

(No Model.)

H. F. COX.

RAIL SPLICE OR FISH PLATE.

No. 378,543.

Patented Feb. 28, 1888.

Fig. 1.

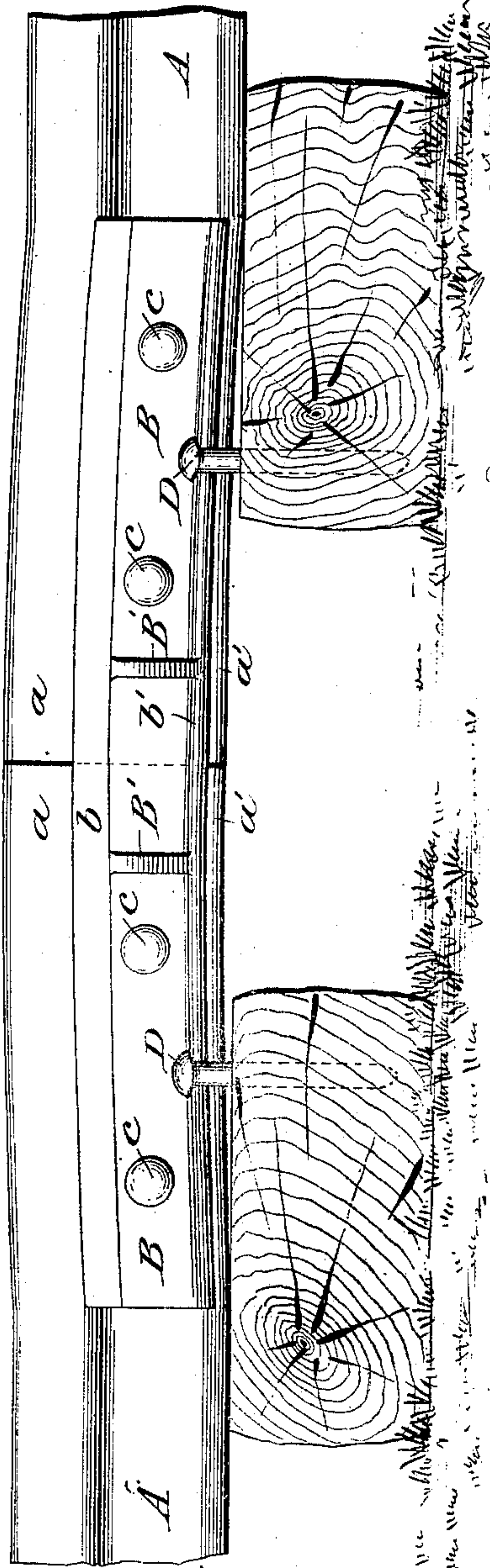


Fig. 3.

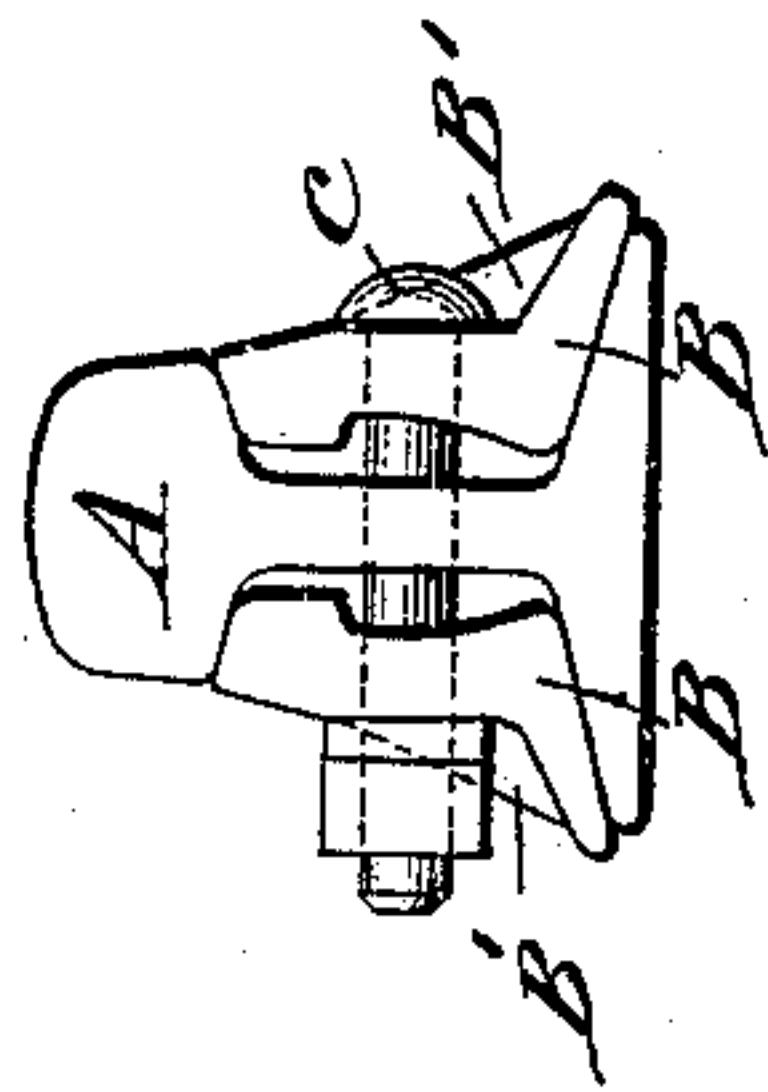
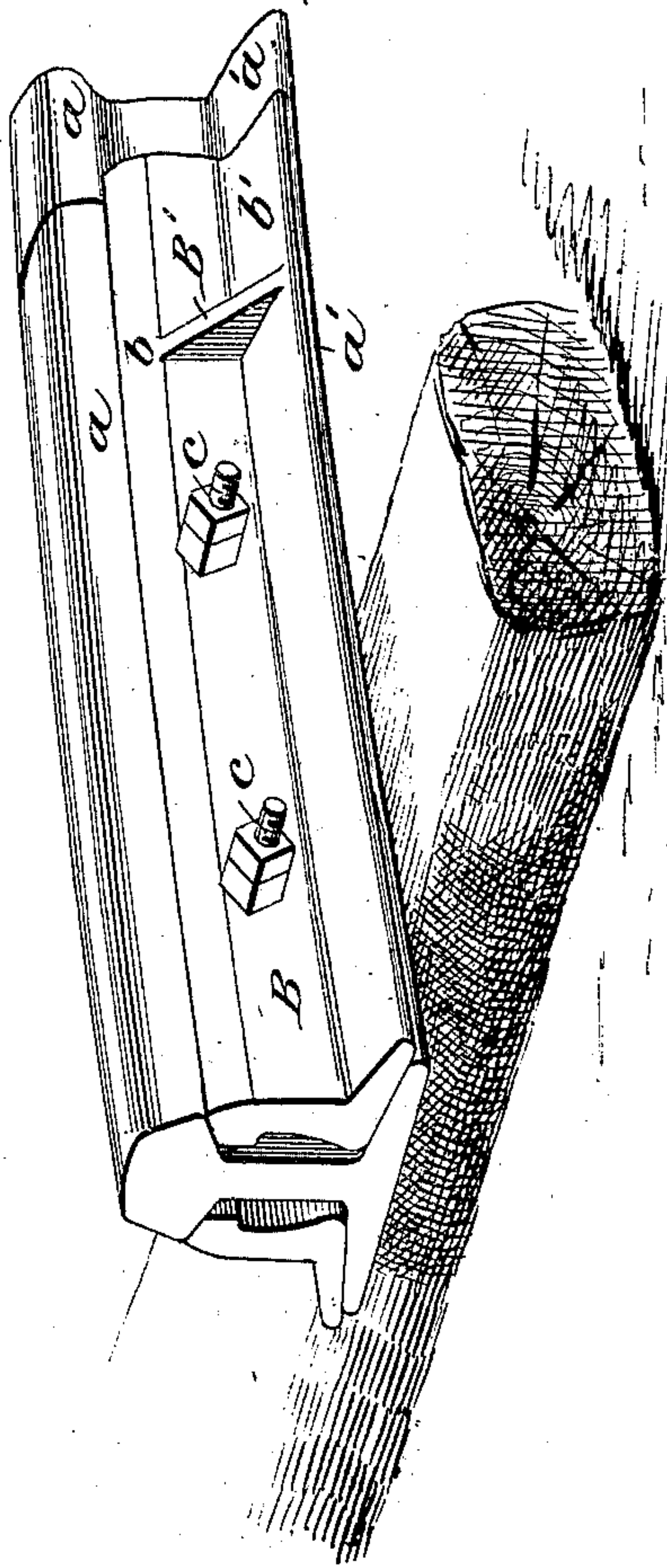


Fig. 2.



WITNESSES:

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RAIL-SPLICE OR FISH-PLATE.

SPECIFICATION forming part of Letters Patent No. 378,543, dated February 28, 1888.

Application filed March 28, 1887. Serial No. 232,652. (No model.)

To all whom it may concern:

Be it known that I, HENRY F. COX, of the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improved Rail-Splice or Fish-Plate, of which the following is a true and exact description, due reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to the construction of fish-plates for uniting the adjoining ends of railway-rails, and has for its object to make a firmer and smoother joint than has heretofore been practicable by the use of similar splices. More especially my object is to counteract the tendency of the rails to yield at their ends under the weight of a train and so insure a practically level track for the train to run over.

My invention consists, first, in making my fish-plates with a camber or upward convex curve of about one-sixteenth of an inch, which I have found to be about the proper degree of curvature to counteract the tendency to sag of the rail ends; and, second, in providing such fish-plates with re-enforcing wings, by which their strength and rigidity are increased.

Reference being now had to the drawings which illustrate my invention, Figure 1 is a side elevation of a rail-joint having my improved fish-plate; Fig. 2, a perspective view of the same, and Fig. 3 an end view of such a joint.

A A are the rails, *a a* being their heads and *a' a'* their bases.

B is my improved fish-plate, the upper surface, *b*, of which comes in contact with the head of the rail, while its lower surface, *b'*, is in contact with the rail-base. Both of these contact-surfaces *b* and *b'* are curved uniformly from end to end of the splice, the total curvature being such as to make the plate about one-sixteenth of an inch higher in the middle than at the ends. These fish-plates are, as is usual,

clamped in pairs on opposite sides of the rails by bolts C, and as they are drawn together by means of these bolts they force the rail to take a curvature corresponding to that of the splices. In the drawings this curvature is greatly exaggerated in order to make it apparent to the eye. A train passing over a track having my splices secured, as above described, will run more smoothly and with less resistance than on a level track. I have also found that the strength and rigidity of such fish-plates and of the joint formed by them is increased by forming buttresses or wings B' B' in the angle formed between the two flanges of the fish-plate, and I prefer to use this re-enforcing device in conjunction with the curved or arched form of fish-plate already described.

It will be noticed that the spikes D D, which secure the ends of the rails to the ties, are shown in the drawings as having their heads resting on the flange of the fish-plate, but not so as to force the plate and rail down upon the tie. The rail can thus bend under the train and recurve itself when the weight is removed without interference from the spikes.

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

1. As a new article of manufacture, a railway splice or fish-plate having a gradual upward curvature from its ends to its center, substantially as and for the purpose specified.

2. As a new article of manufacture, a railway splice or fish-plate provided with upwardly and outwardly extending flanges, said plate having a gradual upward curvature from its ends to its center, and having wings or buttresses B', all substantially as and for the purpose specified.

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Witnesses:

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