No. 804,071. PATENTED NOV. 7, 1905.

T. F. TROOP.

BRAKE MECHANISM FOR FIRE APPARATUS.

APPLICATION FILED MAR. 21, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

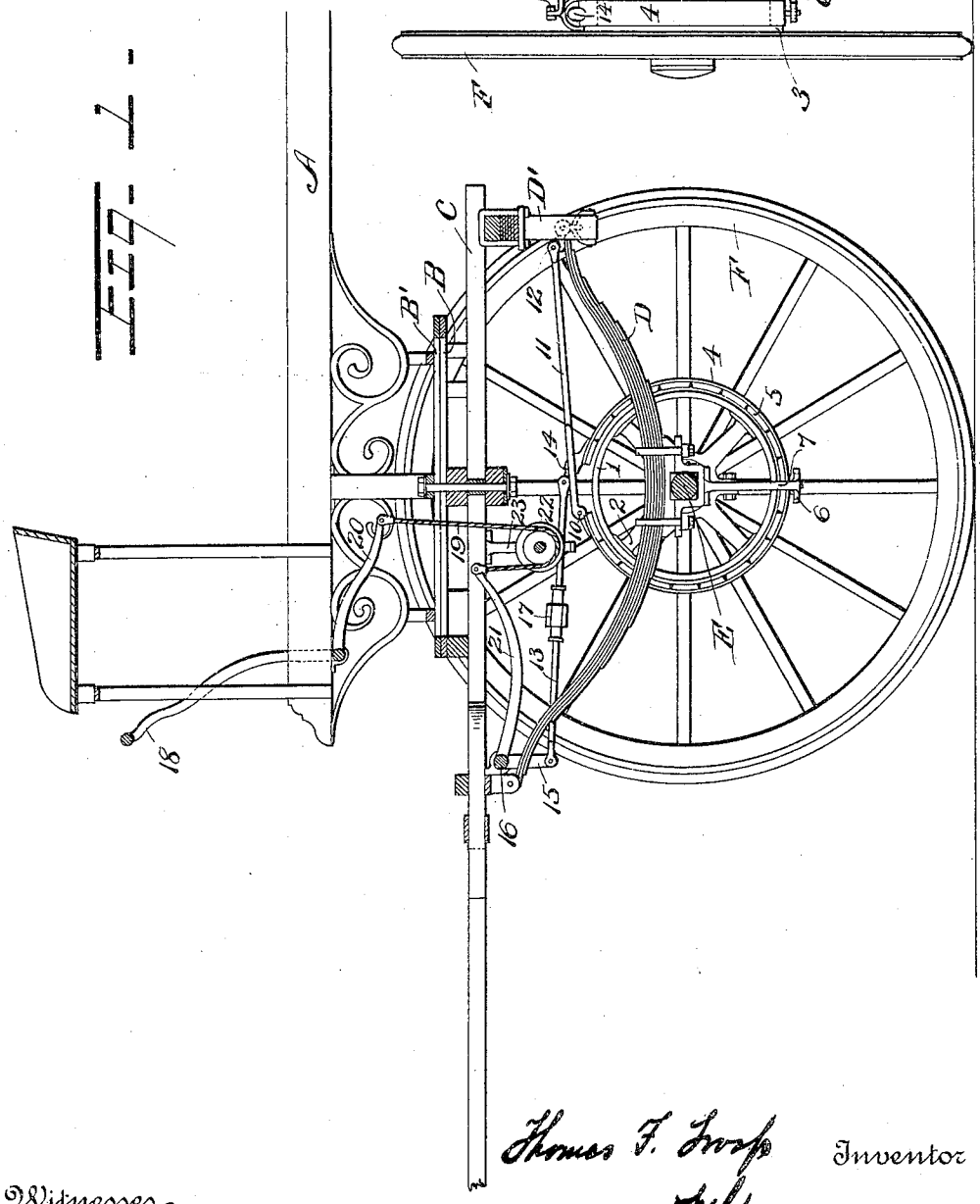
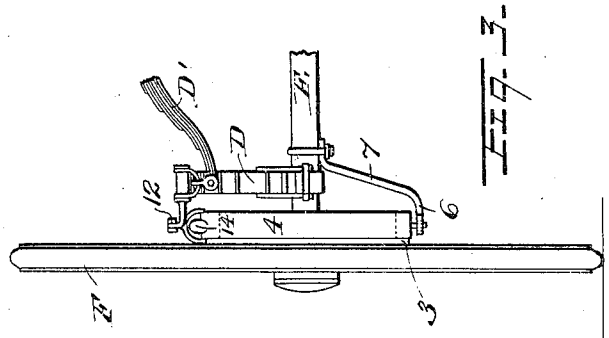


Fig. 3.



Witnesses
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D. M. Stewart

Thomas F. Troop Inventor

By D. M. Stewart

Attorney

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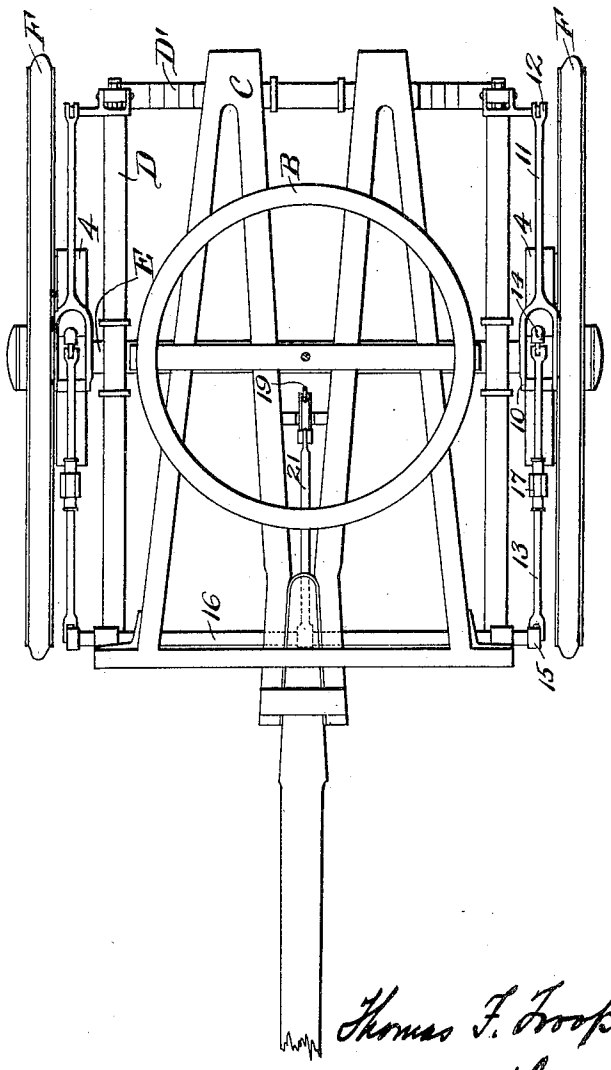


Fig. 2.

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UNITED STATES PATENT OFFICE.

THOMAS F. TROOP, OF READING, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO WILLIAM W. WUNDER, OF READING, PENNSYLVANIA.

BRAKE MECHANISM FOR FIRE APPARATUS.

No. 804,071. Specification of Letters Patent. Patented Nov. 7, 1905.

Application filed March 21, 1904. Serial No. 199,172.

To all whom it may concern:

Be it known that I, THOMAS F. TROOP, a citizen of the United States, residing in the city of Reading, county of Berks, State of Pennsylvania, have invented certain new and useful Improvements in Brake Mechanism for Fire Apparatus, of which the following is a specification.

My invention relates particularly to brake mechanism for the swinging trucks or fore gears of fire apparatus and other wagons; and my object is to provide a simple, convenient, and powerful mechanism which will be satisfactorily operative under all conditions.

The invention is fully described in connection with the accompanying drawings, and the novel features are specifically pointed out in the claims.

Figure 1 is a sectional elevation of the front portion of a fire-wagon having my improved brake mechanism applied thereto. Fig. 2 is a plan view of the same. Fig. 3 is a partial rear view.

A A represent the main frame or body-beams, and B B′ the fifth-wheel, the top member of which is fastened to the body and the bottom member to the truck-gear or platform C, the latter being supported, as usual, through springs D D′ upon the axle E, on which are loosely mounted the wheels F F.

Upon the inner hubs of the wheels F F, as shown, I secure friction or brake rings 1, preferably carried by a parted spider 2, rigidly clamped to the hub. These rings are each provided with a circular flange 3, adjacent to the inner spoke-edges of the wheel and against which the edge of the encircling brake-band 4, with its friction-lining 5, contacts when the wheel is in position on the axle, but which does not prevent the free removal of the wheel whenever desired. Each brake-band 4 is carried, as shown, upon the foot 6 of a depending bracket 7, fixed beneath the axle, there being provided a slotted engagement between the band 4 and the bracket-foot 6, which permits of a limited transverse movement of the band thereon relative to the axle, whereby the band is free to adjust itself to the brake-ring 1. One end 10 of each brake-band is held by a horizontally-arranged retaining-rod 11, which is pivoted at 12, so as to leave the band end 10 free to adjust itself vertically though retained against movement, due to the closing action brought upon the band through the horizontal operating-rod 13, connected to the other end 14 of the band, as shown. Each operating-rod 13 is connected to an arm 15 of a transverse crank-shaft 16, mounted beneath the swinging platform C, and is provided, as shown, with an adjusting-nut 17, which either alone or in connection with a similar nut upon the rod 11 permits of accurate adjustment of the normal position of the band as required. A rocking movement is imparted to the crank-shaft 16 for operating the brake by means of a suitable lever 18, pivotally carried by the frame A A and having a flexible connection 19 between an arm 20, carried by said pivoted lever, and a central arm 21, upon the crank-shaft 16, said flexible connection, preferably a wire rope, being carried downward near the center of the fifth-wheel and over a guide-pulley 22, mounted in a suitable bracket 23, depending from the swinging platform C.

It will be readily seen from the above detailed description of my improved brake mechanism that the brake may be satisfactorily operated in any position of the swinging truck or fore gear relative to the body or frame of the wagon, that the brake-bands are carried independently of the wheels which they engage, are adjustable to proper normal position, and thus capable of automatically adapting themselves to the brake-rings, so as to insure the most effective action, and that the independent handling of the wheels and general operation are in no way interfered with by the application of the brake mechanism. Obviously the particular construction specifically shown and described may be varied without departing from my invention, and I do not desire to unduly limit myself thereto.

What I claim is—

1. The combination with the vehicle-frame and the swinging truck having wheels with brake-rings concentrically fixed thereto, of brake-bands encircling said rings, retaining connections for one end of said bands and movable connections for the other end, a crank-shaft on said truck for operating said movable connections, an operating-lever on the vehicle-frame having flexible operating connection to said shaft, and a guide-pulley for said flexible connection mounted on the

truck adjacent to the pivotal center thereof, substantially as set forth.

2. In a vehicle-brake mechanism the combination with the axle, loose wheels thereon, and a brake-ring fixed concentrically to one of said wheels, of a brake-band loosely encircling said ring, a supporting-bracket fixed beneath said axle and adapted to normally carry said band, retaining connections for one end of said band, and operating connections to the other end thereof said band being slidably engaged with said bracket so as to permit of a limited vertical and longitudinal movement in closing upon said ring substantially as set forth.

3. In a vehicle-brake mechanism the combination with the axle, loose wheels thereon, and a brake-ring fixed concentrically to one of said wheels, of a brake-band loosely encircling said ring, a suporting-bracket fixed beneath said axle and adapted to normally carry said band, a vertically-movable retaining connection for one end of said band, and operating conections to the other end thereof, said band being slidably engaged with said supporting-bracket so as to permit of a limited vertical and longitudinal movement thereof in closing upon said ring.

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

THOMAS F. TROOP.

Witnesses:

D. M. STEWART,

W. G. STEWART.