

(No Model.)

B. G. MAERCKLEIN.
RAILROAD RAIL.

No. 474,094.

Patented May 3, 1892.

Fig. 1.

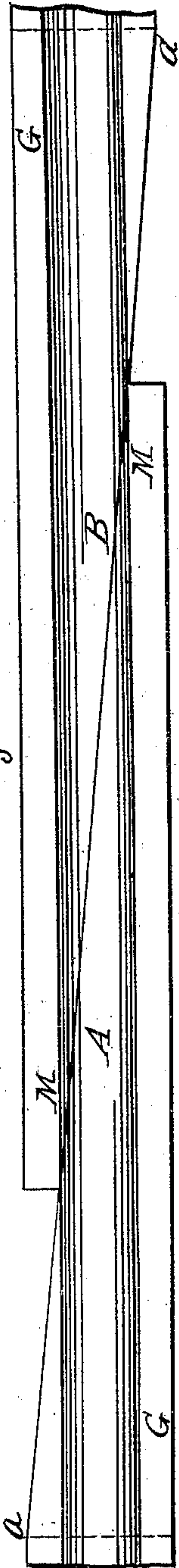


Fig. 2.

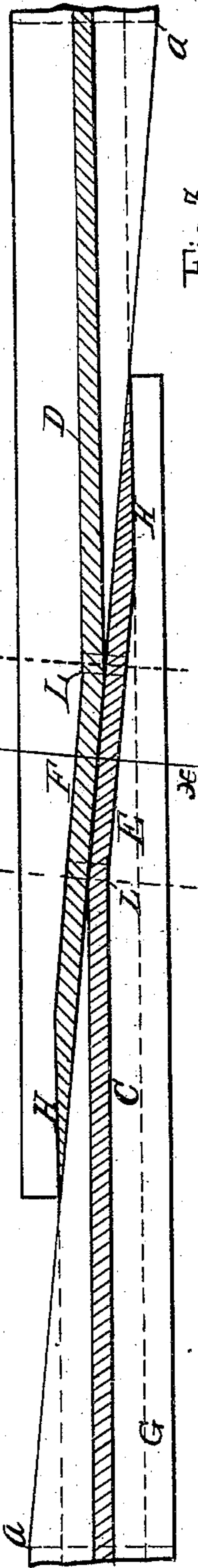


Fig. 3.

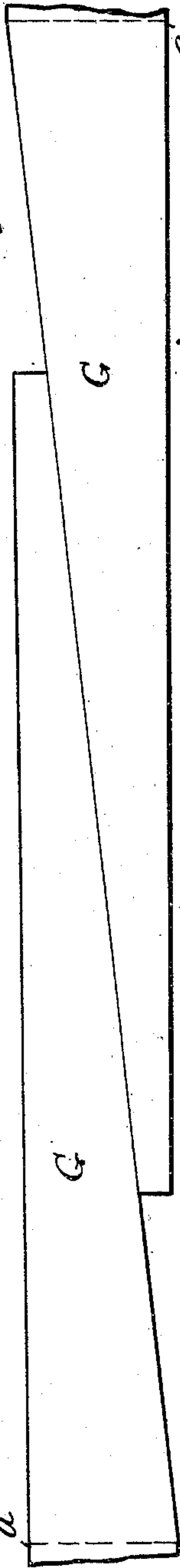


Fig. 4.

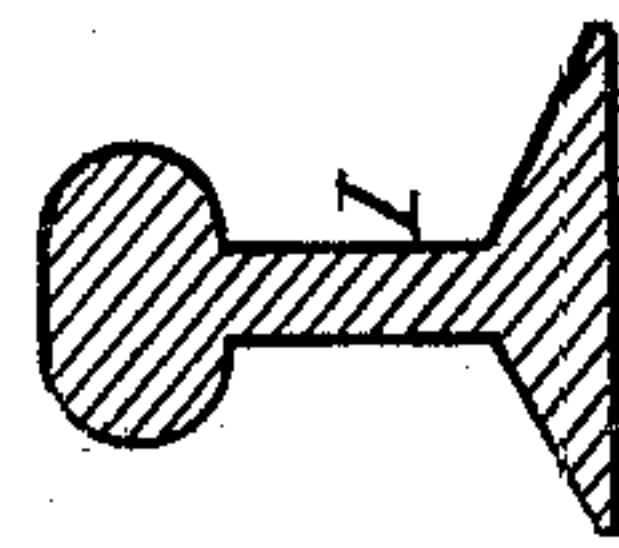
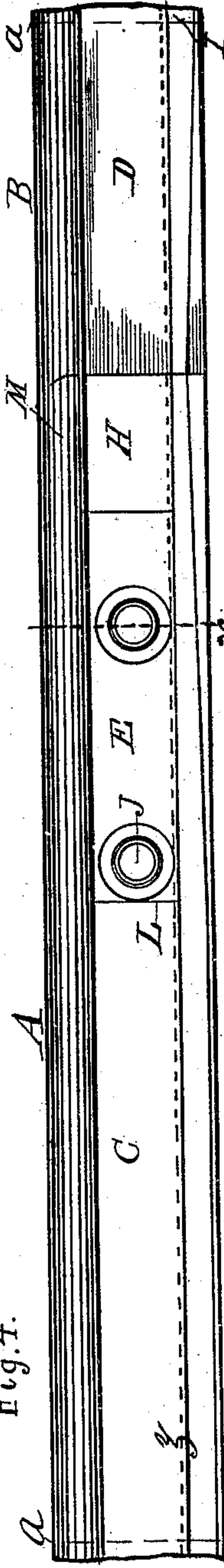


Fig. 5.

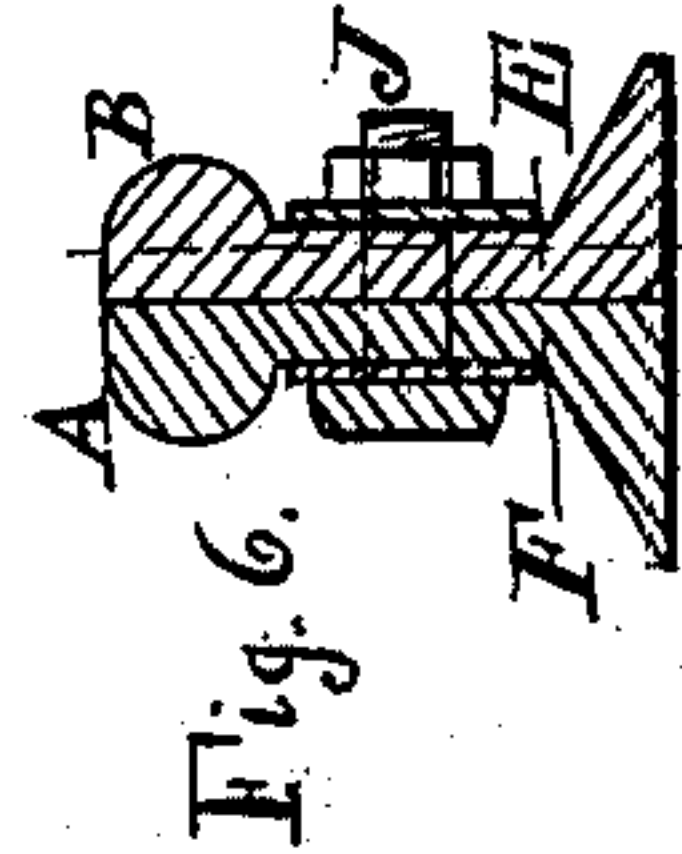


Fig. 6.

Witnesses:

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UNITED STATES PATENT OFFICE.

BERNHARD G. MAERCKLEIN, OF MILWAUKEE, WISCONSIN.

RAILROAD-RAIL.

SPECIFICATION forming part of Letters Patent No. 474,094, dated May 3, 1892.

Application filed August 27, 1891. Serial No. 403,924. (No model.)

To all whom it may concern:

Be it known that I, BERNHARD G. MAERCKLEIN, a citizen of the United States, and a resident of Milwaukee, county of Milwaukee, and State of Wisconsin, have invented new and useful Improvements in Railroad-Rails, of which the following is a specification, reference being had to the annexed drawings, illustrating the invention, in which—

Figure 1 is a plan view of a portion of the ends of two rails, showing how they are spliced to form a continuous rail. Fig. 2 is a horizontal section of Fig. 4 on line *z*. Fig. 3 is a view of the under side of Figs. 1, 2, and 4. Fig. 4 is an elevation of Fig. 1. Fig. 5 is a section of the main rail at I and outside of the spliced portion, which lies between the dotted lines *a a*, &c.; Fig. 6, a transverse section of the spliced portion of the rail on line *x*, Figs. 2 and 4.

This invention relates to the novel manner of splicing the ends of ordinary railroad-rails to form a continuous track. The following detail description will fully set forth the construction, novelty, and utility.

I take the ordinary rail, and by means of suitable swages and dies taper the track portions A B of two rails so that the rails will be in line, with a diagonal joint between them of a length of about twelve widths of the said track portion. The webs C D of the main rails are deflected at L L to form diagonally-projecting webs E F, which are parts of and lie under the thin portions M of the spliced parts of the rails.

At H H the diagonal portions C D are beveled down substantially to a thin edge, so as not to project beyond the edges of the track.

From L to L the diagonal webs lie flat against each other and are firmly united by bolts J, Fig. 6, whereby the webs of the spliced rail are double the strength of the web at other points, and the projecting portions of the web being respectively parts of the said thin ends of the spliced portion the latter cannot become buckled down or separated from the thicker portions of the spliced portions.

Heretofore it has been impossible to make a diagonal lap-splice serve as a substantial means to form a continuous rail, because fish-plates could not be made to serve a permanent support for the thin end of the laps. It will be seen that the faces of the lapped por-

tions of the rails are made parallelograms through the bed and bearing portions of the rails and that the ends H of the diagonal webs lie almost flush with the edges of the bearing portion. This construction is such that the splice will sustain as great a lateral strain as the main rail without the use of fish-plates, two or more bolts being sufficient, inasmuch as the splice will in practice lie on the two ties. The bolt-holes being slotted longitudinally with this splice, the rail can expand and contract without longitudinal strain on the bolts, because the double web is parallel to itself.

I do not confine myself to the swaging process for giving the requisite contour to the splice, for it is evident that should it be found possible to cast rails the spliced portions could be cast as a part of the rails.

The difference between my invention and the rail in the English Patent No. 269 of 1856 is that in my rails the splice is not a notched splice, which weakens the main rails and is difficult to make, but the joint forming the splice is parallel to itself diagonally through the entire rail, including the lower flange, the same as through the top of the rail, and the diagonal webs are exteriorly beveled to an edge from the points where they come to the edge of the top of the rails, and the beveled portions lie parallel with the edges of the rail and under and to the points of the splice to support the said points. I do not therefore claim diagonal webs in notched rails nor diagonal webs in any form of rail independent of the beveled ends of the diagonal webs and the joint of the splice formed parallel to itself.

I claim as new and desire to secure by Letters Patent of the United States—

An improvement in railroad-rails, consisting of a diagonal splice the face of which is parallel to itself entirely through the rails and the diagonal webs of the spliced portions beveled to thin edges to lie parallel with the edges of the top of the rail and extending under and to the points of the splice and projecting outward from the webs of the main rails, as and for the purpose specified.

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Witnesses:

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