

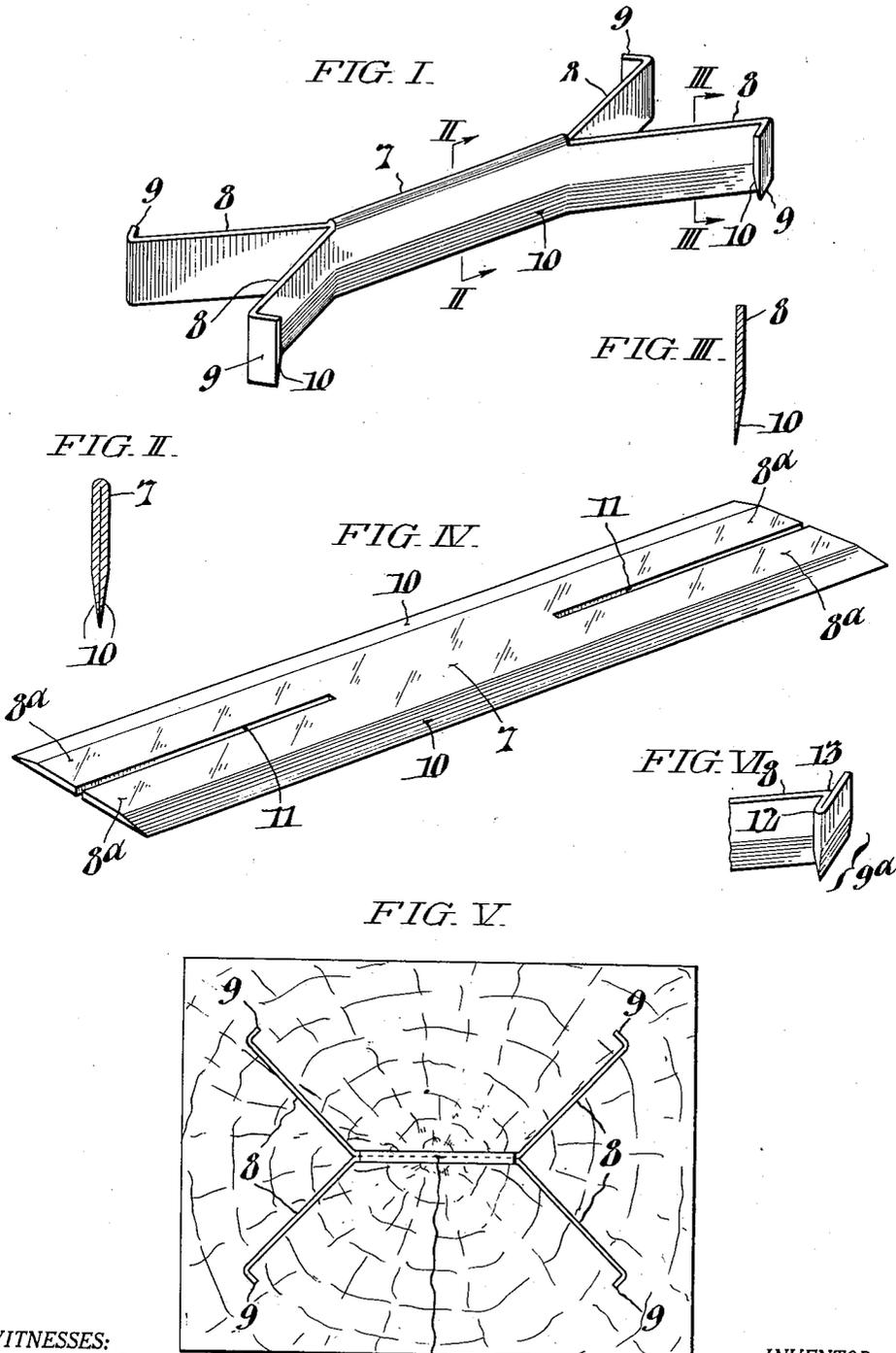
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ANTISPLIT IRON

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UNITED STATES PATENT OFFICE

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ANTISPLIT IRON

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5 Claims. (Cl. 85—11)

This invention relates to anti-split irons designed to be driven into the ends of railroad ties and the like for the purpose of preventing and restraining splitting or "checking" while seasoning under adverse climatic conditions.

Anti-split irons for ties were heretofore generally made to other configuration. In cases of excess checking, we have found that anti-split irons of these configurations did not embrace sufficient of the cross areas of the ties to adequately reinforce and protect the tie ends against checking.

Our invention is in part directed toward overcoming the above recited drawbacks; and this desideratum we attain, as hereinafter fully explained, through provision of an anti-split iron characterized by extremities which extend angularly in opposite directions from opposite ends of a center bar so as to reach diagonally far into the corners of the tie ends, and which have their tips laterally bent, whereby the tie is constrained against crosswise expansion, and checking accordingly effectively prevented.

A further aim of our invention is to provide a simple method whereby anti-split irons having the foregoing attributes may be economically and expeditiously produced as integral units in quantity from sheet metal by comparatively simple blanking and bending operations.

In the drawing, Fig. I is a view showing our improved anti-split iron in perspective.

Figs. II and III are detail cross sectional views taken as indicated respectively by the arrows II—II and III—III in Fig. I.

Fig. IV shows the sheet metal blank from which we form the anti-split iron.

Fig. V shows the end view of a railroad tie reinforced with one of our improved anti-split irons; and

Fig. VI is a fragmentary perspective view showing a slight modification of our invention.

As delineated in Fig. I of these illustrations, our improved anti-split tie iron is characterized by a double thickness center bar 7; and single thickness extremities 8 whereof a pair extend angularly in opposite directions from each end of the said center bar and whereof the tips are directed laterally outward as at 9. To facilitate penetration of the iron into the tie, the center bar 7 and the extremities 8 are formed with continuous beveled knife-edges as indicated at 10 in Figs. I, II and III.

In use, our anti-split iron is adapted to be forced centrally into the end of the tie as shown in Fig. V; and from the latter illustration it is to

be particularly noted that the proportioning of the iron is such that the extremities 8 reach diagonally from the center bar 7 well into the corners of the tie end. Our anti-split iron thus comprehends substantially the full cross area of the tie; and by virtue of the lateral disposal of the tips 9 of its extremities 8, it will obviously operate as an effective means to counteract splitting or "checking" of the tie end.

To produce our novel anti-split iron we first cut or otherwise fashion from strip sheet metal about three quarters of an inch wide and about $\frac{1}{8}$ of an inch thick and beveled along its longitudinal edges, an elongate rectangular blank of a suitable length such as shown in Fig. IV of the drawing. We next centrally slit the blank part way inward from opposite ends as at 11, 11 in Fig. IV, with incident formation of tongues 8a, 8a; then fold the blank longitudinally along the line of the slits 11 to provide the double center bar 7 of the iron; and finally bend the tongues 8a angularly in opposite directions to provide the extremities 8 of the finished iron. Under this method it is obviously possible to expeditiously and economically produce the tie irons of our invention as integral units.

The effectiveness of the tie iron may be increased by providing the extremities 8 with T-heads as indicated at 9a in Fig. VI, instead of with the plain lateral bends 9 of Fig. I. To form the T-heads, we first retrovert the ends of the extremities 8 as at 12, and then bend back the retroversions at right angles midway of their lengths as at 13.

Having thus described our invention, we claim:

1. An anti-split iron for railroad ties and the like, made from sheet metal, and having knife-edged extremities of single thickness extending angularly in divergent relation beyond opposite ends of a folded double thickness knife-edged center bar.
2. An anti-split iron for railroad ties and the like, integrally made from sheet metal, and having a pair of knife-edged extremities with out-turned ends extending angularly in divergent relation beyond each end of a knife-edged center bar.
3. An anti-split iron for railroad ties and the like, having knife-edged T-ended extremities extending angularly in divergent relation beyond opposite ends of a knife-edged center bar.
4. As a new article of manufacture, an anti-split iron for railroad ties and the like, formed from an elongated rectangular blank of sheet metal centrally slit inward of its opposite ends

and folded longitudinally along the line of the slits, with the tongues resulting from the slitting bent angularly in outward divergent relation.

5 As a new article of manufacture, an anti-split iron for railroad ties and the like, formed from an elongated rectangular blank of sheet metal centrally slit inward of its opposite ends

and folded longitudinally along the line of the slits, with the tongues resulting from the slitting bent angularly in opposite directions, the tips of said tongues retroverted, and T-heads formed through bending of the retroversions on center.

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