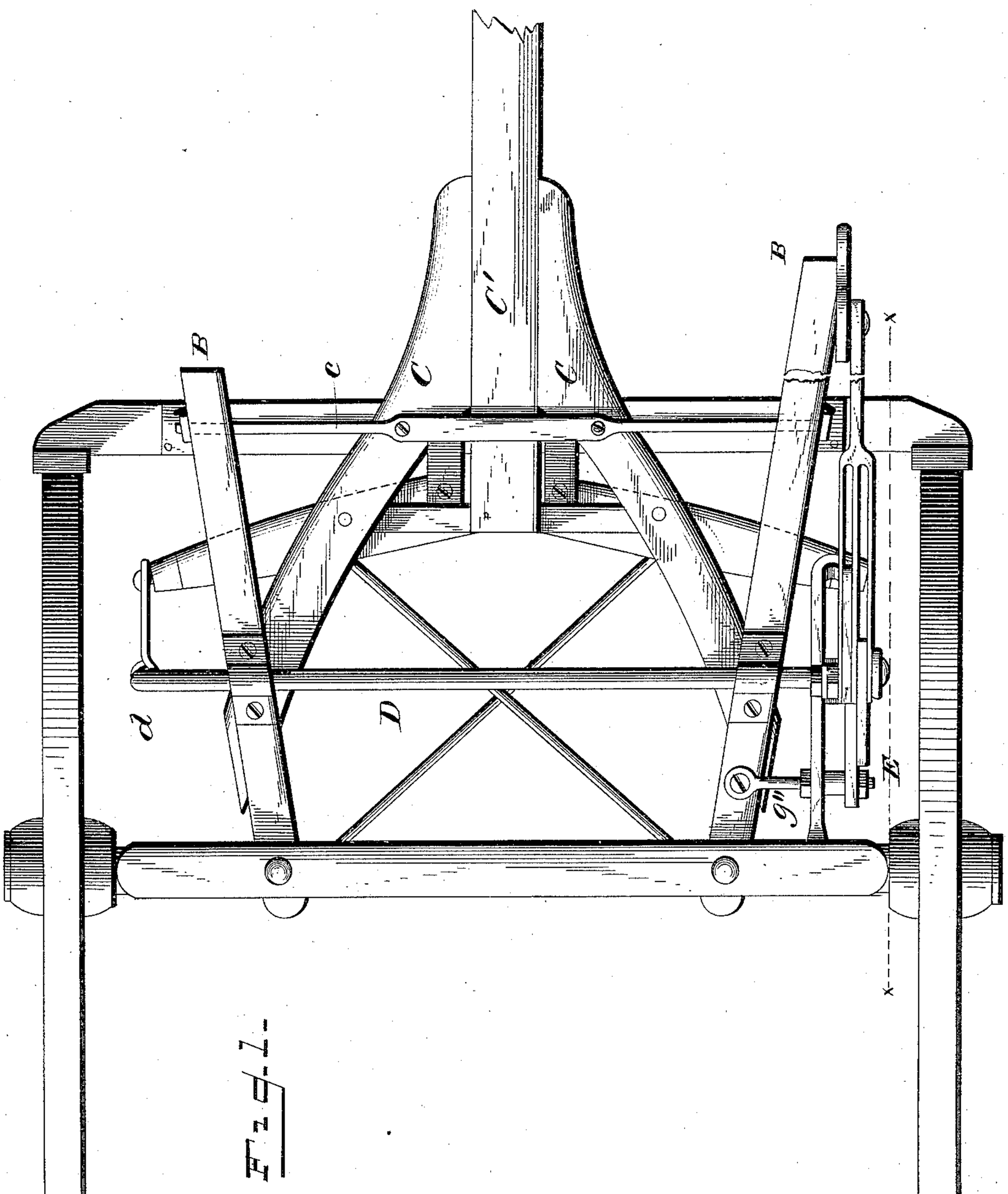
(No Model.) 3 Sheets—Sheet 1.

G. DENNY.

WAGON BRAKE.

No. 343,895. Patented June 15, 1886.



WITNESSES

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(No Model.) 3 Sheets—Sheet 2.

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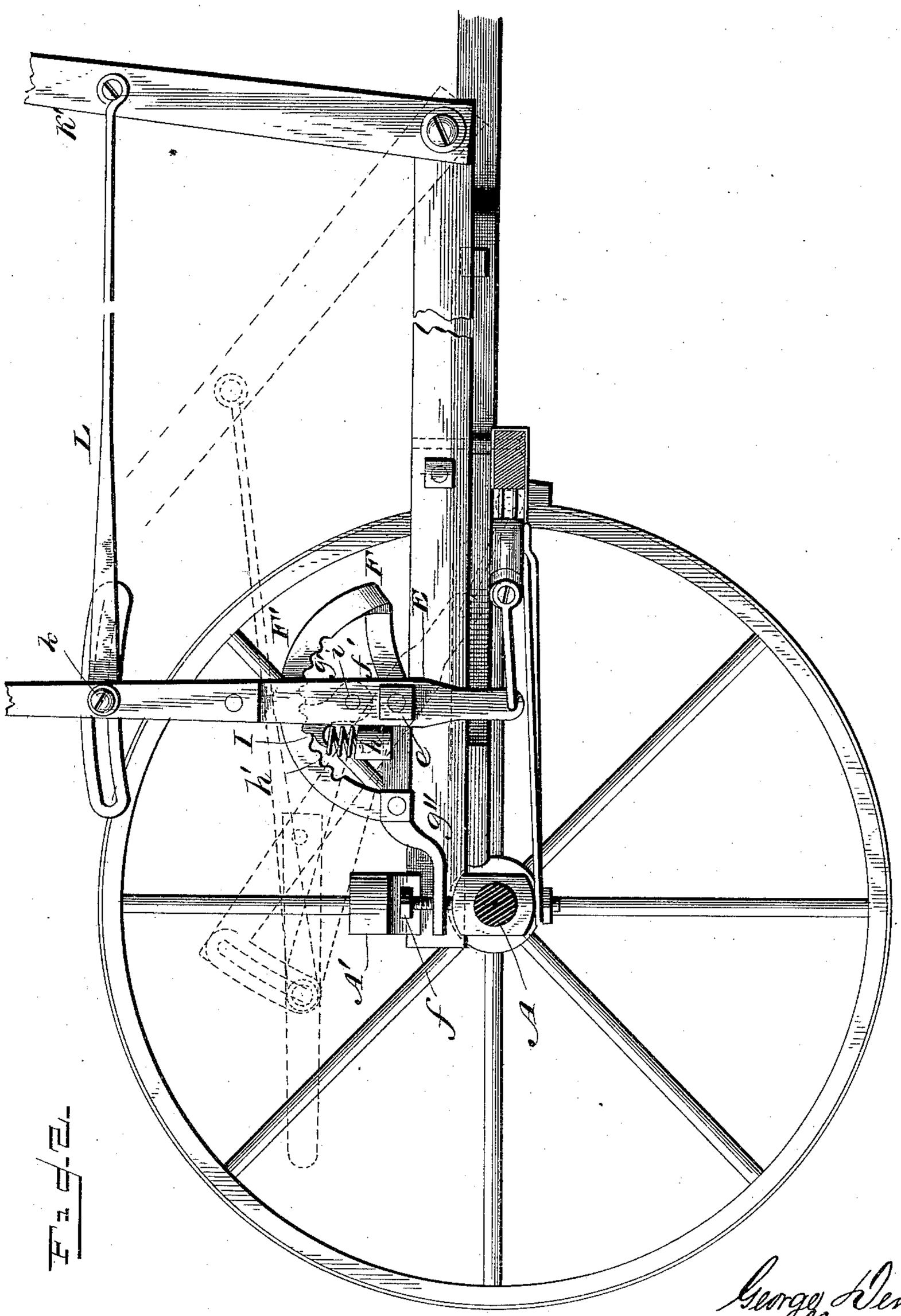

Fig. 1.

WITNESSES

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3 Sheets—Sheet 3.

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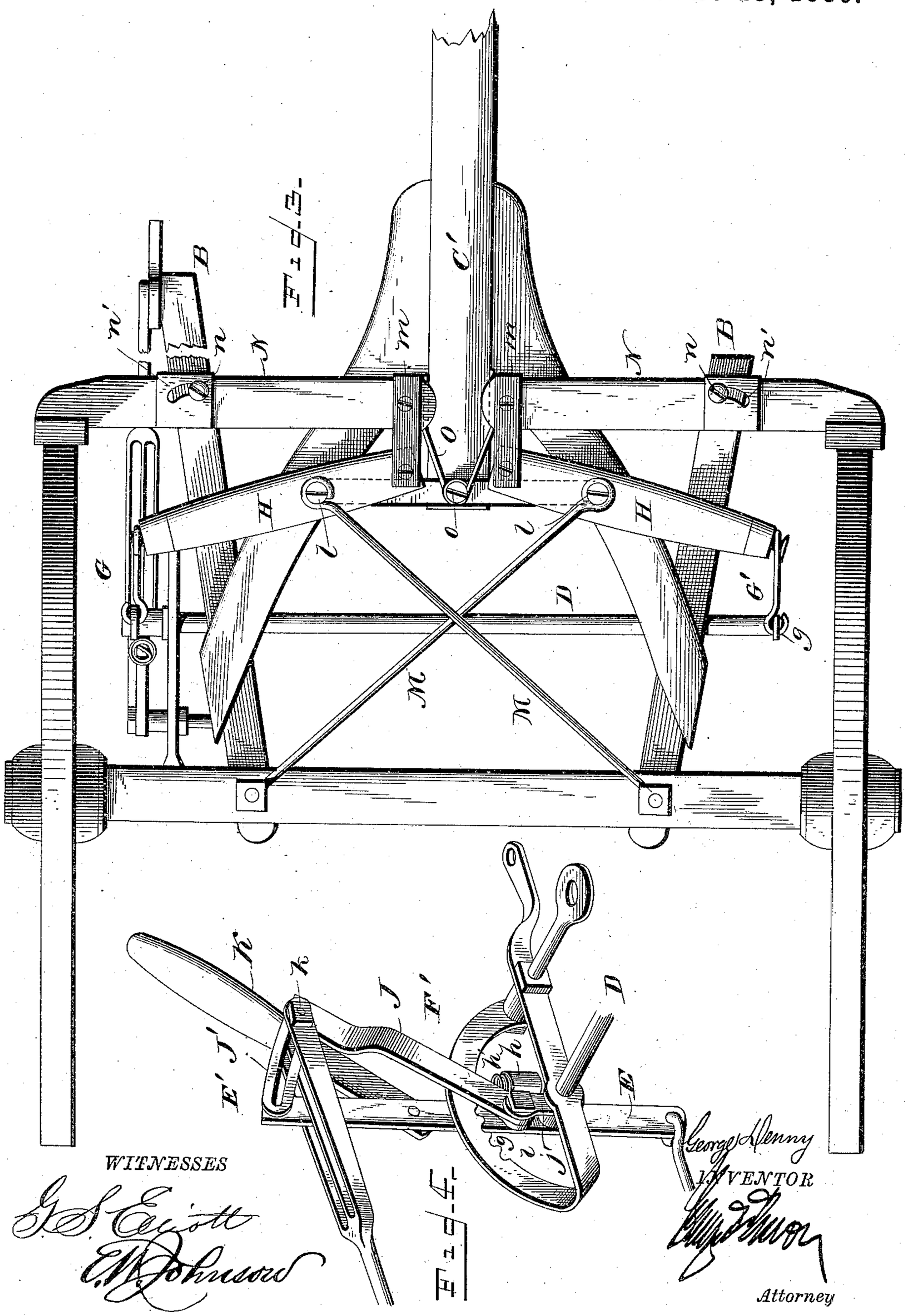

UNITED STATES PATENT OFFICE.

GEORGE DENNY, OF LA CYGNE, KANSAS.

WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 343,895, dated June 15, 1886.

Application filed May 13, 1886. Serial No. 202,081. (No model.)

To all whom it may concern:

Be it known that I, GEORGE DENNY, a citizen of the United States of America, residing at La Cygne, in the county of Linn and State of Kansas, have invented certain new and useful Improvements in Wagon-Brakes; 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 letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in wagon-brakes and means for operating the same; and my invention consists in the construction and combination of the parts, as will be hereinafter fully set forth, and specifically pointed out in the claims.

In the accompanying drawings, which illustrate my invention, Figure 1 is a plan view of the brake and brake-lever. Fig. 2 is a sectional view taken through the line *x x* of Fig. 1. Fig. 3 is a bottom plan view, and Fig. 4 is a detail perspective view.

A refers to the rear axle of the vehicle, above which is located the rear bolster, A′, between which are secured forwardly-diverging bars B B, to which the hounds C are attached, said hounds being provided near the rear end of the reach C′ with a cross-bar, *c*, which is rigidly attached thereto, and serves as a brace for the ends of the bars B B. By this means the hounds, reach, and bars B B and the rear axle are rigidly connected to each other.

To the upper side of the bars B B is journaled a rock-shaft, D, which is provided at one side with a downwarly-bent end, *d*. The opposite end of this rock-shaft D is key-ended, and is embraced by a lever, E, which lever is secured thereto by a suitable nut, *e*. At the right-hand side of the vehicle-frame, to the rear axle, a bent bar, F, is attached by means of the bolt *f*, said bent bar having a nearly-horizontal portion, *f′*, from which extends a segmental curved portion, F′, which is provided with serrations *g*. The lower end of this bar and the segmental portion is provided with a perforation, through which passes a brace-bar, *g″*, said brace-bar first passing through a perforation in the horizontal portion F, from thence through a washer, and then through a perforation in the end of the segmental portion F′. The horizontal portion *f′* of the bar F is provided with a central opening, through which the rock-shaft passes. By the means just described the bar F is held securely in place.

The lever E is rigidly secured to the rock-shaft D, and is provided at its upper end with a rearwardly-projecting portion, E′, which is provided with a curved slot, and to its lower portion is attached a link, G, which connects the same to the pivoted bars H H of the brake mechanism. The opposite pivoted bar H is connected by a link, G′, to the depending portion *d* of the rock-shaft, which is on a line with the end of the lever E.

The brake-lever E is provided at its rear edge, a slight distance above the nut *e*, with a pocket, *h*, within which is secured a spring, *h′*, said spring bearing upon a pivoted pawl or locking-dog, I, said locking-dog being attached to the square bolt *i*, which passes through the lever E, and also through the end of the lever J, and from thence through a short link, *j*, said link being pivotally attached to the rock-shaft D. It will thus be seen that when the short lever J is moved the dog will be turned therewith, as the perforation in said lever is squared so as to correspond with the configuration of the bolt. Thus when the short lever is turned down or forced rearwardly it will act upon the pawl or dog so as to release the same from the serrations *g* of the segmental bar. The short lever J, hereinbefore referred to, has a forwardly-extending slotted portion, J′. Above the segmental curved bar F′ the lever E has pivoted thereto a hand-lever, K, the intermediate portion thereof being provided with a slot, through which passes a bolt, *k*, said bolt also passing through the curved slots in the upper bent ends of the levers E and J.

The operation of the portion of my invention hereinbefore described is as follows: When it is desired to put on the brakes, the hand-lever K is moved forwardly, which swings the rock-shaft D, so as to draw the ends of the pivoted bars H rearwardly. The movement of this hand-lever causes the dog to slide over the serrations *g*, and will hold the same in position for further movement. When it is desired

to release the brakes, by moving this hand-lever rearwardly it will engage with the rear end of the slot J′, so as to throw the dog out of engagement, and thus release the brakes. The short hand-lever K is designed especially for operating the brake-levers at the rear portion of the vehicle, and when it is desired that the brake-bars should be operated from the forward portion of the vehicle near the driver's seat, I secure thereto a double bifurcated bar, K, the ends of which are embraced by a bolt, *k*, which is attached to the short hand-lever and passes through the slots in the portions E′ and J′ of the levers E and J. The forward end of this bar L is pivotally attached to the end of the lever K′, the lower end of which is pivotally attached to the wagon-body. When this lever K′ is moved forwardly, the brakes are put on or forced against the hind wheels, and when it is moved rearwardly it will force the bolt *k* against the rear ends of the slots in the bent portions E′ and J′, so as to turn the rock-shaft D and release the dog I from the serrated curved bar F′.

The bars H H, to which the links G G′ are attached, are pivotally secured to the hounds by means of bolts *l l*, and said bolts are braced on their under sides by cross-bars M, which extend to the rear axle. These bars are attached by means of links or straps *m* to the inner ends of the bars N, which are pivotally secured by means of bolts *n* to the bars B, and at their portions through which the bolts *n* pass they are provided with curved slots *n′*, which will allow said bars a slight lateral movement, so that the brake-shoes at the ends of said bars will be held parallel with the tires of the wheels. The end of the reach C′ is braced to the hounds by a cross-bar, as shown, and beneath the same is attached a bolt, *o*, which carries a spring, O, the terminal portions of which bear upon the ends of the pivoted bar N, so as to throw said bars outwardly, thus holding said bars normally against the inner sides of the slots *n′*.

By the arrangement hereinbefore described, by a single lever the brake-bars and dog can be operated so as to put on or release the brakes.

Having thus described my invention, I do not limit myself to the precise construction herein shown and described, but reserve the right to modify or change my invention within the scope of my claims.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a wagon-brake, the combination of the shoe carrying bars N, provided with curved slots, the inner end of said bars being attached to pivoted bars H, the outer ends of said bars being provided with links G′, which are connected to a rock-shaft and lever, the parts being organized substantially as shown, and for the purpose set forth.

2. In a wagon-brake, the combination of the pivoted shoe carrying bars N, bars H, pivotally attached thereto and connected at one end to a rock-shaft and at the other end to a lever, E, levers K and K′, for operating the rock-shaft either from the rear or front portion of the vehicle, substantially as shown, and for the purpose set forth.

3. In combination with a rock-shaft, D, the brake mechanism constructed substantially as described, a lever, E, attached to the rock-shaft and provided with a pivoted hand-lever, K, a pivoted lever, J, with slotted end J′, for releasing a pawl from a bar, F′, substantially as shown, and for the purpose set forth.

4. In combination with a lever, E, for operating the brake-bars, said lever being rigidly attached to a rock-shaft, a bar, F, provided with a curved serrated portion, *g*, a pivoted lever, J, carrying at its lower end a dog, and provided at its upper end with a slotted portion, J′, a hand-lever pivoted to the lever E and provided with a bolt, *k*, which passes through the slotted portion G′ and J′ of the levers, a connecting-bar, L, attached at its forward end to a hand-lever, K′, the parts being organized substantially as shown, and for the purpose set forth.

5. The combination, in a wagon-brake, of a rock-shaft, D, rigidly attached at one end to a lever, E, the opposite end being provided with a downwardly-bent portion, *d*, a bent bar, F, suitably supported by the wagon-frame and provided with a serrated segmental portion, F′, a lever, J, pivotally attached to the lever E, and carrying at its lower end a spring-actuated dog, I, the levers J and E being provided at their upper ends with opposite bent portions, E′ and J′, through which passes a bolt, *k*, attached to the hand-lever K, the parts being organized substantially as shown, and for the purpose set forth.

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

GEORGE DENNY.

Witnesses:
J. V. DONALDSON,
E. S. CROXTON.