

(No Model.)

2 Sheets—Sheet 1.

F. A. YOUNG.
VEHICLE BRAKE.

No. 537,100.

Patented Apr. 9, 1895.

Fig. 1.

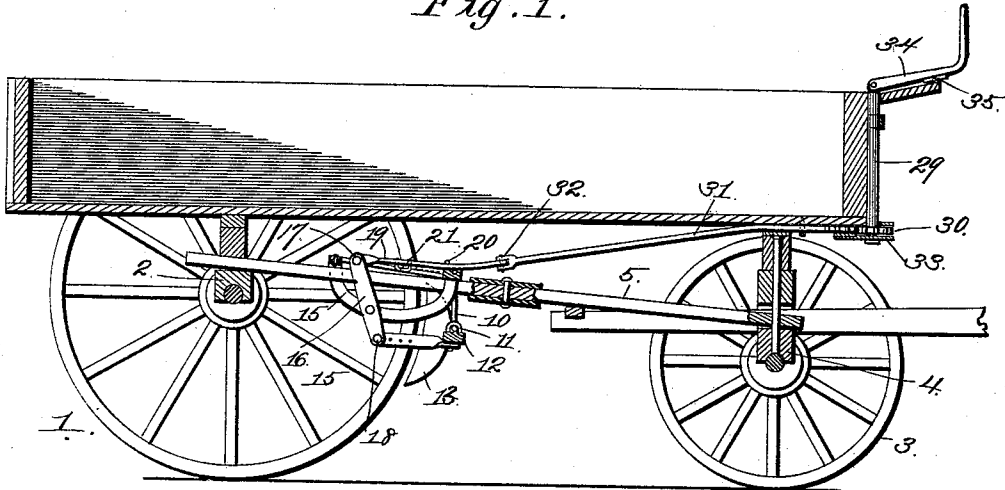


Fig. 2.

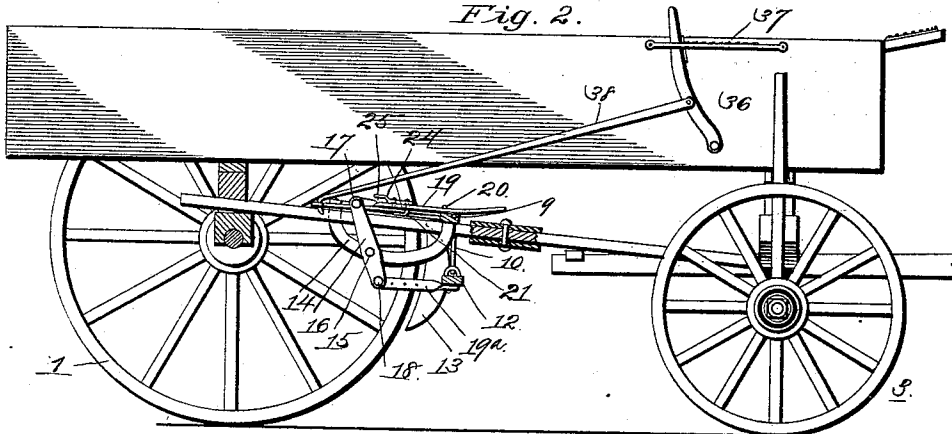


Fig. 3.

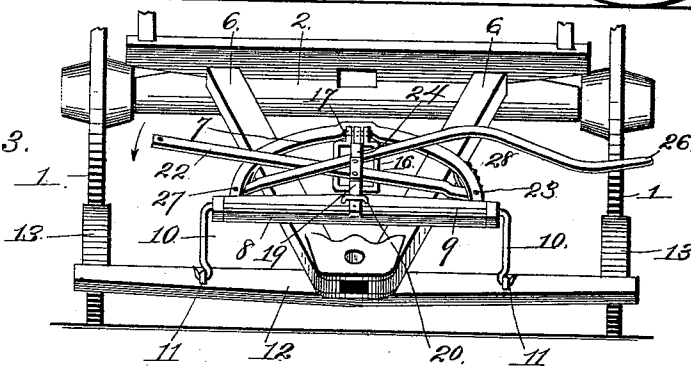
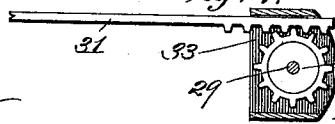


Fig. 4.



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2 Sheets—Sheet 2.

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Fig. 5.

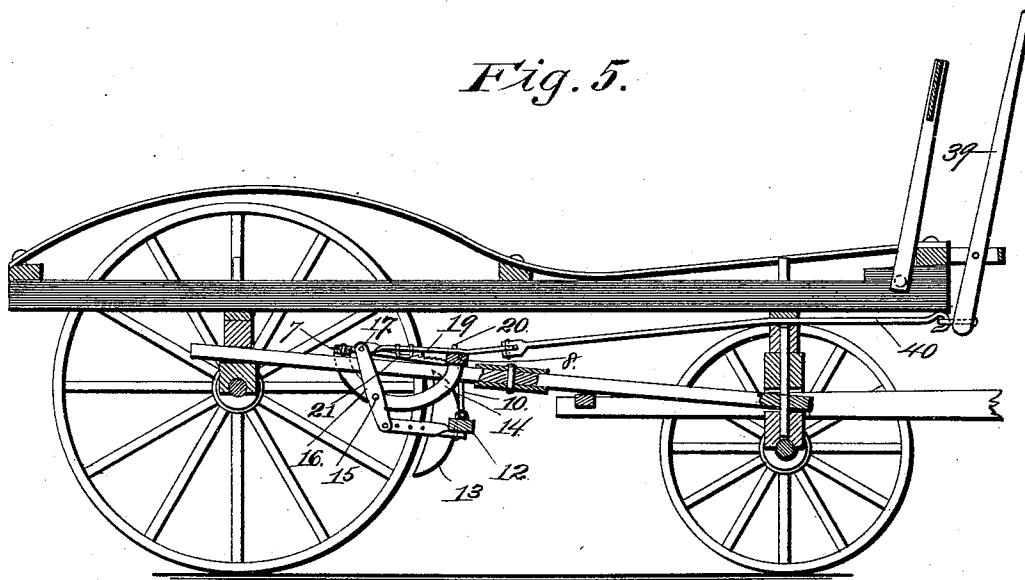


Fig. 6.

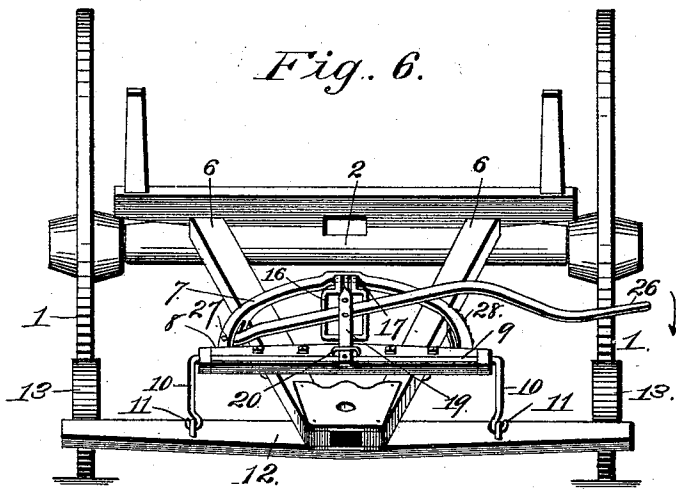


Fig. 7.

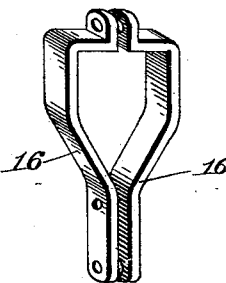
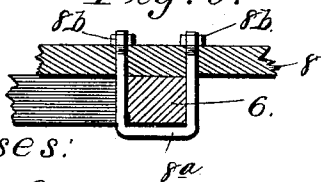


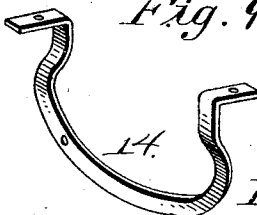
Fig. 8.



Witnesses:

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Fig. 9.



Inventor

F. A. Young

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UNITED STATES PATENT OFFICE.

FREDERICK A. YOUNG, OF RICHMOND, MISSOURI.

VEHICLE-BRAKE.

SPECIFICATION forming part of Letters Patent No. 537,100, dated April 9, 1895.

Application filed March 27, 1894. Renewed February 18, 1895. Serial No. 538,885. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK A. YOUNG, of Richmond, Ray county, Missouri, have invented certain new and useful Improvements in Vehicle-Brakes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to vehicle brakes, and has for its object to produce a brake mechanism which is simple, strong and durable; which is positive and reliable in action, and which may be operated from various points; furthermore, to produce a mechanism of this character which may be easily secured in or removed from position, and which is inexpensive of construction.

With these objects in view, the invention consists in certain peculiar and novel features of construction and combination of parts, as hereinafter described and claimed.

In order that the invention may be fully understood, reference is to be had to the accompanying drawings, in which—

Figure 1. is a vertical longitudinal section of a wagon, and showing my improved mechanism applied thereto in operative position. Fig. 2. is a side elevation of my improved brake-mechanism, and showing it operatively applied to a wagon, and showing it connected with a hand lever of different construction from that shown in Fig. 1. Fig. 3. is a perspective view of the brake-mechanism in operative position. Fig. 4. is a detail view. Fig. 5. is a view of my improved brake-mechanism, as applied to a hay-rack. Fig. 6. is a detail perspective view of a construction slightly different from that shown in Fig. 3, and Figs. 7, 8, and 9, are detail views of various parts.

In the said drawings, 1 designates the rear wheels of a wagon truck, and 2 designates the axle connecting the same.

3 designates the front wheels, 4 the axle connecting the same, and 5 the longitudinally extending reach which connects the front and rear axles in the ordinary manner.

6 designates the hounds, converging forwardly from the rear axle and secured to opposite sides of the reach in the ordinary man-

ner, and bolted or otherwise rigidly secured upon said hounds, is a semicircular casting 7, the open side of which is disposed forwardly, and is secured in any suitable manner to the transversely extending bar 8. This bar rests upon the upper side of the hounds and the reach, and is secured firmly in this position by the U-shaped clips 8^a, which embrace the hounds at their lower and opposite sides, and projecting up through the said transverse bar, have their screw-threaded ends engaged by retaining-nuts 8^b. It is to be understood, however, that this bar may be secured rigidly upon the hounds and reach in any other suitable manner without departing from the spirit of my invention. A rock-shaft 9, is journaled longitudinally of and upon the bar 8, and is provided at each end with the depending arms 10, terminating in hooks, which pivotally engage the staples or loops 11, projecting upwardly from the brake-beam 12, which is arranged a suitable distance in advance of the front peripheries of the rear wheels, and carries at each end the brake-shoes 13, in the ordinary manner. Arranged longitudinally of and vertically beneath the center of the reach-bar 5, is a semicircular casting 14, which depends from and has its ends rigidly secured to the semicircular casting 7, and the under side of the cross-bar 8. A lever, which operates in a vertical plane, is pivoted at 15 to the said casting 14, and is composed of similar arms 16, extending divergently upward from the pivotal point 15 so as to embrace loosely the opposite sides of the reach-bar 5, and the upper ends of these arms are connected by the bolt 17, and the lower ends by the bolt 18. A link-bar 19^a is pivotally mounted at one end upon said bolt 18, and is secured at its opposite end to the brake-beam, about midway its length. A longitudinally extending bar 19, is pivotally connected at its rear end upon the bolt 17, and projecting forwardly therefrom, extends beneath the guide-loop 20, projecting upwardly from the cross-bar 8.

It will be apparent from the foregoing, that the forward movement of the bar 19, will rock the lever composed of the similar arms 16,

and cause the brake-shoes to engage the periphery of the rear wheels. Depending from, and extending longitudinally of the bar 19, is a loop 21, and extending transversely of the machine and through said loop, is a lever 22, which is pivoted at 23 to the semicircular casting 7, adjacent to one end. It will be apparent from this construction, that the operation of the lever 22, in the direction of the arrow, Fig. 3, will move the bar 19 forwardly, and apply the brakes as above explained.

The casting 24 is bolted upon the upper side of the bar 19, and is formed with a recess 25 in its rear end; said recess being the equivalent of the loop 21, and engaging this recess, and extending transversely of the wagon, is a lever 26, the free or handle end of which projects slightly beyond the side of the wagon, and this lever is pivotally connected at 27 to the semicircular casting 7, and adjacent to one end thereof. By the operation of this lever in the direction of the arrow, Fig. 6, it will be apparent that the bar 19 is moved as above explained, and the brakes applied, and in order to secure the brakes against the wheels, the casting 7 is provided with the toothed segment 28, which is engaged by the lever 26; said lever being of spring-metal, so that it shall hold its position when once in engagement with this toothed segment.

In Fig. 1, 29 designates a vertical shaft, which is mounted at the front end of the wagon-body, and this shaft carries, at its lower end, a cog-wheel 30, which meshes with the teeth of a rack-bar 31, which is pivotally connected at 32 at its rear end, to the front end of the longitudinally extending bar 19, and this rack-bar is supported in operative position at its front end and held in engagement with the cog-wheel 30 by a guide-casting 33, which is secured to the bottom of the wagon. 34 designates a lever, which is pivoted to operate in a vertical plane, to the upper end of the shaft 29, and this lever engages the rack-segment 35, secured to the foot-board of the wagon. The lever 34, is preferably in the form of a crank-handle, so that by operating it in one direction or the other, the brake may be applied or thrown from its engagement with the wheels.

In Fig. 2, 36 designates a lever, which is pivoted at the side of the wagon, and engages the rack-segment 37, in the usual manner, and this lever 36, is connected through the medium of the link-bar 38, with the free end of the transversely extending lever 22, so that by the operation of the lever 36, the brake-mechanism may be operated as required.

In Fig. 5, a hay-rack is shown mounted operatively upon the truck, and the lever 39, pivotally mounted at the front end of the hay-rack, is pivotally connected through the medium of the link-rod 40, to the front end of the longitudinally extending bar 19, so that

by the operation of the lever 19 the brake-shoes may be thrown into or out of engagement with the rear wheels.

In the practical construction of this brake-mechanism, either one or another of the three means of operating the brake-mechanism from the front end of the wagon, will be employed in connection with the laterally extending lever 26; said lever being provided for use when occasion may demand, such, for instance, as when the wagon is upon a descending plane, and the person in charge is walking at one side of the wagon, when he may apply the brake without remounting.

From the above description, it will be apparent, that I have produced a brake-mechanism which may be applied to any of the ordinary forms of wagons now in use easily and expeditiously; which is positive and reliable in operation; which may be operated from various points, and which is simple, durable, and inexpensive of construction.

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 suitable running-gear, a rock-shaft mounted thereon, and a brake-beam pivotally carried by said rock-shaft and provided with brake-shoes, of a casting, a lever pivoted thereto to operate in a vertical plane, and pivotally connected to the brake-beam, a longitudinal bar pivotally connected to the opposite end of said lever and suitably guided, a loop carried by said bar, a lever extending transversely through said loop, and means to operate said lever to move the brake-shoes into or out of engagement with the rear wheels of the vehicle, substantially as set forth.

2. In a vehicle-brake, the combination with a suitable running-gear, a rock-shaft mounted thereon, and a brake-beam pivotally carried by said rock-shaft and provided with brake-shoes, of a casting, a lever pivoted thereto to operate in a vertical plane, and pivotally connected to the brake-beam, a longitudinal bar pivotally connected to the opposite end of said lever and suitably guided, a loop carried by said bar, a lever extending transversely through said loop, a lever pivoted to the wagon-body and engaging a rack-segment, and a link-rod pivotally connecting the said lever and the free end of the lever extending through said loop, substantially as set forth.

3. In a vehicle-brake, the combination with a suitable running-gear, a bar secured by clips transversely upon the hounds and reach of said running-gear, a rock-shaft journaled longitudinally of said transverse bar, and provided with depending arms, and a brake-beam pivotally connected to the lower ends of said arms and provided with brake-shoes, of a semicircular casting, also secured upon the hounds and the reach, and having its ends

connected by said transverse bar, a semicircular casting secured to and depending from the first-mentioned semicircular casting, a lever pivoted to the last-mentioned semicircular casting, and embracing loosely the opposite sides of the reach, a link-bar connecting operatively the lower end of said lever and the brake-beam, a longitudinally operating bar suitably guided and pivotally connected at its rear end to the upper end of said lever, and

means to reciprocate said bar, so as to apply or throw off the brakes, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERICK A. YOUNG.

Witnesses:

T. T. PROUGH,
J. M. WRIGHT.