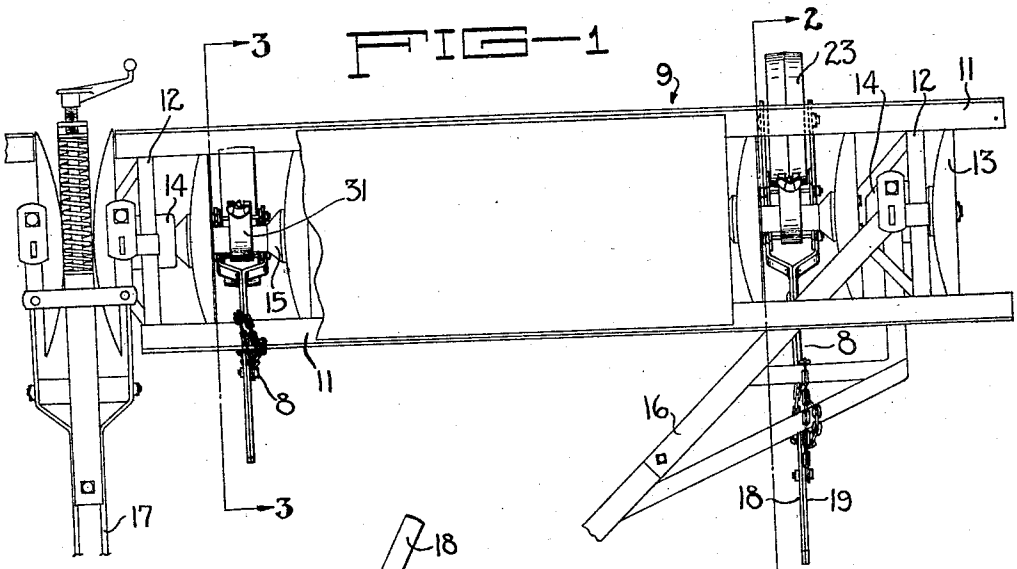
March 14, 1933. H. B. McKAHIN 1,901,183

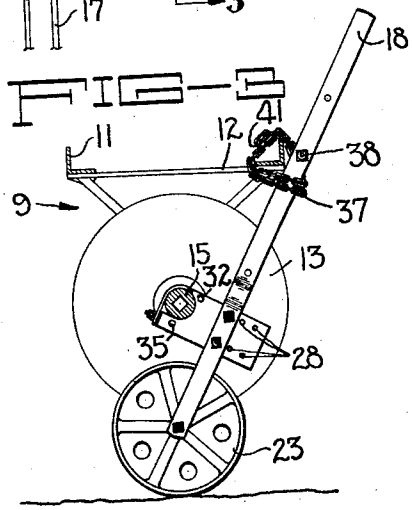
TRANSPORT TRUCK FOR DISK HARROWS

Filed May 28, 1931

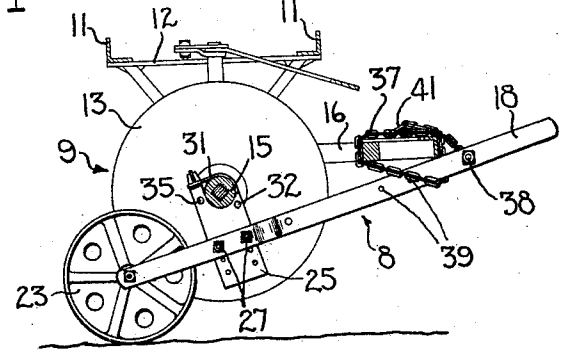
FIG—1



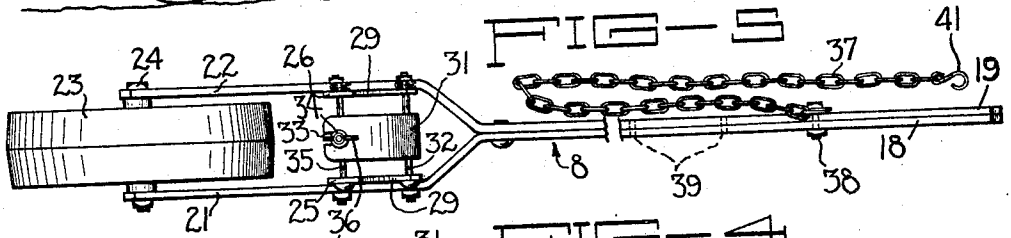
FIG—3



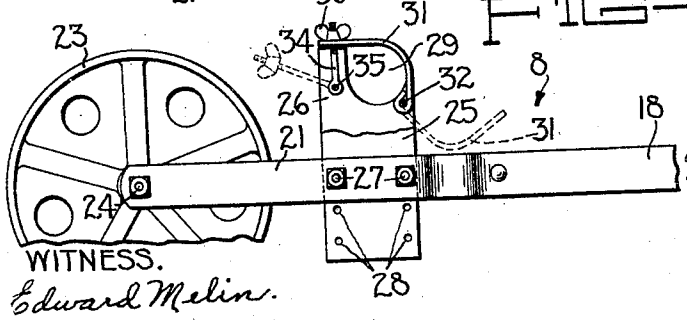
FIG—2



FIG—5



FIG—4



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1,901,183

UNITED STATES PATENT OFFICE

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TRANSPORT TRUCK FOR DISK HARROWS

Application filed May 28, 1931. Serial No. 540,527.

My invention relates to trucks for transporting disk harrows to and from the field with the disks thereof held out of contact with the ground.

The conventional transport truck is designed for one type of disk harrow and is usually not applicable to another type. Operators of disk harrows frequently have two or more harrows each of a different make or design and each requiring an individual transport truck peculiarly adapted to that design. Also, since the truck is used only when transporting the disk harrow to and from the field it is usually still in good condition when the disk harrow has become worn beyond further use. It is apparent, therefore, that a universal transport truck, adaptable for use on different types of harrows, is very desirable since it renders unnecessary the purchasing of an individual type of truck with each type of harrow.

One of the principal objects of the invention is to provide a truck that can be employed with equal efficiency on differing types of disk harrows.

Another object of the invention is to provide a simple and effective form of truck which can be readily placed in operative position to support the disk gang, and removed from operative position to lower the gang.

Another object of the invention is to construct the truck so that the supporting wheel may be arranged either forward or rearward of the axis of the disk gang.

A further object is to provide a novel means for securing the truck to the disk gang.

Other objects and advantages of my invention will be apparent to those skilled in the art after a consideration of the following detailed description, taken in conjunction with the accompanying drawing wherein like numerals refer to like parts and in which:

Figure 1 is a plan view of one gang of a disk harrow mounted for transporting on a pair of my improved transport trucks arranged adjacent each end thereof;

Figure 2 is a section on the line 2—2 of Figure 1;

Figure 3 is a section on the line 3—3 of Figure 1;

Figure 4 is an enlarged side view of a portion of my transport truck; and,

Figure 5 is an enlarged plan view of my improved truck.

The improved transport truck, referred to in its entirety at 8, is illustrated as supporting a disk harrow 9, only one gang of which is shown. For a complete showing of this harrow reference may be had to the co-pending applications of Charles H. White, Serial Number 312,325, filed October 13, 1928 and John E. Hoffman, Serial Number 519,309, filed March 2, 1931. Each gang of the harrow 9 comprises a frame built up of two parallel angle bars 11 which are cross-connected at spaced points by transverse frame bars 12. The disks 13 are mounted, in the usual way, on a square gang bolt supported in bearing brackets 14 depending from the transverse frame bars 12. The disks are spaced apart relative to each other by spacing sleeves or spools 15 also mounted on the gang bolt. One end of a diagonally disposed frame 16 is secured to the outer end of the disk gang frame and extends inwardly and is connected to a longitudinally disposed central frame 17. The structure thus far described is of familiar design and does not relate to the invention except in its association therewith.

The transport truck 8 comprises a supporting arm formed of bars 18 and 19 riveted or otherwise secured together, for a portion of their length, and offset in opposite directions at their lower ends at 21 and 22 to form a fork for receiving a supporting wheel 23. The wheel 23 is journaled on a bolt 24 carried in aligned apertures adjacent the ends of the offset portions 21 and 22. Supporting plates 25 and 26 are secured respectively to the offset portions 21 and 22 of the supporting arm by bolts 27. A plurality of pairs of holes 28 are provided at one end of the plates and permit adjustment of said plates relative to the supporting arm to accommodate different diameter disks. A notch or stirrup 29 is provided in the opposite end of the plates 25 and 26 whereby said plates are adapted to engage a spacing spool 15 of the disk gang. A curved retaining plate 31 is supported on a hinge pin 32 extending between the plates 25

and 26 adjacent one side of the stirrup 29. A slotted opening 33 is provided in the opposite end of the plate 31 and is adapted to be engaged by a clamping bolt 34 pivoted on a hinge pin 35 extending between the plates 25 and 26 adjacent the opposite side of the stirrup 29. A wing nut 36 is threaded on the free end of the bolt 35 and serves to clamp the plate 31 against the spool 15.

A chain 37 is secured to the supporting arm by means of a bolt 38 passing through the last link of said chain and inserted in one of the holes 39 adjacent the upper end of the supporting arm. A hook 41 is provided at the free end of the chain and is adaptable to engage any one of the links of said chain or a frame bar for securing the truck to the disk gang.

In the application and operation of my improved transport truck let us assume that the disk gang is resting on the ground and that it is desired to raise the gang to transport same. The retaining plate 31 is rotated back against the supporting arm into a position shown in dotted lines in Fig. 4 and the transport trunk is arranged behind the disk gang and aligned with the medial line of the spool with which the stirrup 29 is to engage. The truck is then advanced forwardly with the supporting arm in a substantially horizontal position. When the truck is advanced a sufficient distance so that the stirrup opening is in line with the spacing spool, the support bar is raised upwardly until it contacts with the frame of the disk gang. The chain 37 is then wrapped around the frame member one or more times and the hook 41 is engaged with a convenient link of said chain, or with an adjacent frame bar to secure the supporting arm to the frame. When the transport truck is in this position, with the front end of the supporting arm lashed to the disk gang frame and the transport wheel 23 resting on the ground, the cutting disk 13 is raised a sufficient distance to clear the ground. In order that the transport truck may not drop away from the disk gang when passing over uneven or rough ground the retaining plate 31 is provided. When the spacing spool 15 is seated in the stirrup the plate 31 is swung over so as to engage the upper surface of the spool. The bolt 34 is then brought into engagement with the slotted opening 33 and the wing nut 36 tightened against the plate 31.

It will be readily apparent that my improved transport truck may be easily and quickly attached to the disk gang by simply sliding the truck under the said gang, raising the front end of the supporting arm, securing the chain around a convenient frame bar and clamping the plate over the disk spacing spool. The removal of the truck is accomplished by releasing the clamping plate, unfastening the chain, lowering the disk gang and withdrawing the transport truck.

By providing the series of holes 28 in the supporting plates 25 and 26 the transport truck can be adjusted to suit disk gangs having disks of different diameters. The holes 39 in the supporting arm provide a range of adjustment for the chain 37. By means of this adjustment and the use of a chain the upper end of the supporting arm may be secured to any type of disk harrow having a frame or parallel angle bars.

I have found that by mounting my transport truck in a trailing relation to the disk gang, that is, so that the wheel 23 is rearward of the axis of the disk gang, the harrow will transport in a smoother manner than if the wheel 23 were forward of the vertical axis. I prefer, therefore, to mount my truck in this trailing manner but should it be desired to mount same with the wheel 23 forward of the axis of the disk gang it can be accomplished on any harrow having a frame or angle bar to the rear of the disk gang to which the chain 37 may be secured.

While I have described in connection with the accompanying drawing the specific form in which I prefer to embody my invention, it is to be understood that the invention is not to be limited to the specific means which I have herein shown and described and that, in fact, widely different means may be employed in the practice of the broader aspects of my invention.

What I claim, therefore, and desire to secure by Letters Patent is:

1. A transport truck for disk harrows comprising a supporting bar adapted to extend beneath the disk gang of a disk harrow, a wheel mounted on the lower end of the supporting bar, said bar having a plurality of longitudinally spaced perforations near its upper end, a bolt adapted to be inserted in any one of said holes, and a flexible means attached to said bolt, whereby the truck may be secured to the harrow frame by wrapping the flexible means around a member of the frame, said flexible means being of sufficient length to extend around frame members of varying proportions.

2. A transport truck for a disk harrow comprising a supporting bar adapted to extend beneath the disk gang, a wheel mounted on the lower end of the supporting bar, a stirrup adjustably secured to the supporting bar between its ends and a chain attached to the said arm adjacent its upper end for securing same to the harrow frame.

3. A transport truck for a disk harrow having a plurality of disk gangs, each gang having a plurality of disks spaced apart by spacing spools and frame members connecting the gangs, said truck comprising a supporting bar adapted to extend beneath the disk gang, a wheel mounted on the lower end of the supporting bar, a stirrup adjustably secured to the supporting bar between its ends and

adaptable to engage a spacing spool, an arcuate retainer engaging the stirrup to secure same to the said spool, a chain attached to the supporting arm adjacent its upper end adapted to wrap around the frame member and a hook on the free end of the chain to engage one of the links of the chain.

4. A transport truck for a disk harrow having a plurality of disk gangs each gang having a plurality of disks spaced apart by spacing spools, parallel side angles disposed above the disks and frame members connecting the gangs, said truck comprising a supporting bar adapted to extend beneath the disk gang, a wheel mounted on the lower end of the supporting bar, a stirrup adjustably secured to the supporting bar between its ends and adaptable to engage a spacing spool, an arcuate retainer engaging the stirrup to secure same to the said spool, a chain attached to the supporting arm adjacent its upper end and adapted to wrap around either the frame member or side angle and a hook on the free end of the chain to engage one of the links of the chain.

5. A transport truck for disk harrows comprising a supporting bar adapted to extend beneath the disk gang of a disk harrow, a wheel mounted on the lower end of the supporting bar, and a relatively long chain attached to said bar near its upper end and having a hook connected to its free end, by which said truck may be attached to the harrow frame by wrapping the chain around a portion of the frame and hooking the hook into one of the links of the chain.

6. A transport truck for disk harrows comprising a supporting bar adapted to extend beneath the disk gang of a disk harrow, a wheel mounted on the lower end of the supporting bar, a relatively long chain, means for attaching said chain to said bar at any one of a plurality of points, said chain having a hook connected to its free end, by which said truck may be attached to the harrow frame by wrapping the chain around a portion of the frame and hooking the hook into one of the links of the chain.

7. A transport truck for disk harrows comprising two bars fixed together in juxtaposition for a portion of their length, and spaced apart near their lower ends, a wheel mounted between said bars at their lower ends, means on said bars for supporting the axle of a disk harrow, a flexible means fixed to said bars near their upper ends, whereby the truck may be secured to the harrow frame by wrapping the flexible means around a member of the frame, said flexible means being of sufficient length to extend around frame members of varying proportions.

HERBERT B. McKAHIN.