

(No Model.)

F. G. SUSEMIHL.
CAR BRAKE HANGER.

No. 417,953.

Patented Dec. 24, 1889.

Fig. 1.

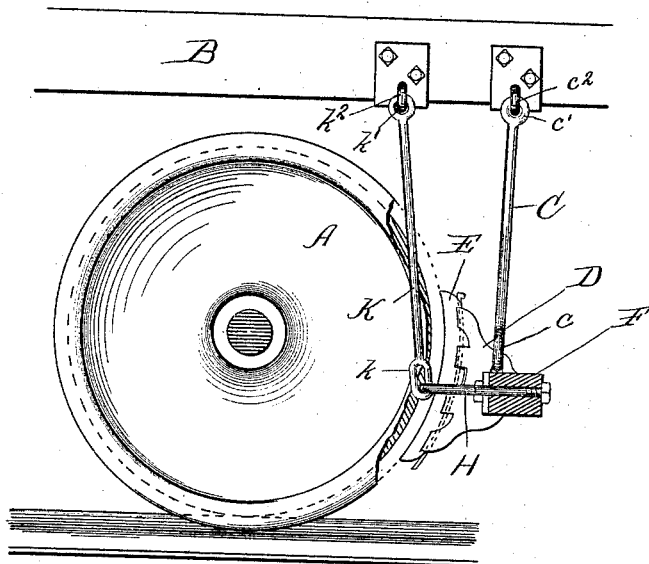


Fig. 2.

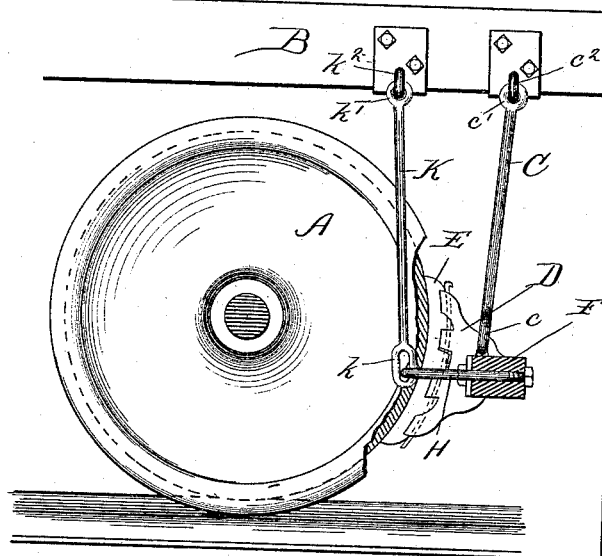
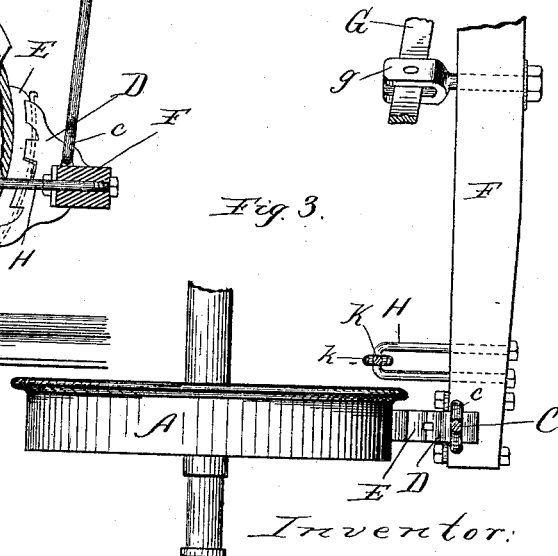


Fig. 3.



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CAR-BRAKE HANGER.

SPECIFICATION forming part of Letters Patent No. 417,953, dated December 24, 1889.

Application filed December 3, 1888. Serial No. 292,495. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS G. SUSEMIHL, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in Car-Brake Hangers, of which the following is a specification.

My invention relates to hangers for brakes upon railroad-cars.

Heretofore it has been customary to suspend the brake-block by means of a swinging link or hanger, which is pivotally connected to the car-sill or sometimes to the truck-frame at a point sufficiently back of or in front of the wheel, so that the brake when not in use will automatically swing away from the wheel by its own gravity; and the brake-block is pivotally connected to this swinging hanger or link in order to permit the same to properly conform to and fit upon the tread of the wheel when the brake is applied, to the end that the brake-shoe may wear evenly. As the brake-block or bracket is thus necessarily connected pivotally to the hanger, great difficulty is, in practice, experienced in keeping the brake-shoe parallel to the tread of the wheel when the brake is hanging free or not applied. It is almost impossible to so balance the brake-block and parts attached and connected thereto about its pivotal support as to prevent one corner or the other of the brake-shoe from riding against the wheel and thus wearing away. Owing to the weight of the brake-lever and its connections, which are usually connected to the brake-beam upon the inside thereof, the tendency usually is to tip the brake-block forward, so that the upper end or corner of the brake-shoe will strike, or frequently strike, against the tread of the wheel. After the brake has been in use a short while the upper corners of the brake-shoe will nearly always be found to be worn away from this cause, thus materially shortening the life of the brake-shoe, and also occasioning a disagreeable striking of the brake-shoes against the wheels from the vibrations of the hanger due to the motion of the car. It has heretofore been customary also to provide the brake-beam with a pair of what are commonly termed "safety-hang-

ers," (usually consisting of chains,) to prevent accidents which might result from the dropping of the brake-beam upon the track in case the ordinary or working hanger should break. These safety-hangers are made longer than the working-hanger, so that they cannot come into play except in case of the breakage of the working-hanger.

The object of my invention is to overcome these difficulties or objections and provide means for keeping the brake-shoe parallel to the tread of the wheel when the brake is free or not applied, while at the same time the brake block and shoe may automatically swing away from the wheel by its own gravity, and also have a pivotal movement upon its hanger or support, so that the brake-shoe may fit properly and bear evenly on the tread of the wheel when the brake is applied.

To this end my invention consists, in connection with the brake block, shoe, beam, and the ordinary working-hanger, of an auxiliary working-hanger connected to the brake beam or block at a different point from the working-hanger, and which serves, in connection with the working-hanger, to hold and support the brake-shoe parallel to the tread of the wheel when the brake is not applied. This auxiliary hanger has a slotted connection either with the brake or with the truck, so that when the brake is applied to the wheel the auxiliary hanger will leave the brake block and shoe free to tilt on the working-hanger, as may be necessary to enable the brake-shoe to fit properly and bear evenly upon the tread of the wheel. My auxiliary hanger thus operates as a working-hanger, in conjunction with the other hanger, at all times, except when the brake is applied, at which time, owing to its slotted connection, it supports no weight, and leaves the brake block and shoe free to turn pivotally upon the other and ordinary hanger. My auxiliary hanger serves not only, however, to keep the brake-shoe parallel to the tread of the wheel, but it may also serve as and take the place of the usual safety-hanger, with which heretofore the brakes have been provided.

My invention also consists in combining this auxiliary hanger with a U-shaped bracket

attached to the beam upon the inside of the wheel, which bracket also serves as the usual guard to prevent the longitudinal vibration of the brake-beam across the truck.

5 My invention also consists in the novel devices and novel combinations of parts and devices, herein shown and described, and more particularly pointed out in the claims.

In the accompanying drawings, which form
10 a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is a side elevation of a device embodying my invention, showing the brake hanging free from the tread of the wheel.
15 Fig. 2 is a similar view showing the position of the parts when the brake is applied, and Fig. 3 is a detail plan view.

In said drawings, A represents one of the wheels of a car-truck; B, the frame or sill of the car or truck; C, the ordinary working-hanger; D, the brake-block or bracket; E, the brake-shoe; F, the brake-beam, and G the brake-lever. All these parts may be of any ordinary and well-known construction.

25 The hanger C has an eye *c*, by which it is pivotally connected to the brake-block D, and an eye *c'*, by which it is pivotally connected to the eyebolt *c*², which is secured to the car or truck frame B at a point sufficiently to one
30 side of the wheel to cause the brake to swing away from the wheel automatically or by its own gravity when the brake is not applied, as shown in Fig. 1.

The brake-lever G is usually pivoted to the
35 bracket *g* attached to the brake-beam F, and projecting inwardly therefrom or toward the truck. The brake-beam is provided near each end with a staple or U-shaped bracket H, consisting, preferably, of a bar or bolt folded
40 upon itself, as indicated in Fig. 3, and K is the auxiliary hanger having a slotted or loop-shaped eye *k* at one end—preferably its lower end. The auxiliary working-hanger K is preferably of the same form and construction as the ordinary working-hanger C,
45 with the exception of the slotted eye *k*, which is connected to the staple or loop-bracket H. The upper end of the auxiliary hanger K has an eye *k'*, which is pivotally connected to the
50 eye piece or bolt *k*². The eyebolt *k*² is attached to the car or truck-frame B at a point in advance from the eye piece or bolt *c*², to which the working-hanger C is pivoted, so that when the brake swings back from the
55 wheel the bracket H will bear against the auxiliary hanger K, as indicated in Fig. 1, while at the same time the bracket H will be free to move in the slotted or oblong eye *k* when the brake is applied against the tread
60 of the wheel, as is clearly shown in Fig. 2.

The bracket H may be of any suitable form or construction, but is preferably made in the form of a loop or staple, as indicated in the drawings, so that it will be sufficiently strong
65 laterally to act as a wheel-guard for the brake-beam as well as a point of attachment for the auxiliary hanger. The bracket H should

project inwardly from the brake-beam sufficiently to enable the auxiliary hanger to support and hold the brake-shoe parallel to the tread of the wheel when the brake is not applied. The length of this bracket H should preferably be about as indicated in the drawings, though it may be varied without departing from the principle of my invention.

I disclaim the devices shown and described in Patents No. 142,600, No. 269,103, and No. 270,732. In my invention both the working-hanger and the auxiliary working-hanger are pivotally connected to the brake and also to
80 the rigid sill or frame-work of the car or truck without the intervention of springs or yielding supports for either of the hangers. If the support for one of the hangers is made yielding—such as a spring—the yielding of
85 the spring-support, due to the jolting of the car when in motion, would necessarily throw the brake-shoe out of parallelism with the wheel and cause the upper or lower corner of the shoe to strike against the wheel and
90 thus produce the very evil which it is the object of my invention to prevent; and where one of the hangers is connected rigidly instead of pivotally to the brake beam or block, as is done in Patents Nos. 269,103 and 270,732,
95 above referred to, the result or object of my invention is not accomplished, as in such case this inclination of the brake-shoe changes with the inclination of the hanger to which it is thus rigidly secured.

In my invention the working-hanger and the auxiliary hanger are about the same length, so that as the brake-shoe swings back away from the wheel the brake-shoe will be held parallel to the tread of the wheel by the
105 two hangers K and C.

I claim—

1. The combination, with a brake-beam, brake-block, and brake-shoe, of a working-hanger pivotally connected at one end to its support and at its opposite end to the brake, and an auxiliary working-hanger likewise pivotally connected at one end to the brake and at its opposite end to its support and operating in conjunction with said working-hanger
115 to hold and support the brake with its shoe parallel to the tread of the wheel when not applied, both said hangers being of about the same length, and said auxiliary working-hanger having a slotted or loose connection
120 to permit the brake-shoes to rock about the working-hanger as a pivot when the brake is being applied, and thus adapt itself to the periphery of the wheel, substantially as specified.

2. The combination, with a brake-beam, of a brake-block and working-hanger pivotally connected to said brake-block and pivotally connected to its support, a bracket secured to the brake-beam, and an auxiliary working-hanger pivotally connected at one end to said
130 bracket, and pivotally connected at its other end to the rigid frame-work from which the brake is suspended, whereby the brake is rigidly supported when not applied with its

shoe parallel to the tread of the wheel, and the rocking or tilting of the brake-shoe prevented, substantially as specified.

3. The combination, with a brake-beam, of
5 a brake block and working-hanger pivotally connected to said brake-block at one end and to the rigid frame-work at its opposite end, a bracket secured to the brake-beam in position
10 to serve as a wheel-guard, and an auxiliary hanger pivotally connected to said bracket and pivotally connected at its upper end to the rigid frame-work from which the brake is suspended, whereby said hangers serve to
15 hold the brake-shoe parallel to the tread of the wheel when the brake is not applied, and to prevent the same from rocking or tilting against the wheel, said auxiliary working-hanger having a slotted or loose connection to
20 permit the brake-shoes to rock about the working-hanger as a pivot when the brake is being applied, and thus adapt itself to the periphery of the wheel, substantially as specified.

4. The combination of a brake-beam, brake blocks and shoes, working-hangers pivotally
25 connected to said brake-blocks, brackets H, secured to and projecting inwardly from the brake-beam, and auxiliary hangers K, having slotted or oblong eyes *k* pivotally connected
30 to said brackets H, substantially as specified.

5. The combination of a brake-beam, brake blocks and shoes; working-hangers pivotally
connected to said brake-blocks, brackets H, secured to and projecting inwardly from the
35 brake-beam, and auxiliary hangers K, having slotted or oblong eyes *k* pivotally connected to said brackets H, said brackets H consisting of looped or U-shaped folded bolts or rods,
40 and being secured to the brake-beams in position to operate as wheel-guards, substantially as specified.

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Witnesses:

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