

S. D. NEEDHAM.
 TRANSPORT TRUCK FOR DISK HARROWS.
 APPLICATION FILED JUNE 9, 1911.

1,019,345.

Patented Mar. 5, 1912.

2 SHEETS—SHEET 1.

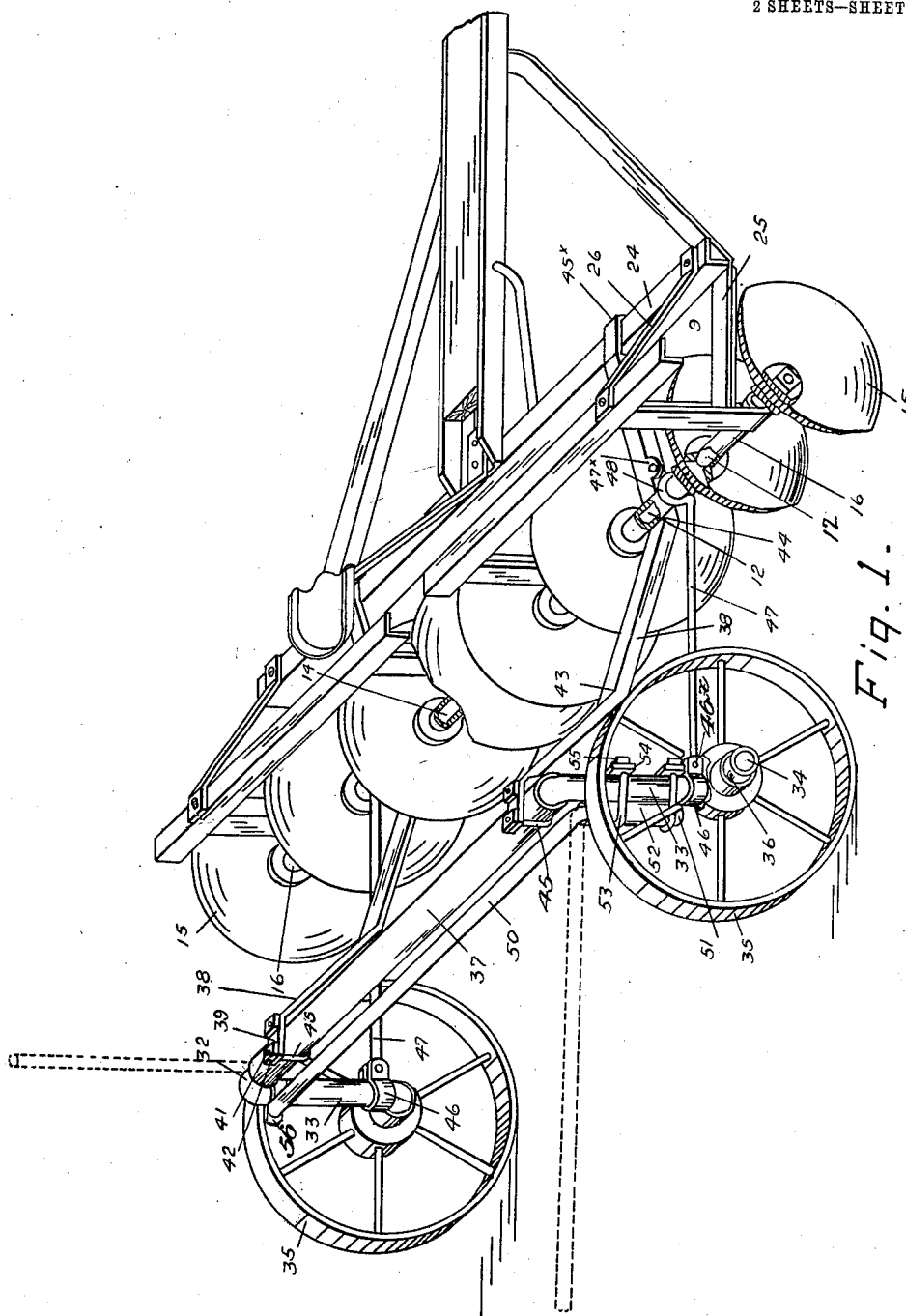


Fig. 1.

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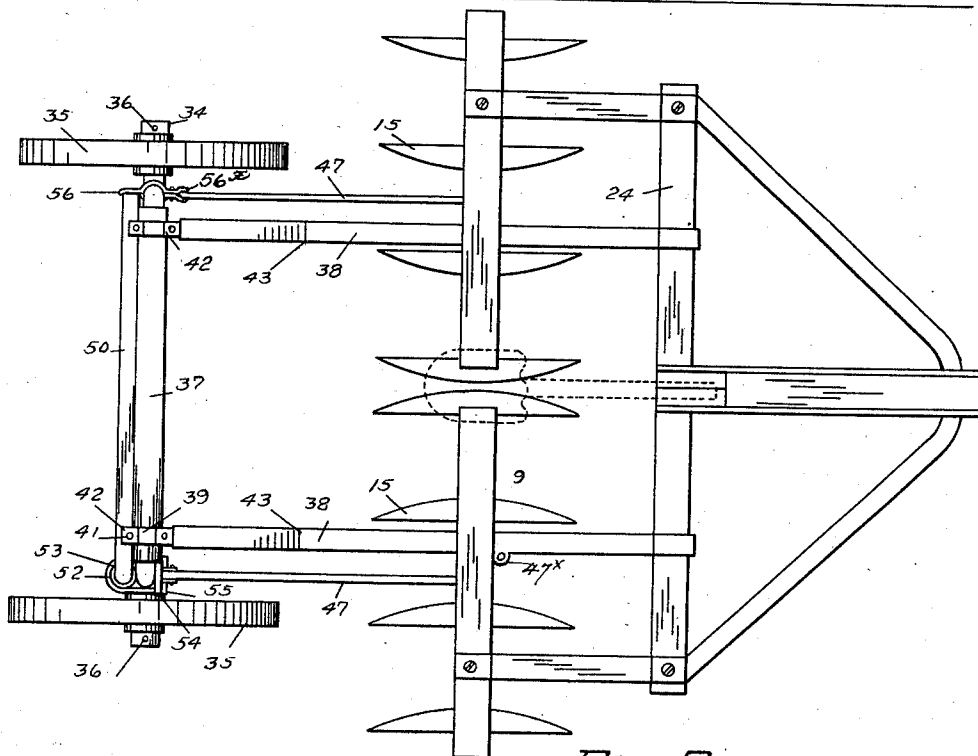
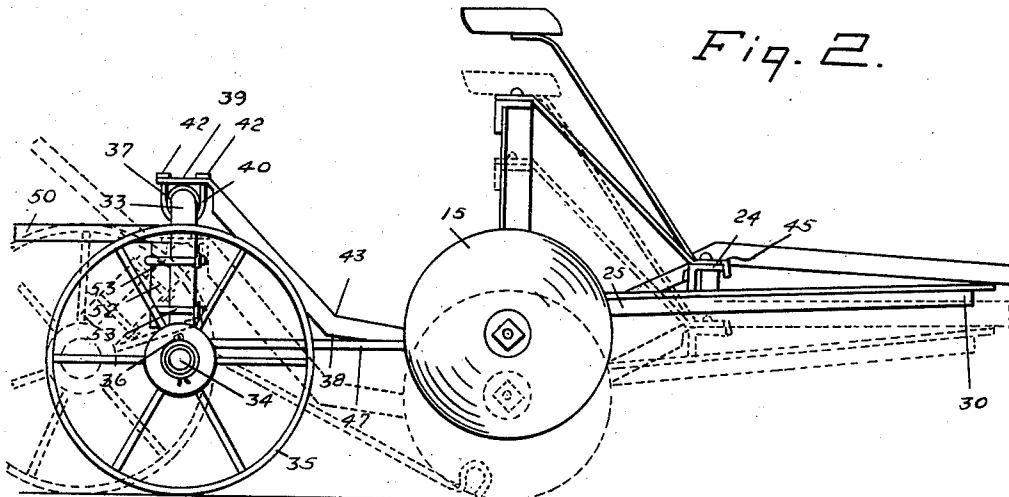


Fig. 3.

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UNITED STATES PATENT OFFICE.

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TRANSPORT-TRUCK FOR DISK HARROWS.

1,019,345.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, STEPHEN D. NEEDHAM, a citizen of the United States of America, residing at Rantoul, in the county of Franklin and State of Kansas, have invented certain new and useful Improvements in Transport-Trucks for Disk Harrows; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

The objects of the invention are: First, to provide a traveling relay for the elevation and transportation of movables in transit. Second, to provide a traveling support for such implements as disk harrows to and from the field, and third, to provide an auxiliary traveling support for any disabled conveyance.

The invention consists in the novel construction and combination of parts such as will be first fully described, and then specifically pointed out in the claims.

In the drawings: Figure 1 is a view in perspective of a disk harrow showing the novel transport in rear of the harrow, and in position for forward movement. Fig. 2 is a side view of the harrow and transport as seen in Fig. 1, showing their position before the elevation of the harrow in dotted lines. Fig. 3 is a plan view of the harrow and the transport as seen in Fig. 1.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

For the purpose of elevating the separate frames of the disk harrow as shown, I employ a longitudinal beam 32 of a suitable length. Portions 33 of the ends of beam 32 are bent at right angles, and extend downwardly a considerable distance forming fulcrum posts, and portions 34 of the lower ends of the fulcrum posts are bent at right angles and extended outwardly a short distance in opposite directions to form axle bearings, and upon said bearings are mounted the spoked wheels 35, which wheels are secured on the bearings by the split keys 36. Upon the longitudinal portion of beam 32, and extending the length thereof is a loosely arranged sleeve 37.

38 indicates the stretcher bars or arms of the stretcher of the transport which consist of angle bars, the inner ends of which

bars are mounted upon the upper surface of sleeve 37—the vertical portions of the angle bars being cut away adjacent said sleeve—the horizontal portion 39—bearing upon said sleeve. The portions 39 of the angle bars are secured adjustably to the sleeve by means of the U-shaped clamping bolts 40, the ends of which bolts are screw threaded at 41, and said ends extended past the sleeve 37, and through the plates 39, and upon said threaded ends of the bolts are secured the clamping nuts 42. From the horizontal portions 39 of the angle bars of the stretcher the said bars are bent at an angle and extended forwardly and downwardly a short distance to a point 43, and at said point the arms or bars are bent at a slight angle and extended forwardly, and inclined downwardly in a slight degree to a point or crotch 44. From said point or crotch 44, the remaining portions of the arms extend forwardly in an upwardly inclined plane terminating in an upwardly extended U shaped grasping portion 45, the vertical portion of the angle bars in the U shaped beam grasping portions of the bars being cut away at 45*, as seen in Fig. 1.

Extending around the lower portions of the fulcrum posts 33, are clasps 46, the free ends being secured by the clamping screws 46*. To the clamping screws 46*, between said free ends of the clasps are pivotally secured the inner ends of the brace rods 47, the forward ends of which rods extend forwardly approximately to a point in line transversely with the crotch 44 in the stretcher arms or bars 38 when said bars are operatively connected with the disk harrow. Upon said forward ends of rods 47 are hooks 48, the portions of the hooks extending upwardly from the rods being bent backwardly a slight distance as seen in Figs. 1 and 2, so as to resist a direct upward movement when engaged with the disk harrow without first imparting a forward pull on the fulcrum posts 33 of the transport to disengage them.

Upon the outer surface of the stretcher bar 38, on the right hand side of the transport a slight distance forward of the crotch 44 is secured an eye plate 47*.

50 indicates the elevating lever on the transport which is approximately of the same length as the longitudinal portion of the main beam 32—a portion —51— of

which lever is bent at right angles and inserted within a socket 52, secured to the rear surface of the fulcrum post 33, on the right hand side of the transport—said socket is secured to the fulcrum post by means of the U shaped bolt 53, having screw threaded end portions, which extend through the ends of the clamping plate 54, and upon said ends are the securing nuts 55. Upon the upper end portion of the fulcrum post 33 on the left hand side of the transport, is secured a spring catch plate 56, one end of which catch plate extends rearwardly a short distance, and is bent forwardly a slight distance upon the free end of the elevating lever 50, so as to retain said lever in a folded position parallel with the sleeve 37, on the longitudinal portion of beam 32. The forward portion of the catch plate 56 supports a clip 56*.

In operation the main beam 32 of the transport is moved forwardly and downwardly in position until the bent portions between the point 43, and the crotch, 44, rest upon the ground. The forward ends of the stretcher arms are then extended forwardly beneath the respective shafts 12 and 14 of the disk harrow until the crotches 44, in said arms, are directly beneath said shafts, in which position the U-shaped portions 45, of said arms are hooked over the upper surface of the main draw beam 24, of the disk harrow. The free end of the elevating lever 50, is released from the catch 56, and moved outwardly and rearwardly. Power being applied to said end of the lever, a leverage is obtained on the fulcrum post to move the wheels 35, of the transport forwardly in the direction of the disk harrow, thereby elevating both shafts 12 and 14, carrying the disks 15 simultaneously the requisite distance above the ground. The hooks 48, on the ends of the brace rods 47, are then hooked over the sleeves 16, on shafts 12, and 14, separating the disks from each other. The harrow may now be moved to and from the field, supported by the wheels of the transport.

In detaching the transport from the harrow, the hooks 48, are disengaged from the sleeve 16, and under controlling lever 50, the sections of the harrow are lowered until the disks 15, rest upon the ground. The grasping ends 45, of the stretcher arms are then released from the beam 24. The beam 32 is then elevated by lever 50, and the hook 48 on the rod 47 on the right hand side of the transport is engaged with the eye 47* on the adjacent stretcher bar, and the rod 47 on the left hand side of the transport is elevated in position, as seen in dotted line in Fig. 1, and is held in said position by the clip 56*.

The invention is applicable as a relay for the transport of disabled vehicles when-

ever a tire or axle may be grasped by the stretcher arms, or in many instances the transport may be utilized for the conveyance of movable commodities or bodies.

In the employment of the transport for disk harrows, its effectiveness in the application of power to raise the disks will be at once apparent.

Such modifications of the invention may be employed as are within the scope of the appended claims.

Having fully described my invention, what I now claim as new and desire to secure by Letters Patent is.

1. An implement relay elevating truck, comprising a main weight-supporting beam, and fulcrum posts connected with the ends thereof, axle bearings at the lower ends of said posts, wheels supporting the fulcrum posts mounted upon said axle bearings, an elevating lever, and a stretcher comprising stretcher bars supported upon and pivotally connected at their inner ends with the main weight-supporting beam and detachable connecting devices connected with the lower portions of the fulcrum posts one of which devices is adapted to be connected with one of said stretcher bars.

2. An implement relay elevating truck comprising a main weight-supporting beam, and fulcrum posts rigidly connected with the ends thereof, and axle bearings at the lower ends of said posts, wheels on said bearings, a sleeve on the main beam, stretcher bars connected with said sleeve, and an elevating lever connected with one of the fulcrum posts and detachable connecting devices connected with the lower portions of the fulcrum posts, one of which devices is adapted to be connected with one of said stretcher bars.

3. An implement elevating relay, comprising a main weight-supporting beam, and fulcrum posts connected with the ends thereof, axle bearings at the lower ends of said fulcrum posts, stretcher bars pivotally-connected with the main beam, and an elevating lever on one of the fulcrum posts foldable upon the main beam.

4. An elevating truck comprising a main weight-supporting beam, fulcrum posts supporting said beam connected at their upper ends with the ends of said beam, axle bearings at the lower ends of said posts, wheels mounted on said bearings, stretcher bars pivotally-connected at their inner ends with the main beam, a socket on one of the fulcrum posts, and an elevating lever having a bent inner end within said socket.

5. An elevating truck comprising a main weight-supporting beam, fulcrum posts supporting the said beams at their upper ends, and axle bearings at their lower ends, wheels on said axle bearings, and stretcher bars having their inner ends pivotally-con-

5 nected with the main beam, and downwardly-bent portions at their outer ends, a lever mounted on the fulcrum post, and brace rods on the lower portions having outer hooked ends.

10 6. An elevating truck comprising a main weight-supporting beam, a sleeve loosely mounted thereon, fulcrum posts rigidly connected with the ends of said beam, axle bearings at the lower ends of said fulcrum posts, wheels mounted on said axle bearings, a lever connected with one of the fulcrum posts, and stretcher bars having their inner ends clamping to said sleeve on the said beam whose outer ends are provided with downwardly-extended beam-grasping outer end portions, and rods of shorter length than said bars connected with the lower portions of the fulcrum posts, and hooks on said rods.

20 7. An implement elevating truck comprising

ing a main weight-supporting beam, fulcrum posts rigidly connected at their upper ends with the ends of said beam, axle bearings at the lower ends of said fulcrum posts, 25 wheels mounted on the axle bearings, a socket on one of the fulcrum posts, an elevating lever having a bent inner end within said socket, securing means on the other fulcrum post for the outer ends of said lever, 30 stretcher bars pivotally connected with the main beam at their inner ends and provided with beam-grasping outer end portions, and brace rods pivotally connected at their inner ends with the lower portions of the fulcrum 35 posts and provided with hooks at their free ends.

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