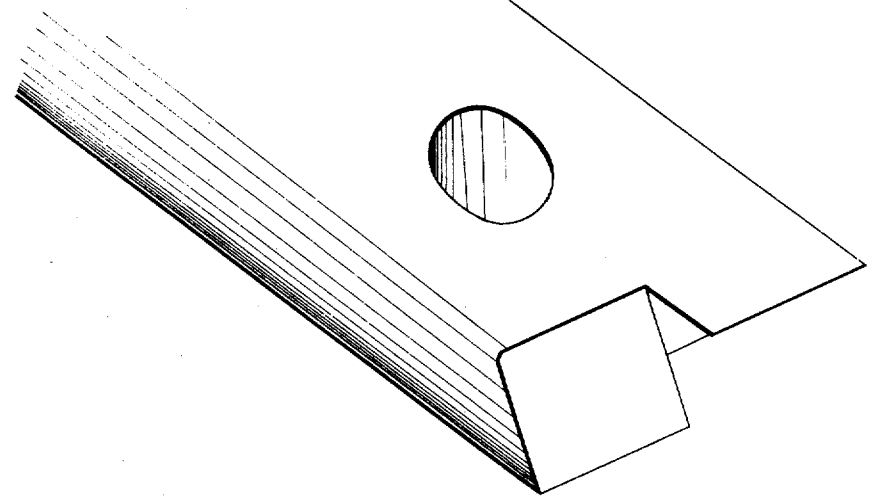
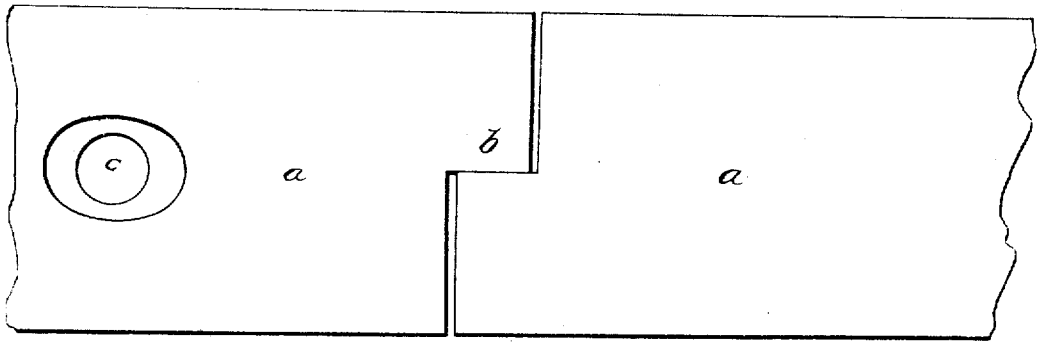
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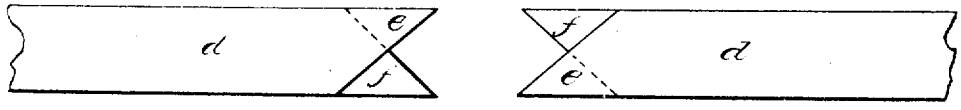
A. M. McCaine.

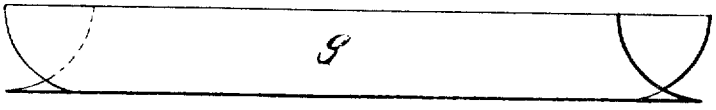
Railroad Rail Joint.

Patented Mar. 31, 1836.









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Mar 31. 1836 13

Kelsick McBride of Montgomery Alabama

Letters Patent

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March 31, 1836

The Schedule referred to in these Letters Patent, and making part of the same, containing a description in the words of the said Kelsick McBride himself of his improvement in forming rail plates or bars, used upon rail roads.

Be it known that I, Kelsick McBride of the Town of Montgomery in the County of Montgomery and State of Alabama, have invented a new and useful improvement in the mode of forming the rail plates, or bars used upon rail roads, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

The surface of the bar may be either rounded or flat, a plain plate or flanged on the inner edge, or otherwise as fancy may direct, and of any required thickness, width, and length. The connection which I claim as new and original I make with a double lap or bevel, that is to say two bevels or laps in contrary directions, of equal or unequal width of surface on the end of each plate, in such manner that one half of the bar or plate laps above, or over a half of the connecting bar or plate, while the other half falls below or under a corresponding half of the same connecting bar. In the drawing the bevel or lap is represented of equal width upon the end of the plate, each bevel being made in a contrary direction, at an angle of 45° which angle may be found on trial advantageous in practice, and an equal solidity in the extremity of the bars is required, instead of a plane surface or bevel I use a convex and corresponding concave surface. The point or centre from which said curved surface is described being upon the upper surface of the plate or bar. The bevels or laps are

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ner of the same width and angle on the connecting plates, but inverted in position so as to make a perfect bind both laterally and longitudinally when applied to the preceding plate so that all the plates having the ends thus bevelled or lapped and laid down continuously upon the bearing surface, may be confined down by one spike in the centre of each bar or plate, and it is evident that the plates or bars may be permanently fixed with a fewer number of spikes than is necessary with the ordinary methods of joining.

I also claim the application of this principle of the double lap or bevel to the fish joint and tongue joint or to any other joint by which the bars thus confine each other when placed in connexion. Any one acquainted with the practical operation of rail roads must at once appreciate the advantage of this expedient, by which the subscriber is convinced they may be effectually secured from all the difficulties arising from the working loose of the end spikes and consequent raising of the extremities of the plates, which coming in collision with the wheels and axles of the engines and cars, give rise to serious accidents endangering the lives of passengers and causing frequent and expensive damages to the Locomotives. With this joint, even should the end spikes work out, or break off, there can be no vertical or lateral separation of one bar from another, and consequently no injury can arise from such cause. The great and perpetual expense attending the keeping up of superstructure of the iron on a long line of rail road now found absolutely necessary to prevent injuries and accidents from loose bars, would be entirely obviated. A great saving in the annual expenses of the road would thus be effected, and the trips would be performed with more celerity, and regularity, and the passengers would pass over the road without that constant apprehension

of

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danger, which the prospect of low bars, and brittle spikes and twisted plates is so well calculated to awaken.

Explanation of the drawing. a.a. top or surface of iron plate. b. joint as it appears when the iron is laid down. c. hole for spike countersunk. d.d. side view of plate with joint shown apart. e.e. taps or bevel. f.f. taps or bevel half side or side view of plate with the joint bearing common & concave surfaces.

What I claim as my invention and desire to secure by Letters Patent consists in the mode of joining or connecting the iron bars or plates used in the construction of rail roads as before specified and described.

Witnesses
Sam[l] Breese
O. A. Lathrop

A. Musick, McGraine

Recorded March 31st 1856