

No. 714,288.

Patented Nov. 25, 1902.

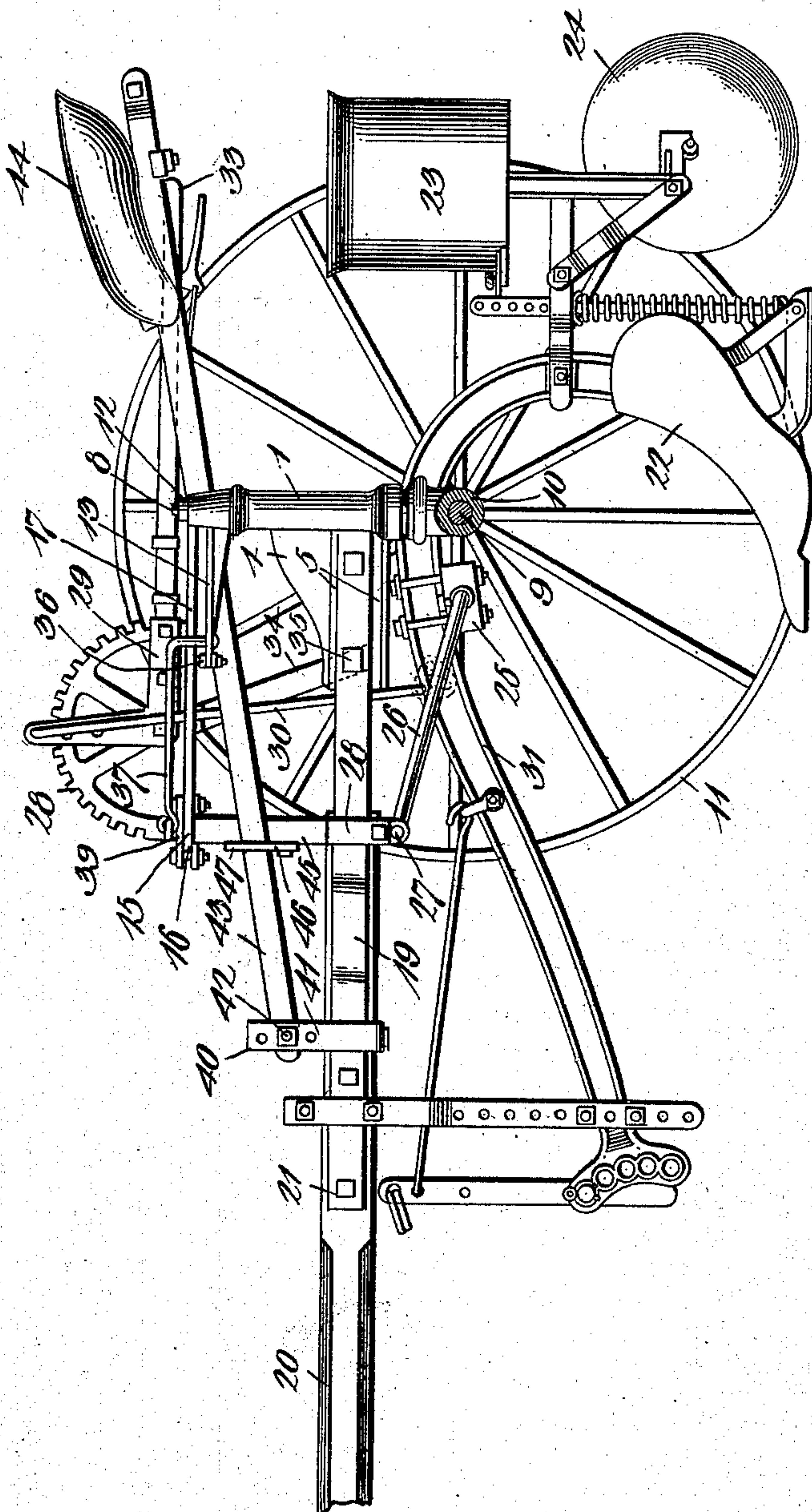
G. ENGELMANN.
SULKY LISTER.

(Application filed Aug. 21, 1902.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.



Witnesses
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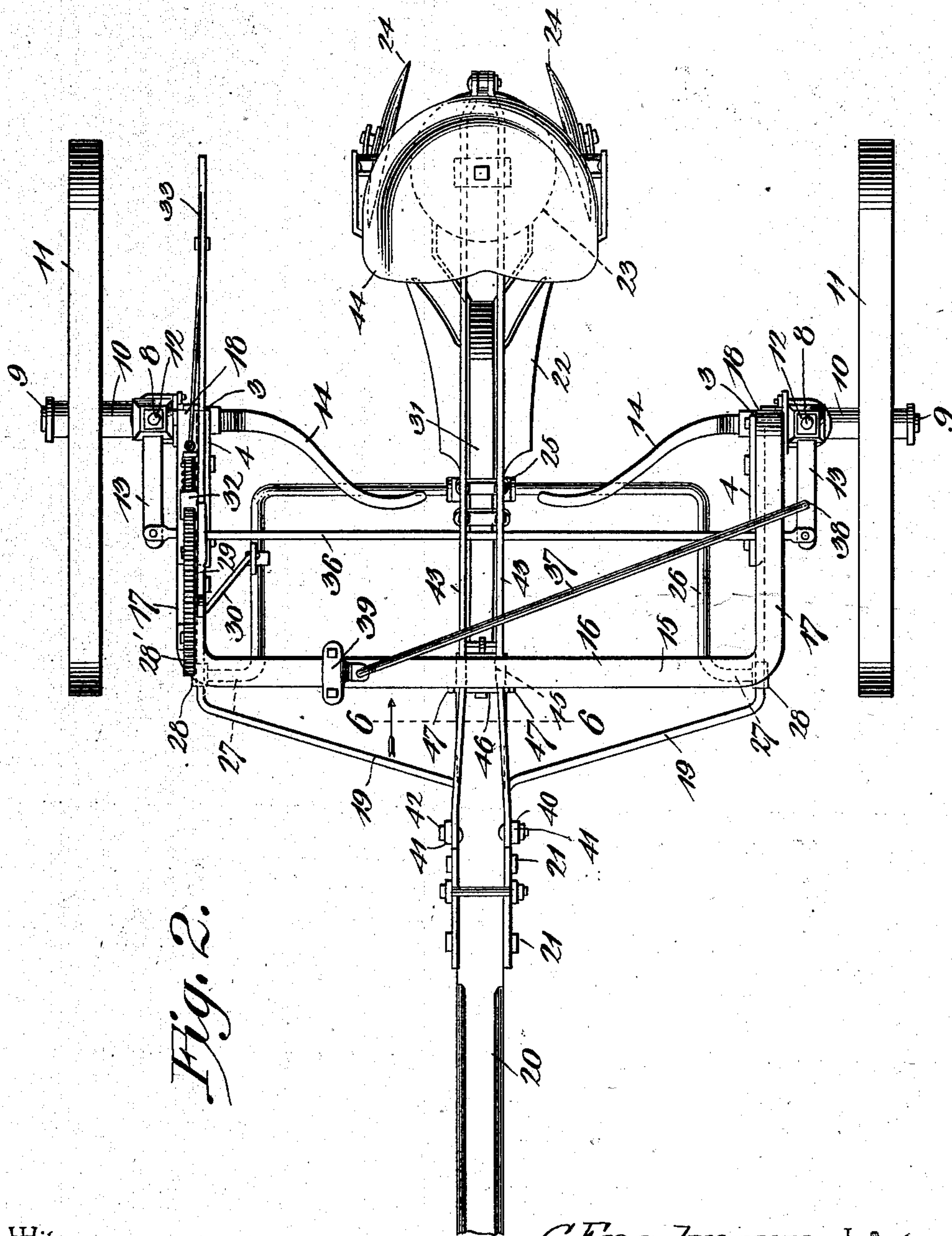


Fig. 2.

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Fig. 3.

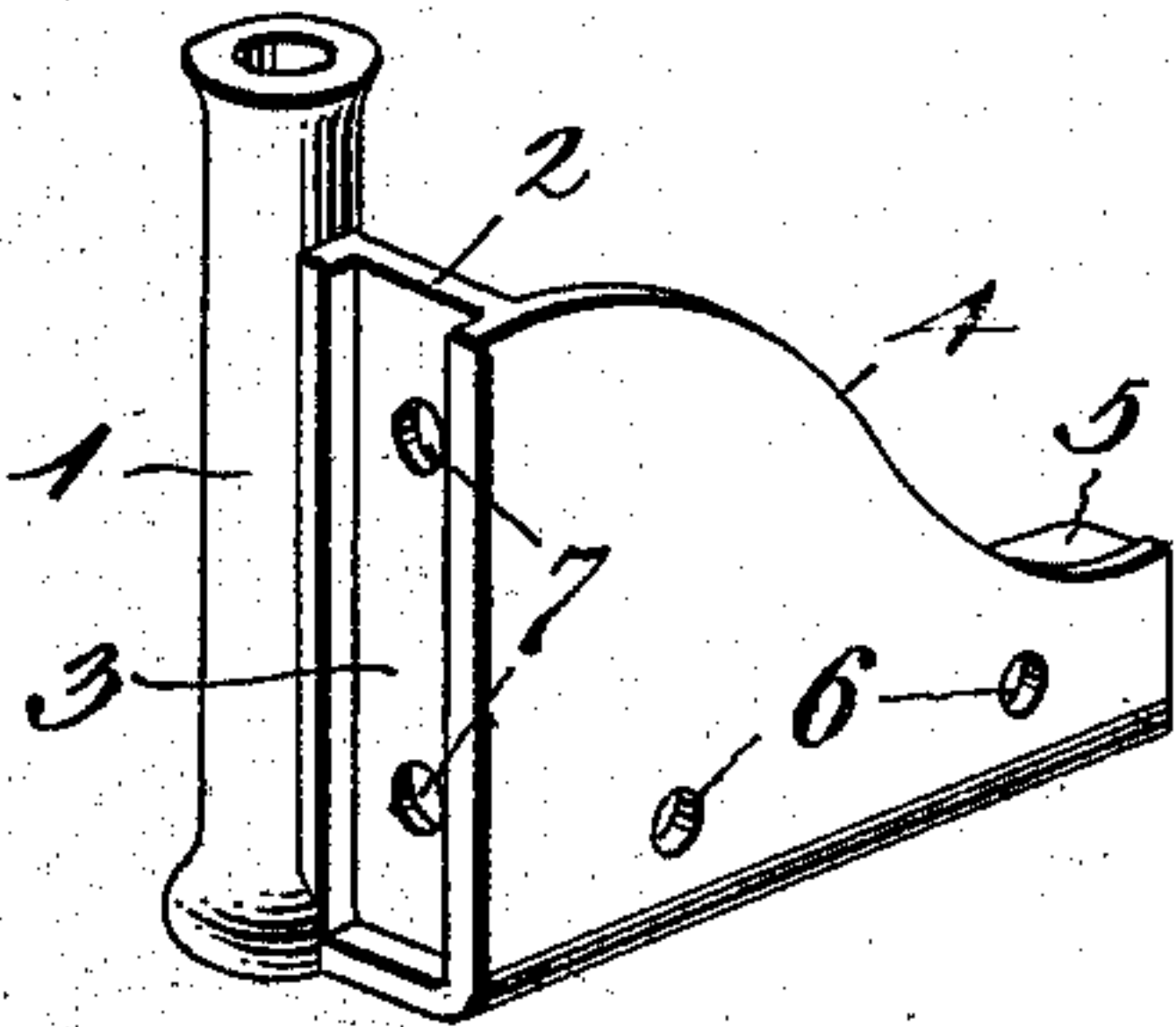


Fig. 4.

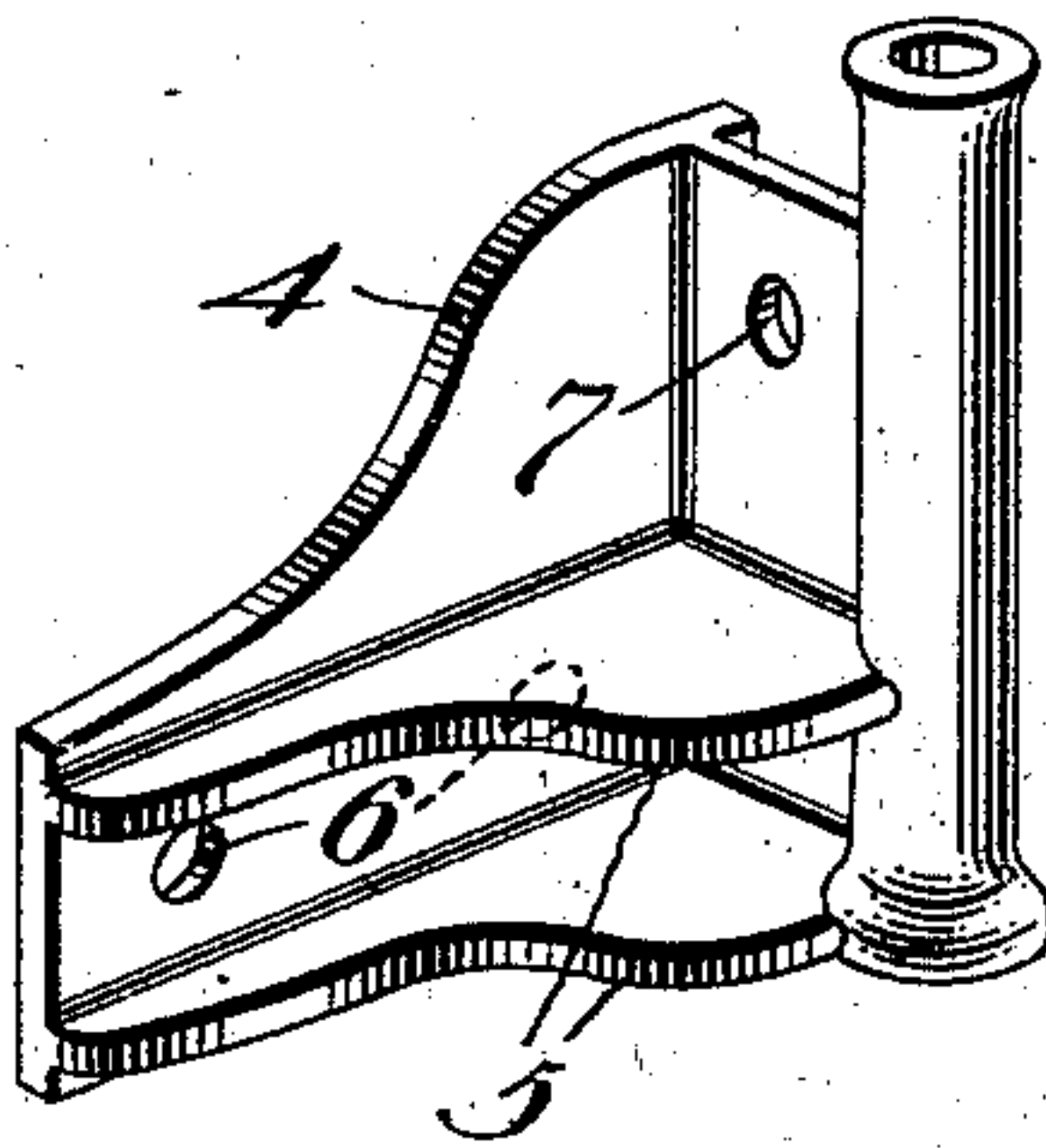


Fig. 6.

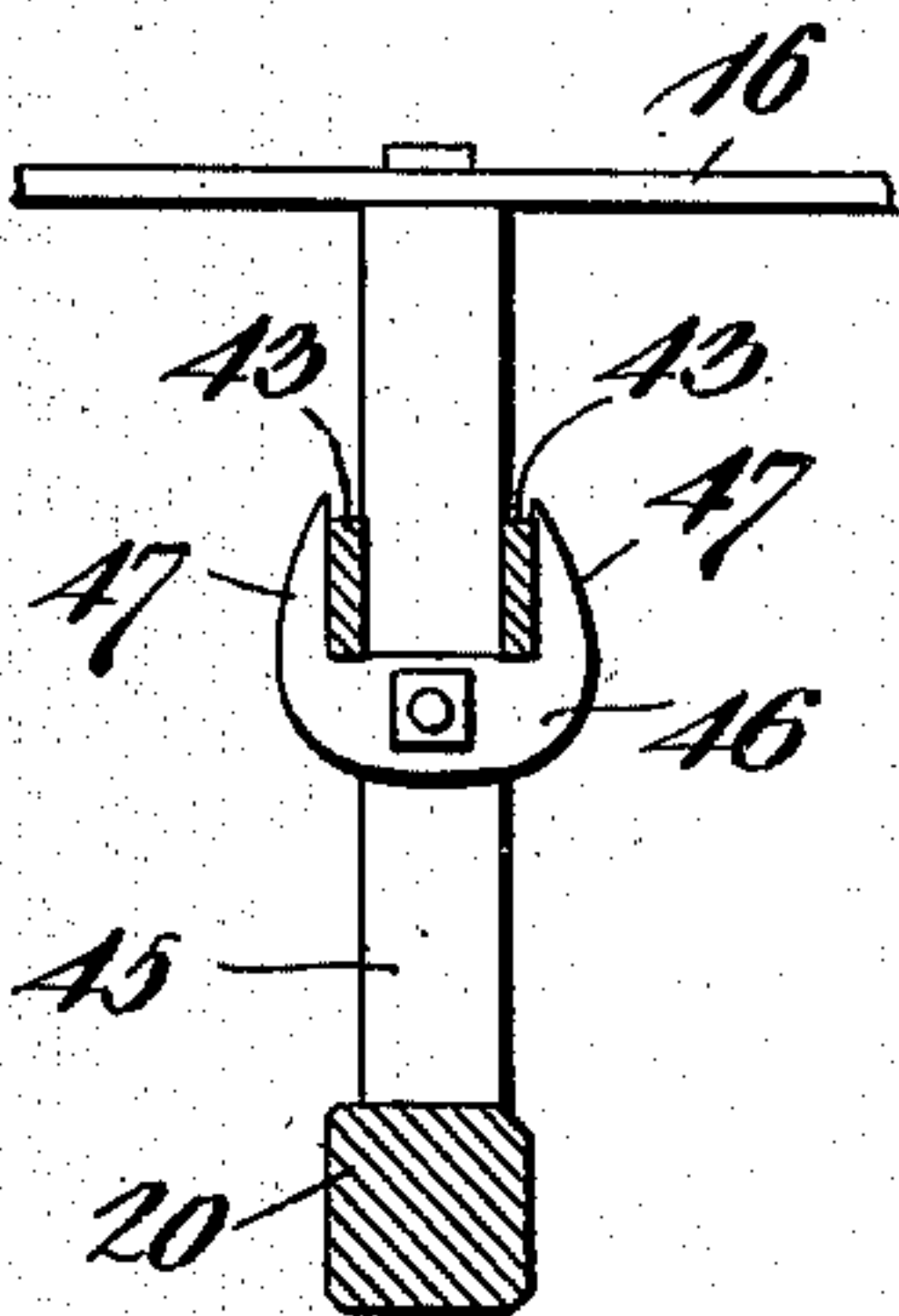


Fig. 5.

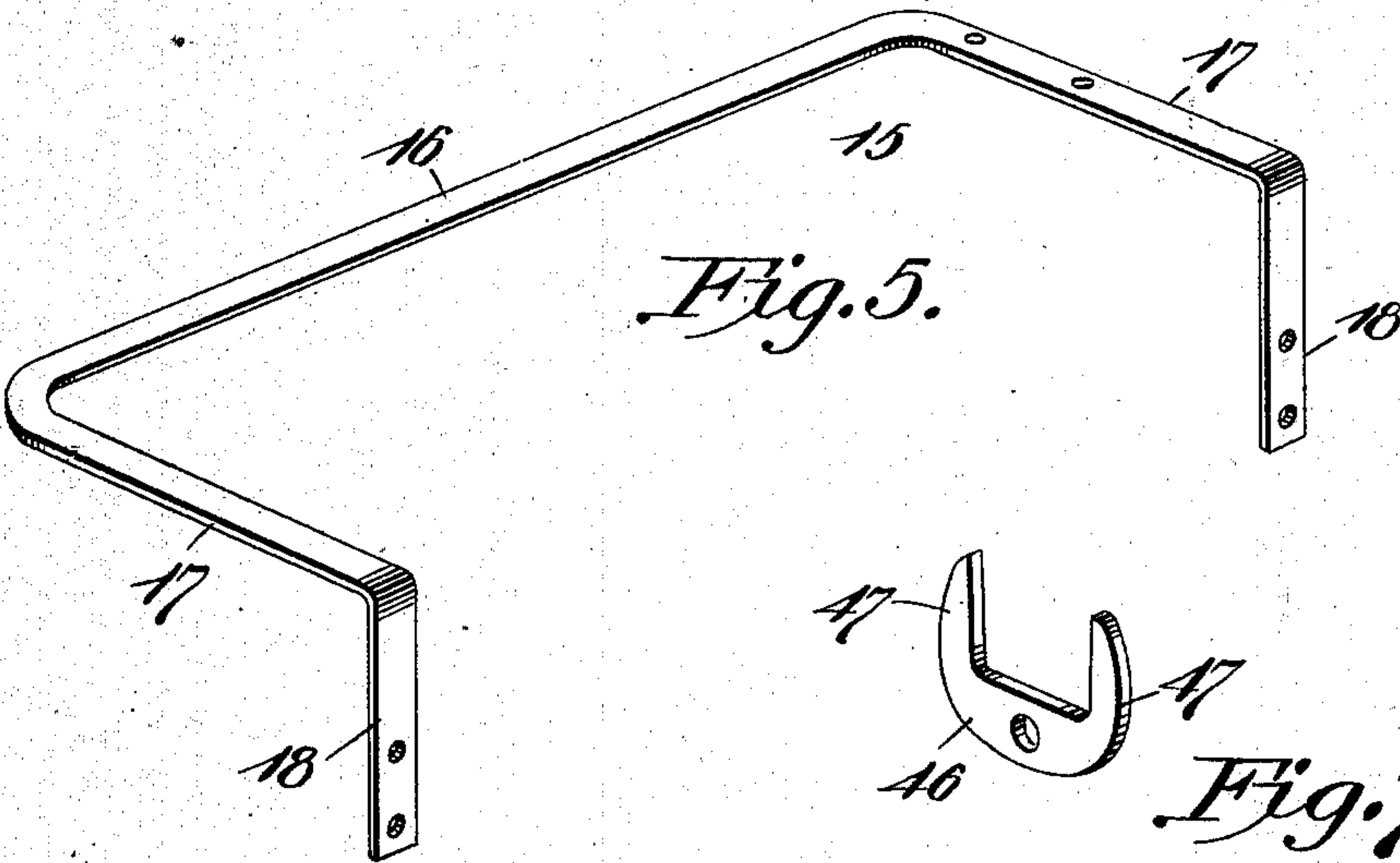
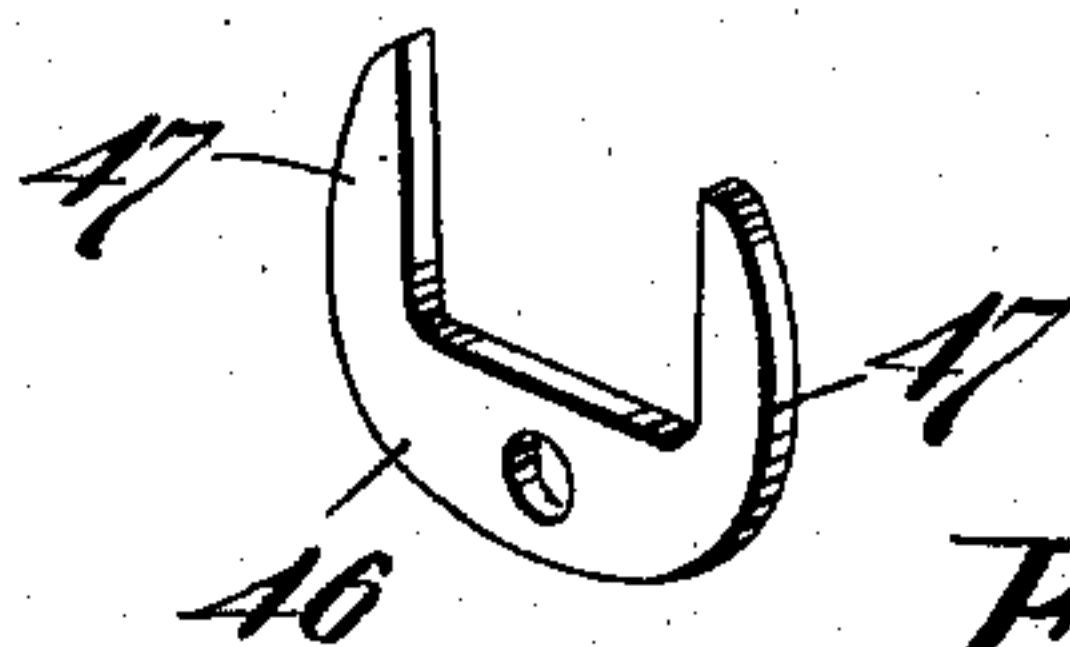


Fig. 7.



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UNITED STATES PATENT OFFICE.

GUSTAV ENGELMANN, OF SELMA, TEXAS.

SULKY-LISTER.

SPECIFICATION forming part of Letters Patent No. 714,288, dated November 25, 1902.

Application filed August 21, 1902. Serial No. 120,516. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV ENGELMANN, a citizen of the United States, residing at Selma, in the county of Bexar and State of Texas, have invented a new and useful Sulky-Lister, of which the following is a specification.

This invention relates to sulky-listers for planting listed corn, cotton, and other crops; and it is an improvement on the device for which Letters Patent of the United States, No. 696,555, were granted to me on the 1st day of April, 1902.

The present invention has for its object to provide a machine which shall be compact, consisting of but few parts, in which the parts lying between the supporting-wheels shall be brought more closely together than heretofore, so as to allow the machine greater freedom in turning, consequently enabling sharper corners to be turned.

A further object of the invention is to so arrange the component parts of the device that the machine shall be more thoroughly under the control of the driver.

A further object is to so construct and arrange the parts that they shall be mutually braced, thereby enabling a light-weight implement to be made which shall be capable of resisting any strain to which it may be subjected.

A further object is to bring the seat-supporting bars more closely together than in my former patent, thereby allowing the driver more freedom of movement, so that he may more thoroughly and satisfactorily control the operation of the machine.

With these and other ends in view the invention consists in the improved construction, arrangement, and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of a machine constructed in accordance with this invention, the rear wheel having been removed. Fig. 2 is a top plan view of the machine. Figs. 3 and 4 are perspective views, on a larger scale, showing in detail one of the corner-pieces which connect the arch-bar with the side bars of the sulky-frame, said corner-piece being seen from opposite sides. Fig. 5 is a perspective detail

view of the arch-bar of the sulky-frame. Fig. 6 is a sectional detail view taken on the line 6 6 in Fig. 2. Fig. 7 is a perspective detail view of the U-shaped clip which supports the seat-bars.

Corresponding parts in the several figures are indicated by similar numerals of reference.

In the construction of the frame of my improved sulky-lister two cast-iron corner-pieces are employed, the same being cast in right and left hand patterns. In Figs. 3 and 4 of the drawings I have shown one of said corner-pieces as seen from the front and rear sides, the said corner-piece being the one which is located at the right-hand side of the machine when viewed from the front. The said corner-piece consists of a vertical sleeve 1, having a laterally-extending flange 2, the rear side of which is provided with a vertical groove 3. A side wall 4 extends forwardly from the outer edge of the flange 2, and said side wall is connected with the said flange and with the sleeve 1 by a pair of horizontally-disposed brackets 5 5. The side wall 4 is provided with perforations 6, disposed intermediately between the brackets 5 5, and the flange 2 is likewise provided with several perforations 7 for the reception of the fastening means to be hereinafter referred to.

The sleeves 1 1 form bearings for the axles 8, which are of the construction usually employed in this kind of devices, being vertically disposed in their respective bearings and provided at their lower ends with cranks or stubs 9, forming spindles upon which the hubs 10 of the wheels 11 are journaled. Suitable means, such as nuts 12 and correlated parts, may be used for retaining the vertical axles 9 in their bearings. These means may be the same as shown in my former patent, hereinafter referred to, as may be the means for connecting the said axles with the forwardly-extending arms 13 and the laterally-extending foot-levers 14, which latter, as will be seen, are curved slightly in a forward and in an inward direction, so as to come well within reach of the feet of the driver, the location of whose seat will be presently described.

15 designates the arch-bar of the machine, which has been shown in detail in Fig. 5 of the drawings, by reference to which it will

be seen that it comprises a transverse bar 16, provided at its ends with rearwardly-extending arms 17, the rear ends of which are bent downwardly to form brackets 18, which engage the grooves or recesses 3 in the rear sides of the flanges 2 of the corner-pieces, where the said bars are rigidly secured by means of connecting-bolts passing through the perforations provided for that purpose in the said brackets and flanges. The side bars 19 are bolted or otherwise rigidly secured to the inner sides of the side walls 4 of the corner-pieces, where they are disposed between and braced by the horizontal flanges 5. These side bars are extended forwardly for a short distance in front of the member 16 of the arch-bar and are thence bent inwardly toward each other and then again forwardly, engaging the sides of the tongue 20, with which they are connected by means of transverse bolts 21.

22 designates the plow, which is connected with the tongue by means of a draft attachment which is identical in construction with that shown in my former patent, as is the construction and arrangement of the seedbox 23, the covering-disk 24, and intermediate parts, of which further description is therefore deemed unnecessary. The plow-beam is in like manner provided with a bearing-block 25, in which is journaled a crank 26, the ends of which are provided with studs 27, journaled in hangers 28, that are suitably supported by the side bars 19.

28 designates a rack-segment, which is bolted or otherwise suitably secured directly upon the right-hand-side arm 17 of the arch member 15. To the segment 28 and concentrically therewith is pivoted a bell-crank lever 29, the short arm of which is connected by a link-rod 30 with the crank-supporting plow, so that by manipulating the said lever the plow may be raised or lowered, as may be desired. The lever 29 is provided with the usual locking mechanism, consisting of a spring-actuated pawl or dog 32, engaging the rack-segment and manipulated by means of a handle 33, connected with the lever. The under side of the arm 17, which supports the rack-segment and related parts, is connected by means of a diagonal brace 34 with the front end of the corresponding corner-piece of the frame, the lower end of said brace being preferably secured by the same bolt 35 which serves for the securing of one of the side bars 19. In this manner I am enabled to construct the arch-bar of comparatively light material and yet attain the degree of strength and rigidity which is indispensable in a device of this class.

36 is a cross-bar connecting the front ends of the arms 13, which, as stated, have connection with the vertical axles, so that movement shall in this manner be transmitted between the two axles. Such movement is controlled by the driver by means of the foot-levers 14, which, as will be readily understood, may be operated so as to adjust the

wheels to guide the machine in any desired direction.

37 is a hooked rod the inner end of which is connected with the cross-bar 16 of the arch by means of a clip 39. The free hooked end of this rod is adapted to engage a perforation 38 in one of the arms 13, thereby securing it and the corresponding bar at the other side of the machine connected therewith by the rod 36 immovably in position when it shall be desired to guide the machine in a straight forward direction, thus avoiding irregularities in the course which might be occasioned by the driver unconsciously shifting the positions of the foot-levers 14.

40 designates a clip the sides of which engage the sides of the tongue, against the under side of which the said clip is supported. The side arms 41 of the clip are connected by a bolt 42, which serves for the attachment of the seat-supporting bars 43, which are extended rearwardly, as shown, and which support the seat 44. The tongue 20 supports an upright brace 45, which in turn forms a central support for the cross-bar 16 of the arch-bar, which is thereby materially braced and enabled to support the weight carried thereby. Upon the front side of the brace 45 is bolted or otherwise secured a U-shaped plate or clip 46, the vertical arms of which, 47, extend slightly beyond the outer sides of the vertical post or brace 45, so as to form supports for the seat-supporting bars 43, one of which is thus disposed on either side of the post 45 and between it and the adjacent clip-arm 47. The side arms 41 of the clip 40 are provided with a plurality of perforations, whereby the point of attachment of the front ends of the seat-bars may be regulated. Said seat-bars being supported upon the clip-plate 46 as upon a fulcrum are thus capable of being adjusted for the purpose of raising or lowering the seat, as may be desired or found necessary.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of this invention will be readily understood. The general construction of the device is very simple, and by the improvements herein shown and described a machine is produced capable of bringing about the best practical results and the lightness and simplicity of which will commend it to those skilled in the art to which it appertains.

I desire it to be understood that while I have in the foregoing described the preferred construction of my invention I realize that structural changes may be made without detracting from the utility or departing from the spirit and scope of my invention. I therefore reserve the right to any changes and modifications which may be resorted to without changing the nature of the invention.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. A corner-piece comprising a vertically-

disposed sleeve having a lateral flange extending inwardly toward the center of the machine, and a side wall extending forwardly from said flange.

5 2. A corner-piece comprising a vertically-disposed sleeve having a lateral flange extending inwardly toward the center of the machine, a side wall extending forwardly from said flange, and horizontally-disposed brackets connecting said side wall with said flange and sleeve.

15 3. A corner-piece comprising a vertically-disposed sleeve having a lateral flange extending inwardly toward the center of the machine and provided with a vertical recess in its rear side, a side wall extending forwardly from said flange, and horizontally-disposed brackets connecting said side wall with said flange and sleeve.

20 4. In a sulky-frame, a pair of corner-pieces comprising vertically-disposed sleeves having lateral flanges extending inwardly toward the center of the machine, in combination with an arched connecting member comprising a cross-bar, arms extending rearwardly from the same, and brackets depending from said arms and connected securely with the flanges of the corner-pieces.

30 5. In a machine of the class described, a sulky-frame comprising corner-pieces consisting of vertically-disposed sleeves having lateral flanges, grooved in their rear sides, side walls connected with and extending forwardly from said flanges, and horizontally-disposed brackets connecting said side walls with said flanges and sleeves; an arched member consisting of a cross-bar having rearwardly-extending arms terminating in downwardly-extending brackets engaging and securely connected with the flanges of the corner-pieces; side bars secured between the horizontal flanges of the corner-pieces, to the side walls of the latter, and extended forwardly, inwardly and thence again forwardly; and a tongue clamped between the front members of said side bars.

50 6. The combination of the corner-pieces, the side bars secured to said corner-pieces and extended in the direction of each other, the tongue clamped between said side bars, the

arch-bar secured to the corner-pieces and having a forwardly-extended cross member, a supporting-brace interposed between the latter and the tongue, a U-shaped clip-plate secured to said supporting-brace and the seat-supporting bars supported by said U-shaped clip-plate on opposite sides of the supporting-brace and having adjustable connection at their front ends with a point of attachment supported by the tongue.

7. In a sulky-frame, the combination of a supporting-brace spacing the tongue and the superimposed member of an arch-bar connecting the wheel-frames, supporting means upon said brace, seat-bars resting upon said supporting means, and means for the attachment of the front ends of said seat-bars adjustably with relation to the tongue.

8. In a machine of the class described, the combination of the corner-pieces, the arch-bar connecting the said corner-pieces and consisting of a transverse member having rearwardly-extending arms terminating in downwardly-extending brackets secured to the flange members of said corner-pieces, the side bars secured to the side walls of the corner-pieces, extended forwardly, inwardly, and again forwardly, the tongue clamped between said side bars, hangers upon said side bars supporting a crank, a plow, pivotal connecting means between the crank and the plow-beam, a rack-segment supported upon one of the side members of the arch-bar, a bell-crank lever having a dog engaging said rack, a link-rod connecting the shorter arm of the bell-crank with the crank supporting the plow, and a brace connecting the under side of the side member of the arch-bar supporting the rack-segment with the approximate corner-piece, the connecting means being one of the bolts by means of which the proximate side bar is secured to said corner-piece.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GUSTAV ENGELMANN.

Witnesses:

J. J. MEYERS,

FRANK J. BOSSHARDT.