

(No Model.)

D. W. LEE.
AUTOMATIC WAGON BRAKE.

No. 526,132.

Patented Sept. 18, 1894.

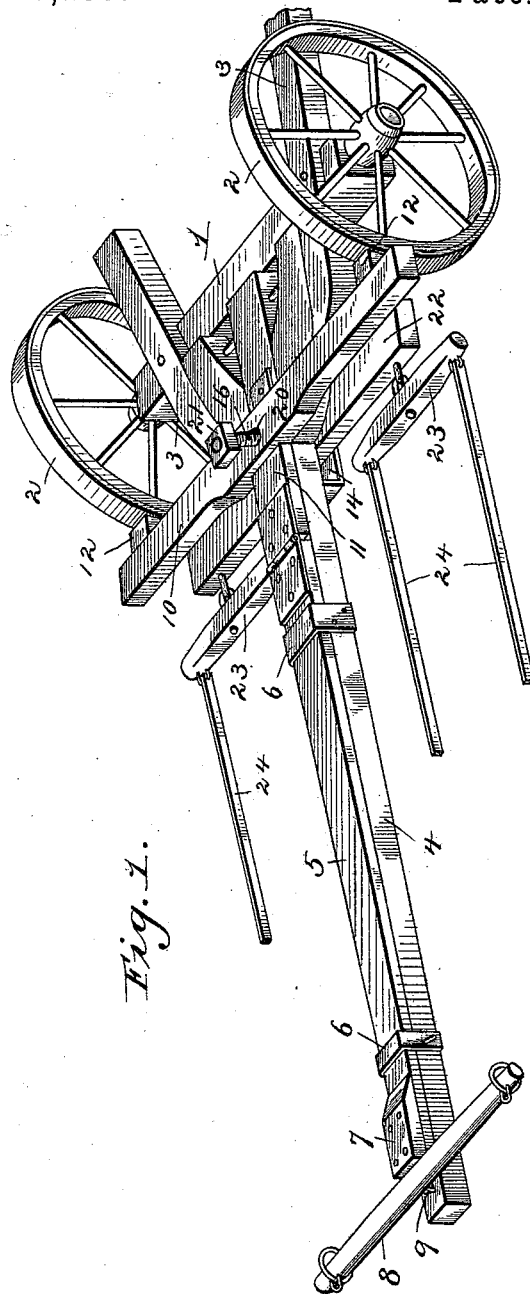


Fig. 1.

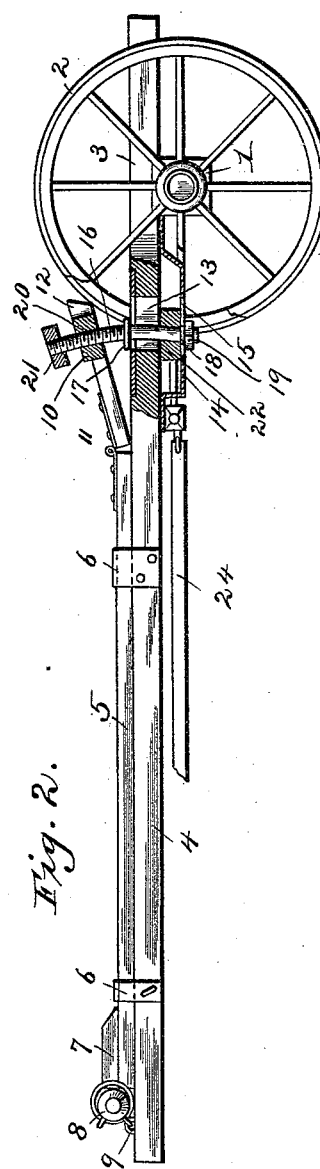


Fig. 2.

Inventor

David W. Lee.

Witnesses

Harry L. Amer.

By his Attorneys.

D. W. Lee

C. Snow & Co.

UNITED STATES PATENT OFFICE.

DAVID WALTER LEE, OF HARRISVILLE, NEW YORK.

AUTOMATIC WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 526,132, dated September 18, 1894.

Application filed December 11, 1893. Serial No. 493,339. (No model.)

To all whom it may concern:

Be it known that I, DAVID WALTER LEE, a citizen of the United States, residing at Harrisville, in the county of Lewis and State of New York, have invented a new and useful Automatic Wagon-Brake, of which the following is a specification.

My invention relates to automatic wagon brakes, and it has for its object to provide a simple, inexpensive and efficient construction capable of being operated by the team without the intervention of the driver.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings: Figure 1 is a perspective view of a brake embodying my invention applied in the operative position to a vehicle. Fig. 2 is a side view, partly broken away, showing the parts in the positions which they assume when the team is backing and causing a retrograde movement of the vehicle.

Similar numerals of reference indicate corresponding parts in both figures of the drawings.

1, designates the front axle of a vehicle; 2, the wheels; 3, the hounds; and 4, the tongue pivoted to the hounds.

5 represents a bar, which is mounted upon the tongue, and is of the same width as the tongue, and is adapted to slide longitudinally thereon through the guides 6, said bar being provided at its front end, which is located adjacent to the front end of the tongue, with a head 7, which is thus arranged contiguous to the neck-yoke 8 and in position to be engaged thereby when the neck-yoke is moved rearwardly by the backing of the team. The neck-yoke is connected to the tongue in the usual way by means of interlocking eyes 9, and its rolling motion, caused by the holding back of the team, is sufficient to repress the sliding bar 5.

10 represents a brake-beam which extends transversely across the vehicle in front of the wheels and is hinged, by means of a short central extension or arm 11, to the rear end of the sliding bar 5, said brake-beam being provided, at its extremities, with the brake-shoes 12, in position to engage the wheels.

The tongue is provided, near its rear end, with a longitudinal slot 13, and secured to the under side of the tongue is a clip 14, having a corresponding aligned slot 15, and in these registering slots is arranged a bolt 16, which is provided above the plane of the tongue with a shoulder 17 to bear upon the upper surface thereof, and is provided, near its lower end, with a squared portion 18, to fit in the slot 15 of the clip. The bolt is engaged at its lower end by a nut 19. The portion of the bolt above the plane of the tongue is curved forward concentric with the pivotal point of the brake-beam, and extends through a perforation 20 in said brake-beam, the upper end of the curved portion being engaged by a nut 21. Pivotally mounted upon the portion of the bolt between the under side of the tongue and the clip is the doubletree 22, carrying the whiffletrees 23, to which are connected the traces 24.

This being the construction of the improved brake-mechanism, the operation thereof is as follows: Inasmuch as a common bolt 16 connects the doubletree and the brake-beam and is slidably arranged in the tongue, the forward movement of the doubletree, caused by the forward draft of the team, moves the brake-beam forward and out of contact with the wheels; but in the same way a backward or restraining movement of the team is communicated through the neck-yoke to the front end of the sliding bar 5, and thence to the brake-beam which is moved backward to bring the brake-shoes in contact with the wheels. If the movement of the wheels is forward, or in the direction indicated by the arrows in Fig. 1, the frictional contact between the rims thereof and the brake-shoes will hold the brake-beam in a depressed position, and therefore the greater the load in the vehicle the more positive will be the restraining effect of the brake. If, on the other hand, it is desired to cause a retrograde movement of the vehicle, the rotation of the wheels in the direction indicated by the arrows in Fig. 2 will cause the brake-beam to rise, as shown in Fig. 2, and thus relieve the frictional contact between the wheels and the shoes.

It will be noted that, inasmuch as the brake-shoes are carried by a common transverse beam, they are applied simultaneously and with equal force, and when the frictional

contact is relieved by the elevation of the beam both wheels are released at the same time, thereby avoiding twisting and side motion of the vehicle.

5 The construction and arrangement of parts whereby the brake-beam and doubletree are carried by the same bolt enable the device to be manufactured at a minimum cost and increase the durability of the mechanism.

10 Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

15 Having described my invention, what I claim is—

1. In a vehicle brake, the combination with a tongue provided at its front end with a neck-yoke, of a bar slidably mounted upon the tongue and terminating adjacent to the front end of the latter and contiguous to the neck-yoke, a bolt fitting in a longitudinal slot in the tongue, a doubletree fulcrumed upon said bolt below the plane of the tongue, and a brake-beam carrying terminal brake-shoes, hinged to the rear end of said sliding bar and provided with a perforation engaging the upper portion of said bolt, substantially as specified.

2. In a vehicle brake, the combination with a tongue provided with a neck-yoke, of a clip secured to the under side of the tongue near its rear end and provided with a longitudinal slot registering with a corresponding slot in the tongue, a curved bolt fitting slidably in said registering slots, a doubletree fulcrumed upon the bolt below the plane of the tongue and held in place by said clip, a bar slidably mounted upon the tongue and terminating in a head arranged adjacent to the said neck-yoke, and a brake-beam arranged transversely of the tongue, provided with a central perforation fitting upon the upper portion of said bolt and having a forward extension or arm which is hinged to the rear end of the sliding bar, said beam being provided with terminal brake-shoes, and the portion of the bolt engaged by the perforation of the brake-beam being curved concentric with the hinge-connection between said extension or arm and the sliding bar, substantially as specified.

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

DAVID WALTER LEE.

Witnesses:

W. A. WRAPE,

HARRY G. P. S. MYERS.