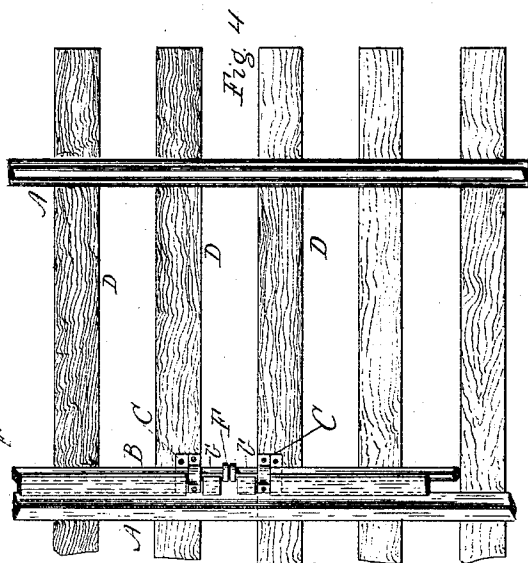
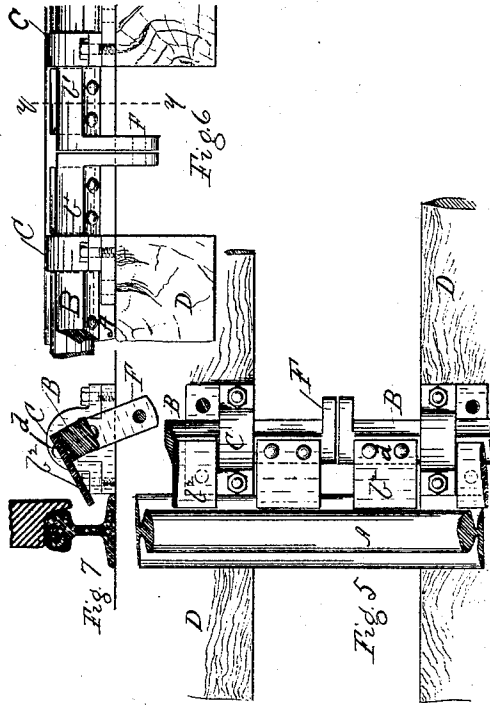
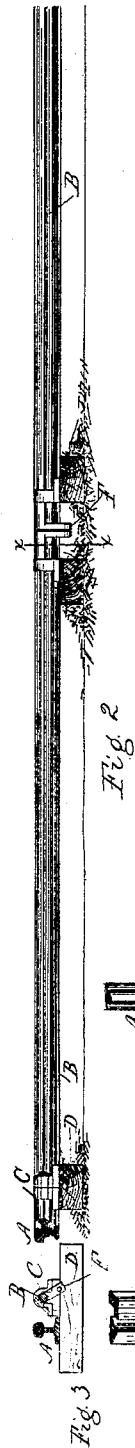
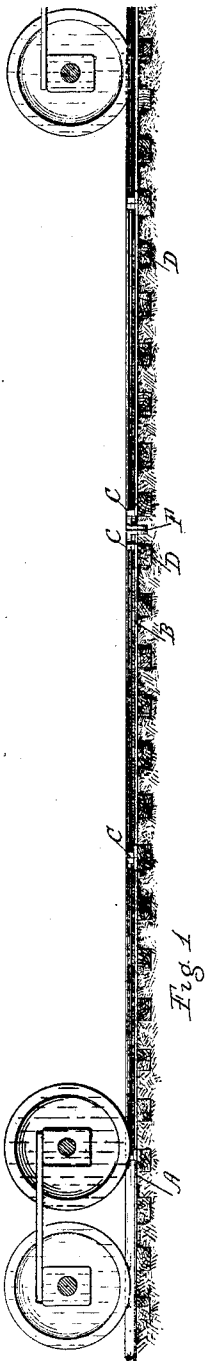


(No Model.)

F. S. GUERBER.
SAFETY BAR FOR RAILWAYS.

No. 348,902.

Patented Sept. 7, 1886.



WITNESSES
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UNITED STATES PATENT OFFICE.

FREDERICK S. GUERBER, OF ALLENTOWN, PENNSYLVANIA.

SAFETY-BAR FOR RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 348,902, dated September 7, 1886.

Application filed April 30, 1886. Serial No. 200,719. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK S. GUERBER, a citizen of the United States, residing at Allentown, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Safety-Bars for Railways; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 represents a side elevation of a track with my improvements applied thereto and the wheels of a car-truck in position on such track. Fig. 2 is a side elevation enlarged of a car-track with my improvement applied thereto. Fig. 3 is a vertical section on the line *xx* of Fig. 2. Fig. 4 is a plan view of a railway-track with my improvements applied thereto. Fig. 5 is an enlarged detailed plan of parts shown in Fig. 4. Fig. 6 is a side elevation of parts shown in Fig. 5. Fig. 7 is a vertical section taken on the line *yy* of Fig. 6.

My improvements have reference to locking-bars or safety-bars, which are used as means of preventing the movement of a switch while any portion of the train which has been moving over the same to enter or leave a siding or main track is still upon the switch, or, in other words, serve as a medium for preventing the movement of the switch until a train has completely passed the same. Heretofore these devices have generally been of such construction that the entire safety-bar was moved lengthwise when movement was imparted to it, such longitudinal movement requiring the exertion of considerable force.

My improvements have for their object to provide a construction whereby the movement of the safety-bar is a lateral or tilting motion on its longitudinal axis, so that, while retaining all the security necessary for the purpose, I obtain the required movement by the exertion of less power or force than has heretofore been required.

Referring to the accompanying drawings, A A indicate the rails of a car-track with my improvements applied to such track.

B represents a safety-bar, which may be of any convenient shape in cross-section, but is preferably L-shaped, and consists of a long bar having journals *b'* fitted in bearings C

secured to the track-ties D, so that said bar may be tilted laterally or rocked on its longitudinal axis. Said bar has a flange-plate, *b*², which may be either made integral with the bar in the first place or be secured thereto by bolts *d*. Said plate *b*² is normally inclined, so that when a car-wheel is upon the adjacent track-rail the flange of such wheel is over it, as shown in Fig. 7, and the bar is thereby prevented from being tilted or rocked on its longitudinal axis. Said bar B has an arm, F, which is connected with a switch-moving or switch-locking device, so that whenever the same is moved the bar will be rocked, and conversely, whenever the bar is held against rocking the switch cannot be moved; hence, when a car-wheel is yet upon the track, either stationary or in movement, and its flange is over the plate *b*² the switch cannot be moved. Ordinarily the bar B, owing to its length, will be made in two sections, as shown in the various figures of the drawings, the ends of the sections meeting at the middle and each section having an arm for connection with the switch or switch-moving device; but this is not essential, and, if desired, the entire bar may consist of a single length or piece.

I have used the term "switch" as indicating any device with which the safety-bar connects and which has its movement controlled by said bar; but my invention is not, of course, restricted to a switch, as it may also be employed in connection with a draw-bridge, gate, or other railway safety appliances.

It will be noted that the boxes or supports in which the safety-bar has its bearings are attached directly to the ties. Heretofore the safety-bar has been supported in brackets attached or secured to the rail. By attaching the boxes to the ties, to which the rails are also spiked, the relative distance between the safety-bar and adjacent rail is constantly preserved, notwithstanding any longitudinal movement of such rail due to "creeping" or other cause, and renewal of rails may be made without moving or disturbing the safety-bar. By the term "ties," as herein used, is meant the structure on which the rails are supported. It will also be noted that the axis of the safety-bar is close up to the rail and that the flange-plate against or over which the car-wheel

rests or passes is attached directly to or formed integral with said bar. This construction is very economical and, as the plate is over the axis, but very little power or force is required to overcome its weight in moving the lever or other device with which it is connected.

What I claim as my invention is—

1. The combination, with a railway-rail and supports therefor, of a safety-bar carried in bearings, whereby it may be tilted or rocked on its longitudinal axis, said bar having a flange-plate secured directly to or formed integral with it and having an arm or means for a connection, and said bearings being secured directly to the rail-supports, substantially as shown and described.

2. A safety-bar for railways, consisting of a bar or shaft supported in bearings, whereby it can be rocked or tilted on its longitudinal axis, said bar having a flange-plate secured directly to or formed integral with it, and having an arm or means for a connection, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 15th day of April, 1886.

FREDERICK S. GUERBER.

Witnesses:

WILL H. POWELL,
A. DALE SPARHAWK.