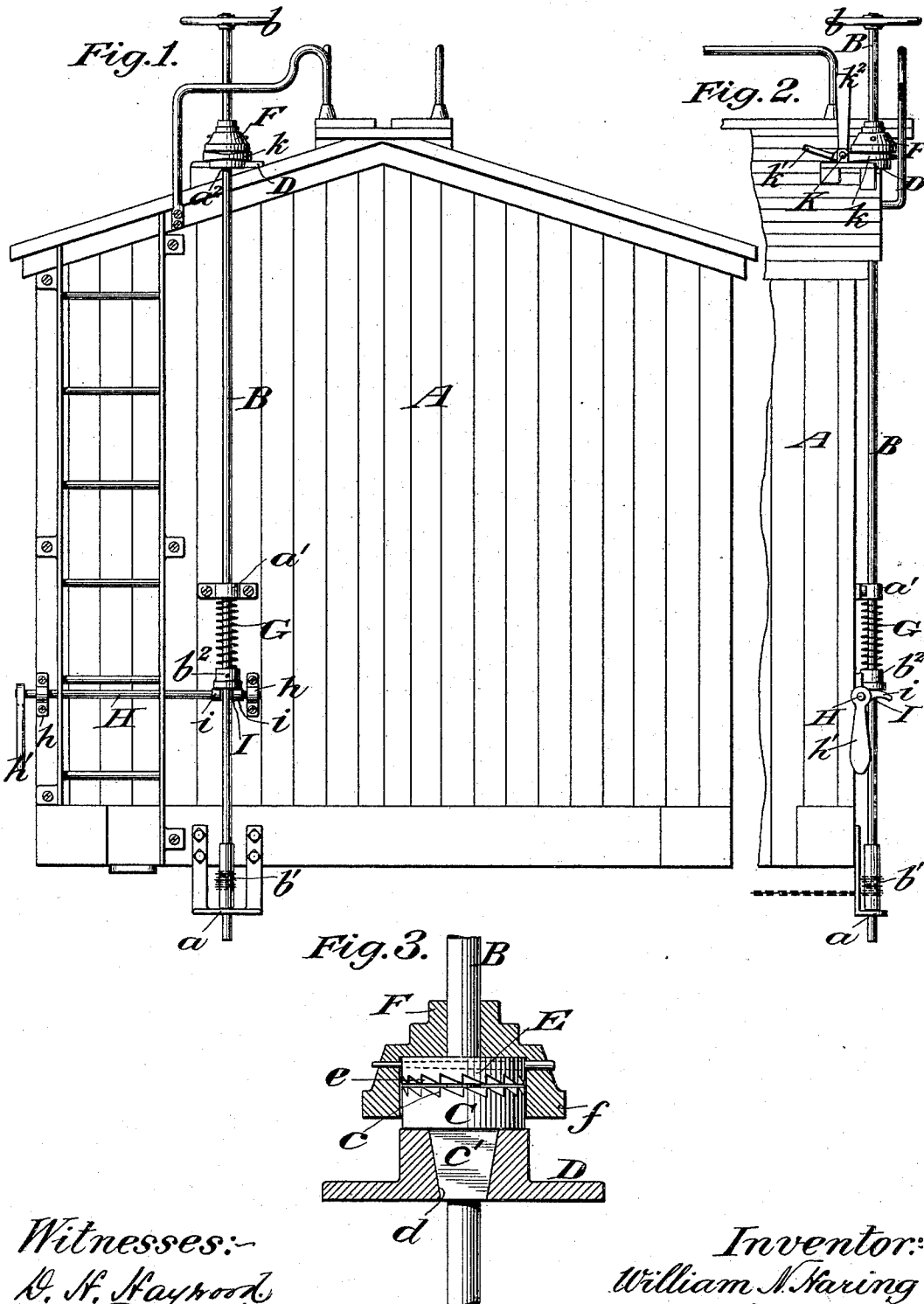


(No Model.)

W. N. HARING.
CAR BRAKE.

No. 487,391.

Patented Dec. 6, 1892.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM N. HARING, OF NYACK, ASSIGNOR OF ONE-HALF TO FRANCES J. HASBROUCK, OF NEW YORK, N. Y.

CAR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 487,391, dated December 6, 1892.

Application filed March 15, 1892. Serial No. 425,034. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM N. HARING, of Nyack, in the county of Rockland and State of New York, have invented a new and useful Improvement in Car-Brakes, of which the following is a specification.

My invention relates to an improvement in car-brakes, and more particularly in the mechanism for setting and releasing the brake.

In cases where the brake-operating spindle extends above the top of the car, as in connection with freight-cars, it becomes a matter of importance both in saving time and labor to provide for the releasing of the brake from a point at the side of the car and within reach of a person standing upon the ground, and also at a point within convenient reach of the brakemen at the top of the car.

My present invention is directed to providing means whereby these desirable results may be conveniently secured without complicated mechanism liable to get out of order.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 represents the brake-operating mechanism in connection with the end of a freight-car as in use. Fig. 2 is a view of the same as it appears looking toward the side of the car, and Fig. 3 represents an enlarged view of the clutch in detail.

A represents the end of a car; B, the brake-operating spindle mounted in bearings *a*, *a'*, and *a''*, fixed to the car. The spindle B extends above the top of the car and is provided at its upper end with a hand-wheel *b*, as is usual. The lower end of the spindle is adapted to have a brake-operating chain attached thereto, as shown at *b'*. The lower clutch-section C is fixed at the top of the car and loosely surrounds the brake-operating spindle B. The clutch-section C is provided with an annular series of ratchet teeth and notches *c* on its upper face, and in the present instance I have shown it fixed to the car by means of a square hub or boss *c'*, extending centrally from its lower face and adapted to enter a square socket *d* in a base D, fixed to the car.

An upper clutch-section E is fixed to rotate

with the spindle B and is provided on its lower face with an annular series of ratchet teeth or notches *e*, corresponding to the teeth and notches *c* on the lower clutch-section and slanting in the reverse direction. The upper clutch-section E is preferably secured in a holder or casing F, the lower flange *f* of which is adapted to surround the lower clutch-section when the parts are in working engagement, and thereby prevent the access to the teeth of dust or other foreign matter which might interfere with their working.

The spindle B is permitted a limited vertical movement within its bearings sufficient to throw the interlocking teeth on the clutch-sections out of and into engagement, and the spindle, in addition to its weight, is held normally depressed or with the teeth in engagement with each other by means of a spring G, one end of which abuts against the lower face of the middle bearing *a'* and the other end against the collar *b''*, fixed on the spindle.

I provide for lifting the spindle B so as to throw the locking-teeth out of engagement with each other from a point within reach of a person standing on the ground at the side of the car by means of a shaft H, mounted in bearings *h*, secured to the end of the car and extending from a point to the rear of the spindle outwardly a little beyond the corner of the car, where it is provided with an operating-handle *h'*. On the shaft H there is fixed an arm I, in the present instance bifurcated and extending in two branches *i*, one on either side of the spindle B beneath the collar *b''* thereon. I prefer to curve the upper faces of the arms *i* where they engage the collar *b''*, so as to enable them to roll against the under side of the collar as the shaft H is rocked. To raise the spindle and thereby release the interlocking teeth from the point at the top of the car, I provide an angle-lever pivoted as at K and extending in one direction from its pivotal connection in the form of a curved arm or ring *k*, adapted to partially or entirely surround the lower clutch-section and engage the under face of the overhanging lip *f*, fixed to the upper clutch-section and spindle. Upon the opposite side of the pivot K the angle-lever extends in the form of a treadle *k'* for

operating the lever and releasing the spindle by foot-pressure, and also in the form of a hand-lever h^2 for accomplishing the same result by hand.

- 5 By the above construction and arrangement of parts a party may release the brake either by hand or foot pressure on the top of the car or by swinging the crank h' at the side of the car, as may be found most convenient, and the brake-spindle will promptly
10 return to position to be again operated to set the brake.

What I claim is—

1. The combination, with the rotary and
15 vertically-yielding brake-operating spindle and means for holding it in its rotary adjustment against the pressure exerted thereon by the brake, of a spindle-operating device located at the top of the car and a releasing
20 device located within reach of the ground, substantially as set forth.

2. The combination, with the rotary and vertically-yielding brake-operating spindle and the clutch-sections secured one to the
25 spindle and the other to the car at the top of the car for locking the spindle in rotary adjustment, of a rock-shaft secured to the car and provided with an operating-handle within reach of a person on the ground, the said rock-
30 shaft being further provided with a spindle-operating arm in position to engage and lift

the spindle when the shaft is rocked, substantially as set forth.

3. The combination, with the rotary and vertically-yielding spindle and clutch-sections, one fixed to the spindle and the other
35 to the car, for locking the spindle in rotary adjustment, of a spindle-releasing device located at the top of the car and a second spindle-releasing device located at a point within
40 reach of the ground, substantially as set forth.

4. The combination, with the rotary and vertically-yielding spindle, of a clutch-section fixed to the car, and a second clutch-section
45 fixed to the spindle, and a lip extending downwardly from around the upper clutch-section in position to embrace the lower clutch-section, and means for lifting the spindle for releasing the clutch-sections, substantially as
50 set forth.

5. The combination, with the rotary and vertically-yielding spindle and the clutch-sections, one fixed to the spindle and the other
55 to the car, of a spindle-releasing lever provided with a curved arm for lifting the spindle and with a treadle and a hand-arm for operating it by foot or hand, substantially as set forth.

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Witnesses:

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