J. W. JACKSON.

TRACTION ENGINE GANG PLOW.

APPLICATION FILED APR. 22, 1909.

950,535. Patented Mar. 1, 1910.

2 SHEETS—SHEET 1.

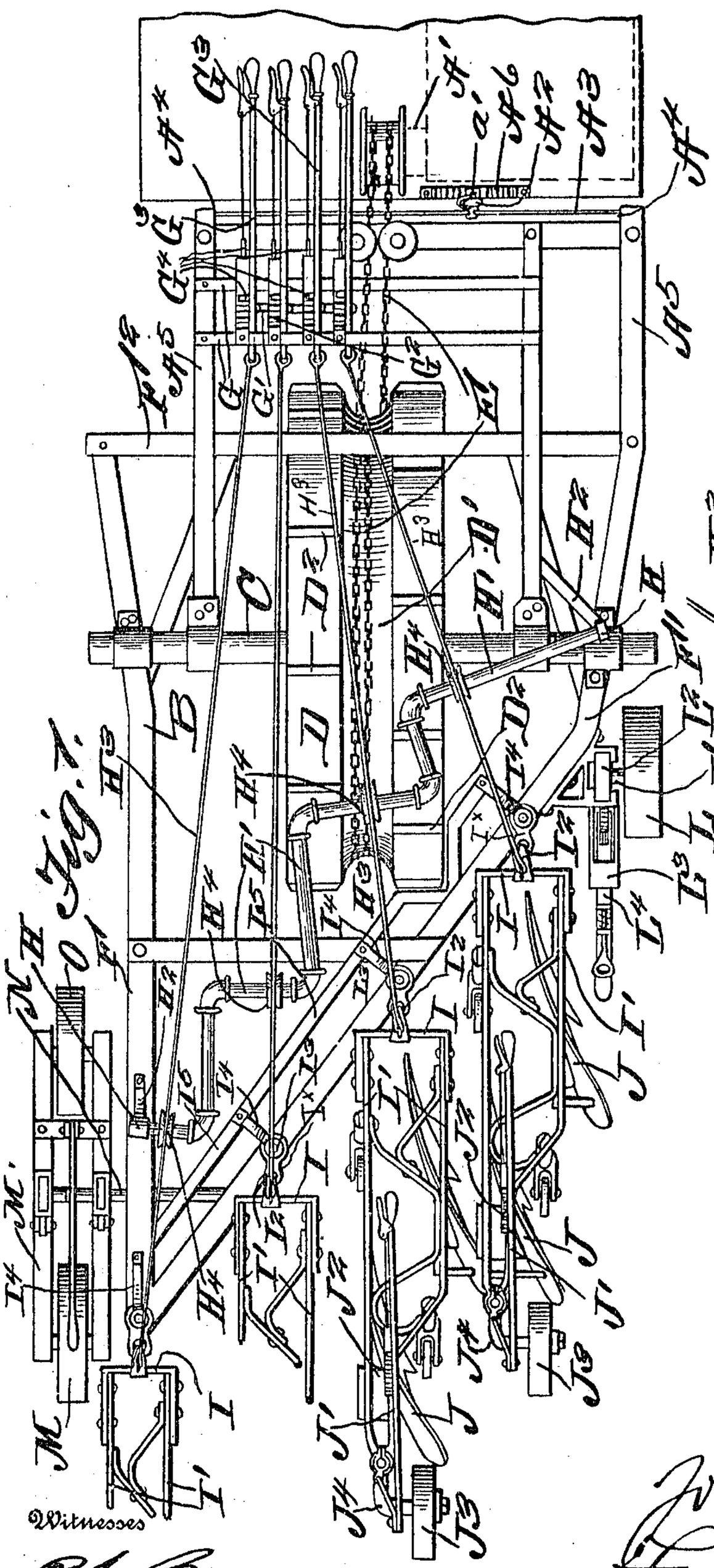

Fig. 1.

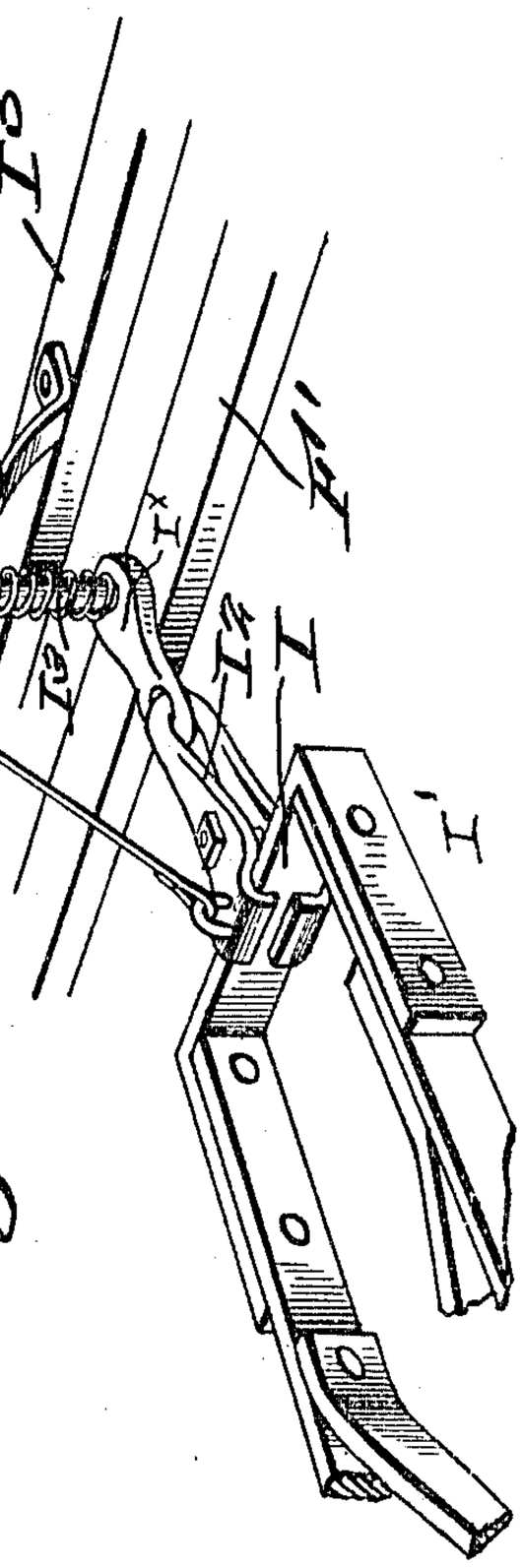

Fig. 2.

Witnesses

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Fig. 5.

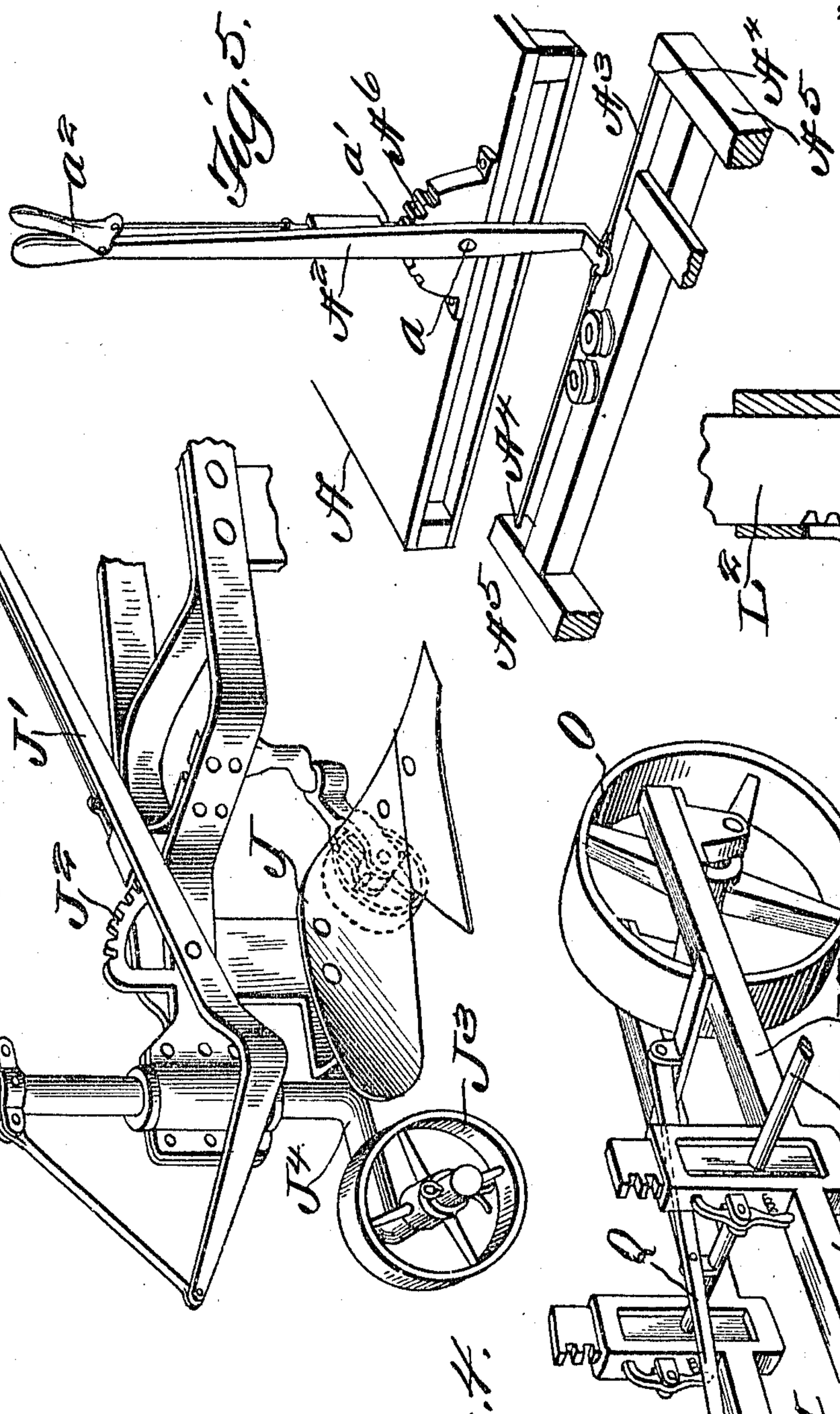
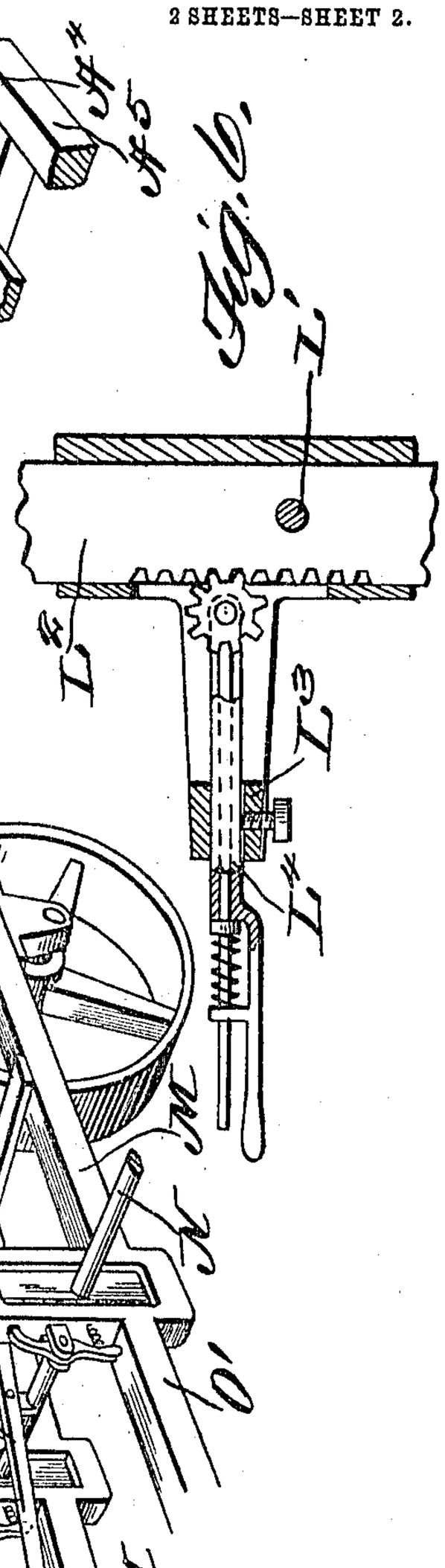


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN WEIR JACKSON, OF MOOSE JAW, SASKATCHEWAN, CANADA.

TRACTION-ENGINE GANG-PLOW.

950,535. Specification of Letters Patent. **Patented Mar. 1, 1910.**

Application filed April 22, 1909. Serial No. 491,648.

To all whom it may concern:

Be it known that I, JOHN W. JACKSON, a subject of the King of England, residing at Moose Jaw, in the Province of Saskatchewan, Canada, have invented certain new and useful Improvements in Traction-Engine Gang-Plows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in traction engine gang plows and comprises various details of construction, combinations and arrangements of parts which will be hereinafter fully described and then specifically defined in the appended claims.

My invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a perspective view of my apparatus complete. Fig. 2 is a side elevation. Fig. 3 is a detail view showing the adjustment of the means whereby the plows are adapted to uneven ground. Fig. 4 is a detail view of the means for adjusting the plows. Fig. 5 is a detail view of the tilting lever, and Fig. 6 is a detail sectional view of a portion of the apparatus.

Reference now being had to the details of the drawings by letter, A designates a frame upon which the driving engine, not shown, is adapted to be mounted and A′ designates the driving shaft of the engine from which power is obtained for driving the apparatus.

B designates the frame of the machine made of any suitable material, preferably metal and suitably braced, and C designates a driven shaft mounted in suitable bearings in said frame and having a wheel D adjustably mounted thereon. Said wheel has a central circumferential groove D′ about which the cable or endless chain E passes, said cable or chain also passing about the engine shaft A′. Upon either side of said circumferential groove upon the wheel are the cleats D^2 arranged preferably in alternate relation and adapted to form means for preventing the wheel slipping when coming in contact with earth.

Suitable draw bars, designated by letters F and F′, are fastened to a transverse draw bar F^2, said draw bars being adapted to have a swinging movement. Pivotally mounted upon a pin *a* fixed to a bracket member upon the platform A is a steering lever A^2, the lower end of which is pivotally connected to a rod A^3, the ends of which are fastened at A^4 to the front ends of the beams A^5 of the frame and *a′* is a rod having a hand lever a^2 pivoted thereto and the end of said rod *a′* is adapted to engage segment teeth A^6 to hold said lever in an adjusted position. Mounted intermediate the beams A^5 of said frame is a cross piece G forming a lever support and G′ is a rod supported by the notched segment members G^2, and G^3 are vertically tilting levers pivotally mounted upon the rod G′ and each of said levers G^3 is provided with a dog or pawl G^4 adapted to engage the teeth of the segment G^2.

Supported upon the draw bars F and F′ is a raising frame H, and H^2 are suitable braces to said frame. Pulleys H^4 are mounted upon the frame H and wires or cables H^3 are connected one to the lower end of each of the levers G^3 and passes over a pulley H^4 and its other end is fastened to an eye *h* upon an arm of the clamping member I^2. Each of said clamping members I^2 has angled ends adapted to engage over the opposite edges of the bracket member I to which bars I′ are fastened and to which latter the beams of the plow J are fixed. Each of the clamping members I^2 is connected by means of a link $I^\times$ which in turn is engaged by a spring-actuated pin I^3 and which passes through a brace I^4 secured to the cross piece I^5 of the frame. Each of said plows is vertically adjustable by means of the lever J′ which is so arranged that, by swinging the lever, the plow may be raised and lowered and held in an adjusted position by means of a pawl engaging a notched segment J^2 and each of said plows rides upon a wheel J^3 mounted in a suitable carriage J^4.

A suitable wheel, designated by letter L, is provided which is mounted upon an axle L′ carried by a notched standard L^2 which is adapted to support the draw bar F′, and L^4 designates a tilting lever mounted in a suitable bracket arm L^3 and adapted to regulate said draw bar F′.

Adjacent to the location where the two draw bars F and F′ meet is mounted an axle N, and O designates a wheel mounted in a suitable frame O′ which is connected to said axle N as is also a wheel M mounted in a

fork M′. A lever Q is pivotally mounted upon the frame and is adapted to regulate the tilting of the wheels which are connected to the axle N.

It will be noted that there are four of the pulleys H^4 mounted upon the cross-piece H′ and a cable H^3 passes about each pulley and each is connected to each lever G^3 while the rear end of each cable is connected to and adapted to raise the two plows, one connected to each of the arms I′ and, by tilting said levers, the plows may be raised or lowered.

In operation, power generated from the engine is communicated to the wheel D, causing the plow to be driven forward, the spurs or cleats in the wheel serving to engage the ground to prevent the wheel slipping. As the apparatus is driven over the ground, the plows are so arranged that eight furrows will be plowed at one time.

What I claim to be new is:—

1. A traction engine gang plow, comprising a frame with suitable draw bars, a series of bracket members having pivotal link connection with one of said draw bars, plow supporting means fastened to said bracket members, a shaft mounted upon said draw bars, pulleys upon said shaft, cables passing over said pulleys and connected to said bracket members, and pivotal levers to which said cables are connected.

2. A traction engine gang plow, comprising a frame with suitable draw bars, pins rising from one of said draw bars, links pivotally and yieldingly mounted upon said pins, clamping members pivotally connected one to each of said links, a bracket member engaged by each of said clamping members, plows, and means for fastening the same to said bracket members, pivotal levers, and cables connecting each of the same with one of said clamping members.

3. A traction engine gang plow, comprising a frame with suitable draw bars, pins rising from one of said draw bars, links pivotally and yieldingly mounted upon said pins, clamping members pivotally connected one to each of said links, a bracket member engaged by each of said clamping members, bars secured to said bracket members and having portions thereof bent to form a bearing, a vertically disposed shaft journaled in said bearings and having a laterally projecting spindle, a caster wheel journaled upon said spindle, and means connected to said clamping members for raising said bracket members.

4. A traction engine gang plow, comprising a frame with suitable draw bars, pins rising from one of said draw bars, links pivotally mounted upon said pins, bracket arms through which said pins pass, a spring mounted between the bracket arm and link, a U-shaped clamping member having angled ends pivotally connected to each link, a bracket member engaged by the angled ends of said clamping member, an eye upon said clamping member, means for holding the latter in clamping positions, plows, and means carried by the bracket members for supporting the same.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

JOHN WEIR JACKSON.

Witnesses:
JOSEPH E. HART,
H. CANFIELD.