

(No Model.)

J. E. CARR.
JOINT FOR WOODEN BICYCLE RIMS.

No. 557,967.

Patented Apr. 7, 1896.

Fig. 1

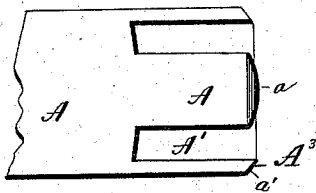


Fig. 2

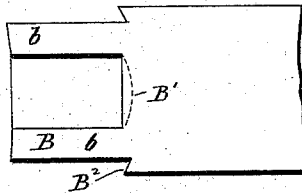


Fig. 3

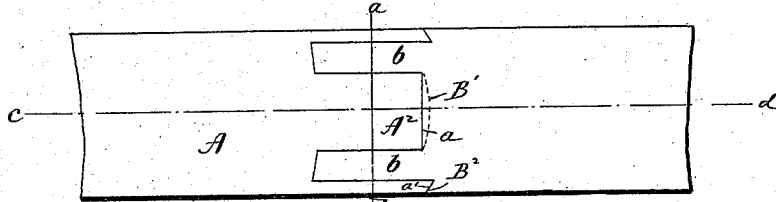


Fig. 4

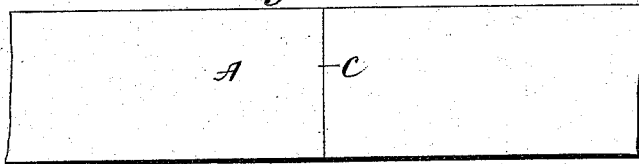


Fig. 5

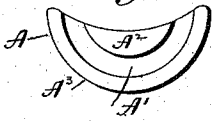


Fig. 6

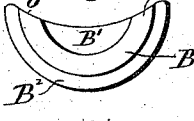


Fig. 7

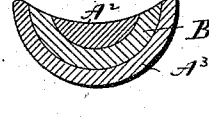


Fig. 8

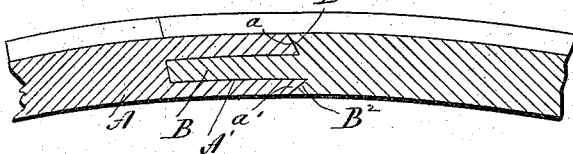


Fig. 9

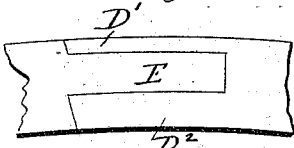


Fig. 10

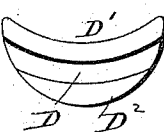


Fig. 11



Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES E. CARR, OF NEW HAVEN, CONNECTICUT.

JOINT FOR WOODEN BICYCLE-RIMS.

SPECIFICATION forming part of Letters Patent No. 557,967, dated April 7, 1896.

Application filed February 10, 1896. Serial No. 578,628. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. CARR, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Joints for Wooden Bicycle-Rims; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a broken plan view of one end of the strip; Fig. 2, a similar view of the other end thereof; Fig. 3, a broken plan view of the outer face of the joint; Fig. 4, a reverse plan view thereof; Fig. 5, an end view of one end of the strip; Fig. 6, a view of the other end thereof; Fig. 7, a view of the joint in transverse section on the line *a b* of Fig. 3; Fig. 8, a view of the joint in longitudinal section on the line *c d* of the same figure; Fig. 9, a view in end elevation of one member of one of the modified forms of the joint; Fig. 10, a similar view of the other member thereof; Fig. 11, a broken view in side elevation showing the two ends illustrated by Figs. 9 and 10 as interlocked.

My invention relates to an improvement in joints for wooden bicycle-rims, the object being to produce a simple and strong joint constructed with particular reference to an economical use of the wood, to strength, and to reducing the exposed line of jointure to the minimum.

With these ends in view my invention consists in a wooden rim for bicycle-wheels consisting of a long rim-strip, one end of which is formed with a segmental longitudinal groove, and an outer and an inner segmental longitudinal tongue located above and below the said groove, and the other end of which is formed with a segmental longitudinal tongue and an outer and an inner segmental transverse shoulder located above and below the base thereof.

My invention further consists in certain details of construction, as will be hereinafter described and pointed out in the claims.

In carrying out my invention, as shown in Figs. 1 to 8, inclusive, of the drawings, I form one end of the rim-strip A with a deep seg-

mental longitudinal groove A', substantially following the curvature of the convex inner edge of the strip and emerging through the concave outer face of the strip at points close to but within the edges thereof, as clearly shown in Fig. 5. The formation of this deep segmental groove also results in the formation of a segmental longitudinal outer tongue A², located centrally above the said groove, and a segmental longitudinal inner tongue A³, located below the said groove, the outer tongue being much narrower than the inner tongue, which has the superficial dimensions in cross-section of the rim-strip itself. The outer end of the outer tongue A² is constructed with a downward bevel *a*, while the outer end of the inner tongue is constructed with an upward bevel *a'*, both of the said bevels being shown in Fig. 6. The other end of the rim-strip is formed with a segmental longitudinal tongue B, adapted in cross-section and in length to fit into and fill the segmental longitudinal groove A', formed, as described, in the other end of the rim-strip. The edges *b b* of the said tongue B lie in the plane of the concave outer face of the rim and are really continuations thereof, as seen in Fig. 5. An outer undercut segmental transverse shoulder B' and an inner segmental undercut transverse shoulder B² are respectively formed above and below the tongue B aforesaid at the base thereof. Of these two shoulders the outer shoulder B' lies entirely within the concave outer face of the rim-strip and is comparatively short, while the inner shoulder B² extends transversely entirely across the inner face of the rim-strip and to the edges thereof.

In joining the two ends of the strip together it will be understood, of course, that the segmental longitudinal tongue B enters and fits closely within the segmental longitudinal groove A', and that the segmental outer tongue A² fits into the concave outer face of the tongue B, the convex inner face of which is inclosed within the concave inner face of the outer tongue A². When the two ends of the strip are pushed fully home, the bevel *a* of the tongue A² takes into the undercut shoulder B' and the bevel *a'* of the tongue A³ takes into the undercut shoulder B², all as shown in Fig. 8.

The joint produced as above described reduces the exposed line of jointure to the minimum, the exposed line being simply a single transverse line C, as shown in Fig. 4, the main lines of jointure being located within the edges of the concave outer face of the rim, as shown in Figs. 3 and 7, and these lines of jointure being concealed and protected, when the rim is in use, by the tire.

10 In the modified construction shown in Figs. 9 to 11, inclusive, one end of the rim-strip is formed with a deep segmental longitudinal groove D and with a segmental longitudinal outer tongue D' and a segmental longitudinal inner tongue D². In this construction also the groove substantially corresponds to the curvature of the rim-strip in cross-section, but issues at points upon the inner face of the rim-strip and below the edges thereof. The other end of the rim-strip is formed with a segmental longitudinal tongue E and with an undercut segmental transverse outer shoulder E' and with an undercut segmental transverse inner shoulder E², the said shoulders being located above and below the tongue E at the base thereof. Under this construction the lines of jointure partly shown in Fig. 11 are not so far concealed and protected as under the construction before described, although the joint formed is a very strong one.

It will be readily seen that a joint constructed in accordance with my invention is very economical of wood, inasmuch as the overlap, so to speak, of the two ends of the rim-strip is confined to a comparatively short length thereof. Moreover, the wood cut away for the formation of the joint leaves the wood remaining in such shape as to be very strong.

40 I may add that the joint will preferably be made with glue or cement or secured by rivets, or both by cement and rivets.

In view of the modified form shown, and

of other modifications which may obviously be made, I would have it understood that I do not limit myself to the exact form shown and described, but hold myself at liberty to make such changes as fairly fall within the spirit and scope of my invention.

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

1. A joint for wooden rims for bicycle-wheels, consisting in forming one end of the strip with a segmental longitudinal groove, and with an outer and an inner segmental, longitudinal tongue located above and below the said groove; and, in forming the other end of the rim-strip with a segmental longitudinal tongue adapted to fit into the said groove, and with a segmental outer transverse shoulder, and a segmental inner transverse shoulder respectively located above and below the base of the said tongue.

2. A joint for wooden rims for bicycle-wheels, consisting in forming one end of the rim-strip with a segmental longitudinal groove, the ends of which issue through the concave inner face of the rim-strip within the edges thereof, and with a narrow segmental longitudinal tongue formed above the said groove, and a segmental longitudinal tongue formed below the said groove and coextensive with the inner face of the rim-strip; and the other end of the rim-strip being formed with a segmental longitudinal tongue to fit into the said groove and with transverse segmental outer and inner shoulders formed above and below the base of the said tongue.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JAMES E. CARR.

Witnesses:

FRED C. EARLE,
LILLIAN D. KELSEY.