKIN.

Witnesses:
INGWALD STEENSON,
L. W. PATMORE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."