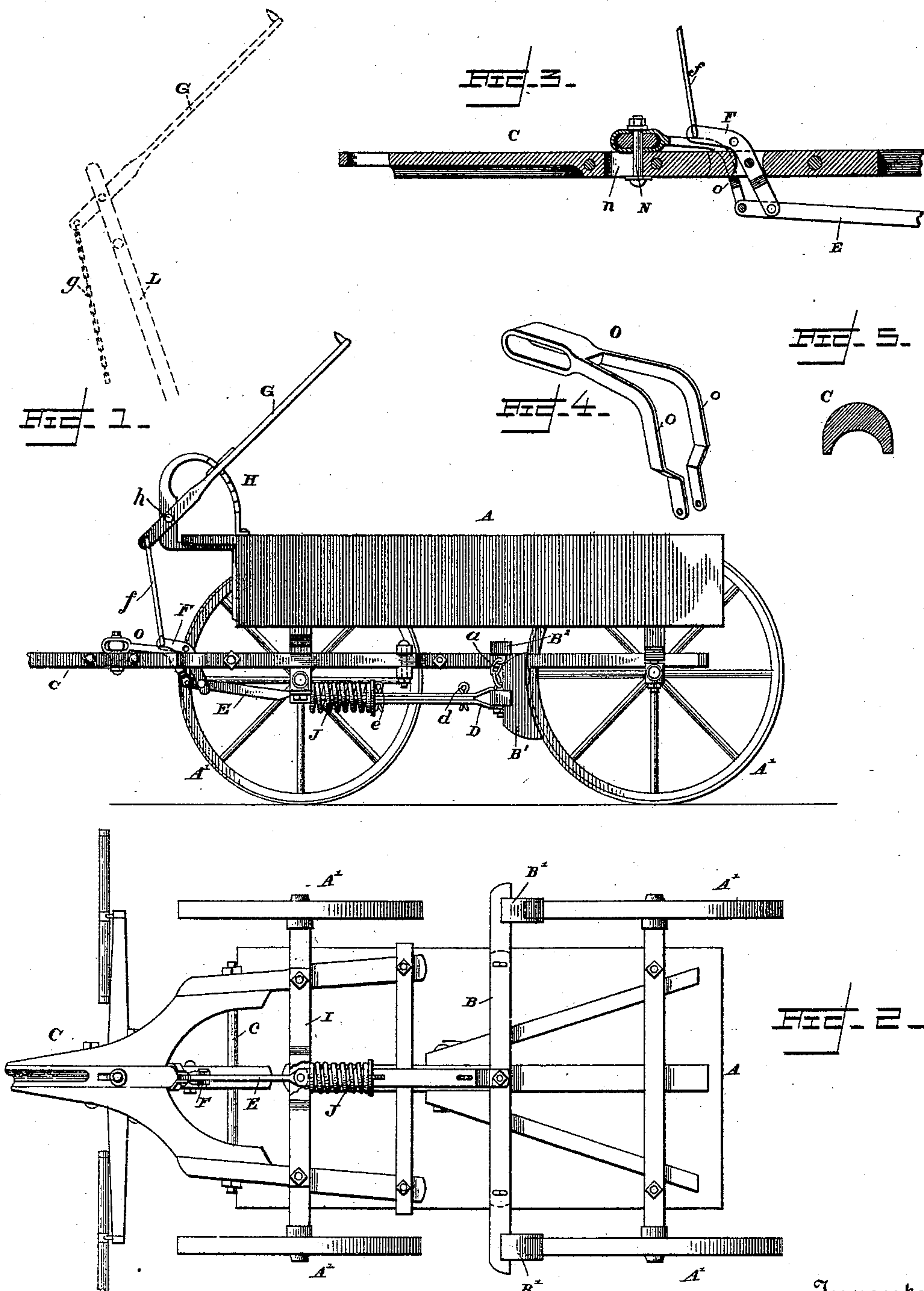


(No Model.)

C. C. REYNOLDS.  
WAGON BRAKE.

No. 498,188.

Patented May 23, 1893.



Witnesses

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# UNITED STATES PATENT OFFICE.

CHRISTOPHER C. REYNOLDS, OF ELDORADO, UTAH TERRITORY, ASSIGNOR  
OF ONE-THIRD TO ELIZABETH BROWN, OF SAME PLACE.

## WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 498,188, dated May 23, 1893.

Application filed June 7, 1892. Serial No. 435,843. (No model.)

*To all whom it may concern:*

Be it known that I, CHRISTOPHER C. REYNOLDS, a citizen of the United States, residing at Eldorado, in the county of Salt Lake and Territory of Utah, 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.

This invention relates to an improvement in wagon brakes the object of the invention being to provide a simple, cheap, efficient and easily-operated brake, which may be operated automatically or by the hand of the driver, and the invention consists in the construction, arrangement and combination of parts, substantially as will be hereinafter described and claimed.

In the accompanying drawings illustrating my invention: Figure 1 is a side elevation of a vehicle provided with my improved brake. Fig. 2 is a bottom plan view of the same. Fig. 3 is a detailed longitudinal section of the tongue. Fig. 4 is a detail perspective view of the front strap which incloses the tongue. Fig. 5 is a cross section of the tongue.

Similar letters of reference designate corresponding parts in the several figures of the drawings.

My improved brake is applicable with equal value to vehicles of many and various kinds, such as wagons, carriages, carts, buggies, &c.

In the example of wagon shown in the drawings, I have delineated a four-wheeled wagon, A being the body and A' the wheels. C denotes the tongue or pole which is pivotally hung at its inner end by means of a horizontal bolt c upon horizontal framework beneath the wagon body. These and other parts make up the general structure of the body of the vehicle to which in the present instance my improved brake is applied for actual operation, but doubtless this structural combination of the vehicle might vary without departing from the invention or any other vehicle might be substituted therefor inasmuch as the brake is applicable as before stated to a great diversity of carriages.

B denotes the horizontal brake beam lo-

cated transversely beneath the wagon body A and carrying the brake shoes B' B' which are designed to bear upon the peripheries of the rear wheels A'. The brake beam B is partly supported and held in place by means of the chains a a which are connected to the transverse horizontal beam B<sup>2</sup>, forming part of the underneath framework of the wagon.

To the middle portion of the brake beam B is secured the rear end of the brake rod D, which consists in the present instance preferably of two metallic strips which are bolted to the beam B and which are pinned together by means of the split pins d and e and which strips receive horizontally between them the rod or metallic beam or pole E which constitutes the remainder of the brake rod and which extends to near the forward part of the vehicle underneath the inner end of the pole or tongue C, said rod E being supported below the front axle and between it and a horizontal metallic strip which is bolted to the underside of said front axle, said rod E being jointed at a point between said metallic strip I and the front axle so that the rod may have sufficient play to adapt itself to the various locations in which it must of necessity be placed in consequence of a swinging of the front wheels upon the front bolt of the wagon.

J designates a spring which may be of any suitable and desirable kind, size and strength, it being preferably a spring of considerable power and being coiled around the rod E between the front axle and the washer located next to the split pin e as shown in Fig. 1 or between the front axle and some other fixed point or projection on the brake beam, so that the tendency of said spring shall be to push the brake shoes constantly upon the rear wheels to exert thereon a braking action. It will be observed that by this collocation and arrangement of parts which I have just described, the brake rod, consisting of the section D and the section E may be permitted to have a longitudinal or endwise movement sufficient to place the brake shoes upon the rear wheels or remove them therefrom and that the normal action of the strong coiled spring J will be to keep the brake set, but that whenever any force is exerted upon the



outer end of the rod E to pull the same outward, then the brake shoes will be removed from their action upon the wheels. I arrange the whiffletrees upon the upper portion of the rear end of the tongue C and locate their bolt in a slot in said tongue C, as shown, the lower end of which bolt connects by a link pivotally with the extreme outer end of the rod E so that when the wagon starts forward under the pulling action of the animals which are harnessed thereto, the action will be to force the rod E endwise and remove the brake shoes from the wheels.

A bell crank or curved lever F is pivoted in a slot in the rear end of the tongue C ahead of the bolt c, but behind the whiffletree slot and the lower end of this curved lever F is pivotally connected to the brake rod E, while its upper end is pivoted to the lower end of a long lever handle G, supported by means of a pivot h upon the frame or standard at the front end of the wagon body A, which standard is provided with a curved sector H, having the usual teeth which are adapted to be engaged by a lug on the handle G, so that the said handle G may be located at any desired point, and thus by means of the leverage just described which connects the handle G with the brake rod, the force of the spring can, by a manipulation of the handle G, be overcome when desired and the brake shoes removed from the wheels and held in their removed positions in consequence of the engagement of the lever handle with any particular one of the notches or dentations in the sector H.

My improved wagon brake is especially designed for use in connection with wagons for transporting hay, on which wagons large loads are usually mounted, carrying the top of the load sometimes up to a considerable height which can only be reached by means of a ladder which is ordinarily located at the fore part of the wagon. I have shown such a ladder in dotted lines at L in Fig. 1. When the brake is used with this kind of a wagon having such a ladder, the lever handle G instead of being pivoted upon the forward standard, would ordinarily be pivotally supported at the top end of the ladder as shown in Fig. 1 and a chain g can be substituted, if desired for the link f, the lower end of said chain connecting with the upper end of the bent lever F. This ratchet and lever arrangement is only used for the purpose of holding the brake shoes temporarily off the wheels when it is desired to back up the wagon. Of course it can be used at other times if desired, but I speak of this as the principal use for which it is devised.

The improved steel tongue C, forming a part of my present invention, has a concave groove on the under side thereof lengthwise, so that the tongue appears in cross section as shown in Fig. 5. Tongues have heretofore been made solid and also with longitudinal passages through them, but such a passage when provided has to be drilled out which

causes a great deal of labor and trouble as well as waste of material. With the tongue constructed of the form shown herein, it will be evident that it can be easily molded in that shape and that a much smaller quantity of material will be required to make it, than when it is made solid or even with a longitudinal passage. With the present construction it is amply strong and is much lighter and can be provided at much less expense. In a slot n in the tongue C, is located the bolt N. Connected to this bolt is the metallic strap O, shown in Fig. 4, having the side pieces o o which pass down on each side of the tongue, their lower ends being perforated for the purpose of enabling them to be pivotally connected to the extreme forward end of the brake rod E. Obviously the whiffletrees will be connected to the bolt N. Said bolt has a sufficient play within the slot n to enable the brake to be removed from the wheels whenever the horses start forward and act upon the whiffletrees and thus cause the brake rod to be moved forward.

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

1. In a wagon brake, the combination of the brake beam with its shoes, the longitudinal brake rod, a spring enveloping the same for setting the brakes and devices for shifting the brake rod endwise for the purpose of removing the brakes from the wheels, substantially as described.

2. In a wagon brake, the combination with the brake beam and its shoes, the longitudinal brake rod, a spring J enveloping said rod and tensioned so as to cause the shoes to bear upon the wheels, a lever F pivoted in the rear part of the wagon tongue C and means for connecting the whiffletrees and the front ends of the brake rod which rod is also attached to the lever F, substantially as described.

3. In a wagon brake, the combination of the brake beam the shoes, the longitudinal brake rod consisting of two interpivotated parts, the coiled spring J enveloping the brake rod and the devices for connecting the whiffletree with the front end of said rod.

4. In a wagon brake, the combination of the beam B, having shoes B' B', the brake rod consisting of the part E which is jointed and the part D which is bolted to the beam B and connected to the part E, the coiled spring J enveloping the brake rod, the bent lever F pivoted in the wagon tongue and likewise to the brake rod E, the operating lever G having its lower end connected by a link with the lever F, all arranged substantially as described.

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

CHRISTOPHER C. REYNOLDS.

Witnesses:

FRED J. LEONARD,  
E. D. R. THOMPSON.