(No Model.)

H. J. HOLMAN.

AUTOMATIC WAGON BRAKE.

No. 469,740. Patented Mar. 1, 1892.

Fig. 1

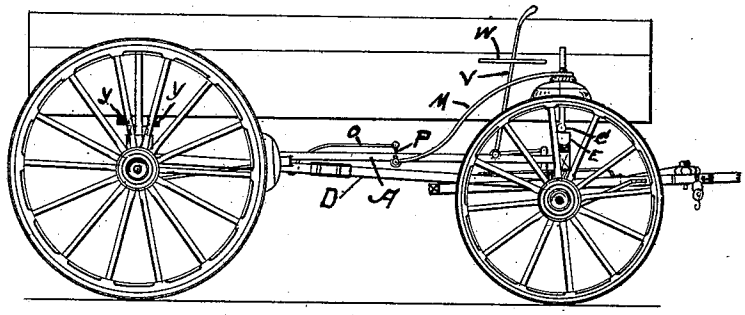


Fig. 3

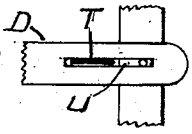
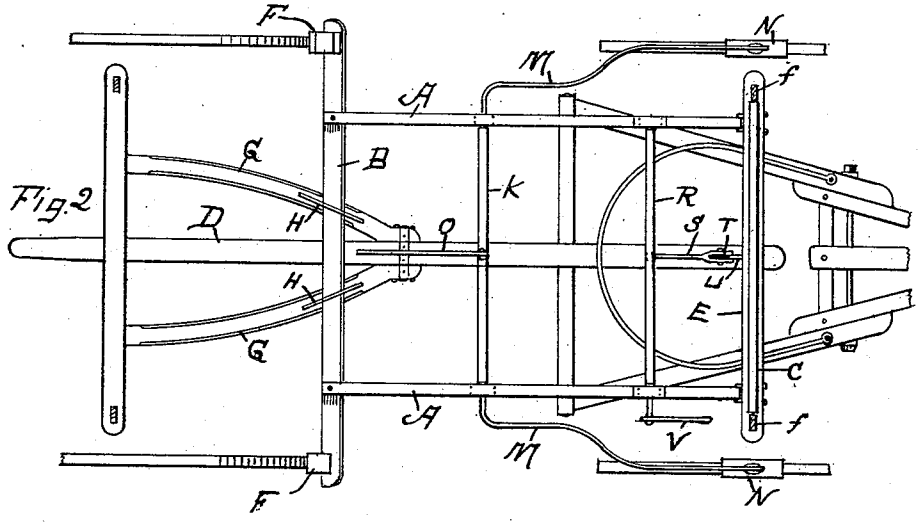


Fig. 2



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UNITED STATES PATENT OFFICE.

HENRY J. HOLMAN, OF WAVELAND, INDIANA.

AUTOMATIC WAGON-BRAKE.

SPECIFICATION forming part of Letters Patent No. 469,740, dated March 1, 1892.

Application filed November 27, 1891. Serial No. 413,303. (No model.)

To all whom it may concern:

Be it known that I, HENRY J. HOLMAN, a citizen of the United States, residing at Waveland, in the county of Montgomery and State of Indiana, have invented a new and useful Improvement in Automatic Wagon-Brakes, of which the following is a specification.

My invention consists in a device by which at the beginning of any descent in a roadway the weight of the load upon the wagon-trucks, taken in connection with a sudden "hold-back" of the horses, is made to apply the brakes to the circumference of the wheels without the intervention of the driver, the brakes being released from friction with the wheels at the foot of the decline by the action of the horses in pulling forward to again draw the load. I accomplish this by the mechanism illustrated in the accompanying drawings, of which—

Figure 1 is a side elevation of an ordinary farm-wagon with my automatic wagon-brakes attached thereto. Fig. 2 is a plan of a farm-wagon truck, with a plan also of my automatic wagon-brakes attached thereto in proper relation therewith. Fig. 2 is drawn on a somewhat larger scale than Fig. 1. Fig. 3 is a detail at the junction of the coupling-pole with the front bolster.

Similar letters refer to similar parts throughout the drawings.

A A are two scantlings in a nearly horizontal position, extending lengthwise of the coupling-pole D and securely bolted to the front bolster E near the ends of said bolster. The other ends of the scantlings A A are rigidly bolted to the cross-bar B, which cross-bar carries the friction-rubbers F F at each end thereof. The cross-bar B rests upon the braces G G and coupling-pole D and passes under the two guide-rods H H, attached to the braces G G.

K is an oscillating shaft at right angles to the scantlings A A and turning in bearings fixed to said scantlings at each end of said shaft. This oscillating shaft carries at each end a rigidly-fixed bent rod M, carrying the friction-rubbers N N at the tops of the front wheels.

O is a bent bar rigidly fixed at its rear end to the coupling-pole D just in front of the position occupied by the cross-bar B. The other end of the bar O is pivoted with an arm P, which arm is rigidly attached to the oscillating shaft K in the center thereof.

C is a roller suspended at its ends on suitable bearings on the inner side of the front standards *f f* and so placed that the said roller may revolve or oscillate freely on its axis and in a position to just clear the upper surface of the front bolster E.

R is an oscillating shaft parallel to shaft K and similar thereto resting in bearings in the scantlings A A. This oscillating shaft R carries an arm S at its center, rigidly fixed thereto at right angles. This arm S is bifurcated at its front end and is pivoted with a vertical bar T, suspended between the said bifurcations. The vertical bar T is suspended above the slot U in the coupling-pole D, into which slot the bar T may be made to drop at will.

V is a hand-lever rigidly fixed to the end of the shaft R and is for the purpose of operating said shaft R.

W is a guide-bar fastened at each end thereof to the wagon-bed side and having a series of notches on its inner side.

The edge of the lever V next to the above-mentioned series of notches is reciprocally arranged to fit into any one of the said notches at the will of the driver, and is held firmly in place by any ordinary spring between the lever V and the side of the wagon-bed.

Y Y are are two scantlings bolted to the under side of the wagon-bed parallel to the rear bolster and fitting against the front and rear faces of said bolster.

Having now described my invention, its manner of operation is as follows: On starting down any inclined plane in the roadway and the horses being checked by the driver and holding back, the gravity or weight of the load in the wagon-bed pitches the bed forward, which carries with it the hind part of the trucks, the coupling-pole D, and bent bar O, and the brakes are at once applied to the circumference of the wheels through the medium of the mechanism hereinbefore described. The slot U permits a forward and backward motion of the coupling-pole D sufficient to allow of the brakes to be applied or released. The roller C permits the wagon-bed to glide freely forward or back-

ward. On reaching the foot of the inclined plane the tightening of the traces by the horses instantly releases the brakes, as is clearly seen from the mechanism above described. By the use of the lever V the driver may at any time permit the suspended bar T to drop into the slot U and as readily draw it from the slot again by the same means. The object of this part of the device is to prevent the brakes from being applied when it is desired to "back" the team, as is often necessary. By applying the brakes vertically over the hubs of the front wheels my improved automatic wagon-brake accommodates itself to a winding roadway without releasing the brakes from the front wheels.

I claim—

In a farm-wagon, the automatic brakes thereof, consisting of the following combination of parts: the pair of longitudinal supporting-scantlings A A, bolted to the front bolster E near the extremities of said bolster and at the rear ends bolted to a cross-bar B, resting on truck-braces G G and coupling-pole D and carrying at its extremities friction-rubbers F F, adapted to rub against the front of the hind wheels of the wagon, the guide-bars H H, attached to braces G G, confining and limiting the movements of the bar B, the oscillating shaft K, suspended in bearings in the supporting-scantlings A A, carrying vertically-arranged arm P, rigidly fixed at its center and at right angles thereto, said oscillating shaft K carrying rigidly-fixed bent rods M M at each end thereof, supporting friction-rubbers N N, adapted to rub the circumference of the front wheels over the center of the hubs, the bent bar O, rigidly fixed at its rear end to the coupling-pole D and pivoted with the free end of the arm P of the shaft K and thereby operating the shaft K, the oscillating shaft R, supported in bearings in the scantlings A A, operated by a hand-lever V, said shaft R carrying at its center and rigidly fixed at right angles thereto an arm S, bifurcated at its forward end and carrying between said bifurcations a vertical bar or stop-pin T, suspended by a pivotal bolt, said bar T adapted to be dropped into a reciprocal slot U in the coupling-pole D just in rear of the front bolster E, the horizontal roller C, suspended freely just over the front bolster E and revolving in bearings on the inner side of the front standards *f f*, and the pair of cross-scantlings Y Y, bolted to under side of wagon-bed and fitting on each side of the rear bolster to prevent any forward or backward movement of the bed with reference to said rear bolster, all substantially as set forth.

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