J. A. WHITNEY.

AUTOMATIC WAGON BRAKE.

No. 32,659. Patented June 25, 1861.

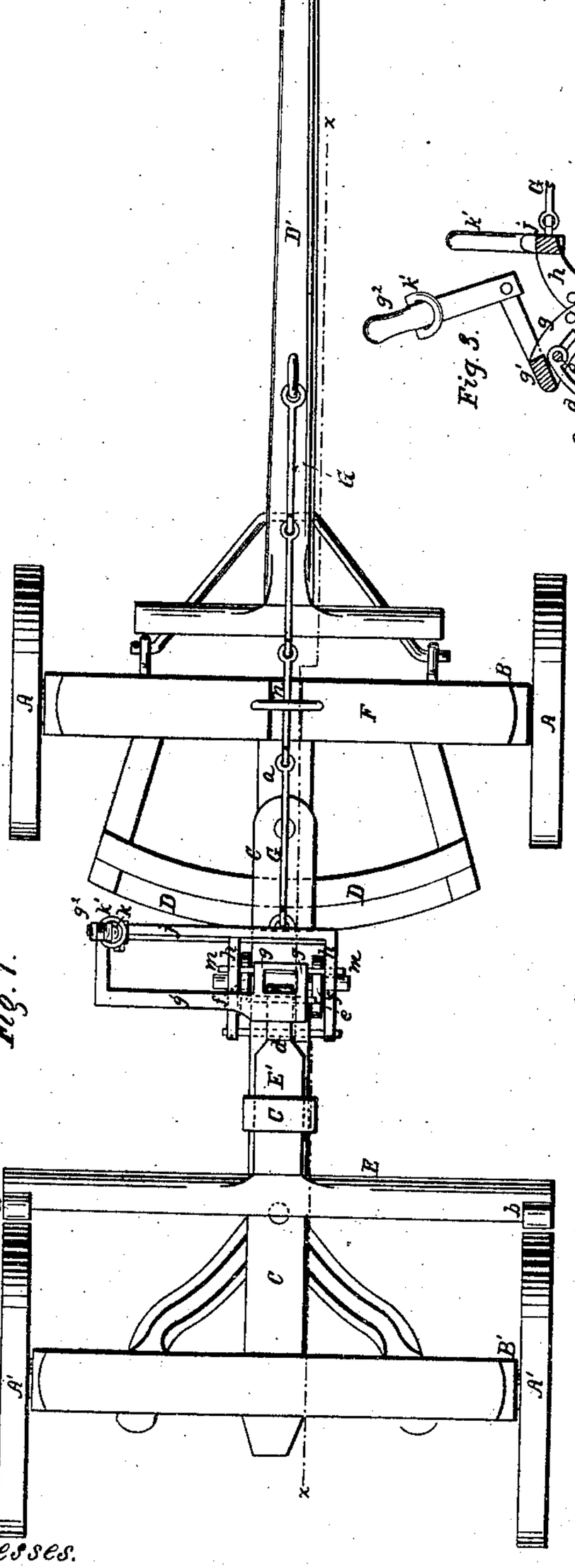

Fig. 1.

Fig. 3.

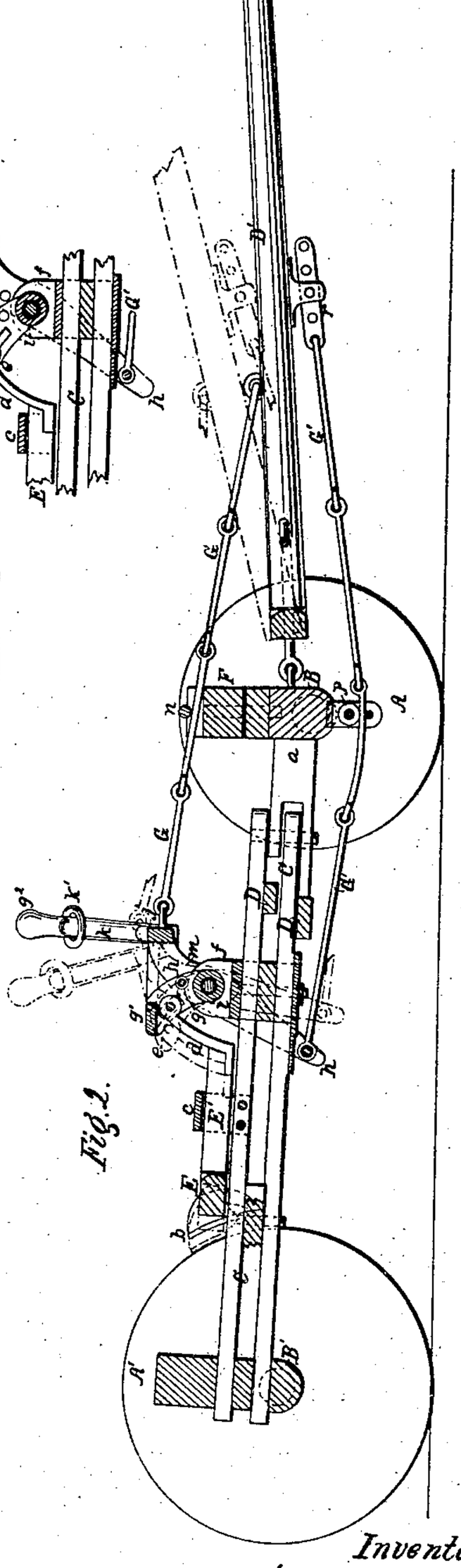

Fig. 2.

Witnesses.

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JAMES A. WHITNEY, OF MARYLAND, NEW YORK.

BRAKE FOR VEHICLES.

Specification of Letters Patent No. 32,659, dated June 25, 1861.

To all whom it may concern:

Be it known that I, JAMES A. WHITNEY, of Maryland, in the county of Otsego and State of New York, have invented a new and Improved Automatic Brake for Vehicles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1, is a plan view of the running gear of a wagon having my improved brake apparatus applied to it. Fig. 2, is a longitudinal section through Fig. 1, indicated by the red line *x*, *x*, thereon, showing by the aid of red lines the position of the parts when the brake is applied, and when it is released from the wheels. Fig. 3, is a detail view of the levers when disconnected.

Similar letters of reference indicate corresponding parts in the three figures.

This invention relates to an improvement in operating wagon brakes, either by hand, or by the movement communicated to them by the rise and fall of the draft pole.

It consists in the employment of two levers of a peculiar construction arranged on the reach of the wagon and capable of being connected together or disconnected at pleasure, one of said levers being pivoted in a suitable manner to a longitudinally sliding bar which is connected to, and moves the brake bar, and the other lever being connected to the draft pole by means of two chains passing, one above, and the other below the front axle-tree, so that when the two levers aforesaid are connected together, the rise and fall of the draft pole will actuate the brake bar, as will be hereinafter explained, and when the levers are disconnected, the brake bar may be operated by hand, and not by the draft pole, all as will be hereinafter fully described.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A, A, A′, A′, are the front and rear wheels of the wagon. B, B,′ the front and rear axle-trees, C, the reach which connects the front and rear axle-trees together. This reach C, is secured and rigidly braced at its rear end to the axle-tree B,′ and at its front end this reach is pivoted to a short bar *a*, projecting out from behind the axle-tree B.

D, are the usual sector guides between which the front end of the reach passes, and D′, is the draft pole which is pivoted to the front axle-tree B, in the usual manner. This running gear is constructed in many respects like that of a common wagon, and indeed my invention can be applied to a common four wheel wagon with very little labor and alteration.

E, is the brake bar which is placed on the top of the reach in a horizontal transverse position and furnished with the usual rubber blocks *b*, *b*, on its ends which are made to bear with greater or less force upon the peripheries of wheels A′, A′.

E′, is a short longitudinal bar which is mortised into the front part of brake bar E, at the middle of the length of this brake bar. This short bar E′, passes under a guard *c*, which is secured to the reach, which guard allows the bar E′, to receive a longitudinal play on the reach C, and this guard *c*, keeps the brake bar E, and its right angular bar E′, down on the reach C; on the front end of bar E′, a piece of metal *d*, is secured, as shown in Figs. 1, 2, and 3, and this piece *d*, curves upward a short distance and has a transverse eye formed through it which receives a pin *e*, that passes through slot through the two arms of lever *g*, and connects the brake bar to the lever *g*, so that by vibrating this lever the brake bar will advance up to, or recede from the peripheries of wheels A′, A′. Lever *g*, is pivoted at its lower end at *i*, between the bearing plates of ears *f*, *f*, which are bolted on each side of the reach C. The upper end of lever *g*, has a horizon arm *g′*, projecting out transversely from it, and on the end of this arm a perpendicular arm g^2, is suitably attached which arm is used when the brake is to be operated by the hand, as will be hereinafter described.

On the outside of the bearing plates *f*, *f*, are two levers *h*, *h*, which are pivoted to these plates *f*, *f*, by the pin *i*, so that these levers *h*, *h*, and levers *g*, have a common center. Levers *h*, *h*, are connected together at both ends, above and below reach C, and from one side of these levers an arm *j*, projects out which is parallel with the arm *g′*, of lever *g*. Arm *j*, is however not quite as long as arm *g′*, and it carries on its outer end a perpendicular arm *k*, to which the arm g^2, may be connected by a link *k′*, or in any other suitable manner which will admit of these two arms g^2, and *k*, being detached from each other at pleasure. A pin *m*, shown in Figs. 1, and 2, is passed trans-

versely through the levers g, and h, h, when it is desired to connect these levers together, but when it is desired to disengage these levers the pin m, is removed so that the levers will work independently of each other as in Fig. 3.

To the upper ends of levers h, h, a chain G, of a suitable description is attached, which passes over bolster F, through a staple n, and is connected at a suitable point to the top of draft pole D′, another chain G′, is attached at one end to the lower ends of the levers h, h, and this chain G′, passes under a friction roller p, which is secured to the lower side, and in the middle of the front axle-tree B, and the front end of this chain is attached at a suitable point to the lower side of the draft pole D′. The adjustable plate r, which forms the attachment of chain G′, to the draft pole D′, will admit of this chain G′, being shortened or lengthened at pleasure.

Now it will be seen from the above description of my invention that when the draft pole D′, is raised to the position indicated by red lines in Fig. 2, as in the case of a wagon descending a grade, the chain will draw the lower ends of levers h, h, forward and as these levers are pivoted to lever g, the upper end of lever g, will be forced backward and move the rubber blocks b, b, on brake bar E, up hard against the wheels A′, A′. Then when the wagon runs on a level grade and the pole D′, assumes a horizontal position the chain G, will move the upper ends of levers g, h, h, forward, and release the brakes from the wheels. Should it be desired to operate the brakes by hand, and not by the movement of the draft pole D′, as in the case of ascending a hill when it is desired to rest the horses at intervals by applying the brakes to the wheels, the pin m, is withdrawn from levers g, and h, h, and the link k', is detached from arm k, so as to disengage levers h, h, from lever g. The brakes can now be applied by moving the arm g, backward with the hand. The perpendicular arms g^2, and k, may project up alongside of the wagon body outside thereof, or, these arms may be arranged in any other suitable manner which will allow them to be conveniently operated by a person in the wagon.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent; is,

The combination of levers g, and h, h, their arms g', g^2, j, k, pivoted together by loose pin m, connected to the brake bar E, and operated by the movements of the draft pole D′, substantially as herein described and shown.

JAMES A. WHITNEY.

Witnesses:
J. T. Thompson,
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