

(No Model.)

F. HERMAN.
JOINT PLATE AND BURR HOLDER.

No. 515,224.

Patented Feb. 20, 1894.

Fig. 1.

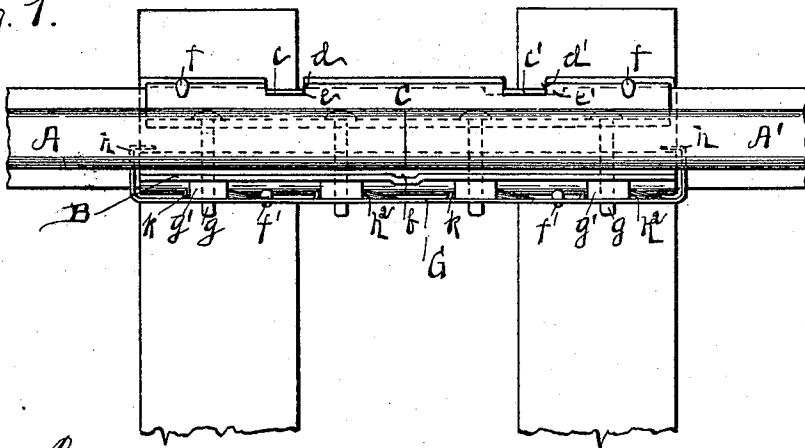


Fig. 2.

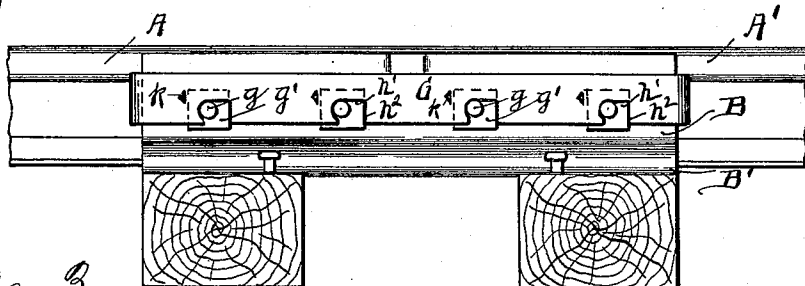


Fig. 3.

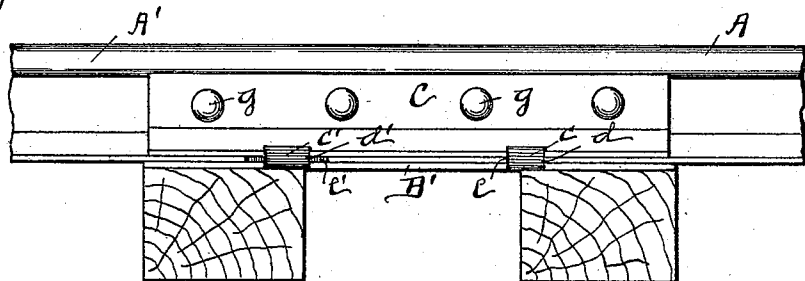
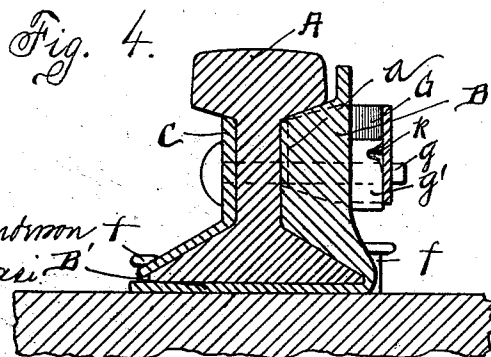


Fig. 4.



WITNESSES

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FREDERICK HERMAN, OF MARTINSVILLE, MISSISSIPPI.

JOINT-PLATE AND BURR-HOLDER.

SPECIFICATION forming part of Letters Patent No. 515,224, dated February 20, 1894.

Application filed October 7, 1893. Serial No. 487,469. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK HERMAN, a citizen of the United States, and a resident of Martinsville, in the county of Copiah and State of Mississippi, have invented certain new and useful Improvements in Joint-Plates and Burr-Holders; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a top plan view. Fig. 2 is a view of one side of plate and burr holder. Fig. 3 is a view of opposite side of Fig. 2 and Fig. 4 is a cross section.

This invention has relation to certain new and useful improvements in railway rail joints, and is designed to provide a simple, practical, and secure means for retaining the meeting ends of rails; and the invention consists in the novel construction and combination of parts, all as hereinafter described, and pointed out in the appended claims.

Referring to the accompanying drawings illustrating the invention, the letters A, A', designate the two meeting rails, which, at the joint portions are seated upon an angular joint plate. Said plate has a vertical portion B which seats against the outer, lateral faces of the rails, and a base portion B' upon which the rails seat. The inner face of the vertical portion B of the said plate has a longitudinal projection *a* which is beveled to fit snugly between the base and tread flanges of the rail as shown, said projection fitting to within about one-fourth of an inch of the face of the web of the rail. The upper edge of said portion B should be about one-third of an inch lower than the tread surface in order to avoid interference with hollow driving wheels, and at the same time preserve the continuity of the rails should the latter "run" or separate from each other longitudinally by reason of the breakage of the joint bolts. Directly against the joint the portion B is provided with a notch or recess *b*, which admits of the rails swelling somewhat at this point without causing breakage of the bolts. The base portion B' of the joint plate is somewhat wider

than the base of the rail and projects to the inside thereof, where it is provided with upward lugs or projections *c, c'*, which are designed to respectively engage with notches *d, d'* in the horizontal portion of an angular fish plate C, fitting the inner faces of the rails. Said lugs or projections should fit closely in these notches. I prefer also to form corresponding notches *e, e'* in the inner base flange of the rail and designed to engage with the said lugs or projections *c, c'*. The notch *e* should be of such width as to just receive the lug *c*, while the notch *e'* should be about two inches wider than the width of the lug *c'* so as to permit endwise movement of the rail, should the bolts break. The lug *c* and notch *e* will retain the joint and support the bolts. This notching of the rails is, however, optional, as the joint will be secure without it, but it is to be preferred. The plate, B B', may be of sufficient length to form either a two, or a three-tie joint. Spikes *f* are driven through the plates at the inside of the rail, while at the outside are spikes *f'* driven with their backs to the joint plate.

g g are the usual bolts which pass horizontally through the joint plate, the rail, and the fish plate, and secured by nuts *g'*. To prevent the nut from turning I employ a lock G especially adapted to the joint. This lock consists of a narrow plate somewhat longer than the joint plate, its ends being bent to form angular hooks *h* which are engaged with the space between the joint plate and rails, as shown. Formed in said plate are recesses *h'*, one for each nut, and having each a square shoulder *h''* for engagement with a face of the nut. At the upper corner of each nut the plate is struck inwardly to form inward projections *k* which also engage with the nut, thus forming a double lock for each nut.

The joint constructed as above described is exceedingly strong and secure, and should the bolts break, its safety is not destroyed.

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

1. In a railway rail joint, the combination with the rail sections, of the joint plate having the horizontal base portion upon which the joint portions of the rails are seated, and the vertical portion having a longitudinal

projection beveled to fit between the base and tread flanges of the rail, the upper edge of said vertical portion being slightly below the tread surface of the rail, the angular fish plate having the notches therein, and upward lugs or projections on the base portion of the joint plate arranged to fit said notches, substantially as specified.

2. In a railway rail joint, the combination with the rail sections, of the angular joint plate having the base portion upon which the rails are seated, and a vertical portion shaped to fit between the base and tread flanges of the rail, the angular fish plate having notches therein engaged by projections on the base portion of said joint plate, notches in the rail also engaged by said projections, spikes driven through said plates at the inside, and spikes driven against the joint plate at the outside, substantially as specified.

3. In a railway rail joint, the combination with the rail sections, of the angular joint plate having the base portion upon which the rails are seated, and a vertical portion having a longitudinal projection shaped to fit between the base and tread flanges of the rails, the angular fish plate having notches therein engaged by projections on the base portion of said joint plate, notches in the rail also engaged by such projections, spikes driven through and against the joint plate, bolts through said joint and fish plate, and through the rails, and a locking device for the nuts of said bolts, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERICK HERMAN.

Witnesses:

H. PAGE,

MC C. STUART.