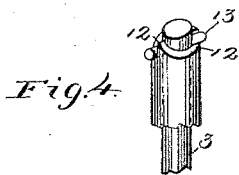
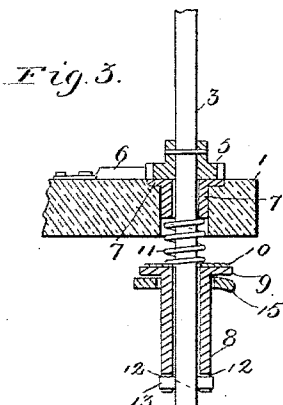
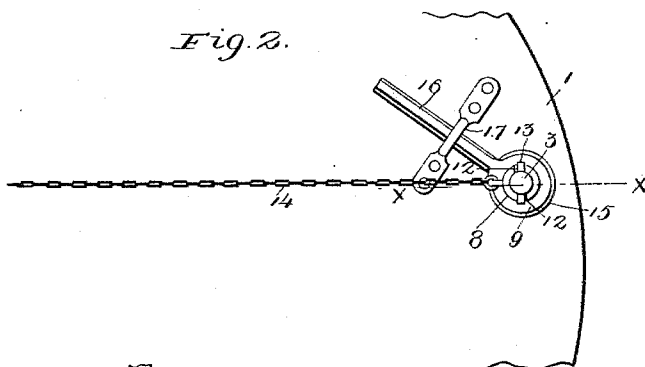
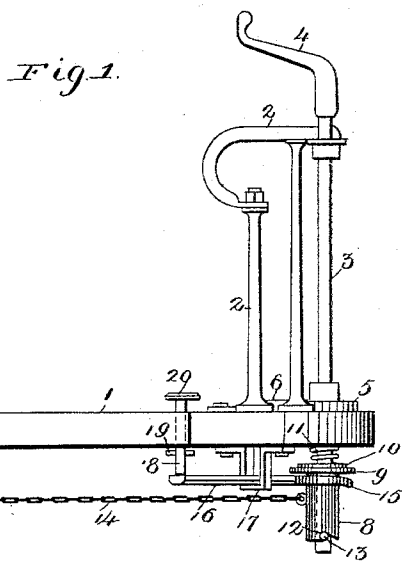


(No Model.)

A. M. AMMONS.
BRAKE STAFF.

No. 564,960.

Patented Aug. 4, 1896.



Witnesses
Alfred A. Mathew
M. J. Lawrence

Inventor
Alfred M. Ammons
 By his Attorneys
Keller & Storer

UNITED STATES PATENT OFFICE.

ALFRED M. AMMONS, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO
HENRY TURNER, OF SAME PLACE.

BRAKE-STAFF.

SPECIFICATION forming part of Letters Patent No. 564,960, dated August 4, 1896.

Application filed December 2, 1895. Serial No. 570,745. (No model.)

To all whom it may concern:

Be it known that I, ALFRED M. AMMONS, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Brake-Staves, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in brake-staves; and it consists in the novel arrangement and combination of parts more fully set forth in the specification, and pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a portion of the platform of a car, showing the brake-staff with my improvement attached thereto. Fig. 2 is a bottom plan view of the same. Fig. 3 is a middle vertical section taken on the line *xx* of Fig. 2 with the staff proper in side elevation; and Fig. 4 is a perspective detail showing the manner of coupling the staff to the rotatable sleeve carried by it.

The object of my invention is to provide means for releasing the brakes of a car or other vehicle without the necessity of turning the brake-staff and the operating-handle carried by it.

A further object is to locate the operating mechanism under the platform of the car where the same will be out of the way of the motorman or driver.

In detail the device may be described as follows:

Referring to the drawings, 1 represents the platform of a car having the usual dashboard-frame 2, in which the brake-staff 3 is mounted. The latter is provided with the usual operating-handle 4, and at the lower end thereof adjacent to the upper surface of the platform has secured thereto the ratchet-wheel 5, with which coöperates a spring-pawl 6. The brake-staff passes through, and the ratchet-wheel operates on top of a flanged tubular bearing 7, carried by the platform, the upper surface of the flanged portion being flush with the surface of the platform. Loosely embracing the brake-staff below the under surface of the platform is a flanged winding sleeve or drum

8, the flange 9 of which supports a plate 10, between which and the lower end of the bearing 7 is interposed a spring 11, coiled about the brake-staff, the upper end of the spring being confined within the opening cut in the platform for the reception of the tubular bearing 7. The base of the sleeve 8 has two terminal notches 12 12, the walls of which are adapted to simultaneously engage the arms of a transverse pin 13, carried by the lower projecting end of the brake-staff, the action of the resilient spring 11 being such as to normally force the notched end of the winding drum or sleeve 8 into engagement with the pin carried by the brake-staff, the action being similar to that of a clutch mechanism, and when the brake-staff is thus brought into engagement with the sleeve 8 the latter will be carried or turned with it upon the turning of the brake-staff in the operation of putting on the brakes. The sleeve 8 has secured thereto one end of the chain 14, leading to the brake mechanism, (not shown,) and as the sleeve 8 revolves with the brake-staff 3 the chain will be wound thereon and the brakes applied.

In order to release the brakes, I provide the following mechanism: Loosely embracing the sleeve 8 and bearing normally against the under surface of the flange 9 is the looped end 15 of a tripping or releasing lever 16, supported at its medial portion by a depending bracket 17, the opposite end of the lever being adapted to be depressed by a tripping-bar 18, mounted in an opening in the platform and normally resting on the free end of the lever 16. A transverse pin 19 prevents it from being displaced from its position in the platform. The upper projecting end of the bar carries a head or foot plate 20. The bar 18 with its head 20 is normally held raised above the upper surface of the platform 1, resting as it does on the free end of the lever 16.

With the sleeve 8 coupled to the brake-staff by the expanding and resilient action of the spring 11, which forces the notches 12 into engagement with the pin 13, it is apparent that as the motorman turns the brake-staff the sleeve will turn with it and wind upon

itself the chain 14. To release the brake, the motorman simply steps on the plate 20, depressing the bar 18, tilting the looped end of the tripping-lever 16 upwardly about the bracket 17, (which acts as a fulcrum,) the said loop raising the sleeve against the resilient action of the spring 11 and disengaging it from the pin 13 and allowing the sleeve to rotate freely about the brake-staff, while the latter is held stationary by the ratchet 6 or by the motorman. The sleeve being thus loose and free to turn on the brake-staff allows the chain 14 (which is under tension) to unwind therefrom and release the brakes. Upon the removal of the foot of the motorman from the plate 20 the spring 11 will again cause the sleeve 8 to reengage with the brake-staff, and tilt the lever 16 back to its original position, and support the bar 18 with its plate 20 above the surface of the platform. The parts are thus again in position for another similar operation.

Having described my invention, what I claim is—

1. In a brake mechanism, a suitable brake-staff carried by the platform of a car, a rotatable sleeve loosely embracing the staff below the platform, means for coupling the sleeve to the staff, a flange forming a part of the upper end of said sleeve, a chain forming a part of the brake mechanism adapted to be wound upon the sleeve, a releasing-lever having a looped end loosely embracing the sleeve and adapted to cooperate with the flanged portion thereof, and means for tilting the releasing-lever and cause the looped end thereof

to raise the sleeve out of engagement with the staff, substantially as set forth.

2. A brake mechanism comprising a suitable brake-staff carried by the platform of a car, a rotatable sleeve loosely embracing the staff below the platform, a transverse pin carried by the lower projecting end of the staff, terminal notches at the lower end of the sleeve, a flange forming a part of the upper end of the sleeve, a tubular bearing for the staff carried by the platform, a spring coiled about the staff and interposed between the flange of the sleeve and the base of the tubular bearing and adapted to normally force the notched end of the sleeve into engagement with the transverse pin carried by the projecting end of the staff, a chain forming a part of the brake mechanism adapted to be wound upon the sleeve, a releasing-lever having a looped end loosely embracing the sleeve and adapted to cooperate with the flanged portion thereof, a depending bracket carried by the platform of the car for suspending the medial portion of the releasing-lever, and a tripping-bar carried by the platform of the car and normally resting on the free end of the releasing-lever and adapted to tilt the latter and cause the loop thereof to raise the sleeve out of engagement with the staff, substantially as set forth.

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

ALFRED M. AMMONS.

Witnesses:

ALFRED A. MATHEY,
EMIL STAREK.