

(No Model.)

3 Sheets—Sheet 1.

J. W. HOLLAND.

SULKY GANG PLOW.

No. 352,920.

Patented Nov. 23, 1886.

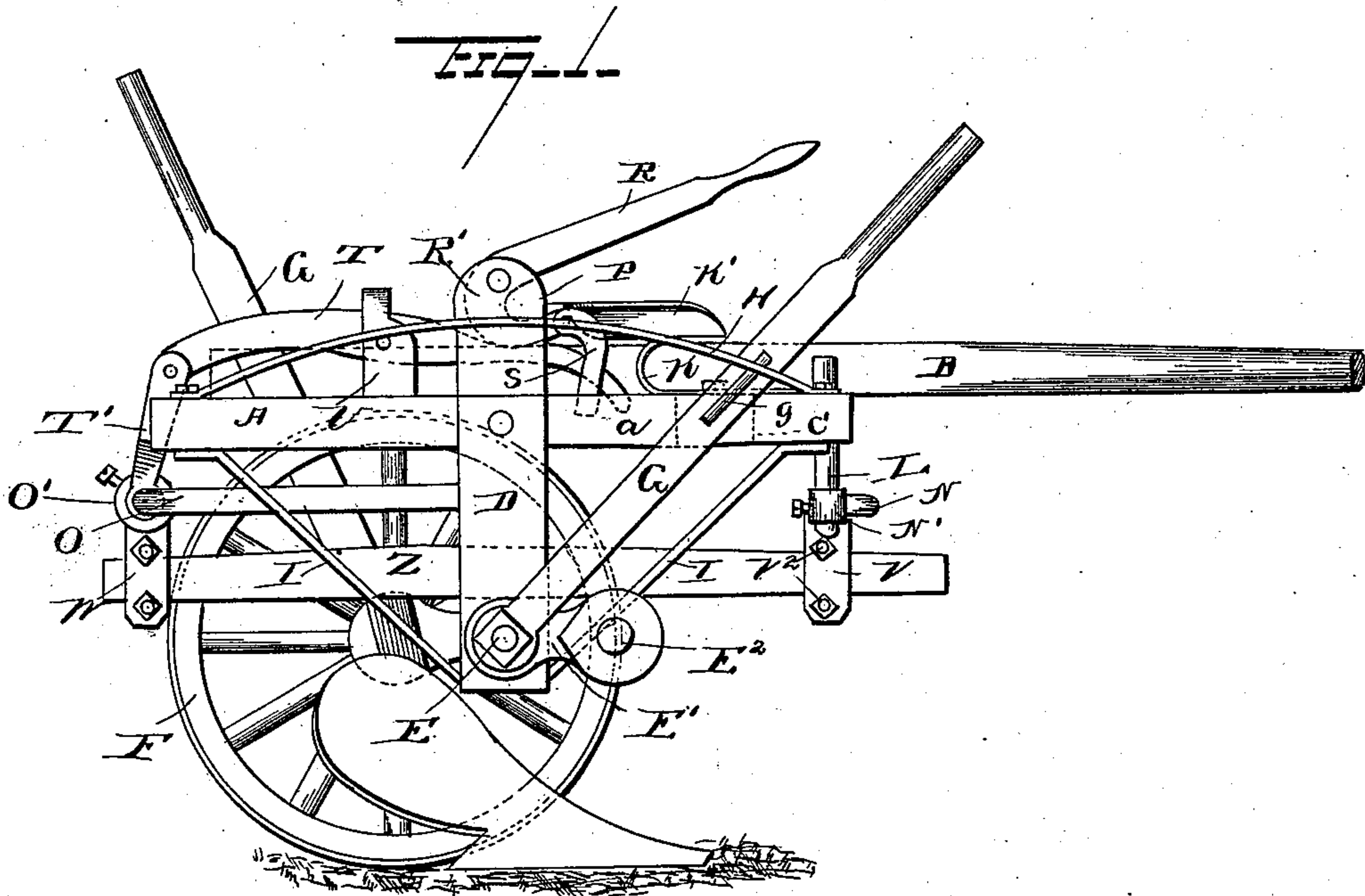
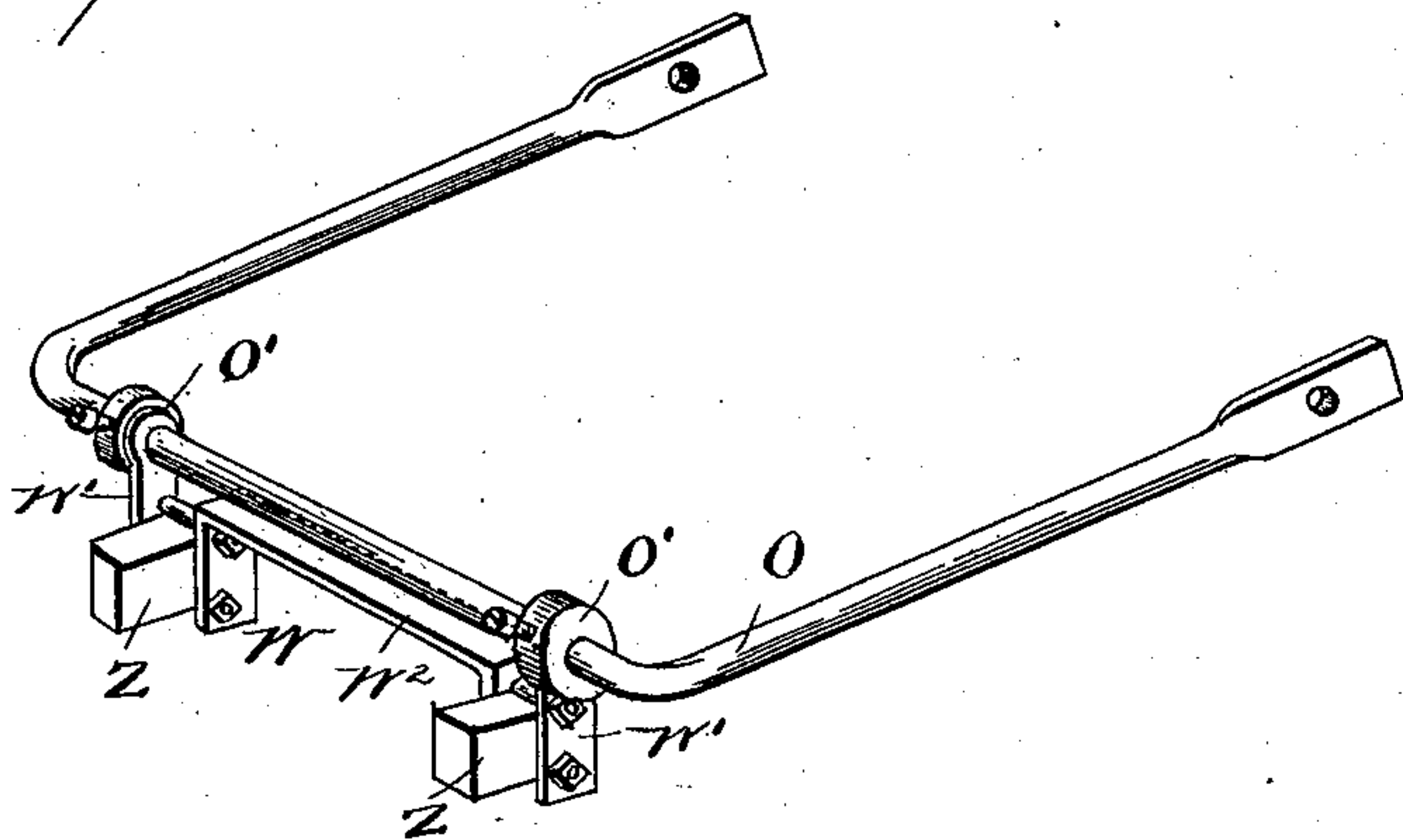


FIG. 5



Witnesses

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E. G. Siggers

Inventor

James W. Holland

By his Attorneys

C. A. Chandler

(No Model.)

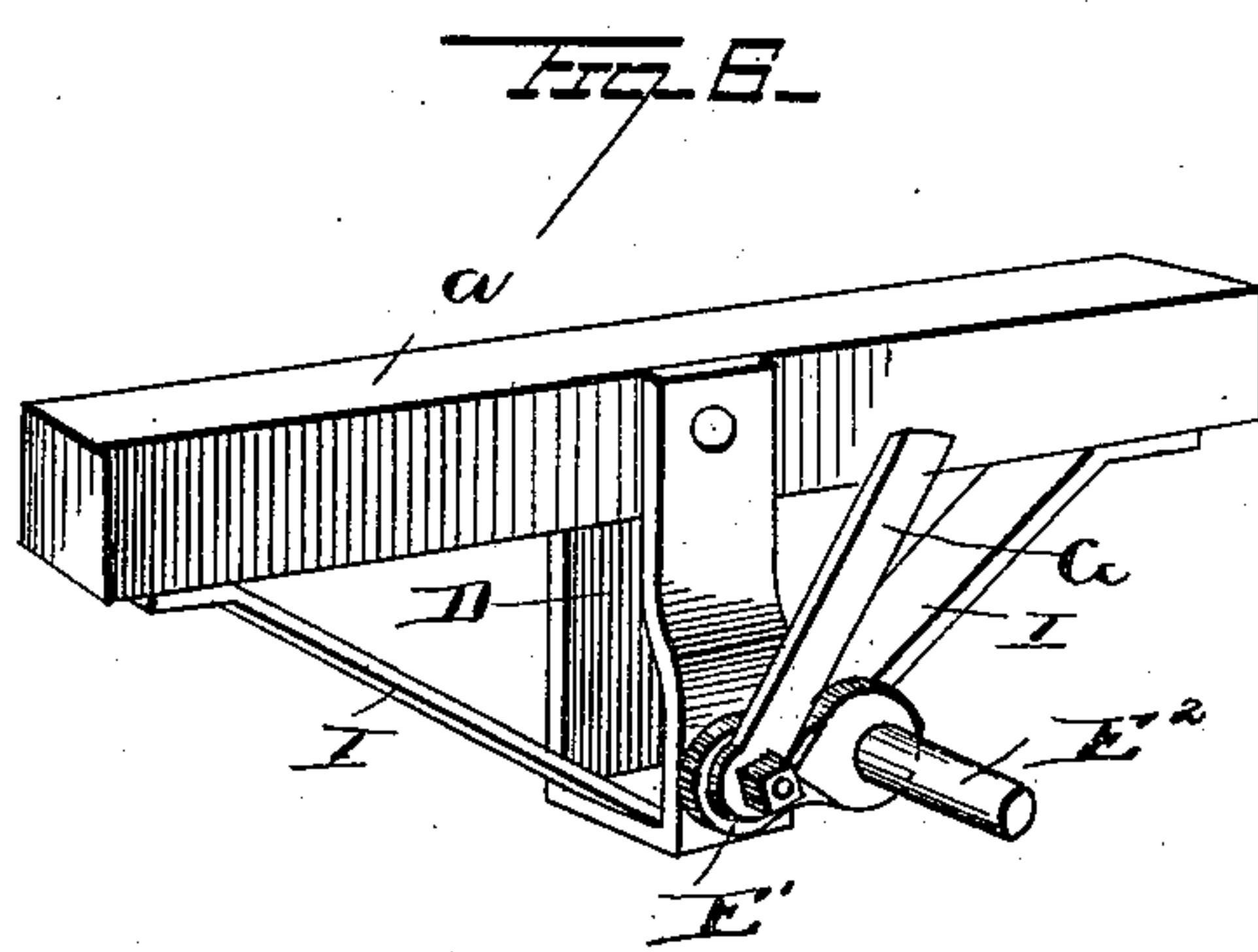
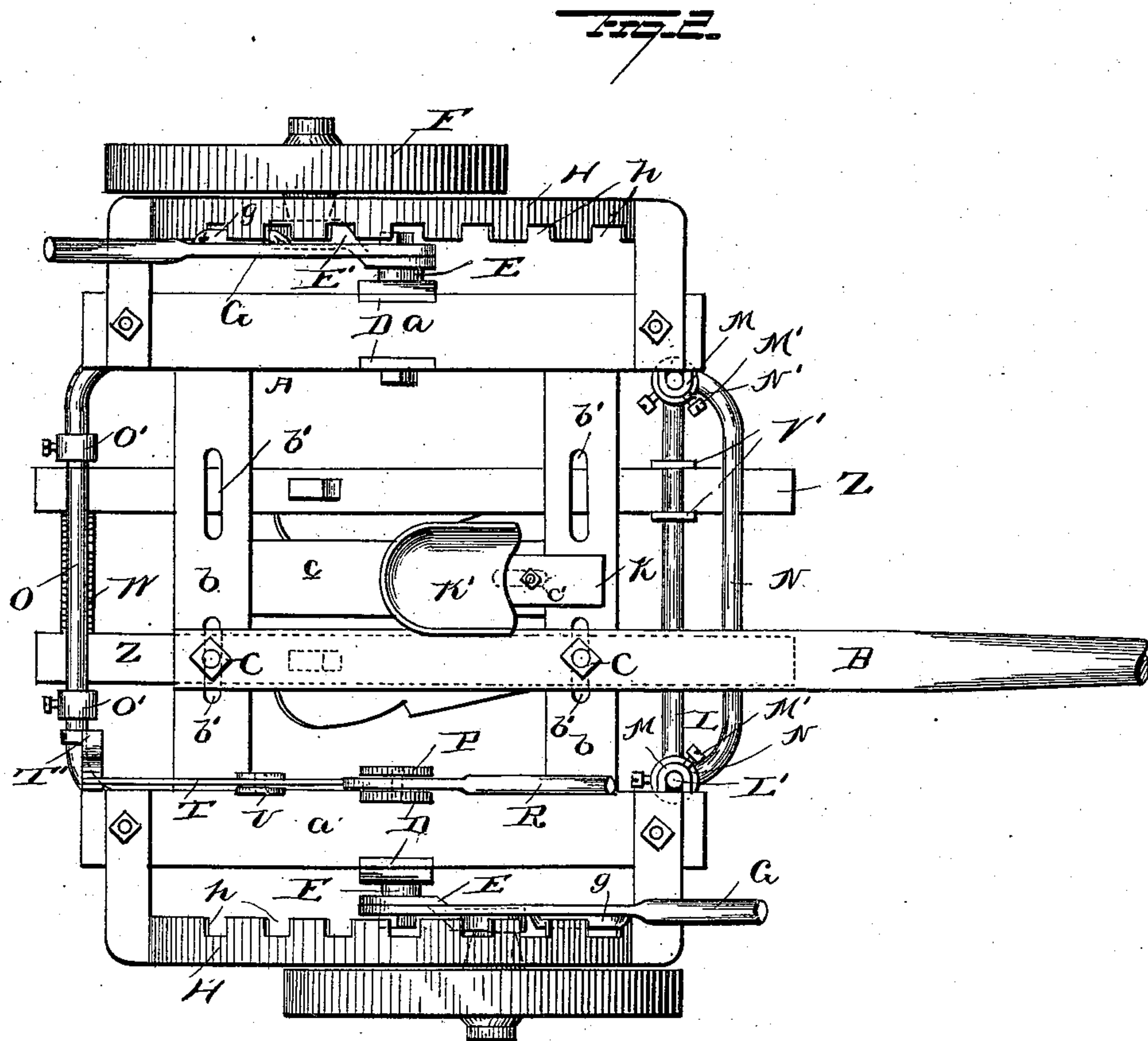
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(No Model.)

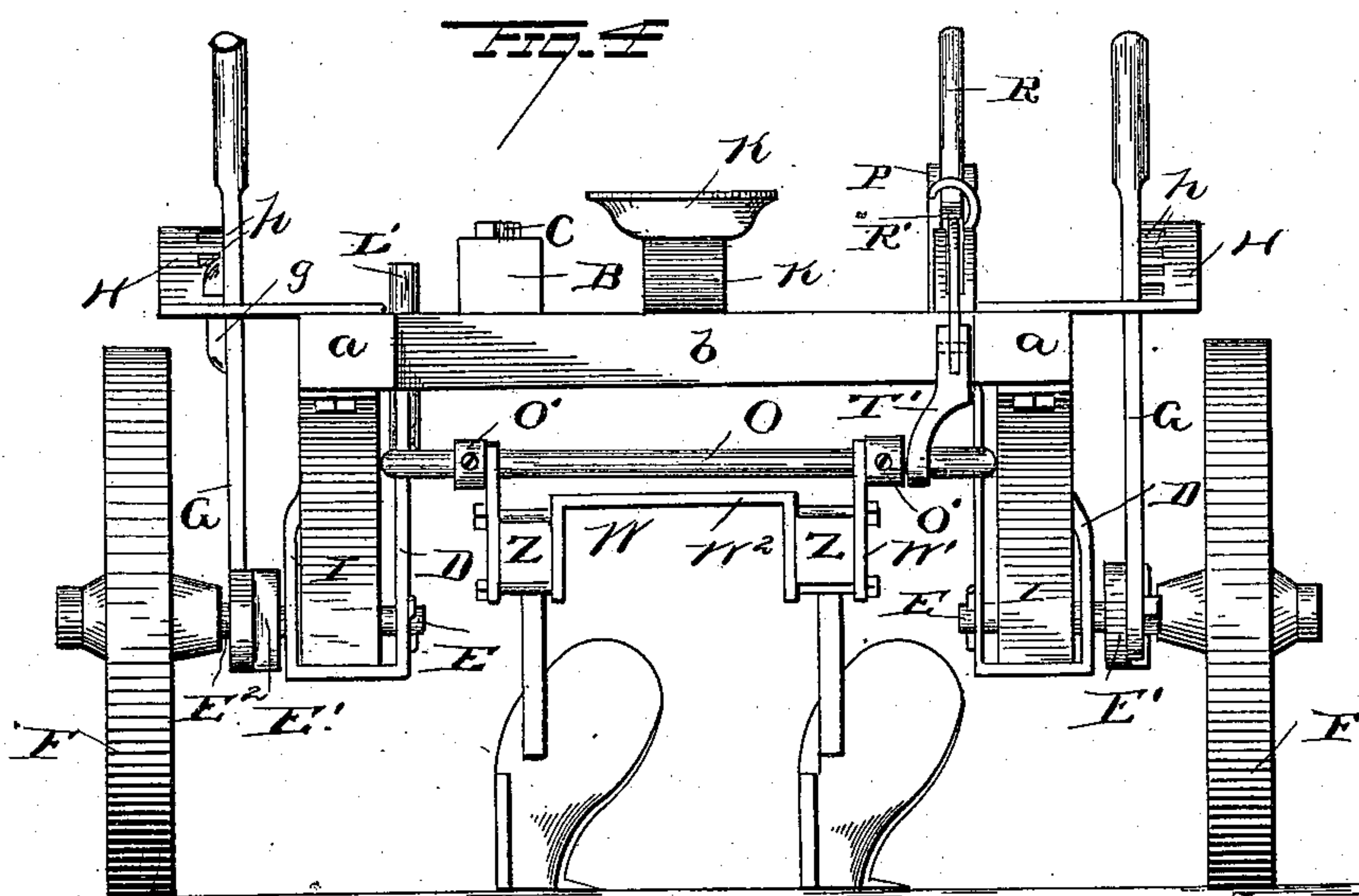
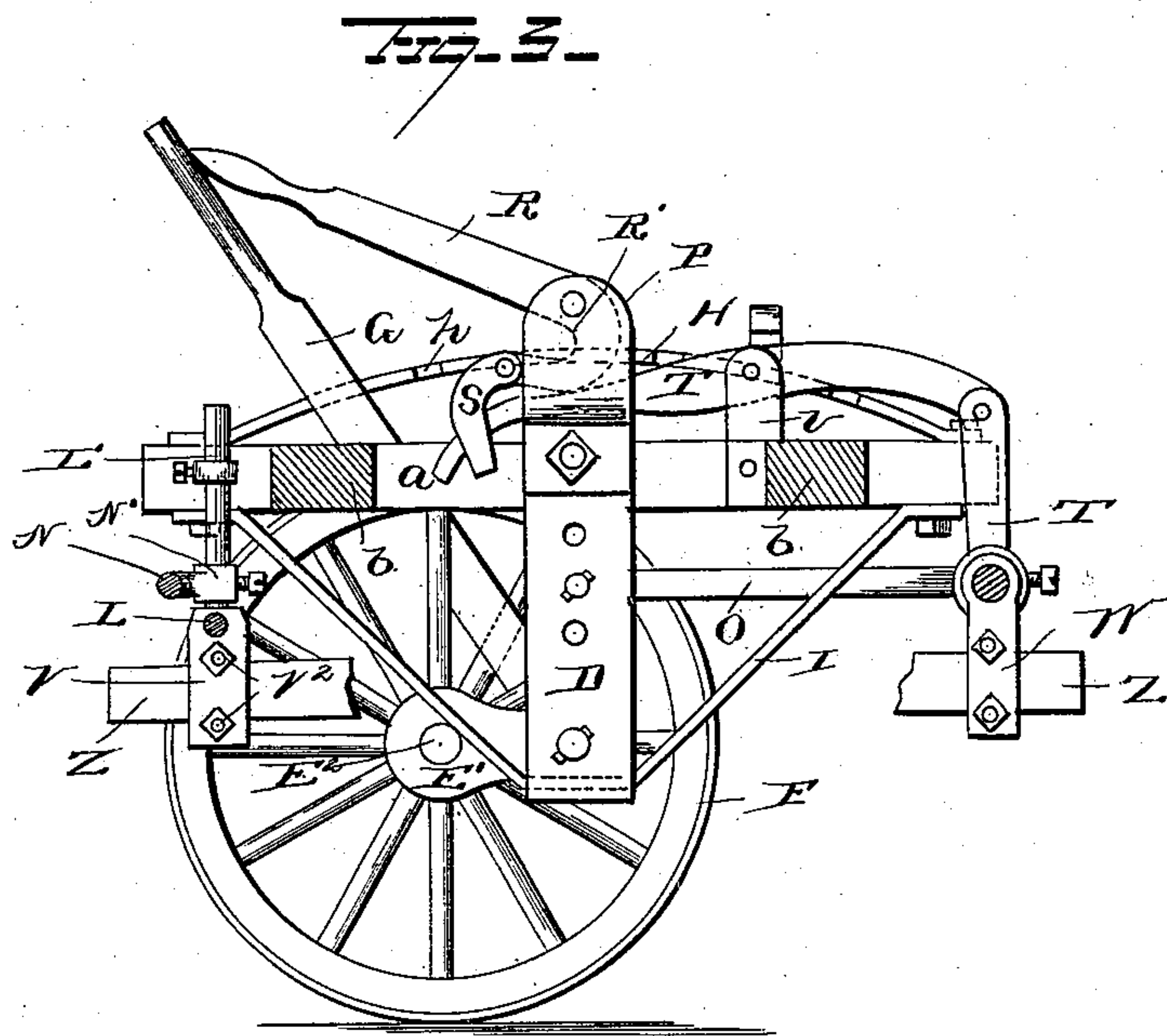
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Witnesses

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# UNITED STATES PATENT OFFICE.

JAMES W. HOLLAND, OF POMEROY, WASHINGTON TERRITORY.

## SULKY GANG-PLOW.

SPECIFICATION forming part of Letters Patent No. 352,920, dated November 23, 1886.

Application filed July 31, 1886. Serial No. 209,681. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES W. HOLLAND, a citizen of the United States, residing at Pomerooy, in the county of Garfield, Washington Territory, have invented a new and useful Improvement in Sulky Gang-Plows, of which the following is a specification.

My invention relates to an improvement in sulky gang-plows; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a sulky gang-plow embodying my improvements. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical longitudinal section taken on the line *xx* of Fig. 2. Fig. 4 is a rear elevation. Figs. 5 and 6 are detailed perspective views.

A represents the frame, which is rectangular and comprises the longitudinal side beams, *a*, the front and rear cross-bars, *b*, and the longitudinal central beam, *c*, which connects the cross-bars *b*. The said cross-bars are provided with transverse elongated slots *b'*.

B represents the tongue, which is provided with bolts C, which pass downwardly through the tongue and enter the openings *b'* of the frame A. By reason of the said openings and the said bolts it will be readily understood that the tongue may be attached to either side of the frame A, and may be adjusted laterally thereon toward or from the center. From the sides of the frame A depend vertical yoke-frames D, which are bent substantially in the shape of the letter U. In the said yoke-frames, near their lower ends, are journaled horizontal spindles E, to the outer ends of which are attached crank-arms E', having outwardly-extending spindles E<sup>2</sup>, on which are journaled the supporting-wheels F.

To the outer end of each spindle E, on the outer side of the crank-arm, is attached a hand-lever, G. The said levers extend vertically and are adapted to sweep across the inner edges of curved detent-bars H. The said detent-bars are provided on their inner edges with serrations or notches *h*, and the hand-levers G are provided with projections *g*, which are adapted to enter the said notches, and thereby secure the hand-levers at any desired

position. As the levers are rigidly attached to the spindles E, it will be understood that by moving the upper free ends of the said levers forward or back the crank-arms E' may be raised or lowered, and thus permit the sides of the frame A to be adjusted vertically independently of each other. The crank-arm on the right-hand side of the frame extends forwardly and the crank-arm on the opposite side of the frame extends rearwardly.

I represents brace bars or rods, which are attached at their extremities to the ends of the side beams, *a*, of the frame, on the under sides thereof, and the said brace bars or rods are bent downwardly and have their central portions attached to the bottoms of the vertical yoke-frames D, and thereby firmly brace and secure the said yoke-frames in place.

The bar or beam *c* of the frame is provided with a longitudinal slot, *c'*.

K represents a spring supporting-bar, to the upper end of which is attached a seat, K', for the driver. The lower end of the spring supporting-bar is provided with a vertical bolt, which passes through the slot *c'* and clamps the spring-bar to the beam *c*. By reason of the said slot *c'* it will be readily understood that the seat may be adjusted forwardly or rearwardly on the frame.

L represents a transverse draw-bar, the ends of which are bent upwardly at right angles, as at L', and are secured in keepers M, which project from the inner side of the front ends of the beams *a*. Set-screws M' pass through the said keepers and bear against the vertical arms of the draft-bar, and thus permit the said draft-bar to be raised or lowered and firmly secured at any desired vertical adjustment. N represents a foot-rest, comprising a bar having eyes N' at its extremities, through which the arms of the draft-bar are passed. The eyes of the foot-rest are provided with set-screws, which bear against the vertical arms of the draft-bar and serve to secure the foot-rest thereon at any desired vertical adjustment.

O represents a supporting-yoke, which is bent substantially in the shape of the letter U. The arms of the said yoke have their front ends pivoted to the inner sides of the vertical yoke-frames D, and thereby the rear horizon-



tal portion of the supporting-frame is adapted to be raised or lowered, as will be readily understood.

P represents a vertical standard, which extends upwardly from one side of the frame, and in the upper end of the said standard is pivoted a hand-lever, R, the lower end of which is bent in the form of a semicircular arm, R', as shown. From the outer end of the said arm depends a link, S.

T represents a curved lever, which is fulcrumed to a standard, U, in rear of the standard P. The front end of the said lever T is curved downwardly, thereby forming a hook to engage the lower end of the link S, and the rear end of the said lever is connected by means of a link, T', with the supporting-yoke O. On the rear horizontal portion of the said yoke are secured laterally-adjustable collars O', having set-screws, as shown.

V represents depending clamps, which are pivoted on the draft-bar L and depend therefrom. The said clamps consist of plates V', which are connected together at their upper and lower ends by transverse bolts V<sup>2</sup>, and are adapted to secure the front ends of plow-beams Z to the draw-bar. These plow-beams and plows may be of any preferred construction, and are not necessarily furnished with the sulky and frame, as I design to manufacture the latter without the plows, so as to enable farmers to utilize their common walking-plows in connection with the sulky-frame, and thus render the gang-plow cheaper.

To the supporting-yoke O are pivoted clamps W, which comprise the outer plates, W', and the inner U-shaped yoke, W<sup>2</sup>. The vertical arms of the said yoke are connected to the plates W' by means of a transverse bolt, and the rear ends of the plow-beams are clamped between the said plates and the vertical arms of the yoke, as shown. Two or more plows may be thus attached to the sulky, as will be readily understood.

In order to raise the plows from the ground, it is only necessary to push forwardly upon the hand-lever R, thereby causing the curved cam-arm R' of the same to bear downwardly upon the front curved end of the lever T, and thus raise the rear end of the said lever, and consequently the supporting-yoke O. By enabling the tongue to be attached to either side of the frame it will be understood that either right or left hand plows may be used in connection with the machine, and by providing

means for independently adjusting the supporting-wheels the machine is adapted to be used on uneven ground and hillsides.

It will be observed that the plows are sustained by the sulky-frame at all times, and are thus prevented from bearing very hard upon the bottoms of the furrows, as the weight of the machine is borne, not by the plows, but by the supporting-wheels, thus greatly lightening the draft.

Having thus described my invention, I claim—

1. The combination of the frame, the draft-bar having the vertical arms, and the foot-rest secured to the vertical arms and vertically adjustable thereon, substantially as described.

2. The combination of the frame, the hand-lever R, having the cam-arm R', and the link S, with the pivoted lever T, having the curved front end engaging with the said link, the pivoted supporting-yoke to carry the rear end of the plow-beams, and the link connecting the said yoke with the rear end of the lever T, substantially as described.

3. In a sulky-plow, the combination of the vertically-movable draft and supporting bars at the front and rear ends of the sulky-frame, the depending clamp-plates pivoted to the said draft and supporting bars and adjustable laterally thereon, and the U-shaped clamp-yokes and the bolts to connect the arms thereof to the clamp-plates, whereby the ends of the plow-beams may be clamped between the clamp-plates and the arms of the clamp-yokes, and thereby suspended at the front and rear sides of the frame, substantially as described.

4. The combination of the frame A, having the depending yoke-frames D, the vertically-adjustable draft-bar at the front end of the frame, the supporting bar or frame at the rear end of the frame A, and having the arms pivoted to the yoke-frames, the lever to raise and lower the said supporting bar or frame, and the plow-beams having their front ends attached to the draft-bar and their rear ends attached to the supporting bar or frame, substantially as described.

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

JAMES W. HOLLAND.

Witnesses:

J. S. THOMAS,  
E. M. RAUCH.