

May 16, 1944.

C. E. JORDAN ET AL

2,348,820

FENCE POST DRIVER

Filed March 11, 1941

3 Sheets-Sheet 1

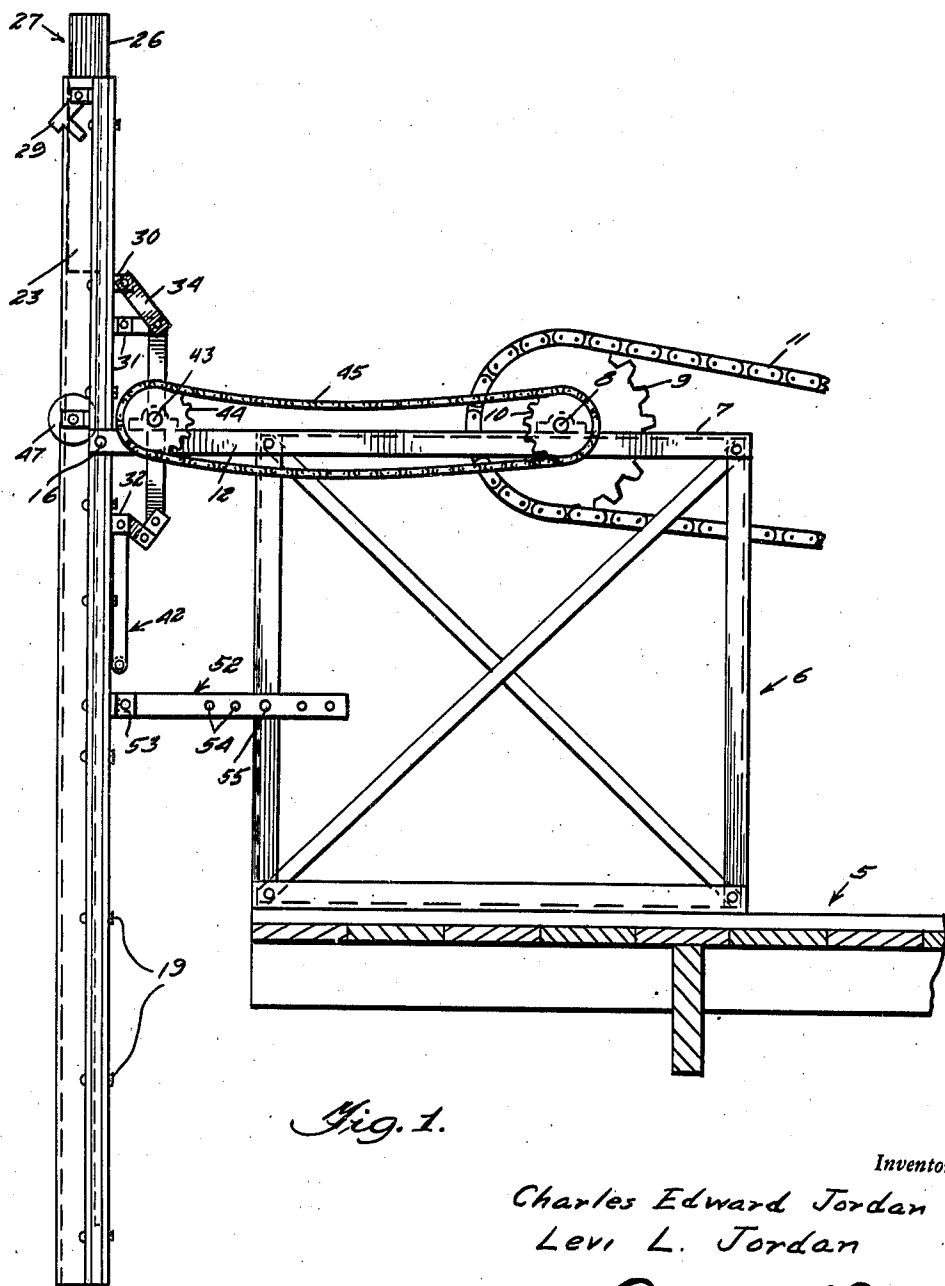


Fig. 1.

Inventor

Charles Edward Jordan
Levi L. Jordan

By

Clarence A. O'Brien

Attorney

May 16, 1944.

C. E. JORDAN ET AL

2,348,820

FENCE POST DRIVER

Filed March 11, 1941

3 Sheets-Sheet 2

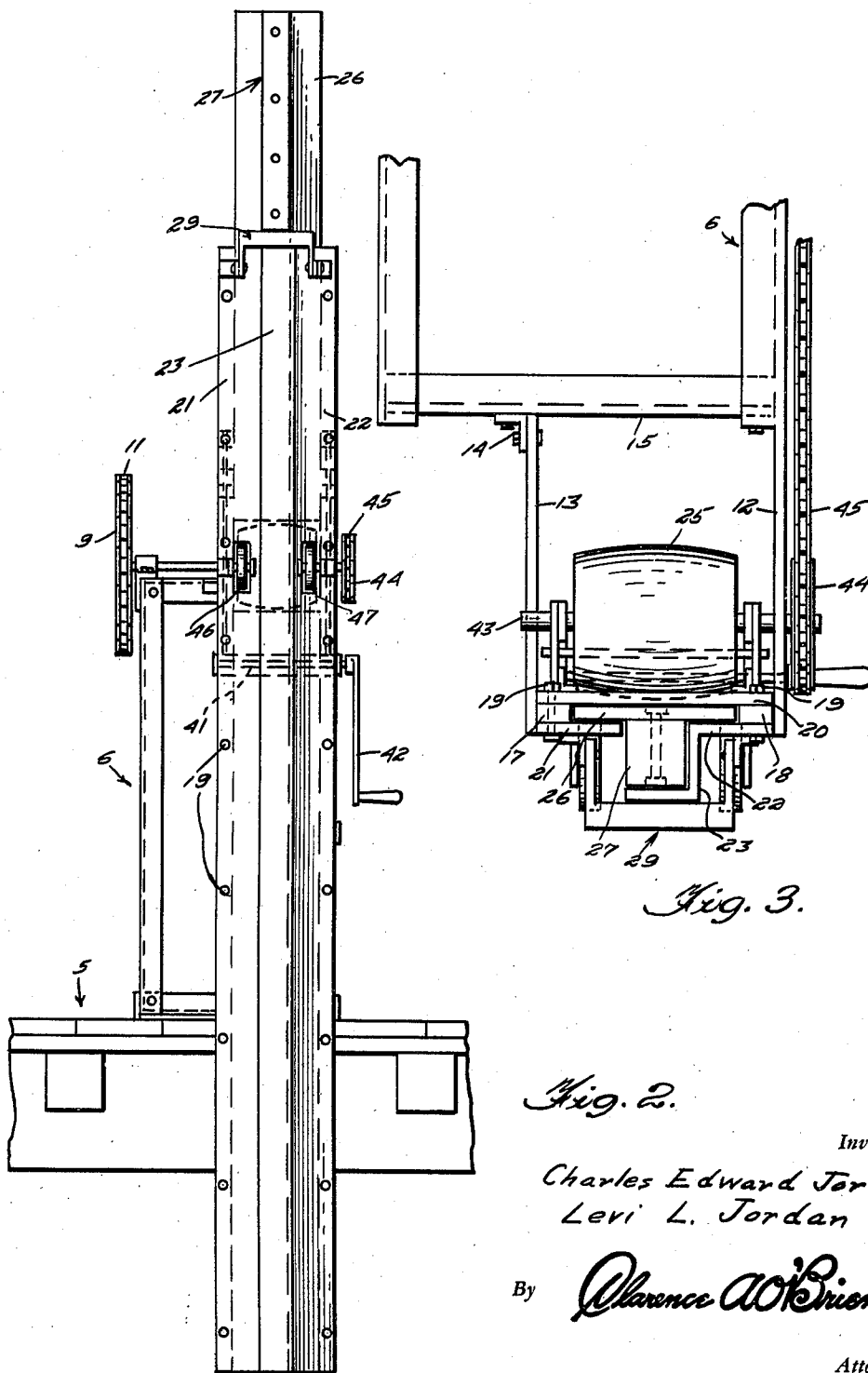


Fig. 3.

Fig. 2.

Inventor

Charles Edward Jordan

Levi L. Jordan

By

Clarence A. O'Brien

Attorney

May 16, 1944.

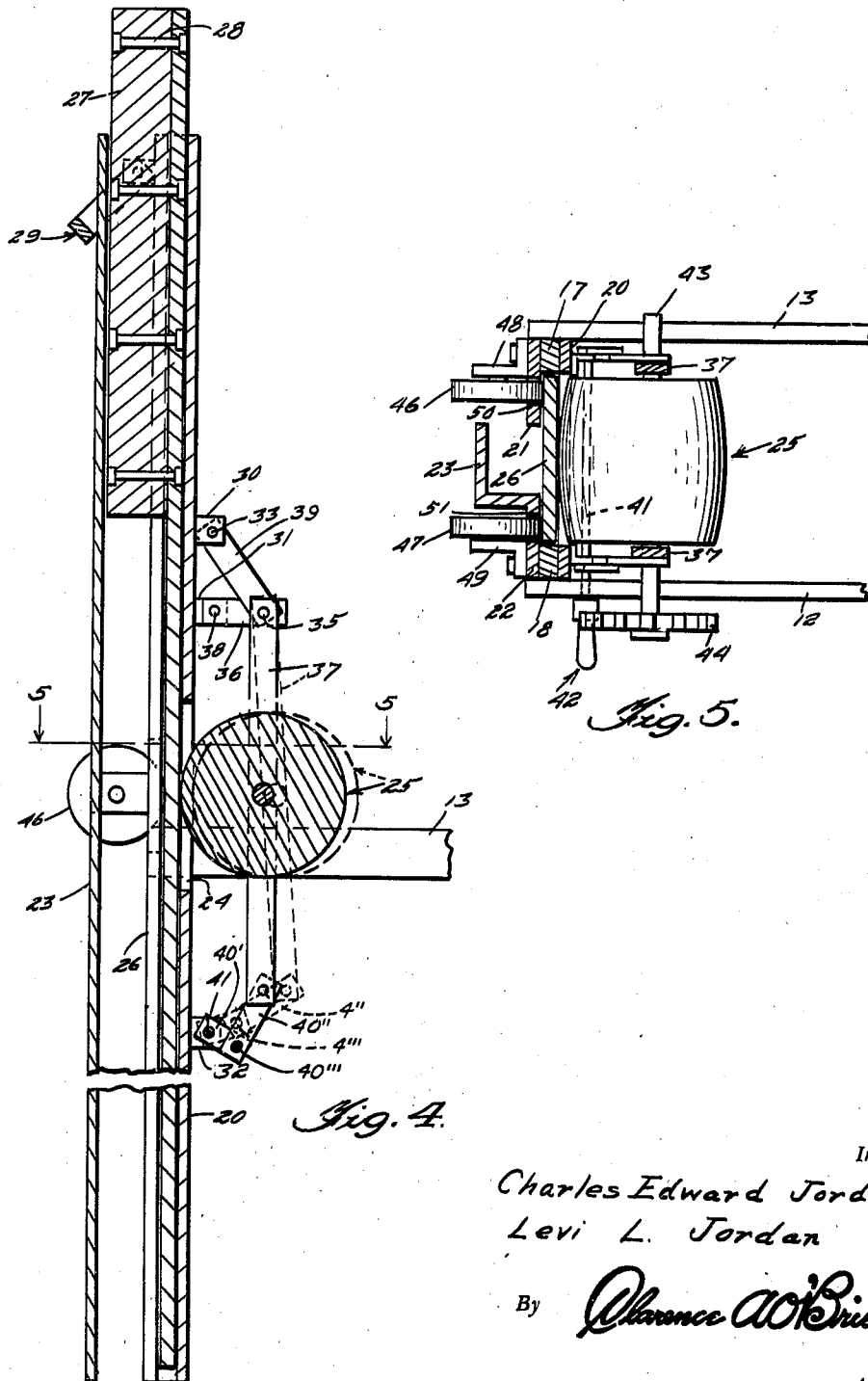
C. E. JORDAN ET AL

2,348,820

FENCE POST DRIVER

Filed March 11, 1941

3 Sheets-Sheet 3



Inventor

Charles Edward Jordan

Levi L. Jordan

By

Clarence A. O'Brien

Attorney

UNITED STATES PATENT OFFICE

2,348,820

FENCE POST DRIVER

Charles Edward Jordan, Dawson, and Levi L.
Jordan, Oskaloosa, Iowa

Application March 11, 1941, Serial No. 382,826

3 Claims. (Cl. 61—74)

Our invention relates to improvements in means for driving uprights into the ground, and particularly to a fence post driver, the said fence post driver being characterized by marked simplicity and fewness of parts, as well as by ready portability, and the primary object of our invention is to provide a practical and easily operated arrangement of this character.

Another important object of our invention is to provide an arrangement of the character indicated above which is especially adapted for operative mounting on a truck, with the hammer lifting mechanism operatively connected to a power source on the truck.

Other important objects and advantages of our invention will be apparent from a reading of the following description taken in connection with the appended drawings, wherein for purposes of illustration we have shown a preferred embodiment of our invention.

In the drawings:

Figure 1 is a fragmentary general vertical longitudinal sectional view taken through the rear part of a truck showing the same equipped in accordance with the present invention with the fence post driving means.

Figure 2 is a fragmentary enlarged elevational view looking from left to right in Figure 1.

Figure 3 is a fragmentary enlarged top plan view of Figure 2.

Figure 4 is a transverse vertical sectional view taken through Figure 2.

Figure 5 is a fragmentary horizontal sectional view taken through Figure 4 along the line 5—5 and looking downwardly in the direction of the arrows.

Referring in detail to the drawings, the numeral 5 generally designates the floor of a suitable truck body or chassis having a generally rectangular framework 6 secured thereon and mounting on the upper side members 7 thereof in suitable bearings a transverse horizontal shaft 8 which includes the relatively large sprocket wheel 9 and the relatively small sprocket wheel 10. A drive sprocket chain 11 is trained over the larger sprocket wheel 9 and over a power take-off (not shown) on the truck, of which several types are conventionally available.

One of the horizontal side members 7 of the framework 6 is extended beyond the rear end of the framework 6 as indicated in Figure 3 of the drawings by the numeral 12, and a companion extension 13 is mounted at 14 on the transverse upper member 15 at the rear of the framework 6.

Horizontal pivots 16 connect the rear ends of

the extensions 12 and 13 to vertical guide bars 17 and 18, respectively, which extend substantially the full height of the guide structure to be described. To the front of the guide bars 17 and 18 are bolted or riveted or otherwise suitably secured as indicated by the numeral 19 a substantially plane front plate 20 which extends substantially the full height of the guide bars. To the front side of the guide bar 17 is secured a laterally inwardly projecting flange plate 21 which is substantially plane and has a major portion thereof extending in rearwardly spaced relation to the front face of the plane plate 20 as indicated in Figure 3 of the drawings. This flange plate 21 is secured in place by the fastening means 19 already mentioned. Similarly fastened to the rear face of the guide bar 18 is an angle iron plate 22 which has a portion similar to the flange plate 21 extending in parallel spaced relation to the front face of the plane plate 20, and the angle-shaped portion 23. A sufficient opening 24 is provided in the plane front plate 20 for effective engagement of the fibre or similar material clutch pulley 25.

The hammer consists of a plain vertically elongated plate-like bar 26 to slide in the guideway provided by the plane plate 20 and the guide bars 17 and 18 and the retaining flanged members 21 and 22 as indicated in Figure 3 of the drawings. The upper part of the bar 26 has the weighted rectangular cross section mallet 27 affixed thereto by bolts 28 or similarly adequate means, with the heads of the bolts or the like flush so as not to interfere with the smooth action of the hammer. The mallet 27 is slidably guided and confined by the adjacent walls of the channel-shaped part 23 of the guide element 22, as shown in Figure 3 of the drawings. Attached to the opposite sides of the guideway or to the plates 21 and 22 are the opposite legs of a retaining bail 29 which is adapted to be placed over the upper end of the hammer to hold the same down in place while the device is being transported, the bail being adapted to be placed in the disengaged position illustrated in Figure 4 while the device is in use.

Secured to the front of the opposite marginal edges of the plane plate 20 are vertically spaced pairs of brackets 30, 31 and 32. Pivoted at 33 by its upper end to the bracket 30 is a forwardly declining link 34 which is pivoted at 35 to a normally horizontal link 36 and the upper end of a vertical link 37, the link 36 being pivoted at its rear end at 38 on the bracket 31. The lower end of the long vertical link 37 is pivoted at 39 to the upper end of an L-shaped crank 40

which comprises angularly related links 40', 40'' pivoted together, as at 40'''. The links 40' is fixed on the shaft 41 to which a hand crank or lever 42 is rotatably connected. As indicated in Figure 3 of the drawings, the described linkages are duplicated at opposite sides of the plate 20, both linkages being located within the extensions 12 and 13 of the framework 6, and the long vertical links 37 carrying between them the friction pulley shaft 43 on which is mounted the fibre or other suitable material clutch or friction pulley 25 which has the slightly convexed contour indicated in Figure 3 for effective frictional engagement with the adjacent surface of the plate element 26 of the hammer. The pulley shaft 43 has fixed thereon the relatively small sprocket wheel 44 from which is trained the sprocket chain 45 which is, in turn, trained over the relatively small sprocket wheel 10 on the framework 6.

By reason of the arrangements described, the power connection of the truck operating the sprocket wheel 9 and hence the sprocket wheel 10, the friction or clutch pulley 25 is in continuous operation in a clockwise direction as seen in Figure 4. Normally the hand lever or crank 42 is in such a position that the pulley 25 is disengaged from the hammer. However, operation of the hand crank in the proper direction will through the described links 40', 40'' swing the links 37 on the pivots 35 to bring the pulley 25 into engagement with the hammer bar 26 so as to exert an upward push on the hammer which is effective to lift the hammer from a depressed position to an elevated operative position from which it drops upon the fence post or the like (not shown) to drive the same into the ground.

The brackets 30 are designed to be adjusted on the plate 20, in any suitable manner, to adjust the described linkage and take up wear in the pivotal connections thereof.

In addition to the flange plates 21 and 22, the guideway assembly comprises a pair of rollers 46 and 47 which are mounted on suitable brackets 48 and 49, respectively, secured to the rear side of the flange plates 21 and 22 as illustrated in Figure 5 of the drawings, suitable openings 50 and 51, respectively, being provided to permit the rollers 46 and 47 to engage the marginal portions of the plate 26 of the hammer in opposition to the friction pulley 25, with which the rollers are in substantial horizontal alignment. By the means described, the vertical movement of the hammer is facilitated under the action of the pulley 25, due to the reduction of friction of the guideway. It is obvious that manual operation of the hand lever 42 may predetermine the degree of operative engagement of the pulley 25 with the hammer, as may also determine the height to which the hammer is lifted on each lifting operation. Following a lifting operation, with the fence post or the like inserted in place below the mallet portion 27 of the hammer, the hand lever 42 is simply operated slightly in the release direction, and the hammer drops by gravity to force the fence post or the like on its way into position in the ground. The dotted

lines in Figure 4 of the drawings show varied positions of the friction pulley 25 and its operating linkages in different positions of the hand lever 42.

5 A bar 52 is horizontally hinged at 53 to the plate 20 and extends forwardly alongside of one of the rear vertical members of the framework 6. The bar 52 has holes 54 to selectively accept a pin 55 on the said member whereby the hammer may be held in a selected angular position relative to said framework.

10 Although we have shown and described herein a preferred embodiment of our invention, it is to be definitely understood that we do not wish to limit the application of the invention thereto, except as may be required by the scope of the subjoined claims.

15 Having described the invention, what is claimed as new is:

20 1. A fence post driver comprising a support, a vertical guideway mounted on said support, said guideway comprising a C-shaped channel, a hammer comprising a relatively wide vertically elongated plate having its marginal portions slidably confined in the opposite sides of said channel, said hammer further comprising a vertically elongated block secured to said plate and projecting laterally outwardly through the space between the edges of the open side of said channel, the web of the channel opposite said opening being formed with an opening, a friction wheel carried by said guideway for movement into and out of engagement with said plate of the hammer to elevate said hammer when engaged with the plate and permit the hammer to fall from an elevated position when disengaged from said plate, operating means for moving said friction roller into and out of engagement with the said plate, and driving means on said support and operatively connected for driving said friction wheel.

2. A fence post driver according to claim 1 wherein anti-friction rollers are mounted on said channel to extend through openings formed in the spaced portions forming the said open side of the channel to rollably bear against the said marginal portions of the plate of the hammer in opposition to said friction roller.

3. A fence post driver comprising a support, a hammer comprising a flat driver bar endwise movable vertically, and an elongated rectangular mallet fixed on the upper end portion of said bar in parallel centered relation thereto, guideway forming means for said hammer comprising a pair of upstanding spaced apart guide bars, a plate extending along said pair of bars on one side thereof, and a pair of spaced apart plates extending along the bars of said pair, respectively, on the other side thereof, one being a plane plate and the other of angle iron form, said pair of guide bars and said plates forming a guideway confining said driver bar therein and out of which the mallet extends, and said plate of angle iron form providing a guideway for said mallet, and releasable means to drive said driver bar upwardly.

CHARLES EDWARD JORDAN,
LEVI L. JORDAN.