S. J. HANLIN & G. W. RIGNEY.

BRAKE HANDLE.

APPLICATION FILED MAY 29, 1908.

898,880.

Patented Sept. 15, 1908.

2 SHEETS—SHEET 1.

Fig. 1.

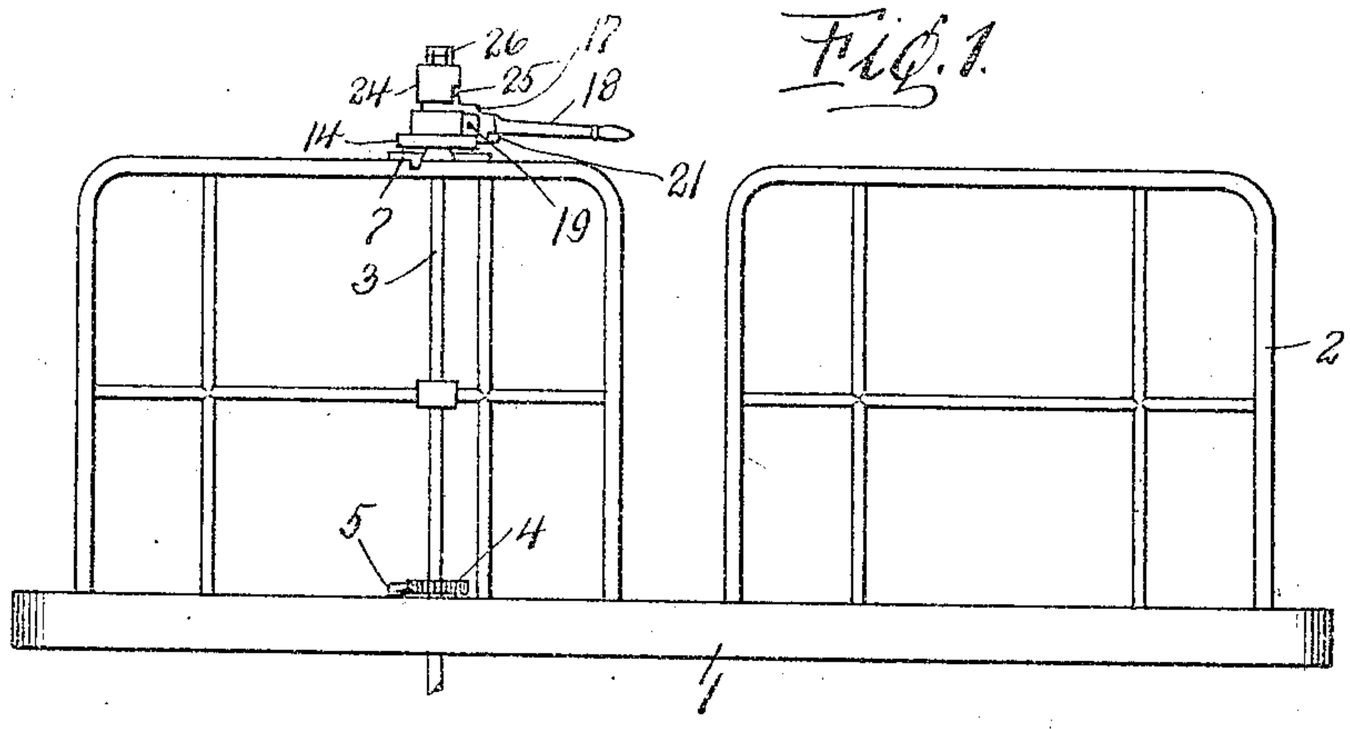


Fig. 2.

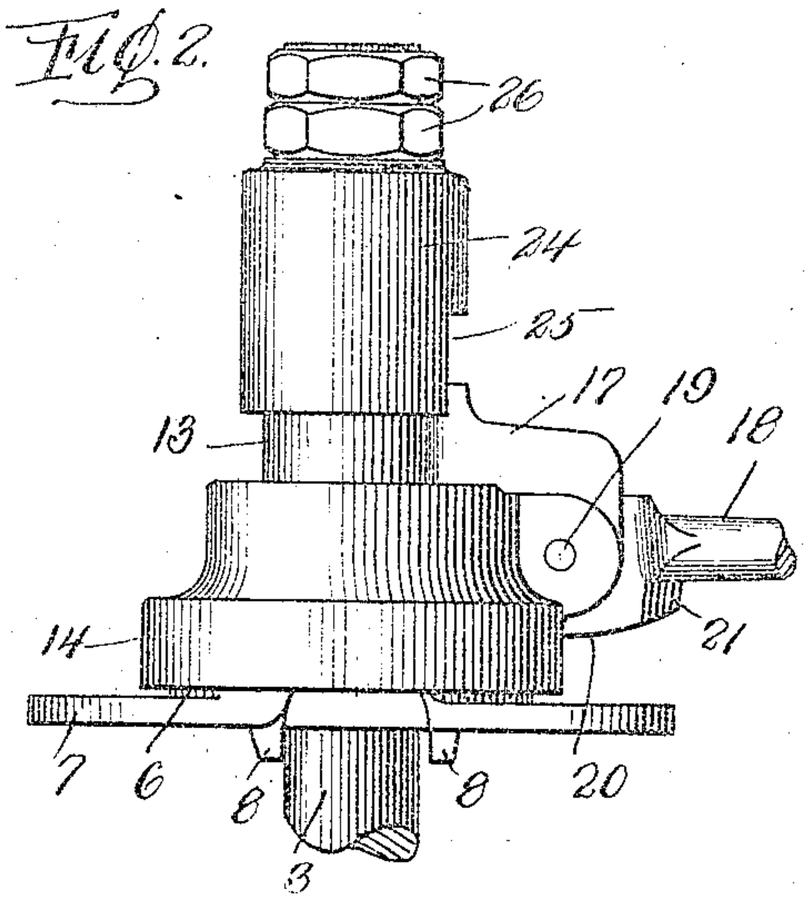


Fig. 3.

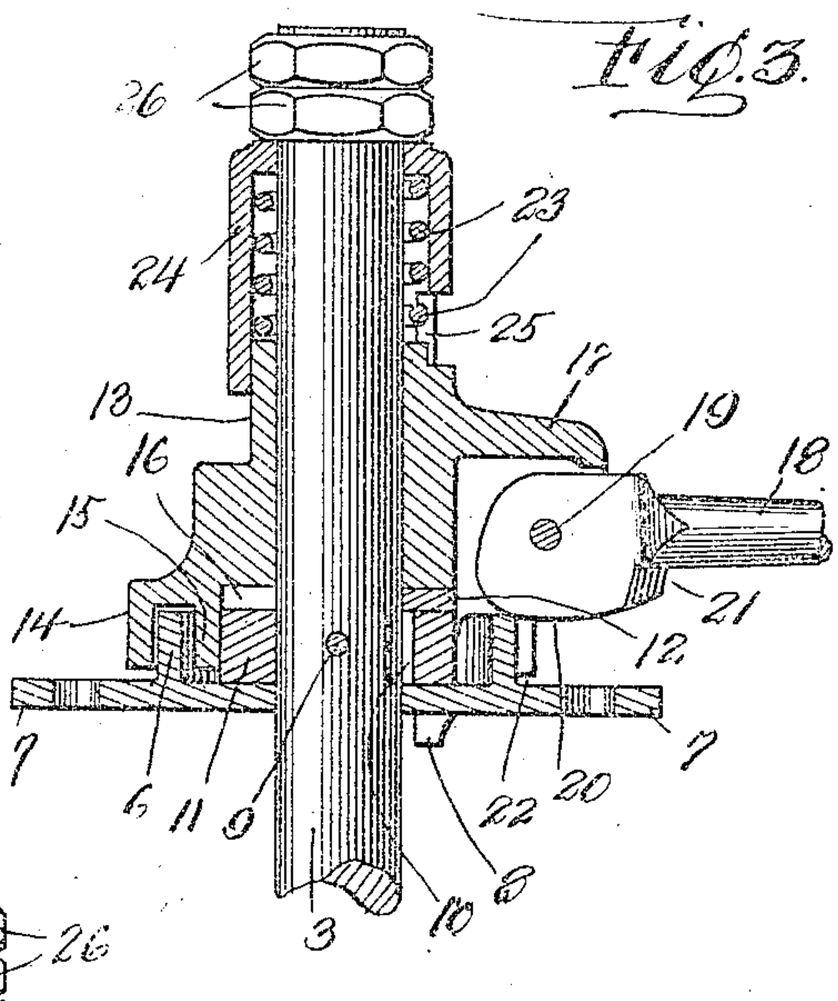
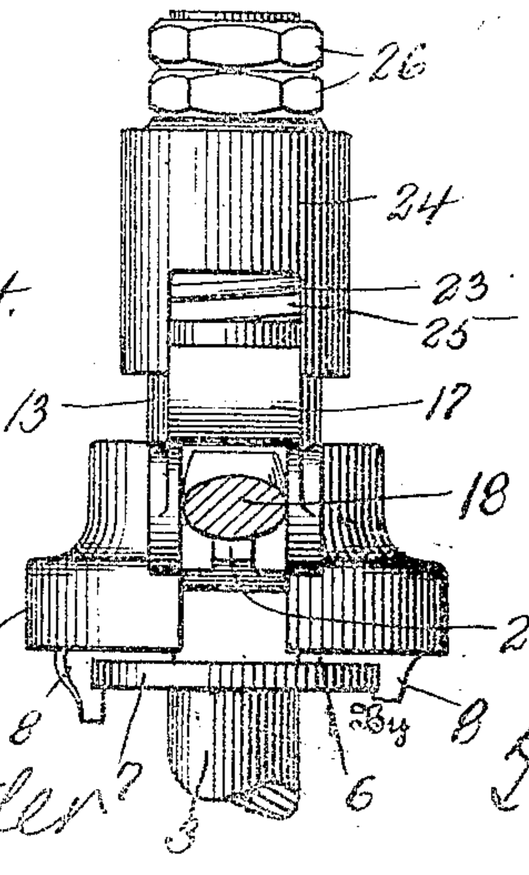


Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 5.

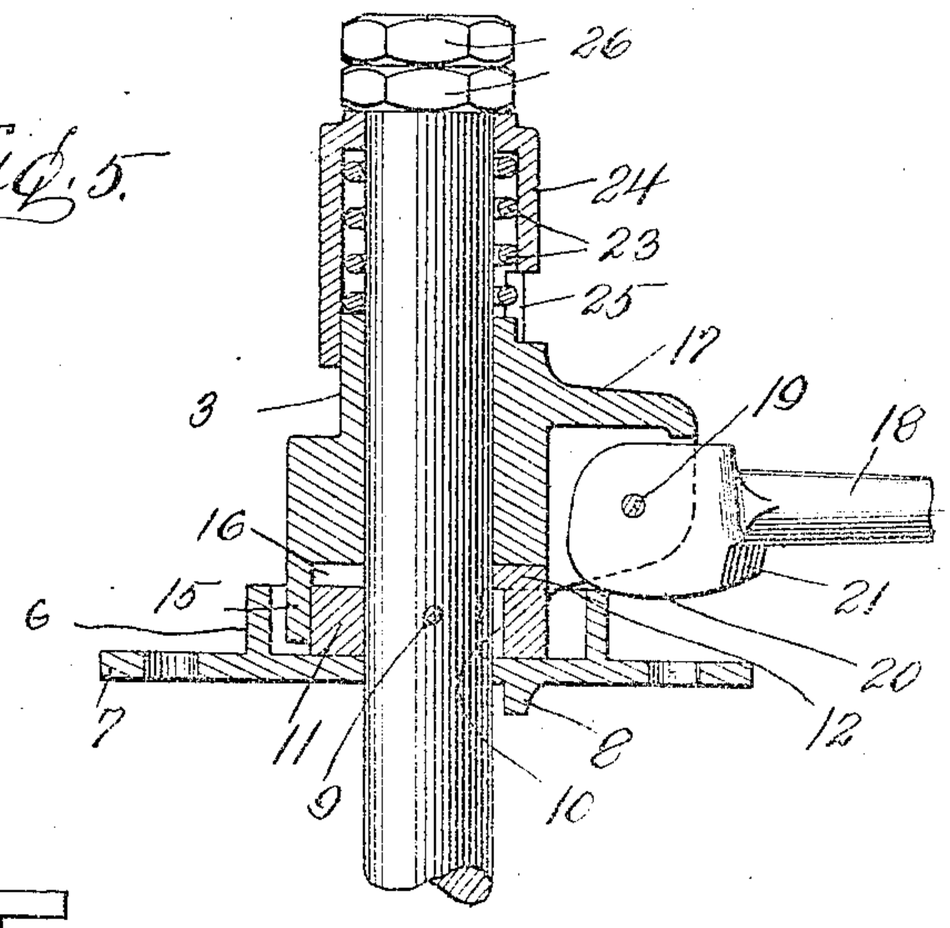


Fig. 6.

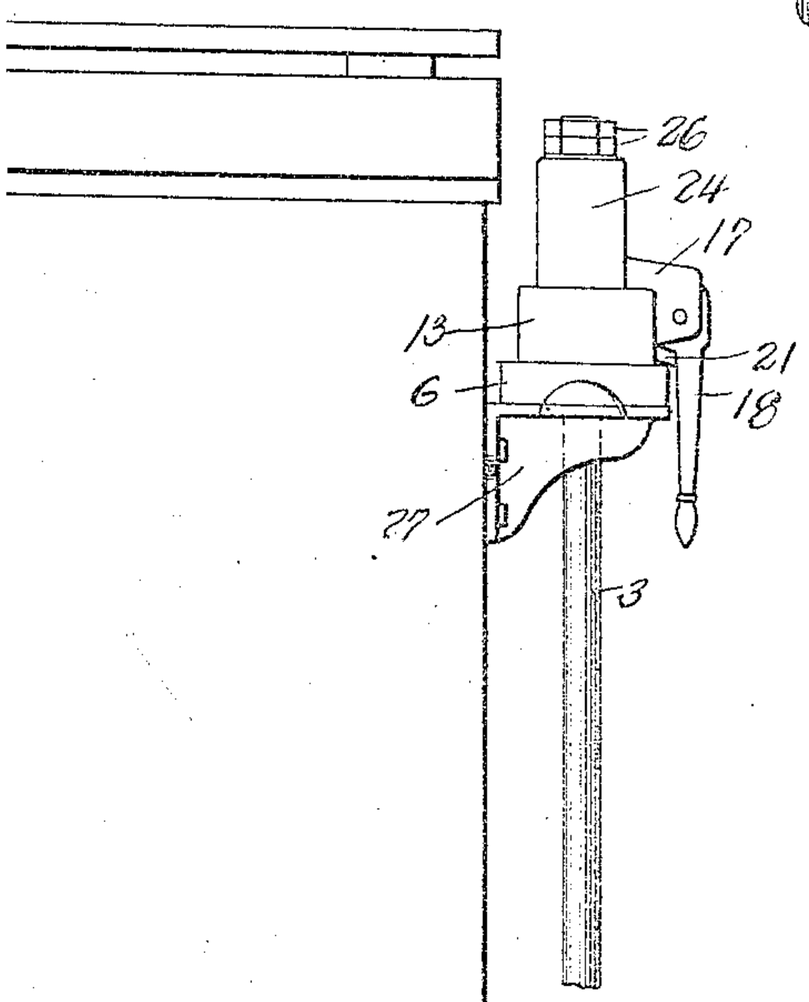
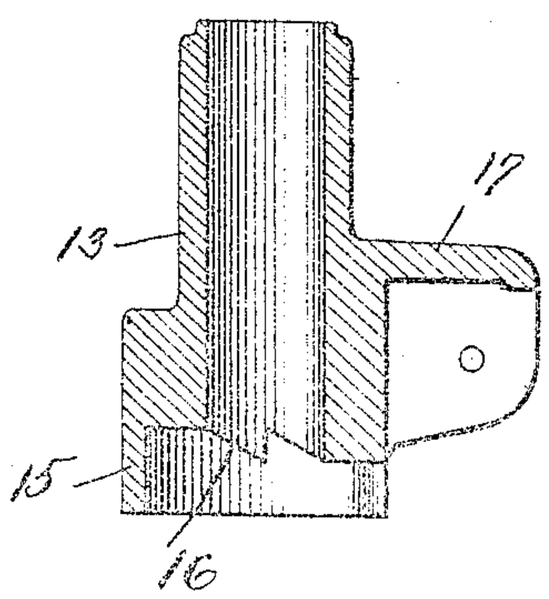


Fig. 7.



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UNITED STATES PATENT OFFICE.

STEWART J. HANLIN, OF PITTSBURG, PENNSYLVANIA, AND GEORGE W. RIGNEY, OF BATTLE CREEK, MICHIGAN.

BRAKE-HANDLE.

No. 898,880. Specification of Letters Patent. Patented Sept. 15, 1908.

Application filed May 29, 1908. Serial No. 435,796.

To all whom it may concern:

Be it known that we, STEWART J. HANLIN, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, and GEORGE W. RIGNEY, residing at Battle Creek, in the county of Calhoun and State of Michigan, citizens of the United States, have invented certain new and useful Improvements in Brake-Handles, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to brake-handles, particularly designed for the brake-shafts of passenger and freight cars.

The objects of our invention are to provide a brake-handle wherein a ratchet mechanism is employed to assist a brakeman in applying the brakes; second, to provide a brake-handle that can be folded into a plane parallel with a brake-shaft, thereby not interfering with passengers passing on or off of the platform of the car; and third, to provide a simple and inexpensive brake-handle that will be thoroughly protected from the forces of nature and prevented from becoming inoperative.

The present invention relates to certain improvements upon Patent No. 838,249, granted December 11th, 1906, wherein the principle of the present invention is fully disclosed.

We obtain the above objects by a structure that will be presently described, and reference will now be had to the drawings forming a part of this application, wherein,

Figure 1 is an elevation of a portion of the car platform and rail equipped with our improved brake-handle, Fig. 2 is an enlarged side elevation of a brake-handle, Fig. 3 is a vertical sectional view of the same, Fig. 4 is a front elevation of a brake-handle, Fig. 5 is a vertical sectional view of a brake-handle of a modified form of construction, Fig. 6 is a side elevation of our brake-handle as carried by a freight car, and Fig. 7 is a vertical sectional view of a movable sleeve.

In the accompanying drawings, we have illustrated a car platform 1 having a railing 2 and a vertically disposed brake-shaft 3, said shaft being journaled in said platform and the railing.

Upon the lower end of the shaft is wound a brake chain or cable (not shown) and above the platform, the shaft 3 is provided with a ratchet wheel 4, which together with the pivoted dog 5 is employed to lock the shaft from rotation in one direction, and since these parts are common to an ordinary passenger coach or car, they need not be further considered.

To put our invention into practice, we provide a railing 2 or a similar support with a ratchet member or base comprising a collar 6 having diametrically opposed lugs 7 adapted to be secured to the railing 2 by nuts and bolts, or similar fastening means, (not shown). To further assist in retaining the collar upon the railing, we provide said collar with depending lugs 8 for embracing the sides of a railing and correctly positioning said collar thereon. The collar 6 is adapted to fit upon the upper end of the shaft 3, and secured to said shaft within the collar 6 by a pin 9 and a key 10 is a ratchet member 11 having the upper edge thereof provided with circumferentially arranged ratchet teeth 12.

Revolubly mounted upon the shaft 3 above the collar 6 is a movable sleeve 13, said sleeve having two depending annular flanges 14 and 15, the flange 14 surrounding the collar 6, and the flange 15 surrounding the ratchet member 11 within said collar. The sleeve 13 is formed with interior circumferentially arranged ratchet teeth 16 adapted to normally engage the ratchet teeth 12 of the member 11.

One side of the sleeve 13 is formed with a housing 17 for a pivoted handle 18, said handle being retained within the housing 17 by a pin 19. The pivoted end of the handle 18 is provided with a beveled edge 20 forming a shoulder 21 adapted to rest upon the collar 6 when the handle is in an inoperative position the flange 14 of the sleeve 13 being cut away, as at 22, to provide clearance for the handle 18.

The ratchet teeth 16 of the sleeve 13 are normally held in engagement with the ratchet teeth 12 of the member 11 by a coil spring 23, said spring encircling the shaft 3 and resting upon the upper end of the sleeve 13. The spring 23 is incased by a cap 24, which is cut away, as at 25, to clear the housing 17. The cap 24 is retained upon the upper end of the shaft 3 by nuts 26 screwed thereon.

To rotate the shaft 3, the handle 18 is manipulated similar to a ratchet lever, the handle being first swung to a horizontal posi-

tion to allow the ratchet teeth of the sleeve 13 to engage the ratchet teeth of the member 11. The handle 18 is then moved back and forth, and at each retractile stroke of the handle, the sleeve 13 recedes to obtain a fresh grip upon the member 11. During this operation, the pivoted dog 5, carried by the platform 1, is manipulated by the brakeman's foot to prevent a backward rotation of the shaft 3 and the sleeve 13, while a fresh grip is being taken by the sleeve. With the handle 18 in a lowered position, and the shoulder 21 resting upon the collar 6, the spring 23 is retained under tension, but immediately lowers the sleeve 13 when the handle 18 is raised.

In Fig. 5 of the drawings, we have illustrated the sleeve 13 without the outer depending flange 14, while in Fig. 7 of the drawings, a similar sleeve is shown that is adapted to descend by gravity, the spring 23 being dispensed with.

The application of our brake-handle to a freight car is clearly shown in Fig. 6, wherein the brake-handle is supported from a bracket 27 carried by the end of a freight car.

Referring to the preferred embodiments of our invention as illustrated in Figs. 1 to 4 inclusive, it will be observed that it is impossible for water, ice, or any foreign matter to interfere with the movement of the sleeve 13, spring 23, and handle 18, these elements being protected in such a manner as to at all times maintain our device in an operative condition.

While in the drawings forming a part of this application there is illustrated the preferred embodiments of our invention, it is to be understood that the elements therein can be varied or changed as to shape, proportion and exact manner of assemblage without departing from the spirit of the invention.

Having now described our invention what we claim as new, is;—

1. In a brake handle, the combination with a car having a brake-shaft, of a collar carried by said car, a toothed member arranged within said collar and fixed to said shaft, a movable spring pressed sleeve mounted upon said shaft and having interiorly arranged teeth for engaging said toothed member, depending flanges carried by said sleeve for embracing said member and said collar, a housing carried by said sleeve, a handle pivotally mounted in said housing and adapted to support said sleeve in an elevated position, and a cap mounted upon the upper end of said sleeve, substantially as described.

2. In a brake handle, the combination with a brake-shaft, of a toothed member fixed thereon, an interiorly toothed sleeve movable on said brake shaft, a depending flange carried by said sleeve for bracing said member, a spring bearing against said sleeve and tending to normally hold said sleeve in engagement with said member, a housing carried by said sleeve, a brake-handle pivoted in said housing, and means comprising a stationary element co-acting with a shoulder on said brake-handle whereby in one position of a brake-handle the said spring is held under compression and the movable sleeve disengaged from said member.

In testimony whereof we affix our signatures in the presence of two witnesses.

STEWART J. HANLIN.
GEORGE W. RIGNEY.

Witnesses:
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K. H. BUTLER.