J. W. BRAINARD.

METAL HOOP.

APPLICATION FILED FEB. 17, 1908.

938,205. Patented Oct. 26, 1909.

*Fig. 1.*

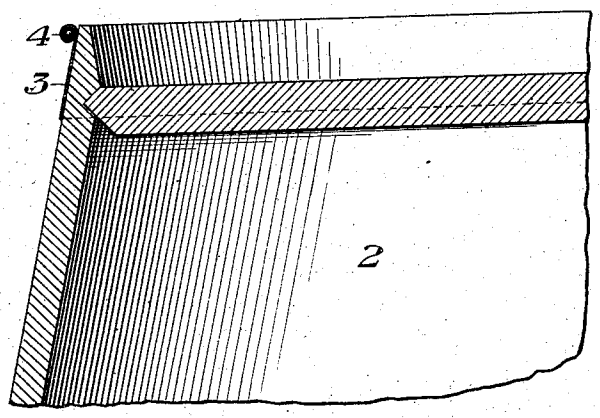



*Fig. 2.*

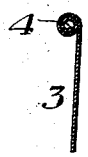



*Fig. 3.*

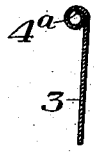
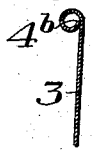



*Fig. 4.*




WITNESSES

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# UNITED STATES PATENT OFFICE.

JAMES W. BRAINARD, OF PITTSBURG, PENNSYLVANIA.

## METAL HOOP.

938,205. Specification of Letters Patent. Patented Oct. 26, 1909.

Application filed February 17, 1908. Serial No. 416,221.

*To all whom it may concern:*

Be it known that I, JAMES W. BRAINARD, of Pittsburg, Allegheny county, Pennsylvania, have invented a new and useful Improvement in Metal Hoops, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal section of a portion of a barrel or keg showing one form of my improved hoop applied in place; Fig. 2 is a detail view in cross-section of the hoop shown in Fig. 1; Figs. 3 and 4 are sectional views similar to Fig. 2, showing modifications in the construction of the bead on the margin or edge of the hoop.

My invention relates to metal hoops for barrels, kegs, and for use in cooperage generally, and it more particularly relates to beaded chime hoops used on slack cooperage.

The object of the invention is to provide a hoop having an improved form of bead on the margin of such hoops, by which the hoop is stiffened, and a suitable driving edge is provided for applying the hoops in place, and by which the difficulties experienced in making beaded hoops are greatly lessened.

The invention consists in the forming of a spiral bead on one or both edges of a flat thin strip of metal, in such manner that the surfaces of the metal forming the bead are brought into contact with each other, so as to resist the forces put upon the bead while the hoop is being driven, and which will insure the beads being formed to bring the opposing faces of the metal strip into contact and overcome the tendency of the opposing parts of the bead separating on account of the elasticity of the metal.

In the drawings, 2 represents a barrel or keg having a chime hoop 3 constructed in accordance with my invention, applied in place thereon. As is shown in Figs. 1 and 2, a spiral bead is formed upon the upper edge of the hoop 3, the marginal edge 4 of the bead being out of contact with the sides of the metal forming the hoop.

In Fig. 3, the hoop 3 is provided with a modified form of spiral bead, in which the edge 4 of the hoop is free, in this construction the metal not being wrapped into a closed spiral such as shown in Fig. 2.

In Fig. 4 the hoop 3 is provided with a spiral bead, in which the edge of the metal is inwardly and upwardly curled so as to bring the opposing sides of the metal in the bead into contact with each other, with the edge $4^b$ of the hoop out of contact with the body of the hoop.

The advantages of my invention will be appreciated by those skilled in the art. The edge of the metal is free to move while being curled or bent into the bead, and by keeping the edge of the beaded margin of the hoop free and out of contact with the sides of the hoop, the bead can be tightly coiled into shape with the surfaces of the metal in close contact notwithstanding the tendency of the metal in the bead to spring away and separate the contacting surfaces on account of the elasticity of the metal. The bead so formed will impart the necessary stiffness to the hoop and will offer sufficient resistance to the driving force applied in putting the hoop in place on the barrels and kegs.

A spiral bead may be formed on both edges of the hoop instead of on one as shown, and other changes may be made within the scope of my invention.

I claim:—

1. A barrel hoop comprising a flat thin metal strip having a stiffening bead on one edge, the bead being wound spirally, and having the surfaces of the spiral bead contacting with each other to form a resilient driving edge on said hoop; substantially as described.

2. A barrel hoop comprising a flat thin metal strip having a marginal stiffening bead, the bead being wound spirally, and having the surfaces in contact with each other with the edge of the beaded margin of the hoop free to form a resilient driving edge of the hoop; substantially as described.

In testimony whereof, I have hereunto set my hand.

JAMES W. BRAINARD.

Witnesses:
R. D. LITTLE,
H. M. CORWIN.