July 4, 1939. J. M. CRUIKSHANK 2,164,577

TRACTOR HARROW HITCH

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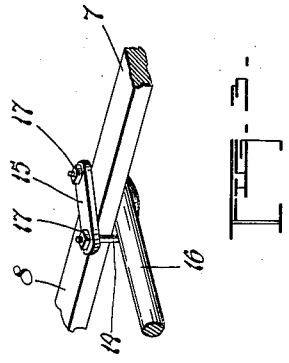


FIG. 3.

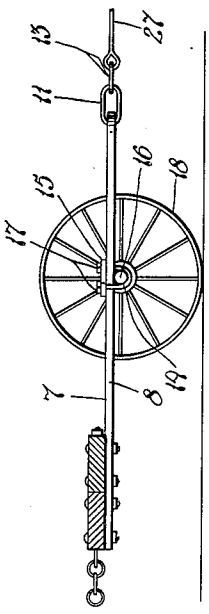


FIG. 2.

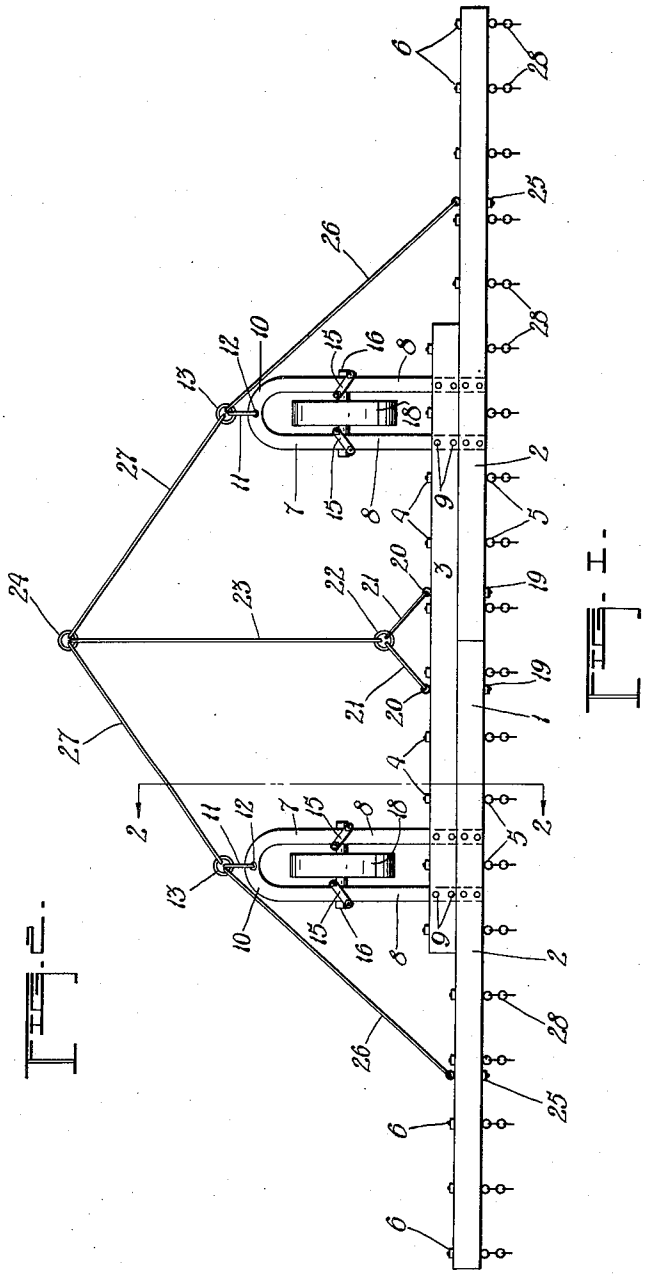


FIG. 1.

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TRACTOR HARROW HITCH

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In Canada August 7, 1936

1 Claim. (Cl. 55—84)

This invention relates to improvements in tractor harrow hitches, and an object of the invention is to provide a device of the character herein described which will permit a plurality of harrows or other farm implements to be attached behind a tractor for simultaneous performance.

A further object of my invention is to provide a device of the character herein described which may be adjusted to fit various types of tractors.

A further object of my invention is to provide a device of the character herein described which is equipped with means for permitting adjustment of the depth of penetration into the soil of the attached implements.

A further object of my invention is to provide a device of the character herein described which is designed to prevent lateral shifting thereof, due to the unbalanced effect resulting from one or more of the implements becoming overloaded.

A further object of my invention is to provide a device of the character herein described which is economical to manufacture, is rugged and durable in construction, and will not easily become out of order.

With the above more important objects in view and such other minor objects as may appear as the specification proceeds, my invention consists essentially in the arrangement and construction of parts all as hereinafter more particularly described reference being had to the accompanying drawing in which:

Fig. 1 illustrates a plan view of my improved type of tractor harrow hitch.

Fig. 2 is a sectional elevation taken on the line 2—2 Figure 1.

Fig. 3 is a perspective detail showing my axle clamping arrangement.

In the drawing, like characters of reference indicate corresponding parts in the different figures.

My structure consists of a cross beam 1 composed of two abutted timbers 2, maintained in position by means of a third timber 3 to which they are attached by a plurality of bolts 4. These bolts are each provided with eyes 5 and are continued along the cross beam as at 6 at either side of the central timber.

On either side of the centre of the cross beam is a yoke consisting of a U-shaped flat bar 7, the legs 8 of which are attached to the cross beam by bolts 9. The arcuate portion 10 is provided with a link 11 extending through an orifice 12 therein. A ring 13 is attached to each link.

To each leg of the yoke is attached a U-bolt 14 which straddles the same obliquely and the ends of each bolt are secured to a clamp 15 which extends obliquely across the upper surface of each leg.

The arrangement just described provides a simplified means for securing the axles 16 which as will plainly be seen, pass through the obliquely disposed U-bolts beneath the legs 8, the nuts 17 upon the same being tightened down to prevent rotation or end-shift in the axles. Between each of the pairs of legs 8 and rotatably mounted upon the axles is a ground wheel 18 by means of which my device is drawn over the ground.

Spaced a short distance on either side of the centre point of the cross beam 1 are a pair of bolts 19 equipped with eyes 20 on the inner side thereof. Short links 21 are attached to and converge forwardly from the eyes 20 to be fastened to a common link 22 to which is also fastened a forwardly extending bar 23. The forward end of this bar is also attached to a second ring 24. Fastened to the timbers 2 and eqaully spaced from the ends of the central timber 3 are further eye bolts 25 from which extend a pair of forwardly and centrally disposed connecting bars 26 which are attached at their forward ends to the rings 13. Still further bars 27 are linked between the rings 13 and 24 in a manner clearly shown in Figure 1.

It should here be noted that a few chain links 28 are attached to each of the bolts 4 and 6 in order that the harrows or other implements to be used with this device may be attached thereto.

Having described the structure of my device, the mode of operation thereof will now be presented.

A series of harrows or other implements may be attached to the chain links 28 in the usual manner and the ring 24 is then fastened to the draw bar of a tractor. As the elevation of the draw bars in different makes of tractors varies, means are provided to enable the correct elevation of the cross beam to be obtained. These means consist of the wheels 18 which may be adjusted within the limits of the yokes 7 by moving U-bolts 14 and clamps 15 along the legs of the yokes and maintaining them in any selected position by tightening down the nuts 17 at the selected point. Moving the wheels to the rear of the device will, of course, raise the cross beam while moving the wheels forwardly, will have the effect of lowering the same.

When this device is in operation, it has been found to operate very satisfactorily and follows the tractor in its true course and is not given to side shifting, a defect which has been found with

previous devices of this character, this advantage being derived from the use of the wheels 18 which are secured firmly in position and allow no lateral movement of the structure.

It should also be mentioned that the connecting bars 26 and 27 may if desired be replaced by chains.

From the foregoing, it will now be evident that I have provided an extremely efficient and useful type of tractor hitch which is efficient in operation, rugged in construction, and economical to manufacture.

Since various modifications can be made in the above invention, and many apparently widely different embodiments of same made within the scope of the claim without departing from the spirit and scope thereof, it is intended that all matter contained in the accompanying specification shall be interpreted as illustrative only and not in a limiting sense and I desire only such limitations placed thereon as are specifically expressed in the accompanying claim.

What I claim as my invention is:

A tractor hitch comprising a cross member, means for attaching implements thereto, a pair of horizontally disposed forwardly extending yokes fastened to said member, a wheel provided with an axle positioned within each of said yokes, a pair of axle clamps secured to the arms of each yoke and surrounding said axle, said axle clamps being adjustable along the length of said yoke for varying the horizontal spacing between each of said wheels, said member and a centrally positioned horizontally disposed and forwardly extending rod secured by links to said member, the forward end of said rod being also tied to said yokes by connecting rods.

JAMES MALFORD CRUIKSHANK.