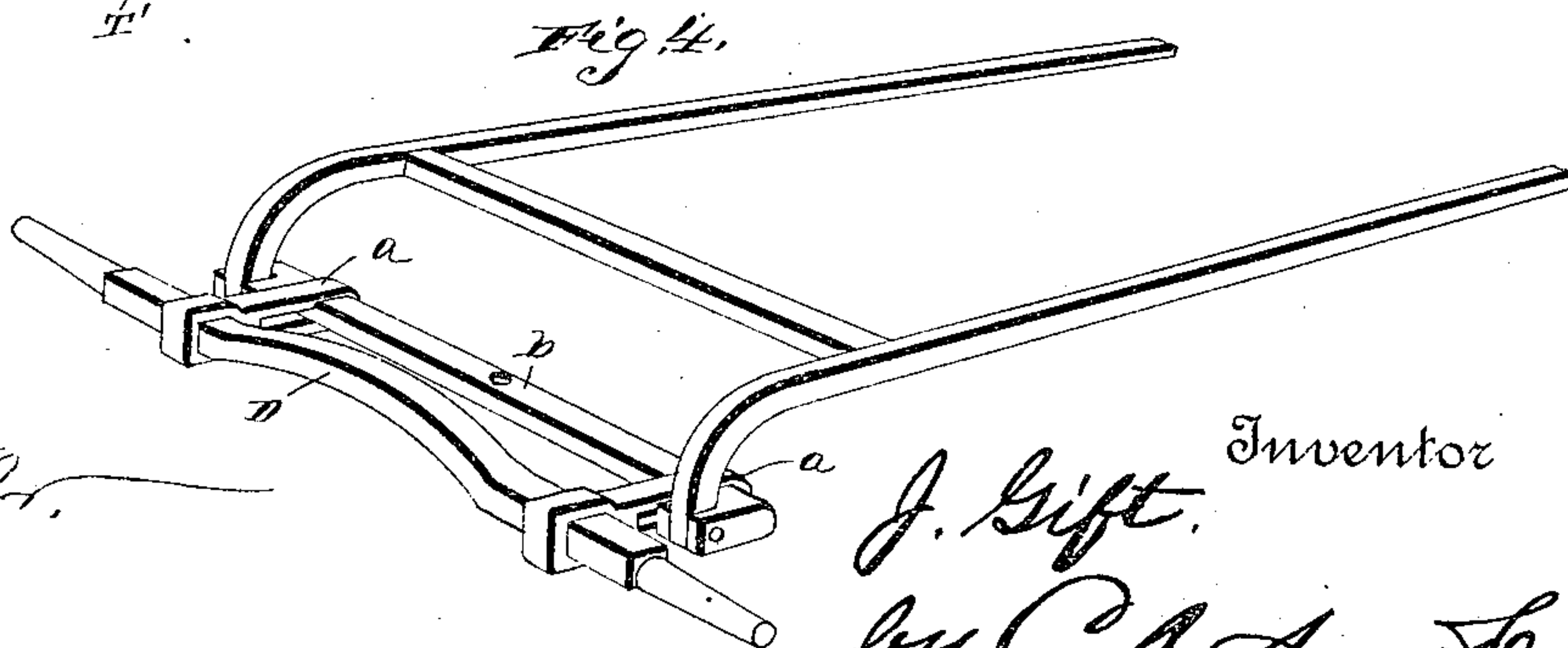
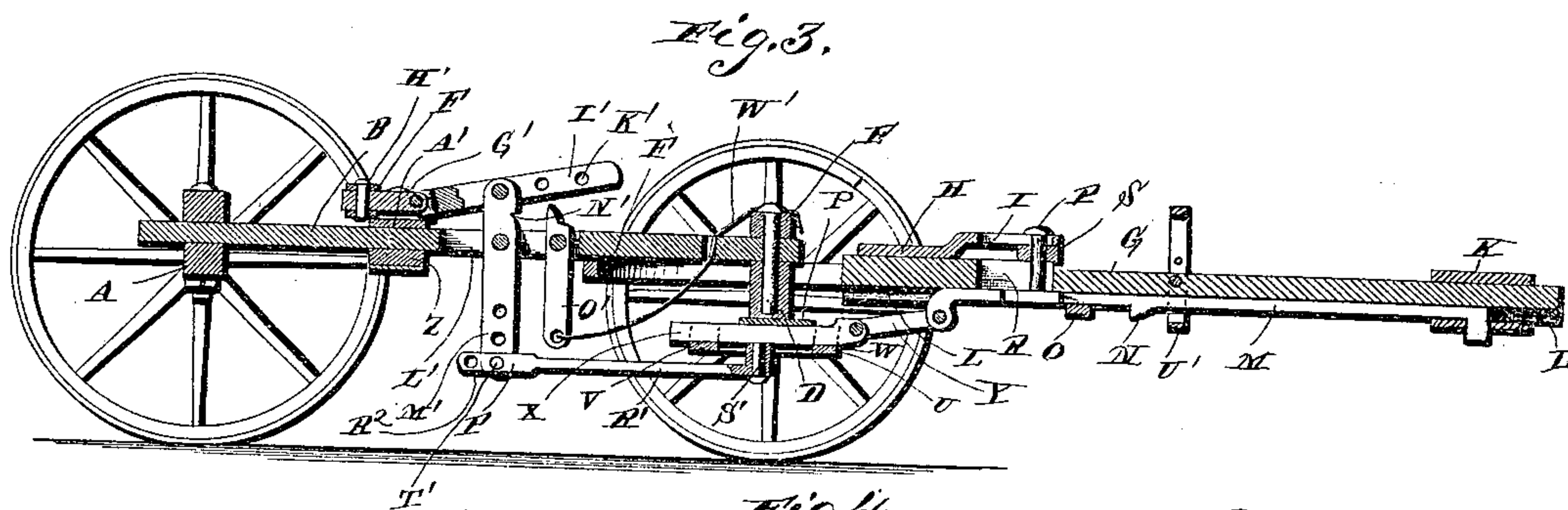
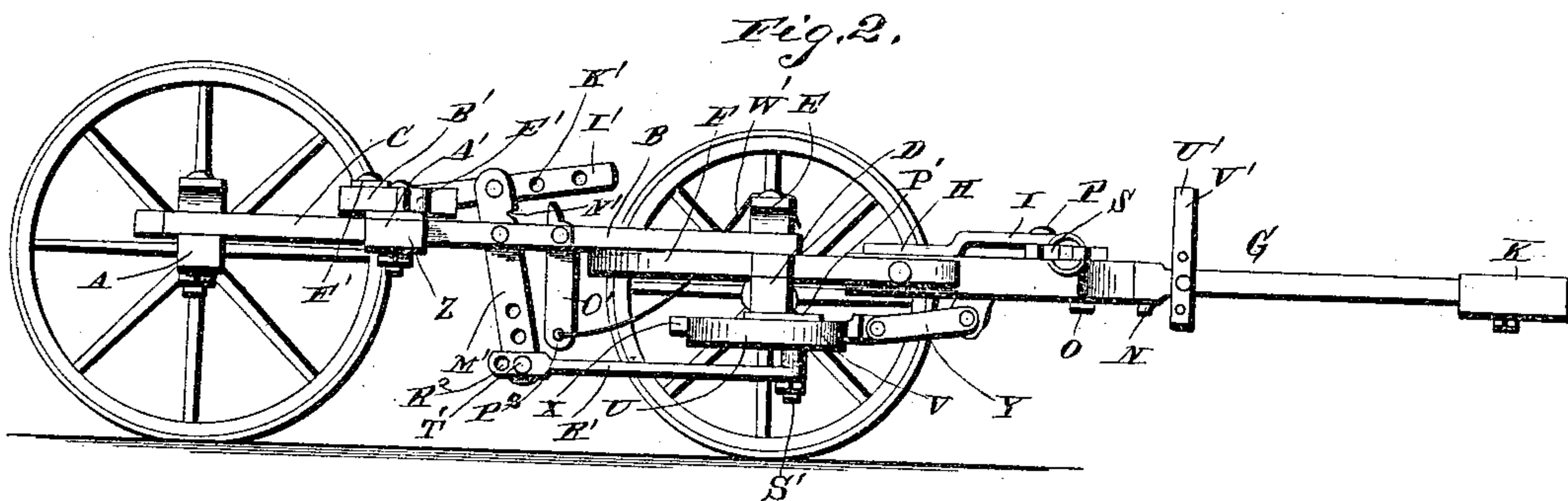
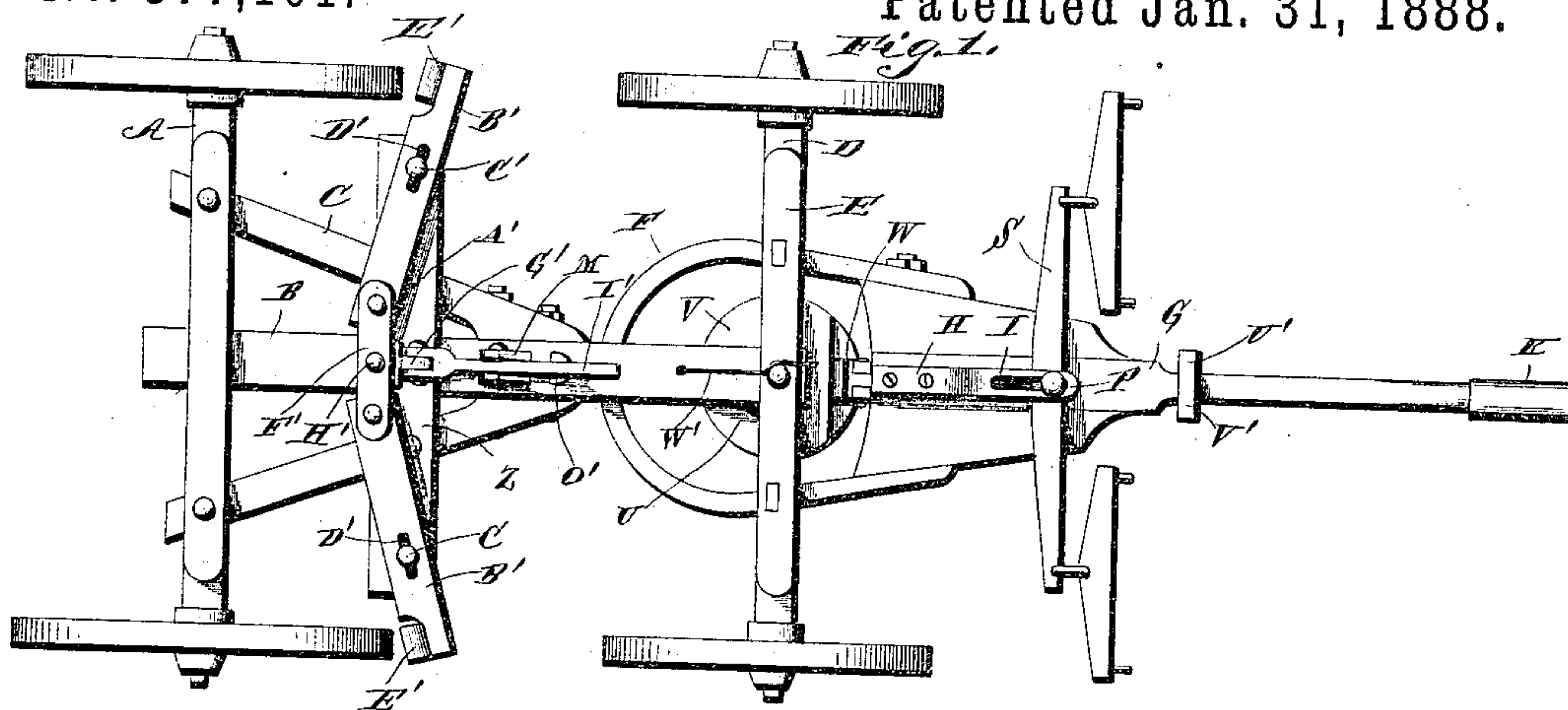


(No Model.)

J. GIFT.
WAGON BRAKE.

No. 377,101.

Patented Jan. 31, 1888.



Witnesses

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UNITED STATES PATENT OFFICE.

JONATHAN GIFT, OF STAR, WISCONSIN.

WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 377,101, dated January 31, 1888.

Application filed June 2, 1887. Serial No. 240,073. (No model.)

To all whom it may concern:

Be it known that I, JONATHAN GIFT, a citizen of the United States, residing at Star, in the county of Vernon and State of Wisconsin, have invented a new and useful Improvement in Wagon-Brakes, of which the following is a specification.

My invention relates to an improvement in wagon-brakes; 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 top plan view of a wagon-brake embodying my improvement. Fig. 2 is a side elevation of the same. Fig. 3 is a vertical longitudinal sectional view. Fig. 4 is a detail perspective view of a modified form of my invention.

A represents the rear axle of an ordinary wagon-gear.

B represents the reach.

C represents the rear hounds.

D represents the front axle.

E represents the front bolster.

F represents the front hounds secured to the front axle, and G represents the tongue pivoted between the front ends of the hounds.

On the upper side of the tongue, at the rear end thereof, is secured a metallic strap, H, which has a forward-projecting longitudinally-slotted arm, I, arranged at a suitable distance above the tongue. On the extreme front end of the tongue is a sliding hollow cylindrical sleeve, K. The tongue is provided on its under side with a longitudinal groove, L.

M represents an endwise-moving rod, which is arranged in the groove L and has its front end secured to the under side of the sleeve K by means of a stud formed by turning down the end of the rod and fitted in an opening in the sleeve. At a suitable distance from the rear end of the rod M the same is provided with a depending stud, N.

O represents a yoke, which is bolted transversely on the under side of the tongue at a suitable distance from the rear end thereof, and the said yoke extends under the rear portion of the rod M and supports the latter in the groove L.

P represents a vertical pin or bolt, which extends upward from the rear portion of the

endwise-moving rod and works through the longitudinal slot R in the tongue and extends through the slotted arm I of the strap H. On this pin or bolt is fulcrumed the usual whiffletree, S.

On the under side of the front axle is secured a metallic plate, P', and beneath the said plate is a plate, U, the central portion of which is enlarged and forms an annular frame, V. In the upper side of the plate U, at the center thereof, is made a groove, W.

X represents an endwise-moving bar, which works in the said groove, and the front end of the said bar is connected to the rear end of the rod M by means of a link, Y.

Z represents a cross-bar, which is bolted under the rear hounds and under the reach at a suitable distance from the rear end of the latter, and on the upper side of the said cross-bar is secured a plate, A', which extends across the upper sides of the reach and hounds.

B' represents a pair of brake-levers, which are fulcrumed on vertical bolts C', that extend downward through longitudinal slots D' made at suitable distances from the outer ends of the brake-levers and through the outer ends of the plate A' and cross-bar Z.

E' represents friction blocks or shoes which are secured to the rear sides of the brake-levers, at the outer ends thereof, and are adapted to bear against the peripheries of the rear wheels. The inner ends of the brake-levers extend nearly, but not quite, to each other, and are connected by means of yokes or links F', which are secured to the brake levers by means of vertical pivotal bolts.

G' represents a block which is secured between the opposing sides of the links or yokes F' by means of a pivotal bolt, H'. The front end of this block has an ear, to which is pivotally bolted a forward-projecting arm, I', provided with a longitudinal series of transverse openings, K'.

The reach is provided at a suitable distance in front of the cross-bar Z with a vertical longitudinal slot, L'.

M' represents a lever, which is fulcrumed in the rear end of this slot on a transverse bolt, and the upper end of this lever is connected to one of the openings K' of the arm I' by means of a pivotal bolt, as shown. In the front

side of the lever M', near the upper end thereof, is a notch or recess, N', which is adapted to be engaged by a pawl, O', which is pivoted in the front portion of the slot L', and is provided with a downward-extending weight-arm, P², which serves to normally keep the pawl in a vertical position out of engagement with the notch in the lever.

R' represents a connecting-rod, which has its front end secured to the under side of the endwise-moving bar X by means of a pivotal bolt, S'. The rear end of the said connecting-rod is bifurcated, is provided with a series of openings, R², and is adapted to be connected to either of a series of openings with which the lever M' is provided by means of a pivotal bolt, T', thus enabling the connecting rod and the lever M' to be adjustably connected together.

U' represents a U-shaped yoke-arm, which is pivoted to the tongue, and is provided with an upward-extending lever-arm, V'. The function of this yoke will be described hereinafter.

W' represents a cord which is connected to the lower end of the weighted arm of the pawl O', and extends upward through an opening in the reach to the body of the vehicle within easy reach of the driver.

The operation of my invention is as follows: The neck-yoke is connected to the sleeve K on the front end of the tongue, and the horses are hitched to the usual singletrees with which the whiffletree is provided. When the horses are drawing the wagon on a level road or up an incline, the rod M and the sleeve move forward, thereby causing the endwise-moving bar X to also move forward and draw forward upon the connecting-rod R', and the latter, being connected to the lower end of the lever M', moves the latter forward and causes the upper end of the same to move rearward, and, by reason of the arm I', block G', and yokes F', causes the inner ends of the brake-levers D' to be moved rearward, and thereby the outer ends thereof are moved forward and cause the brake shoes or blocks E' to recede from the peripheries of the rear wheels and offer no impediment to the motion thereof.

On going down a hill the wagon tends to move faster than the horses, and as the horses draw back upon the neck-yoke the sleeve K moves rearward, and thereby forces the endwise-moving rod M, bar X, and connecting-rod R' rearward, thus reversing the position of the lever M', and consequently causing the inner ends of the brake-levers B' to be drawn forward, so that the outer ends thereof move rearward and apply the brake blocks or shoes to the peripheries of the rear wheels, and thereby obstruct the rotation thereof, and consequently enable the team to readily control the descent of the wagon. When it is desired to prevent the brakes from being applied to the wheels, the operator draws upon the cord

connected to the weight-arm of the pawl, and causes the latter to engage the notch in the upper end of the lever M', thereby locking the said lever in position with the brakes away from the wheels. When the team is backed, the yoke U' is turned rearward on the under side of the tongue to engage the depending stud N of the endwise-moving rod M, thus preventing the latter from moving rearward, and thereby preventing the brakes from being applied to the wheel.

In Fig. 4 I illustrate a pair of shafts adapted to be employed in connection with my improved brake apparatus in a one horse vehicle. In this instance the front axle is provided with forward-extended horizontally-slotted arms a, and the rear ends of the thills or shafts are pivoted to a cross-bar, b, that works longitudinally in the slotted arms, and is provided with a central opening to receive the bolt S', and thereby connect the said cross-bar to the connecting-rod R', as will be very readily understood.

Having thus described my invention, I claim—

1. The combination of the brake-levers having their inner ends connected together, the arm I', connected to the inner ends of the brake-levers, the lever M', fulcrumed to the reach and connected to the arm and having the notch N', the endwise-moving rod arranged under the tongue, and means, substantially as set forth, connecting the said endwise-moving rod to the lever M', the pawl O', pivoted to the reach and adapted to engage notch N' of lever M', and the operating-cord W', attached to the pawl, substantially as described.

2. The combination, in a wagon, of the tongue having the longitudinally-movable rod M, to which the whiffletree is connected, the front axle having the frame U, the longitudinally-movable rod X in a groove or recess in said frame, the link G, connecting said rod to rod M, the brake-levers B', having their inner ends connected together, the lever M', fulcrumed to the reach, connections between the upper end of lever M' and the inner ends of the brake-levers, and the rod R', connecting the rod X to the lower end of lever M', substantially as described.

3. In an automatic wagon-brake, the combination of the tongue, the longitudinally-movable rod secured on the tongue and to which the horses are adapted to be attached, the said rod being provided with the stud N, and the yoke-lever U', fulcrumed on the tongue and adapted to engage the stud, substantially as described.

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

JONATHAN GIFT.

Witnesses:

ROBERT PARKER,
J. C. BROKAW.