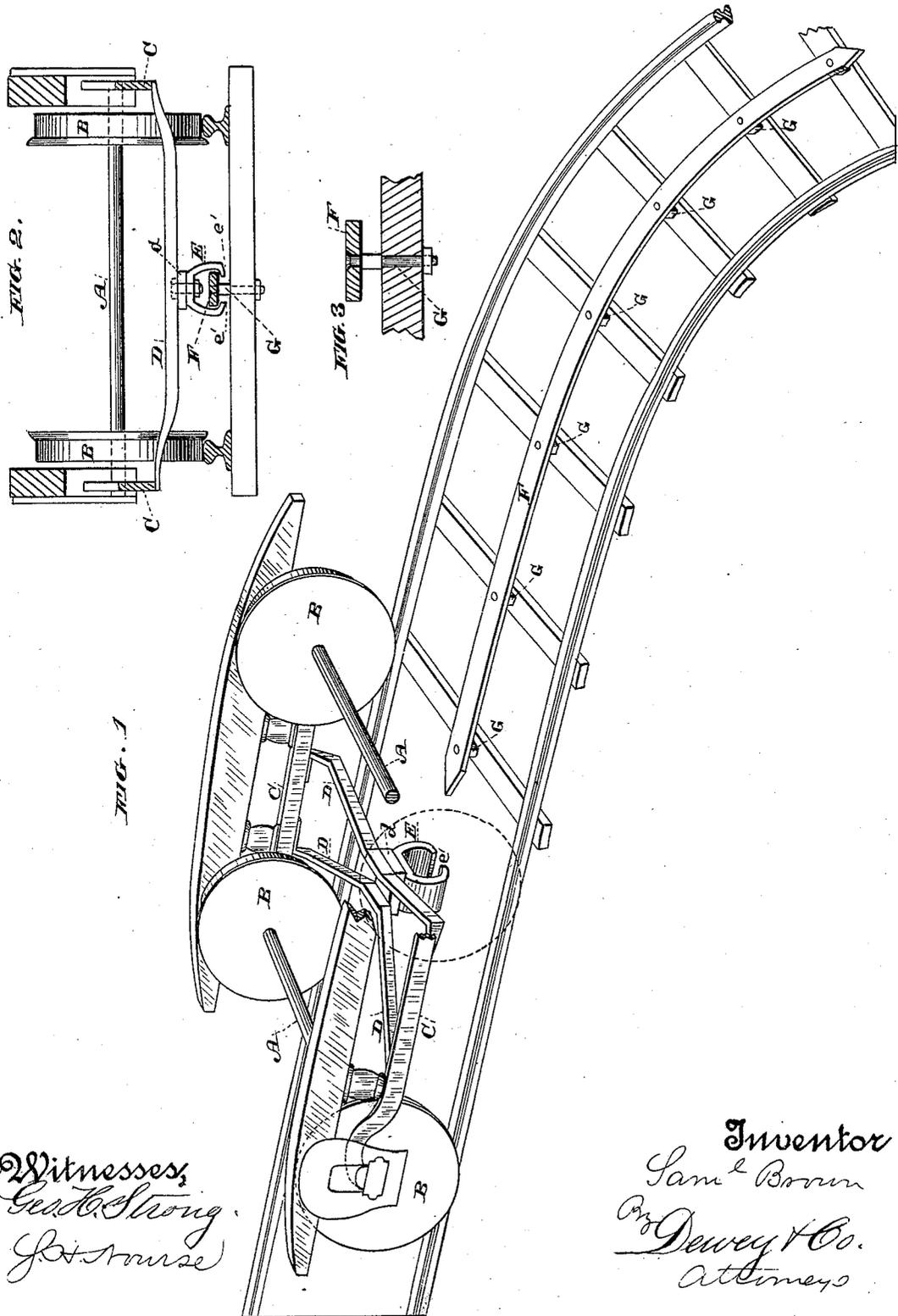


(No Model.)

S. BROWN.
SAFETY CAR TRUCK.

No. 280,442.

Patented July 3, 1883.



Witnesses,
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UNITED STATES PATENT OFFICE.

SAMUEL BROWN, OF SAN FRANCISCO, CALIFORNIA.

SAFETY CAR-TRUCK.

SPECIFICATION forming part of Letters Patent No. 280,442, dated July 3, 1883.

Application filed April 10, 1883. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL BROWN, of the city and county of San Francisco, State of California, have invented an Improved Safety Attachment for Railway-Trains; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a new and useful safety attachment for the cars and locomotives of a railway-train; and it consists in a peculiar clamp or guard rigidly secured under the cars, and in a raised bar or rail with which the clamp or guard is adapted to engage.

The object of my invention is to prevent the derailment of railway-trains at sharp curves, or at other dangerous points where, under speed, the wheels may have a tendency to leave the track.

Referring to the accompanying drawings, Figure 1 is a perspective view of a car-truck on a curve in the track, showing the application of my device to both truck and track. Fig. 2 is a vertical cross-section through truck and track. Fig. 3 is a section showing detail of bar F and the means for securing it to the cross-tie.

A A are the axles, and B the wheels, of a car-truck.

C C are the equalizer-bars supported on the axles. Upon these, through the intervention of suitable springs, the body of the car (not here shown) is supported.

D D are braces secured to the equalizers. These braces, in some construction of trucks, may be set straight across, and in others they may be bent together. In all, however, they are to be bent down closer to the track, and they have bolted securely between them a strong bar, *d*.

E is a clamp or guard having jaws *e*, as shown. This clamp is bolted rigidly under the bar *d*. The object of this connection of the clamp is that it may always travel at a uniform distance from the road-bed. If it were secured to the body of the car it could not so travel, because the body is supported on springs; but the equalizer-bars, being supported by the axles, are steady, and therefore the

clamp depending for support upon them will travel at a uniform distance from the road-bed.

By bending the braces D D downward I lower the point of attachment of the clamp, and thus avoid a shank on said clamp, which would not be as strong or furnish as rigid a connection as the present construction, where the clamp is bolted directly to the bar *d*.

In the center of the road-bed, between and lying parallel with the rails, is a bar or rail, F. This bar is secured in place by bolts G, the heads of which are riveted in the bar. They extend down through the cross-ties and are keyed or otherwise firmly secured underneath. These bolts are round at both ends, and have a square center. One end extends through the tie and the other through the bar. The center, being square, lies between the under surface of the bar and the upper surface of the ties, and raises the bar above the horizontal plane of the cross-ties and supports it in this position. The points of the jaws of the clamp E are thus enabled to embrace and travel under its edges. This bar is only to be placed in the track at curves, or at other points which are particularly dangerous, and its ends are tapered, in order to enable the clamp to engage with it. When the car comes to a curve, the jaws of the clamp pass under the raised edges of the bar F and hold the car down, preventing its wheels from rising to leave the rails, and all danger of derailment is thus avoided. I could place my clamp on one side and cause it to engage with the depressed sides of the ordinary T-rails; but in such case I would have to dispense with the fish-plates now in use on the sides and put them on the bottom in order to preserve an unbroken surface; but the disadvantages of overcoming this difficulty and the presence of switches makes it obvious that the central raised bar, F, is preferable.

This device may be placed on the locomotive, as well as on a car.

The points or manner of attachment of the clamp or guard may have to be varied according to the present construction of the several trucks in use.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

5 The axles A of a railway car or truck, the equalizer-bars C, braces D, secured thereon and bent downwardly, and the cross-bar *d*, secured between the braces, in combination with the clamp or guard E, firmly bolted to the cross-bar, and having jaws *e'*, and the central raised

bar or rail, F, secured in the road-bed, substantially as and for the purpose herein described. 10

In witness whereof I hereunto set my hand.

SAMUEL BROWN.

Witnesses:

S. H. NOURSE,
J. H. BLOOD.