

No. 745,779.

PATENTED DEC. 1, 1903.

J. T. BURTON.
VEHICLE BRAKE.

APPLICATION FILED MAY 15, 1903.

NO MODEL.

Fig. 1.

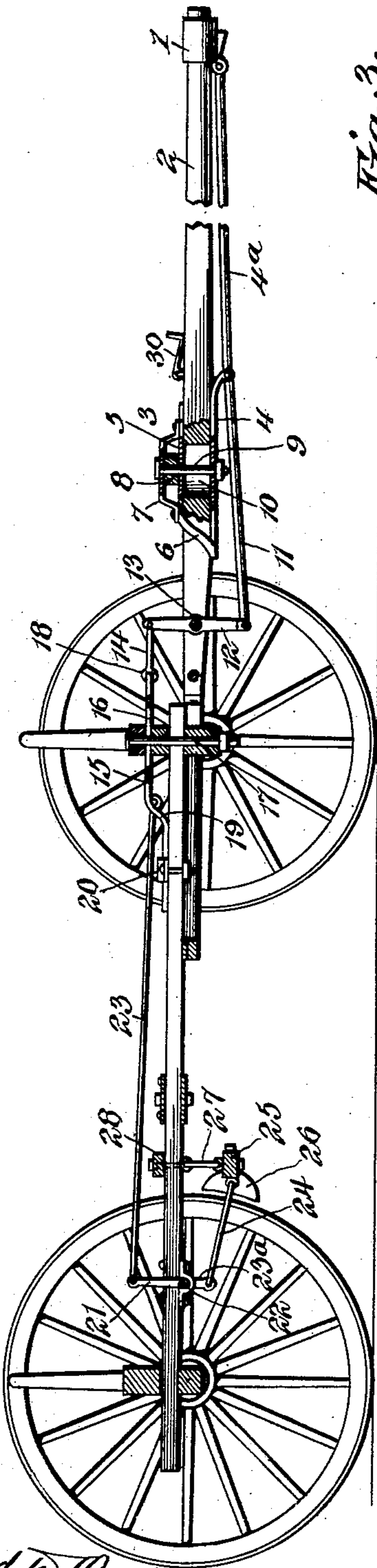


Fig. 3.

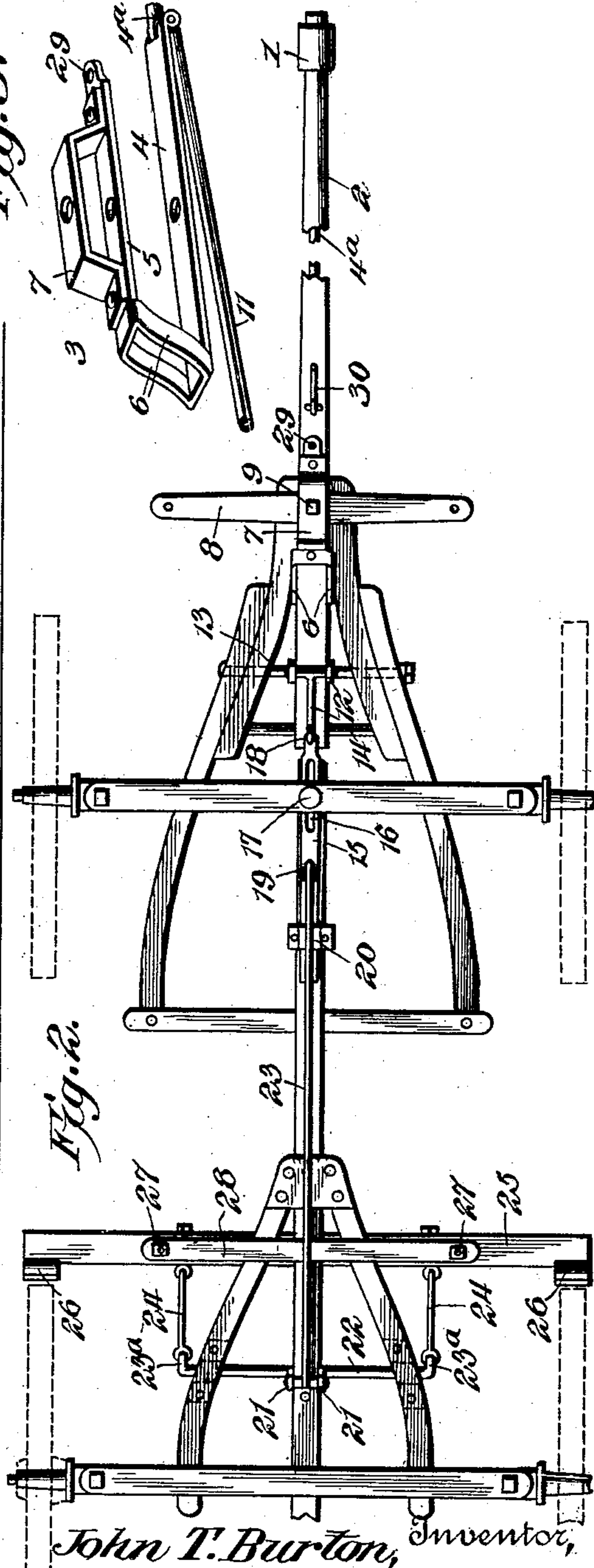
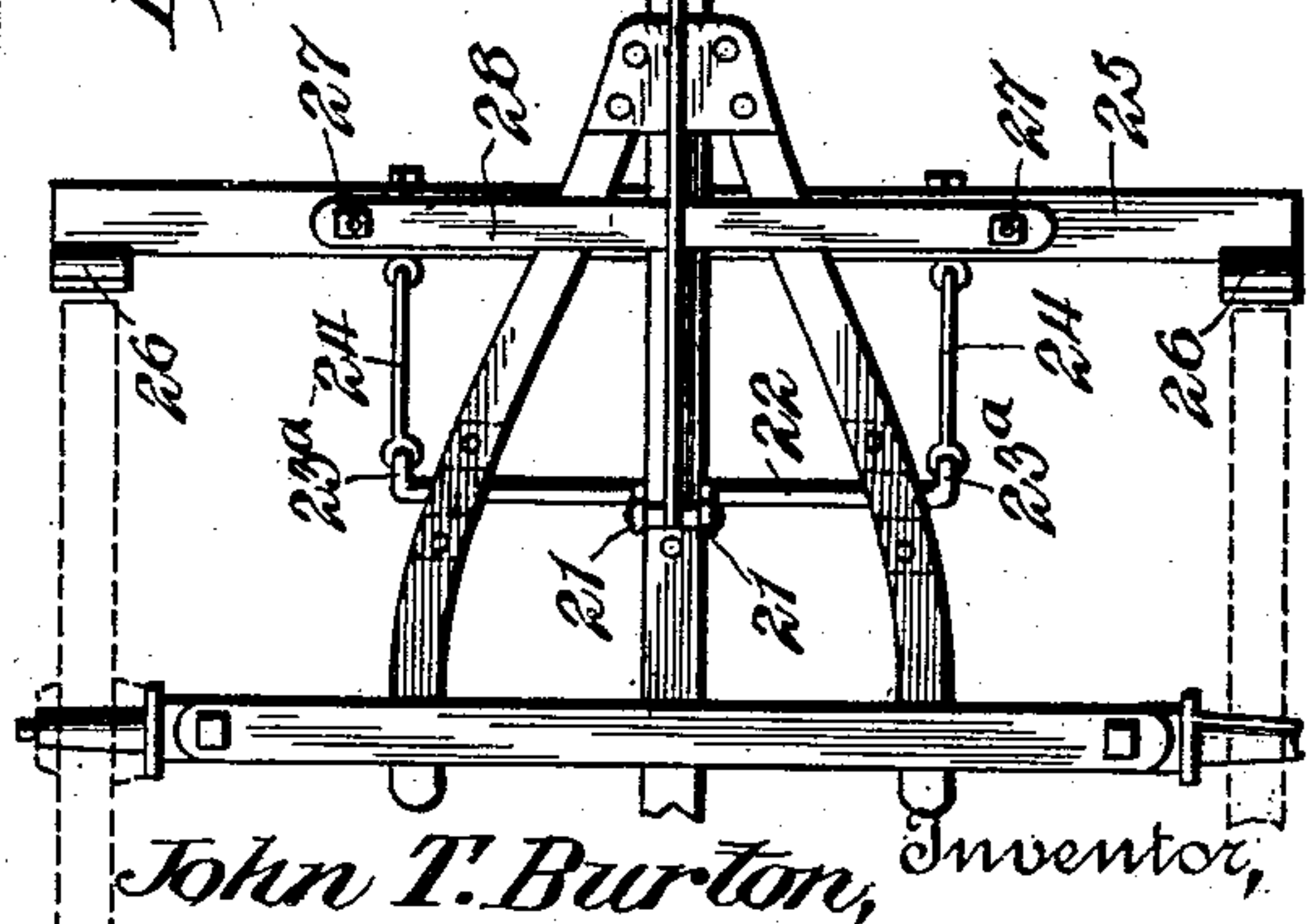


Fig. 2.



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JOHN T. BURTON, OF NEAR JONESBURG, MISSOURI.

VEHICLE-BRAKE.

SPECIFICATION forming part of Letters Patent No. 745,779, dated December 1, 1903.

Application filed May 15, 1903. Serial No. 157,283. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. BURTON, a citizen of the United States, residing near Jonesburg, in the county of Warren and State of Missouri, have invented a new and useful Vehicle-Brake, of which the following is a specification.

The invention relates to improvements in vehicle-brakes.

The object of the present invention is to improve the construction of vehicle-brakes and to provide an automatic one which will be simple and comparatively inexpensive in construction and which will be especially adapted for use on hay-wagons and other vehicles where the load would interfere with the use of ordinary brakes.

A further object of the invention is to provide a brake of this character which will be automatically applied when a vehicle is descending a hill or other grade and which will be readily released when there is a forward pull or strain on the draft devices.

It is also an object of this invention to provide an automatic brake which will permit a vehicle to be readily backed when desired.

With these and other objects in view 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, it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a longitudinal sectional view of an automatic brake constructed in accordance with this invention and shown applied to a running-gear. Fig. 2 is a plan view of the same. Fig. 3 is a detail view illustrating the construction of the slide which carries the whiffletrees.

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

1 designates a sleeve slidably arranged on the front end of a tongue or pole 2 and designed to be connected with the draft-animals by the usual straps or chains or by any other

suitable means, such as a neck-yoke. The sleeve is connected with a slide 3 by means of a hollow rod 4^a, located beneath the tongue or pole, as clearly shown in Fig. 1 of the drawings. The slide consists of a bottom plate 4, a top plate 5, and connecting side pieces 6, located at the rear ends of the plates 4 and 5 and forming an opening to receive the tongue or pole. The plates 4 and 5 are adapted to slide backward and forward on the tongue or pole, and the top plate 5 is provided with a brace 7, constructed of metal and forming an opening to receive the doubletree 8 of the running-gear, to which the brake is applied. The brace 7 is angularly bent between its ends to form an approximately rectangular intermediate portion, which extends upward from the top plate 5, as clearly shown in Fig. 3 of the drawings. The plates 4 and 5 and the brace 7 are provided with registering perforations to receive a bolt 9, which pivots the doubletree to the tongue and which is arranged in a slot 10 of the latter, as clearly shown in Fig. 1. The bolt which passes through the registering perforations of the slide 3 is preferably provided at its lower end with a nut, and it holds the parts of the slide together.

The front end of the lower plate 4 is connected to the rear end of the hollow rod 4^a and to the front end of a rod 11, which extends rearward to the lower end of an upright lever 12. The upright lever 12, which is fulcrumed between its ends on the pivot-rod 13 of the tongue or pole, is preferably composed of two sides or members located at opposite sides of the tongue or pole; but a single bar or piece may be employed, as will be readily understood. By employing two sides or members a central draft is obtained without slotting and thereby weakening the tongue or pole at the pivot of the same. The upper arm of the upright lever 12 is connected by a short link 14 with a slidable plate 15, which extends rearward, passing between the bolster and the sand-board of the running-gear and provided with a slot 16 to receive the king-bolt 17 of the running-gear. The joint 18, between the rear end of the link 14 and front end of slidable plate or member 15, permits the brake mechanism to yield readily to the movements of the front truck of the

running-gear. The rear end of the slidable plate or member 15 is arranged on the upper face of the reach, the said slidable plate or member 15 being bent downward between its ends at 19 and the reach being provided with a guide 20 to receive the rear portion of the slidable plate or member. The slidable plate or member is connected with upwardly-extending arms 21 of a rock-shaft 22 by a rod 23, which is connected to the said plate or member 15 at the bend thereof, as clearly shown in Fig. 1. The rock-shaft, which is located beneath the rear hounds and the reach, is journaled in suitable bearings and is provided at its ends with depending arms 23^a, which are connected by links 24 with a brake-beam 25. The brake-beam 25, which is provided with brake-shoes 26, is suspended by hanger-links 27 from the ends of a transverse bar 28. The bar 28 is arranged on the upper faces of the rear hounds, and the brake-beam is adapted to swing backward and forward to carry the brake-shoes into and out of engagement with the hind wheels of the running-gear.

The brake is especially designed for use on hay-wagons and other vehicles where the load would interfere with the use of hand-brakes of the ordinary construction, and in descending a hill or other incline the slidable sleeve 1 at the front end of the tongue or pole will be moved rearward by the draft-animals in holding back on the vehicle. This will cause the slide to move rearward, and the lower arm of the upright lever 12 will be swung rearward. The forward movement of the upper arm of the lever 12 will carry the slidable bar or member 15 forward and rotate the rock-shaft 22. The upwardly-extending arms 21, which are located at opposite sides of the reach, will be swung forward, and the depending terminal arms 23^a will be carried rearward, thereby moving the brake-shoes into engagement with the hind wheels of the vehicle. The application of the brake will be equal to the force exerted by the vehicle in moving forward, and the forward movement of the vehicle will be checked, thereby relieving the draft-animals of the strain of the same. As soon as the draft-animals move forward the strain on the traces will carry the slide 3 forward and will relieve the hind wheels of the brake-shoes. The vehicle will then be free to move forward, and the draft-animals by this construction are enabled to control without difficulty a heavy load on a steep hill or incline.

The brake is entirely automatic in its operation, and it is adapted to be readily applied to any ordinary running-gear without necessitating any material alteration in the construction thereof, it being only necessary to slot the tongue or pole for the reception of the pivot of the doubletree.

The upper plate 5 of the slide 3 is provided at its front end with a perforation 29, arranged to receive the bill or projecting por-

tion of a pivoted hook or catch 30, mounted on the upper face of the tongue or pole in advance of the slide and arranged to be swung into engagement with the same, whereby the slide is held stationary and the brake locked out of operation to permit a vehicle to be backed without applying the brake.

What I claim is—

1. In an automatic vehicle-brake, the combination with a slotted tongue, of a slide arranged on the tongue and composed of upper and lower plates and connecting side pieces, a pivot carried by the slide and operating in the slot of the tongue and adapted to connect a doubletree with the slide, a cuff or sleeve mounted on the tongue at the front portion thereof for connection with the draft-animals and connected with the slide, brake-shoes, and connections between the slide and the brake-shoes, substantially as described.

2. In an automatic vehicle-brake, the combination with a tongue, of a slide arranged on the tongue and composed of upper and lower plates and connecting side pieces, said slide being provided with means for pivoting a whiffletree on it, a movable device connected with the slide and mounted on the front portion of the tongue for connection with the draft-animals, brake-shoes, and means for connecting the brake-shoes with the slide, substantially as described.

3. In an automatic vehicle-brake, the combination with a running-gear, of a slide mounted on the running-gear and carrying the whiffletrees, whereby it is adapted to be moved forward by the draft-animals, said slide being composed of upper and lower plates and connecting side pieces located at the rear ends of the plates, the bottom plate being extended, a movable device connected with the extended bottom plate and mounted on the front portion of the tongue or pole for connection with the draft-animals for enabling the same to move the slide rearward, brake-shoes, and means for connecting the brake-shoes with the slide, substantially as described.

4. In an automatic vehicle-brake, the combination with a running-gear having a slotted tongue, of a slide mounted on the tongue and receiving the whiffletrees and provided with a pivot operating in the slot of the tongue, a sleeve arranged on the front of the tongue and connected with the slide, an upright lever fulcrumed on the rear portion of the tongue and having one arm connected with the slide, a slidable bar or member mounted on the front portion of the running-gear and connected with the other arm of the lever, a guide mounted on the running-gear in rear of the front axle and receiving the rear portion of the slidable member, and means for connecting the slidable bar or member with brake-shoes, said means being connected with the slidable member at a point in advance of the guide, substantially as described.

5. In an automatic vehicle-brake, the combination with a running-gear, of a slide mounted on the tongue and carrying the whiffletrees, a movable device connected with the
5 slide and mounted on the tongue at the front portion thereof for connection with the draft-animals, an upright lever fulcrumed on the rear portion of the tongue and connected at its lower arm with the slide, a bar or member
10 slidable on the front portion of the running-gear, a link connecting the front end of the slidable bar or member with the upper arm of the lever, a guide receiving the slidable bar or member, and means for connecting
15 brake-shoes with the slidable bar or member, substantially as described.

6. In an automatic vehicle-brake, the combination with a running-gear, of a slide

mounted on the tongue of the running-gear and provided with a brace for supporting the
20 doubletree and receiving the latter, a sleeve arranged on the front portion of the tongue, a rod connecting the sleeve and the slide, a pivoted locking device located in advance of the slide for holding the same out of opera-
25 tion, a lever fulcrumed on the tongue and connected with the slide, and means for connecting the lever with brake-shoes, substantially as described.

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

JOHN T. BURTON.

Witnesses:

C. R. BURTON,

J. A. HARRELL.