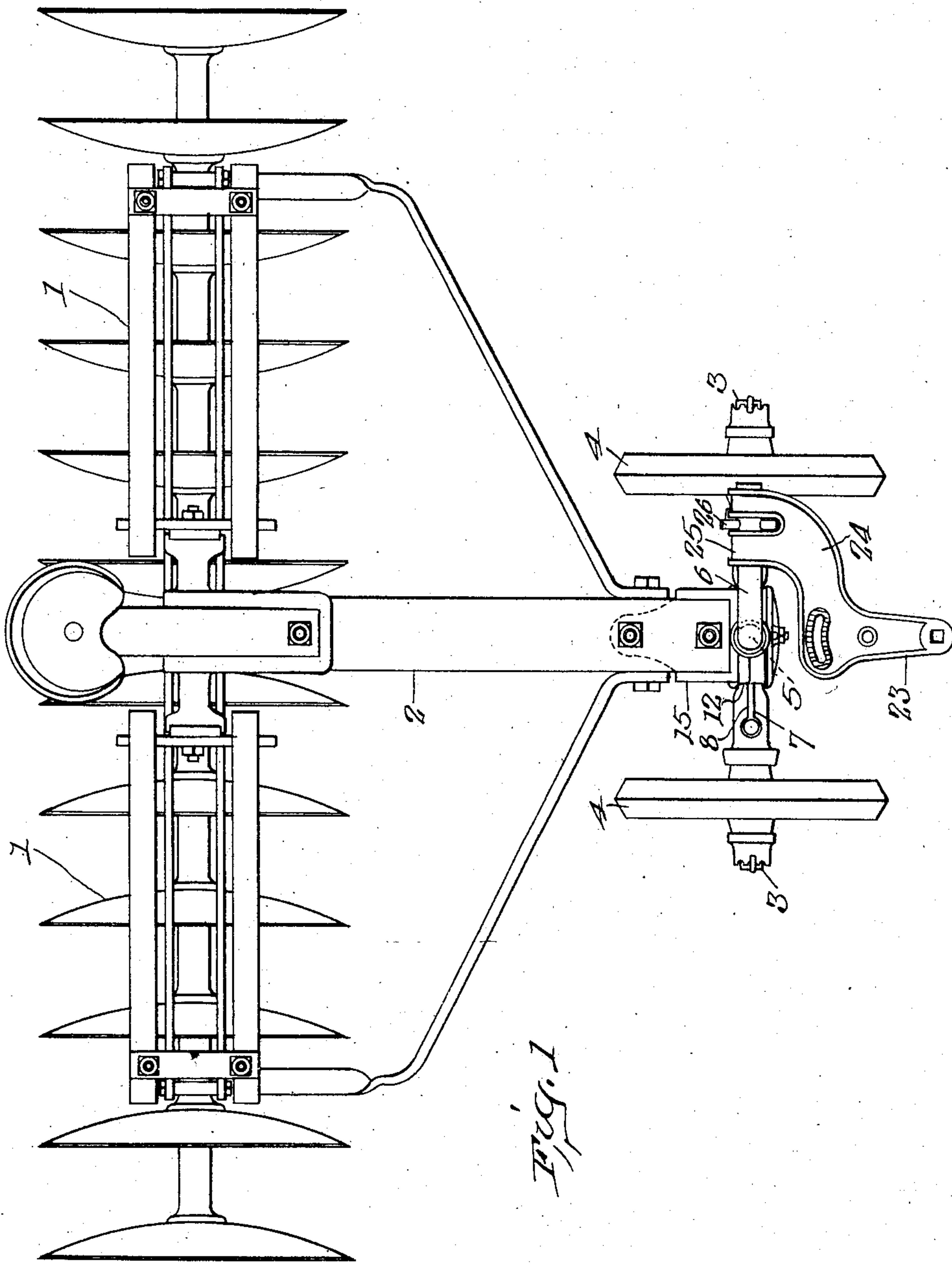


A. C. DANN & R. L. FORD.
TONGUE TRUCK.
APPLICATION FILED APR. 23, 1908.

919,325.

Patented Apr. 27, 1909.
2 SHEETS—SHEET 1.



Witnesses

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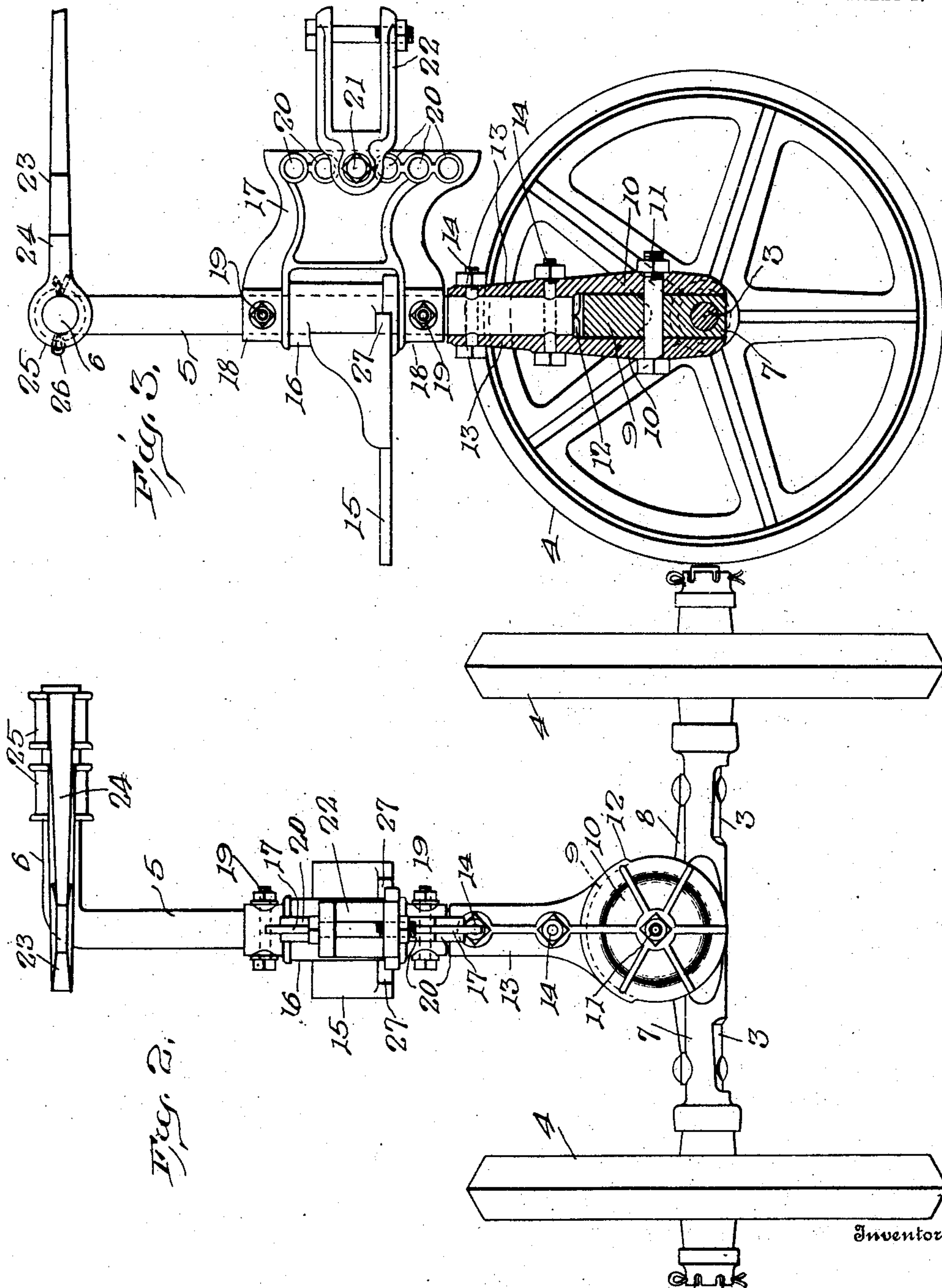
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UNITED STATES PATENT OFFICE.

ALBERT C. DANN AND RALPH L. FORD, OF BELLEVUE, OHIO, ASSIGNORS TO THE OHIO CULTIVATOR COMPANY, OF BELLEVUE, OHIO, A CORPORATION OF OHIO.

TONGUE-TRUCK.

No. 919,325.

Specification of Letters Patent.

Patented April 27, 1909.

Application filed April 23, 1908. Serial No. 428,752.

To all whom it may concern:

Be it known that we, ALBERT C. DANN and RALPH L. FORD, citizens of the United States, residing at Bellevue, in the county of Huron and State of Ohio, have invented certain new and useful Improvements in Tongue-Trucks, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to tongue trucks for agricultural implements.

The object of the same is to provide a tongue truck which will exert a natural draft upon the implement, such as will neither
15 tend to elevate the end of the stub tongue, by means of which the truck is connected to the implement, and thus throw the weight of the truck upon the draft animals, nor tend to depress the end of the stub tongue and cause
20 unnecessary friction between the ground wheels and the ground; to provide such a truck which will accommodate itself to irregularities in the surface of the ground without exerting a strain on the stub tongue
25 or causing the implement to tilt or turn; which will be provided with means for connecting a tongue thereto, which means will be adjustable to support said tongue either in position for use with a four horse even-
30 er or in position for use with a three horse even-er and will, at all times, support said tongue in a substantially horizontal position; and further, to provide such a tongue truck which will be strong and durable, simple in
35 its construction and capable of being manufactured at a low cost.

With these objects in view our invention consists in certain novel features of construction and in certain parts and combinations
40 hereinafter to be described, and then more particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a top plan view of our invention applied to a disk harrow of ordinary construction; Fig. 2
45 is a front elevation of the truck; and Fig. 3 is a longitudinal, sectional view, taken vertically of the truck.

In these drawings, we have illustrated the preferred form of our invention and have
50 shown the same in connection with a disk harrow 1, of ordinary construction, which is provided with the usual stub tongue 2, to the outer end of which is connected the tongue truck. The truck itself preferably consists of
55 an axle 3 having mounted thereon ground

wheels 4 and a frame or standard 5 having its lower end connected to said axle 3. This frame or standard may be of any suitable construction and may be connected to the axle in any suitable manner, but, in the present instance, I have shown the standard as
60 comprising a vertical bar having its upper end bent at substantially right angles thereto, as shown at 6, and extending substantially parallel with the axle 3. The lower end of
65 the standard 5 is preferably pivotally connected to the axle in order to allow the axle to move about its horizontal pivot and thereby permit the wheels to accommodate
70 themselves to irregularities in the surface of the ground. This pivotal connection may be formed in any desired manner, but we prefer to provide the axle with a casing 7 having its
75 central portion slightly raised, as shown at 8, and provided with a suitable bearing block 9, which, in the present instance, is in the form of a disk arranged longitudinally of the axle and having the greater portion of its diameter
80 extending above the casing 7 of the axle 3. The lower end of the standard 5 is provided with a suitable bearing adapted to engage the bearing block 9, and, in the present
85 instance, comprising substantially circular bearing plates 10 of a diameter substantially equal to the diameter of the bearing block 9, adapted to engage the opposite sides thereof
90 and secured thereto by a bolt 11 extending through the central portion of said plates and said bearing block, thus forming a pivotal connection between the plates and the bearing
95 block which will permit of a free rotary movement of the plates relatively to the block and hold the same against movement in all other directions relatively thereto. The
100 rotary movement of the bearing plates 10 relatively to the bearing block is limited by a suitable stop which preferably consists of inwardly extending flanges 12 formed on the
105 upper portion of the plates 10 and extending downwardly along the circumference thereof to points sufficiently above the axle casing 7 to allow the axle the desired amount of piv-
otal movement. In addition to forming a stop to limit the movement of the axle relatively to the bearing and the standard 5, to
110 which said bearing is secured, the flanges 12 serve to close the upper part of the bearing and prevent the entrance of dirt thereto. The bearing plates 10 are preferably secured to the standard 5 by providing the same with

upwardly extending grooved arms or necks 13 adapted to engage the opposite sides of the standard 5 and to be secured thereto by suitable bolts 14 extending through the said upwardly extending portions and through the standard. The stub tongue 2 of the harrow is secured to the standard 5 at a point above the bearing plates 10 and is preferably pivotally connected thereto to enable the truck to be turned about a vertical axis to guide the implement.

In the preferred form of the device, the forward end of the stub tongue 2 is rigidly secured to a tongue plate 15, which, in turn, is pivotally connected to the standard 5 by means of a bearing sleeve 16 carried by the forward portion thereof and journaled upon the standard 5, which, in the present instance, is circular in cross section.

A suitable draft hitch is coupled to the standard 5 at a point near its point of connection with said stub tongue. As here shown, this draft hitch comprises a vertically arranged and forwardly extending plate 17 having at its upper and lower edges suitable collars 18 adapted to extend about the standard 5 above and below the collar 16 of the stub-tongue-connecting means and to be rigidly secured to said standard by means of bolts 19. The forward edge of the plate 17 is provided with a vertically arranged series of apertures 20 adapted to receive a bolt 21 by means of which a clevis 22 is secured thereto, this clevis being adapted to support the draft evenner. The draft hitch being rigidly secured to the standard 5 and the stub tongue 2 being pivotally connected thereto, it will be apparent that the standard and the axle which is connected thereto and held against rotary movement about a vertical axis relatively thereto, can be moved by the operation of said draft hitch to guide the implement in the desired direction, the movement of the standard relatively to the stub tongue being limited by suitable stops 27 formed on the opposite sides of the bearing sleeve 16 of the stub-tongue-connecting means. These stops are so arranged as to check the rotary movement of the truck before the same has been turned far enough to bring the evenners into contact with the implement. Suitable means are also provided for connecting a tongue to the standard 5 at a point above the draft hitch in such a manner that said tongue may be adjusted to accommodate the same for use with either a three horse or a four horse evenner. In the preferred form of the device, this means comprises a reversible tongue plate 23 extending longitudinally to and substantially parallel with the stub tongue 2 and provided with a laterally extending arm 24 having at its outer end a bearing 25 adapted to engage the bent-over upper portion 6 of the standard 5, the bearing being

preferably formed in two parts, as shown, to enable a cotter pin 26 to be inserted in the bent-over portion 6 between the two portions of the bearing to hold the same against movement longitudinally of said bent-over portion. With this tongue plate connected to the standard in the manner shown in Fig. 1, *i. e.*, with the tongue plate proper in substantial alinement with the stub tongue, the tongue is in position to accommodate the same to either a two or a four horse draft evenner. By reversing the position of the bearing 25 on the bent-over portion 6 of the standard, the bearing plate proper 23 will be supported at one side of and some distance from the stub tongue 2, thus accommodating the same for use with a three horse draft evenner.

From the foregoing description it will be apparent that we have provided a truck of such a construction that the draft will be exerted upon the implement in a direct line, thereby avoiding any tendency to either lift the end of the stub tongue, and, consequently, the truck to which it is secured, thus exerting an unnecessary pull upon the necks of the draft animals, or to exert a downward pressure upon the truck on the end of the stub tongue and truck, thereby causing an unnecessary amount of friction between the wheels of the truck and the ground; that the truck, by reason of the pivotal connection of the axle to the standard, is capable of accommodating itself to any irregularities in the surface of the ground without affecting the position of the standard or implement connected thereto. This pivotal movement being a limited one about a horizontal axis and the axle having no rotary movement relatively to the standard, it will be apparent that the truck is, at all times, under control through the medium of the draft hitch which is rigidly secured to the standard. Further, it will be apparent that, by means of the reversible tongue plate detachably secured to the bent-over portion of the standard, the tongue can be supported in a position for use with either a four horse evenner or a three horse evenner and that, when supported in either position, it will extend in a substantially horizontal plane from its point of connection to the standard to the neck-yoke carried by the draft animals; and further, that the construction of the truck is of a strong, durable nature, its parts few in number and not such as are liable to become dissarranged or inoperative, and, consequently, the operation of the device is simple and the cost of production is low.

We wish it to be understood that we do not desire to be limited to the exact details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

Having thus fully described our invention, what we claim as new and desire to secure by Letters Patent, is:—

1. A tongue truck comprising an axle, 5 ground wheels mounted thereon, a disk-shaped bearing block carried by said axle, a standard, a substantially circular bearing secured to the lower end of said standard and inclosing the sides and upper edge of said 10 bearing block, said standard having its upper end bent at substantially right angles thereto, a tongue plate detachably connected to the bent-over portion of said standard, means for connecting an implement to said 15 standard, and a draft hitch secured to said standard in substantial alinement with said connecting means.

2. A tongue truck comprising an axle, a disk-shaped bearing mounted centrally of 20 said axle, a standard having a substantially circular bearing at its lower end adapted to inclose said bearing block, means for limiting the movement of said standard about said bearing block, said standard having its 25 upper end bent at an angle thereto, a tongue plate adapted to be secured to the stub tongue of an implement and having a bearing sleeve journaled in said standard, a draft hitch having collars rigidly secured to said 30 standard above and below said bearing sleeve, a tongue plate having an arm extending at an angle thereto, and a bearing carried by said arm and adapted to engage the bent-over portion of said standard.

3. A tongue truck comprising an axle, 35 ground wheels mounted on said axle, a disk-shaped bearing block carried by said axle, a standard, a substantially circular bearing carried by the lower end of said standard and adapted to engage said bearing block, a stop 40 carried by said bearing to positively limit the movement of said axle relative to said standard, means for connecting an implement to said standard above said bearings, a draft hitch secured to said standard near said con- 45 necting means, and detachable means for connecting a tongue to the upper end of said standard.

4. A tongue truck comprising an axle, 50 ground wheels mounted on said axle, a disk-shaped bearing block carried by said axle, a standard, a bearing carried by said standard and adapted to engage said bearing block, inwardly extending flanges carried by said 55 bearing and adapted to form stops to limit the movement of said axle relatively to said standard, means for connecting an implement to said standard above said bearing, a draft hitch secured to said standard near 60 said connecting means, and means for connecting a tongue to said standard.

In testimony whereof, we affix our signatures in presence of two witnesses.

ALBERT C. DANN.
RALPH L. FORD.

Witnesses:

J. E. MARVIN,
E. A. KEMP.