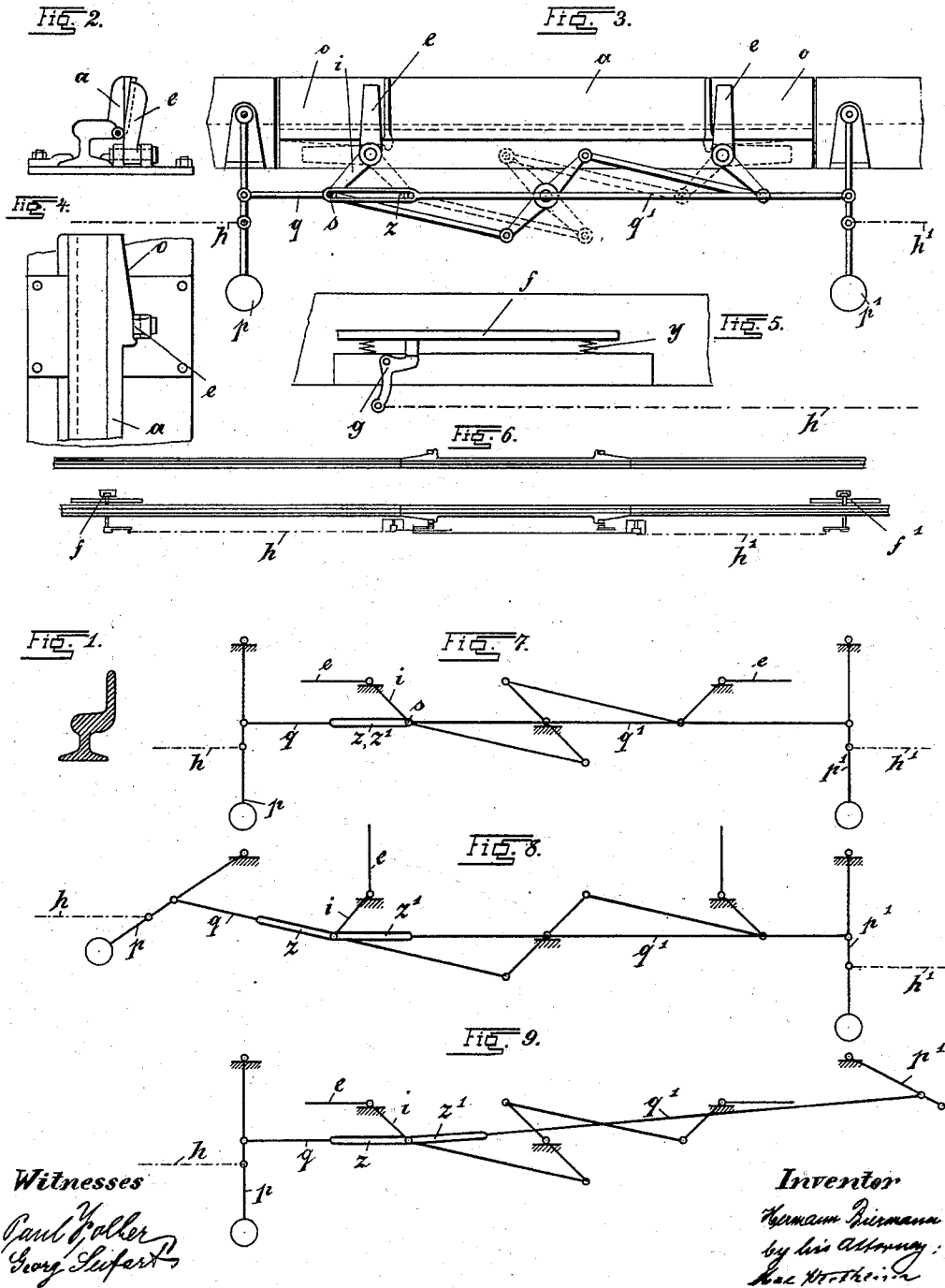


(No Model.)

H. BIERMANN.
SAFETY RAIL FOR PREVENTING DERAILMENTS.

No. 578,854.

Patented Mar. 16, 1897.



UNITED STATES PATENT OFFICE.

HERMANN BIERMANN, OF BRESLAU, GERMANY.

SAFETY-RAIL FOR PREVENTING DERAILMENTS.

SPECIFICATION forming part of Letters Patent No. 578,854, dated March 16, 1897.

Application filed August 27, 1896. Serial No. 604,890. (No model.)

To all whom it may concern:

Be it known that I, HERMANN BIERMANN, merchant, residing at 5^a Paradiesstrasse, Breslau, Province of Silesia, in the Kingdom of Prussia, German Empire, have invented new and useful Improvements in Safety-Rails for Preventing Derailments, of which the following is a specification.

Rails have already been constructed for preventing the derailment of railroad-cars. These rails have been provided with a longitudinal rib projecting over the head of the rail. The rib in this case forms one single part with the rail-body, so as to project over the track. The application of such safety-rails at crossings is therefore rendered impossible.

The object of this invention is a rail to be turned downward, which is to be employed at crossings. If the bar is open, this rib is folded down flat to the ground, so as not to be obstructive to the traffic. As soon as the train approaches the rib is brought into a vertical position by the latter and secured at the same time by bolts.

In the accompanying drawings the rail and the mechanism serving for the turning down and for the erection of the rib are shown.

Figure 1 is a cross-section of the rail when the track is free. Fig. 2 shows a side view of the mechanism for erecting and turning down the safety-rib, the latter having an upright position. Fig. 3 is a front view of the arrangement while the safety-rib is placed in an upright position. Fig. 4 is a part of a top view to Fig. 3. Fig. 5 illustrates the regulating device, by means of which the mechanism for erecting the rib may be actuated. Fig. 6 is a plan of the arrangement. Figs. 7 to 9 illustrate the mode of working of the arrangement, Fig. 7 showing the mechanism at rest with the rib turned down, Fig. 8 the position of the separate parts when the safety-rib is erected. Fig. 9 shows the position of the separate parts when the rib is turned downward.

At a certain distance before the crossing a regulating device *f* is arranged, which is pressed down by the train passing over it, transferring its movement to the rib *a* by means of angle-levers *g* and chain *h*. The erection of the rib *a* is effected by means of

bolts *e*. The rib *a* is at the rear side provided with oblique surfaces *o*, against which the bolts *e* strike when the rib moves into an upright position, thus causing a turning of the rib *a*. If the regulating device *f* is pressed downward by the passing train, the pendulum *p*, and with it the grooved rod *q*, is drawn to the left, thus engaging with the pivot *s* of the lever-arm *i*, whereby the bolt *e* is erected and the safety-rib *a* brought into a vertical position. (See Fig. 8.) The pivot *s* slides in the groove *z'* of the rod *q'*, connected with the pendulum *p'* and by means of the latter with the adjusting device *f'*, arranged behind the crossing, through the chain *h'*. After the adjusting device *f* is passed the latter is pressed upward again by a spring *y*, whereafter the pendulum *p* assumes its vertical position. The groove *z* of the rod *q* slides over the pivot *s* of the lever *i* without altering the position of the latter. If the train passes over the adjusting device *f'*, the latter is pressed downward and the pendulum *p'* drawn to the right by means of the chain *h'*. (See Fig. 9.) The rod *q* will hereafter engage with the pivot *s* of the lever-arm *i*, whereby the bolts *e* reassume their horizontal position. The pivot *s* slides within the groove *z* of the rod *q*. The rib *a* is arranged in such a manner that while having an upright position its center of gravity lies without the basis. In lowering the bolts *e* the rib *a* also assumes automatically its horizontal position.

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

In a safety-rail for railroads the combination of the rail-body with a longitudinal rib *a* jointed to the latter and to be turned downward and means for erecting the rib when the train approaches and for turning it down again after the train has passed, as and for the purpose set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

HERMANN BIERMANN.

Witnesses:

EWALD BÖEHM,
HERRMANN BARTSCH.