(No Model.) 2 Sheets—Sheet 1.

R. M. DEYOUNG.

WAGON BRAKE.

No. 595,529. Patented Dec. 14, 1897.

Fig. 1.

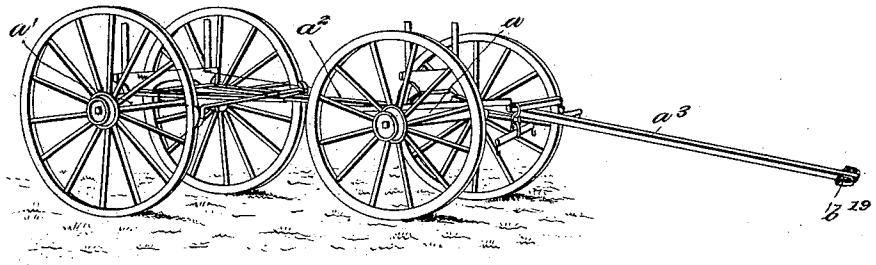


Fig. 2.

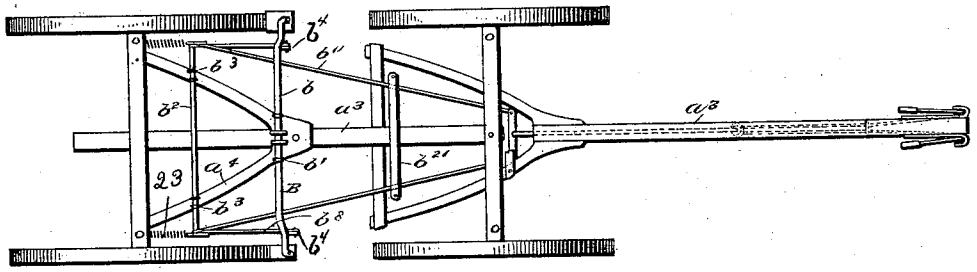
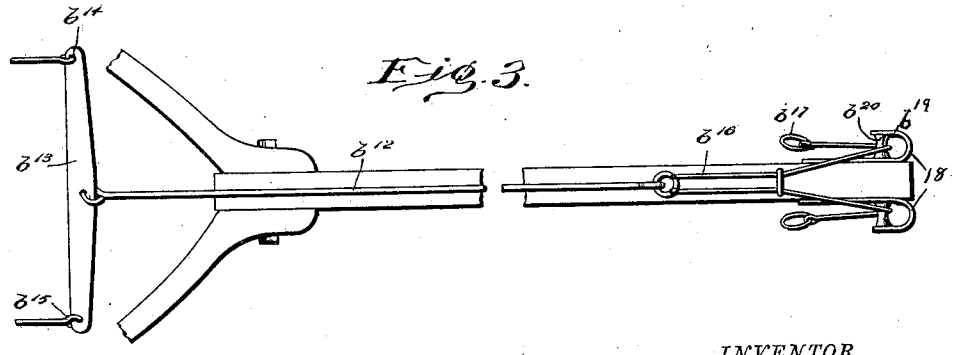


Fig. 3.



WITNESSES

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Fig. 4.

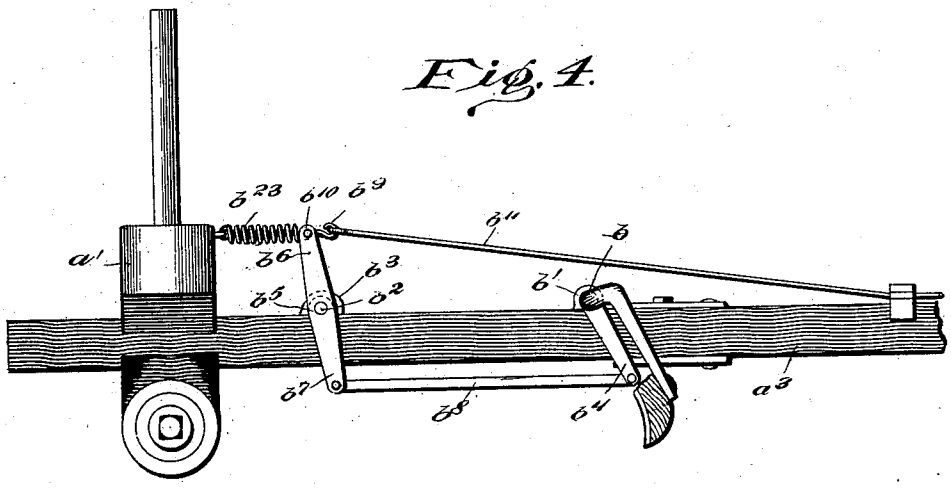
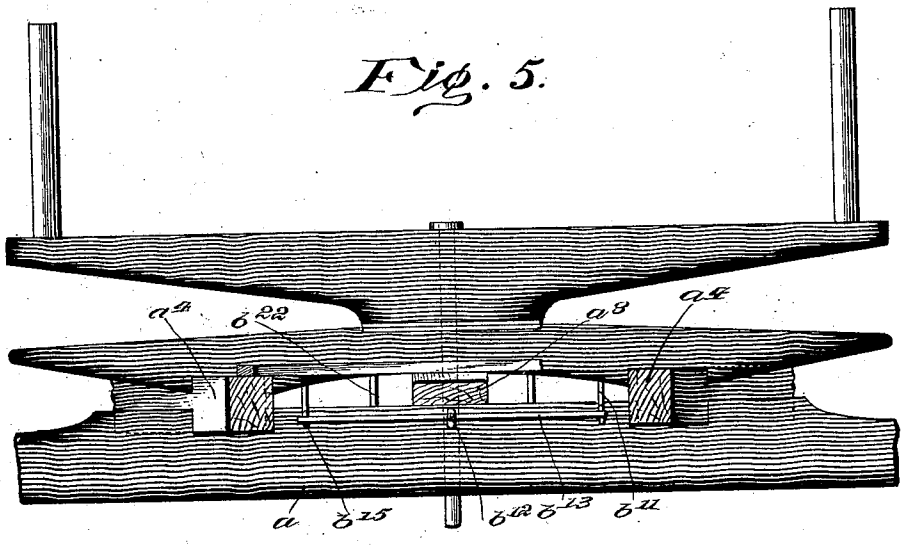


Fig. 5.



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UNITED STATES PATENT OFFICE.

ROBERT M. DEYOUNG, OF RYLAND, ALABAMA.

WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 595,529, dated December 14, 1897.

Application filed October 10, 1896. Serial No. 608,465. (No model.)

To all whom it may concern:

Be it known that I, ROBERT M. DEYOUNG, a citizen of the United States, residing at Ryland, in the county of Madison and State of Alabama, 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.

My invention relates to an improvement in brakes for wagons or similar vehicles, my object being to provide a construction in which the brake is so arranged and has such connections attached to it that backward movement of the animal attached to the vehicle causes the brake to be applied to the wheels.

To this end the invention consists in the various matters hereinafter described and claimed.

In the accompanying drawings, which illustrate the invention, Figure 1 is a perspective of a wagon provided with my improved brake, the body of the wagon being removed. Fig. 2 is a plan view of such a wagon. Fig. 3 is a bottom plan view of the tongue, showing the brake connections upon the same; and Fig. 4 is a side elevation of the portion of the wagon to which the brake mechanism is applied. Fig. 5 is an elevation taken in front of the front axle.

Referring now more particularly to the drawings, A represents a wagon-body of any approved construction, in which a a' are respectively the front and rear axles. a^2 is the coupling-bar, and a^3 is the tongue. The brake mechanism proper, B, is located upon the braces a^4, extending from the rear axle. Said brake mechanism comprises a brake-rod b, held to rotate in staples upon the braces from the rear axle, lateral movement of the brake-rod being prevented by means of collars b' upon the brake-rod lying outside of the braces from the rear axle. In rear of the brake-rod is journaled a shaft b^2, said shaft being also prevented from lateral movement by means of collars b^3, which also lie outside of the braces a^4. Levers b^4 depend from the brake-rod, and levers b^5 are attached to the ends of the shaft, said levers b^5 having arms b^6 and b^7, which project, respectively, above and below said shaft. Links b^8 are pivoted to the depending arms of the levers upon the shaft and are at their other ends pivoted to the depending levers from the brake-rod. Thus the movement forward of the upper arms of the levers upon the shaft will cause the rotation of the brake-rod and the consequent application of the brakes.

There is provided a means for normally returning the upper end of the levers b^5 to their rear position, so that the brakes will be normally held from engagement with the wheels. In the present instance this means comprises coil-springs b^{23}, having one end attached to the rear bolster of the wagon, while the other end is connected to the upper arms b^6.

Connections are provided from the levers b^5, communicating with the harness of the horse, whereby the backward movement of the horse, as in holding back, will serve to apply the brakes. These connections are now to be considered. Pivoted upon the upper arms b^6 of the levers b^5 are hooks b^9, the pivot for these hooks being a pin b^{10}, extending through the arm of the lever. It is to this pin that the forward end of the coil-spring for returning the arms to their backward position is attached. Links or wires b^{11} are attached to the hooks b^9, said links extending to a point beyond the front axle. Another link b^{12} slides in guides on the under side of the tongue, and at its rear end said link is provided with a yoke b^{13}, the ends of which are provided with openings b^{14}, in which are inserted hooks b^{15} upon the forward ends of the links from the brake mechanism. In this way the connections from the brake mechanism to the animal can be separated—that is, the links can be unhooked from the yoke—and thus the forward axle of the wagon can be separated from the remainder thereof.

Attached to the forward end of the link on the under side of the tongue are chains or similar members b^{16}, which are guided by a staple upon the under side of the tongue and pass to the front of the tongue, where they turn backwardly over shoulders provided upon said tongue. The chains are provided at their free ends with any convenient means, such as the ring b^{17}, whereby they can be attached to the collar or other convenient part of the harness of the animal attached to the

wagon. In the construction herein shown these chains serve as the ordinary breast-chains. In order to provide for easy movement of these chains in the operation of applying the brake, brackets b^{18} are attached to the sides of the tongue, said brackets having an eye b^{19} formed in their forward ends, the rear side of said eye being produced by a roller b^{20}, pivoted in the sides of the bracket. These rollers form the shoulders over which the chains are drawn.

Guides are provided upon the wagon-body to prevent the links from the brake mechanism becoming entangled with the other parts of the wagon. One of these guides is located on the coupling-bar of the wagon and is lettered b^{21}. It consists of simply a slotted member extending across the coupling-bar, within which slotted member the links are free to play. The links pass over the forward axle between said axle and the frame of the wagon above it, between which two members a slot is left, and in this slot, as is usual, the forward end of the coupling-bar is pivoted. At a little distance from the ends of this slot are pins b^{22}, extending across said slot between the two members by which it is formed, and between each of these pins and its adjacent end of the slot the links pass. In this way the pins prevent said links from becoming tangled with the end of the coupling-bar when the axle of the wagon is turned.

It will thus be seen that by the present construction a brake is located upon the wagon in a position entirely out of the way, the connections upon said brake for operating the same being such that they can be attached to the horse or other animal in such a manner that the mere movement of the horse in holding back of itself operates to apply the brakes, the pressure with which the brakes are applied being determined by the force with which the animal is made to hold back. The parts are few and simple and the operation is positive.

In the accompanying drawings the invention is shown as applied to a wagon with a tongue to which a double team can be attached. It will, however, be readily seen that with very slight modification the device can be readily attached to the shafts of a single buggy or other vehicle, and I desire to cover any such modification.

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

1. In a vehicle-brake, the combination with a pivoted crank-shaft carrying brake-shoes, pendent levers mounted on said shaft, an auxiliary shaft pivoted on the frame of a vehicle, double levers carried by said latter shaft, connecting-rods connecting said levers and the levers of the crank-shaft, springs connecting said double levers and the frame, whereby the brake-shoes are normally held away from the wheels, and means connecting the double brake-levers with the neck-yoke, whereby the backing of the draft-animals will apply the brake, substantially as described.

2. In a vehicle-brake, the combination with pulleys attached to the opposite sides of the front of the pole, of flexible cords passed over said pulleys and adapted to be connected to the neck-yoke, a movable cross-bar connected to said flexible cords, a crank-shaft carrying brake-shoes, pivoted levers connected to said crank-shaft, and means for connecting the cross-bar with said pivoted levers, substantially as described.

3. In a vehicle-brake, the combination with pulleys attached to the respective sides of the pole, of flexible cords passed over said pulleys and adapted to be connected to the neck-yoke, a movable cross-bar, means connecting said cords and cross-bar, a pivoted crank-shaft carrying brake-shoes, levers mounted on said shaft, an auxiliary pivoted shaft, springs connected to the auxiliary shaft for normally holding the brake-shoes out of contact with the wheels, and means connecting the auxiliary shaft with the movable cross-bar, whereby the backing of the draft-animals will apply the brakes, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ROBERT M. DEYOUNG.

Witnesses:
WM. J. MASTIN,
H. B. GRUBBS.