

(No Model.)

2 Sheets—Sheet 1.

H. C. OSBURN.
AUTOMATIC VEHICLE BRAKE.

No. 573,995.

Patented Dec. 29, 1896.

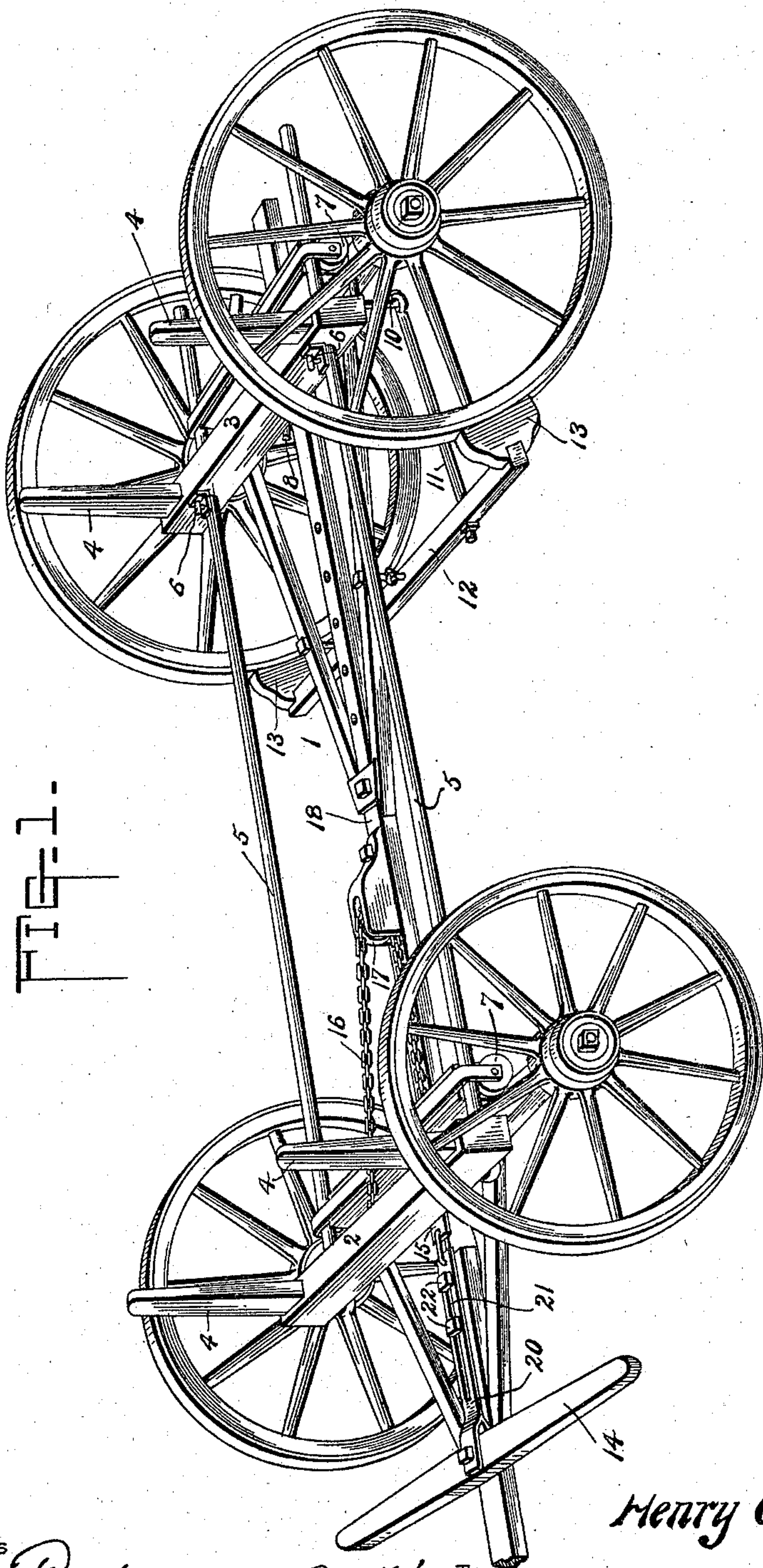


Fig. 1.

Witnesses

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By *his* Attorneys,

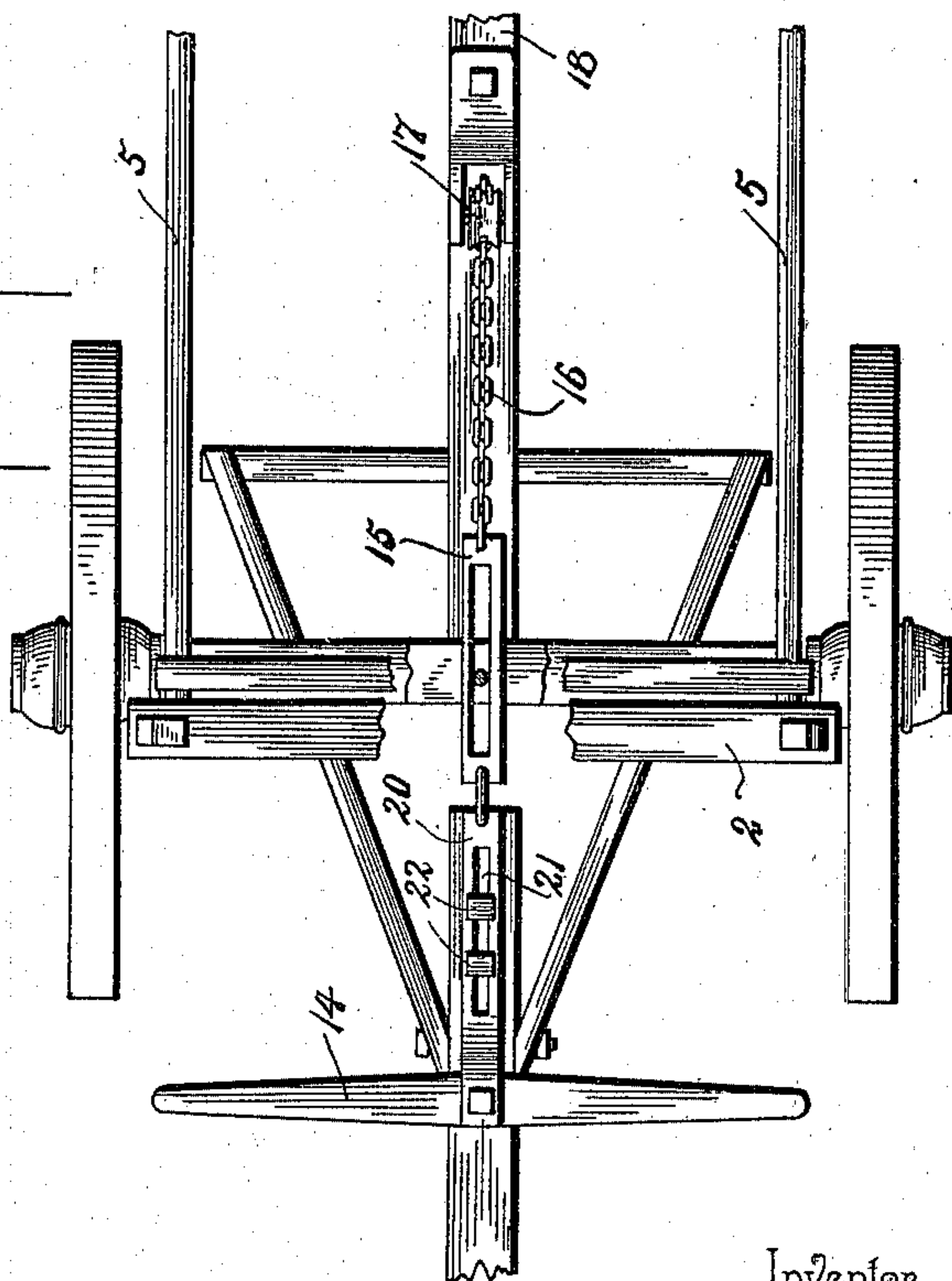
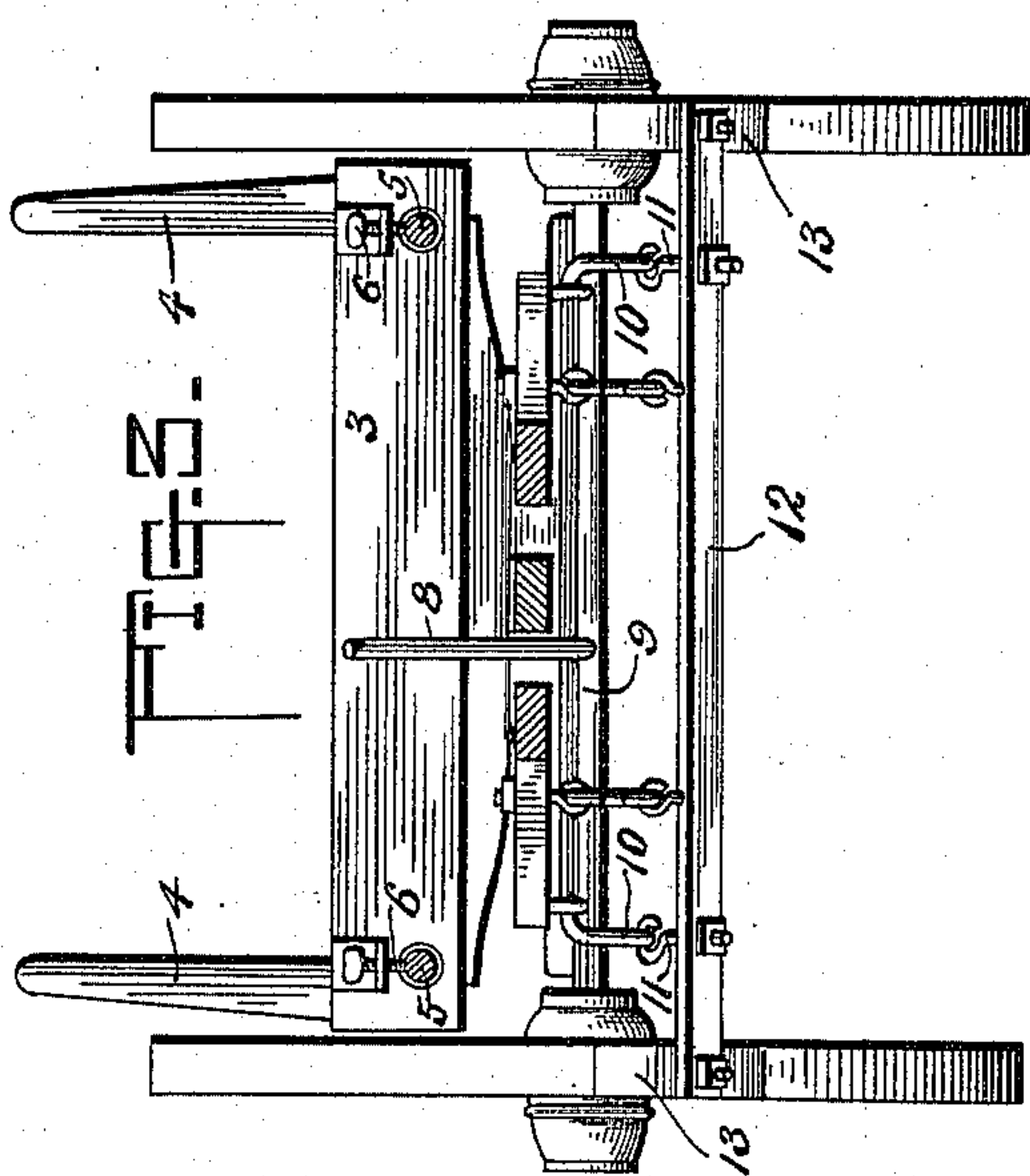
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2 Sheets—Sheet 2.

No. 573,995.

Patented Dec. 29, 1896.



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UNITED STATES PATENT OFFICE.

HENRY C. OSBURN, OF SCIO, OHIO.

AUTOMATIC VEHICLE-BRAKE.

SPECIFICATION forming part of Letters Patent No. 573,995, dated December 29, 1896.

Application filed April 23, 1896. Serial No. 588,737. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. OSBURN, a citizen of the United States, residing at Scio, in the county of Harrison and State of Ohio, have invented a new and useful Automatic Vehicle-Brake, of which the following is a specification.

The invention relates to improvements in automatic vehicle-brakes.

The object of the present invention is to improve the construction of automatic vehicle-brakes and to provide a simple and effective one which will be positive and reliable in operation and which will cause the brake-shoes to engage the hind wheels automatically when a vehicle is descending a hill or the like.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a running-gear provided with an automatic brake constructed in accordance with this invention. Fig. 2 is a central longitudinal sectional view. Fig. 3 is a transverse sectional view. Fig. 4 is a plan view of the front portion of the running-gear, the parts being broken away to show the connection between the pulley-chain and the doubletree.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a body or load-supporting frame mounted on a suitable running-gear and composed of front and rear bolsters 2 and 3, which are provided with standards 4 and side bars 5, connecting the bolsters and adjustably secured to the rear bolster by means of set-screws 6, whereby the rear bolster is capable of adjustment when the running-gear is adjusted. The running-gear is adapted to be lengthened and shortened similar to the ordinary running-gear, and it is provided at opposite sides at points above the front and rear axles with rollers 7, supporting the side bars 5 of the body or load-supporting frame and permitting the latter to move freely. The body or load-supporting frame is capable of a limited reciprocation on the running-gear

and is actuated by a body or load which when the vehicle is descending a hill or declivity is adapted to slide forward on the running-gear, owing to the inclination of the vehicle, to apply the brake automatically. The rollers 7 are arranged in suitable keepers or housings, and the front and rear bolsters 2 and 3 are located in advance of the front and rear axles. The rear bolster is preferably provided with perforations to receive the side bars or rods 5, and the latter are arranged in the keepers of the rollers 7.

When the sliding frame 1 moves forward, the rear bolster engages an arm 8 of a rock-shaft 9 of a brake mechanism. The rock-shaft is disposed transversely of the rear axle and is journaled in suitable bearings, and it is provided with a pair of depending arms 10, which are connected by rods 11 with the brake bar or beam 12. The brake bar or beam 12 is provided at its end with brake-shoes 13, which are located in advance of the hind wheels and which are adapted to engage the same. The arm 8 of the rock-shaft extends upward in advance of the rear bolster 3 and the rock-shaft and its arms constitute a lever which carries the brake-shoes into contact with the hind wheels when the sliding frame 1 moves forward on the running-gear. This brake mechanism may be varied in construction and any desired form may be employed which is capable of being applied by the forward movement of the sliding frame.

In order to relieve the hind wheels of the brake-shoes when the draft-animals start forward, the sliding frame is connected with a doubletree 14 by means of a plate 15 and a chain 16, which passes around a pulley 17 of a reach 18. The pulley 17 is mounted in a suitable housing or block and is located on the upper face of the reach at a point in rear of the front axle, and the chain, which has one end attached to the front bolster 2, extends rearward therefrom to the pulley 17 and then forward to the plate 15, which crosses the front axle, being provided with a slot or opening to receive the king-bolt.

The doubletree 14 is capable of a limited sliding movement longitudinally of the tongue and is preferably pivotally connected to a plate 20, which is provided with a longitudi-

nal slot 21, receiving headed fastening devices 22, whereby it is secured to the upper face of the pulley or tongue.

As the vehicle moves forward on the draft-animals in descending a hill or the like the running-gear, which is directly connected with them, will be checked and the load or body, which is supported by the sliding frame 1, will move forward independently of the running-gear and apply the brake automatically, and as soon as the draft-animals move forward the sliding frame will be carried rearward owing to the flexible connection between it and the doubletree, and the running-gear will be relieved of the brake-shoes to permit the vehicle to move forward freely.

It will be seen that the automatic brake is simple and comparatively inexpensive in construction, that it is positive and reliable in operation, and that it is capable of automatically checking a vehicle in descending a hill or the like and of permitting it to move forward freely when a forward strain is exerted by the draft-animals.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

What I claim is—

1. In an automatic brake, the combination of a running-gear having front and rear axles and provided with a reach rigidly connected with the rear axle and pivotally connected to the front axle, a sliding frame mounted on the running-gear, capable of a limited longitudinal movement and adapted to receive a body or a load, said sliding frame being provided with side bars arranged to slide on the running-gear, a brake-beam mounted on the running-gear and arranged to engage the hind wheels, and a lever fulcrumed on the running-gear, connected with the brake-beam

and arranged to be engaged by the sliding frame, substantially as described.

2. In an automatic vehicle-brake, the combination of a running-gear having front and rear axles and provided with a reach rigidly connected with the rear axle and pivotally connected to the front axle, rollers mounted on the running-gear and located at opposite sides thereof, a sliding body or load-supporting frame comprising rods disposed longitudinally of the running-gear and arranged upon said rollers, and front and rear bolsters secured to the rods and located adjacent to the front and rear axles, and a brake mechanism mounted on the running-gear and having an operating-lever arranged to be engaged by the sliding frame, substantially as described.

3. In an automatic brake, the combination of a running-gear provided at opposite sides with rollers, keepers receiving the rollers, a sliding frame comprising longitudinal side bars arranged in the keepers and mounted on the rollers and the front and rear bolsters, the rear bolster being slidably mounted on and adjustably secured to the side bars, a doubletree capable of a limited sliding movement longitudinally of the pole, a pulley mounted on the reach and located in rear of the front bolster, a flexible connection passing around the pulley, extending forward therefrom, and connected with the front bolster and with the doubletree, and a brake mechanism mounted on the running-gear and arranged to be engaged by the sliding frame, substantially as described.

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

HENRY C. OSBURN.

Witnesses:

JOHN H. SIGGERS,
THEODORE DALTON.