

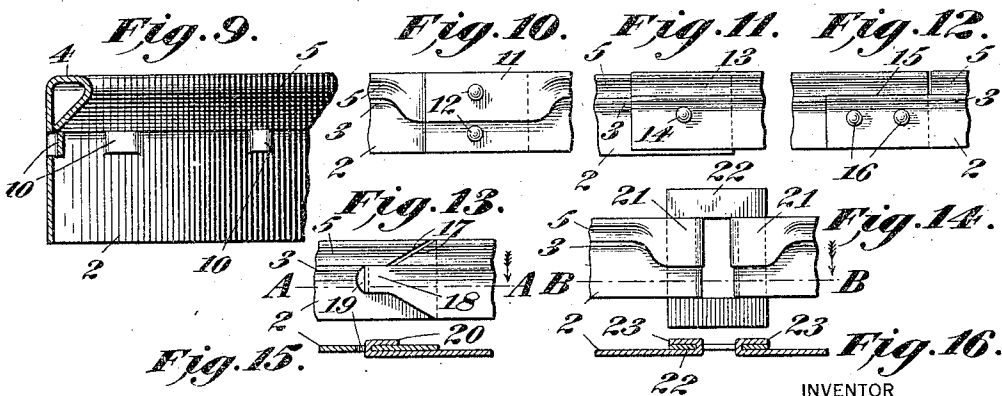
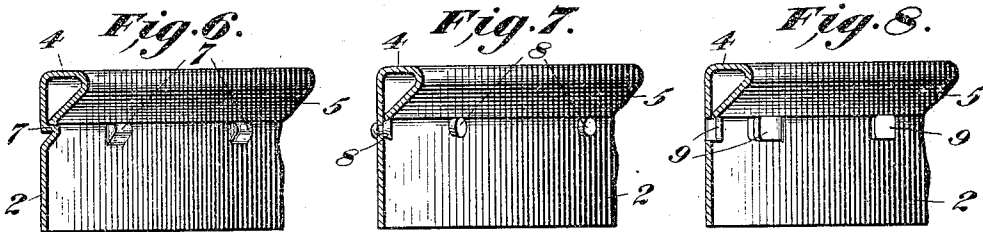
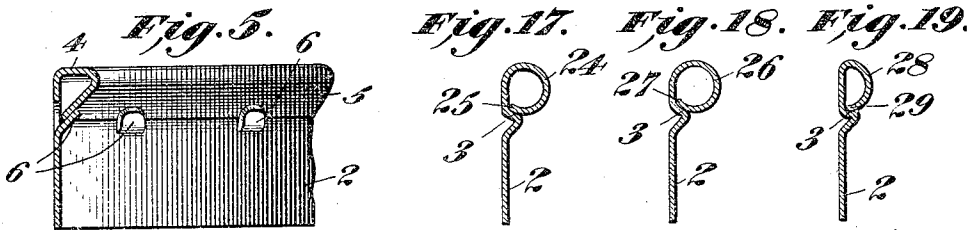
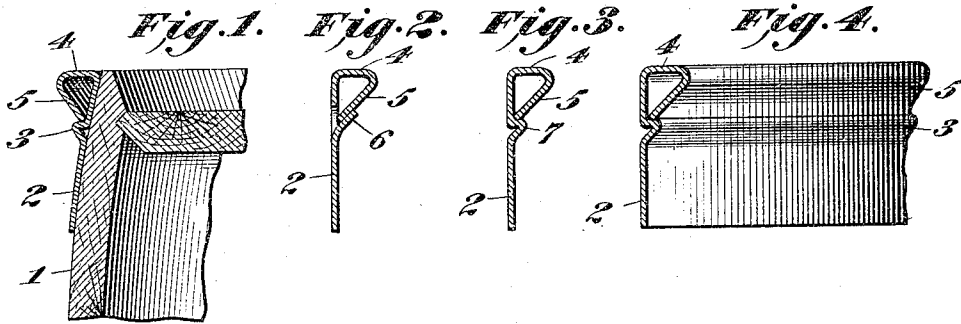
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HOOP.

APPLICATION FILED AUG. 25, 1916. RENEWED DEC. 20, 1918.

1,297,419.

Patented Mar. 18, 1919.



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HOOP.

1,297,419.

Specification of Letters Patent.

Patented Mar. 18, 1919.

Application filed August 25, 1916, Serial No. 116,764. Renewed December 20, 1918. Serial No. 267,732.

To all whom it may concern:

Be it known that I, GEORGE E. THACKRAY, a citizen of the United States, and a resident of the borough of Westmont, county of Cambria, and State of Pennsylvania, (whose post-office address is Johnstown, Pennsylvania,) have invented certain new and useful Improvements in Hoops; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to hoops for barrels, kegs, buckets, firkins, etc., and although my hoops are adapted for use on any part of these containers, either the ends or central portions, the chime or the bilge, they are especially adapted for use as chime hoops on barrels and kegs of either slack or tight cooperage.

My hoop consists essentially of a flat thin band of metal, preferably iron or steel, one edge of which is turned over into an integral bead, the free edge of that part of the band which forms the bead being adjacent to the outer surface of the body of the hoop, while the body of the hoop is provided with a projection or projections which may be of various forms adapted to contact with the said edge and thereby retain the bead in place and form, when pressure, either from a press, clamp or other cooperage tool is exerted on the bed to force or drive the hoop into position on the container. Although I prefer to form the bead of approximately triangular cross section with rounded corners, I may form it approximately cylindrical, cylindrical, semi-cylindrical or of other bent shape as desired, the lower edge portion, however, being arranged to contact with a stop or an abutment formed on or attached to the body of the hoop to prevent the deformation or displacement of the bead in pressing or driving it into place.

A chime hoop made in accordance with my invention and applied to the chimes of a barrel, cask or keg, or other similar container, or in proximity to the edge of the chime, forms a neat, smooth, rounded finish such as will prevent scratching or cutting the hands of persons handling or rolling it, and also provides a smooth and rounded surface on which said keg, barrel or other container can be rolled on its chime, without cutting or marring the floors or platforms on which

it is handled. The form and construction of my hoop is also adapted to add to the strength of the same and particularly to enable it to resist the deformation caused by pressure of driving when the hoops are put on by a press or by the blows of coopering tools when put on by hand, and also prevents the bending of the hoop due to handling the barrel roughly in cases where the chime strikes the floor or other objects.

Having thus given a general description of my invention, I will now, in order to make the matter more clear, refer to the annexed sheet of drawings in which like characters denote like parts:—Figure 1 is a cross sectional elevation of the end of a barrel or keg showing one form of my improved hoop applied to the chime thereof, Fig. 2 is a cross section of a slightly modified form of hoop, the edge of the bead being retained by means of a plurality of bent-out lips; Fig. 3 is a cross section of another modified form of hoop in which the edge of the bead rests against a plurality of pressed-out embossments; Fig. 4 is a cross sectional elevation illustrating more clearly that form of hoop shown in Fig. 1 in which a continuous projection is formed on the body of the hoop to provide an abutment, against which the lower edge of the bead rests in order to hold it in position when being pressed or driven in place. Fig. 5 is a sectional elevation of a portion of my hoop, the cross section of which is illustrated in Fig. 2; and Fig. 6 is a cross sectional elevation of that form of hoop, the cross section of which is illustrated in Fig. 3; Fig. 7 shows a hoop, the abutments of which are composed of rivets which are preferably beveled, as shown, the larger diameters of the outer beads being outward in order to form a slope or taper to insure that the edge of the bead does not slip therefrom when being pressed or driven in place; Fig. 8 is a hoop with the edges of the bead resting against a plurality of outwardly extending portions which are formed on the body of the hoop by slitting the same and bending out the slit portions, as illustrated, these bent portions being in the shape of tongues integral with the hoop at one end; Fig. 9 shows another modification of my hoop, the abutment for the lower edge of the bead in this case consisting of pressed-out portions arranged at intervals, these being formed by making two slits in the hoop, one above the other

and preferably parallel, and then pressing out the portion between the slits, as illustrated, thereby forming a projection which is integral with the hoop at both ends. Fig. 10 shows one form of fastening the ends of my hoop together by flattening the bead and riveting the ends; Fig. 11 is another form of fastening in which the ends of the hoop are telescoped and riveted together; Fig. 12 is another form of securing the ends in which the bead of one end of the hoop is cut away and the ends riveted together; Fig. 13 is still another form of fastening in which portions of the beads at the edge of the hoop are cut away, a projecting tongue formed on one end and a corresponding slot for the tongue cut in the hoop, the tongue inserted therein and bent over, and this is further illustrated in horizontal section in Fig. 15, which section is taken on the line A—A of Fig. 13; Fig. 14 is still another way of securing the ends together in which the ends of the hoop are flattened, passed through a slot in a buckle and then bent over, the bent ends being on the inside of the hoop which contacts with the keg or barrel, which arrangement assists in securing the ends in place, this being further illustrated in the horizontal cross sectional view of Fig. 16 which is taken on the line B—B of Fig. 14. Fig. 17 is a cross sectional view of a form of hoop, the bead of which is approximately cylindrical; Fig. 18 is a cross section of a form of hoop, the bead of which is substantially cylindrical; and Fig. 19 is a cross section of a form of hoop, the bead of which is approximately semi-cylindrical, the marginal portion of said beads being supported in each case by the external projecting abutment, as illustrated.

Referring now to the characters of reference on the drawings, 1 represents the upper portion of a keg or barrel shown in cross sectional elevation, 2 is the body portion of my hoop, 3 is an intermediate bead formed on the body of the hoop, the bead being shown as of approximately triangular section, and I prefer that the upper portion of said bead should be at right angles, or nearly so, to the body of the hoop or if desired it may project slightly upwardly. This construction has the result of forming spaces of approximately right angular section in which the lower edge of the bead rests, and, on account of this arrangement, there will be no tendency whatever for the edge of the bead to be bent downwardly or outwardly, thus preventing the distortion of the bead when the hoop is being pressed or forced into place. This projection 3 also has the effect of stiffening and strengthening the hoop by reason of its integral extension from the body of the hoop, thereby increasing the strength and stiffness of said hoop. The upper portion of the bead is indicated as 4

and the lower downwardly inclined portion is indicated as 5, this latter being shown as substantially straight, but, as heretofore stated this may be made curved or otherwise, if desired as illustrated in Figs. 17, 18 and 19. As illustrated in Figs. 2 and 5; 6 are the bent-out retaining lips, and as illustrated in Figs. 3 and 6; 7 are the pressed-out bosses. As shown by Fig. 7, 8 are rivets which are driven in the body of the hoop with cylindrical or beveled heads on the outside to form substantial abutments against which the lower edge of the bead rests and is secured in place thereby. As illustrated in Fig. 8, cut-out and bent tongues are illustrated as 9, these being formed by cutting the body of the hoop on three sides leaving one end integral with the hoop and bending out this portion to form a slightly projecting tongue. This forms a secure abutment against which the lower edge of the bead rests and is secured in place. As illustrated in Fig. 9, 10 shows another form of projection which is made by cutting two preferably parallel slits in the body of the hoop and then pressing out the metal between them, as illustrated, the upper edges of these projections thus forming sufficient and substantial abutments against which the lower edge of the bead rests and is secured thereby. As illustrated in Fig. 10, 12 are the rivets which secure the two ends of the hoops together, the flattened ends of the hoops being illustrated as 11. As illustrated in Fig. 11, the telescoped ends of the hoops are indicated as 13 and are secured together by the rivet 14, and although only one rivet is shown in this case, two or more may be used if desired. As illustrated in Fig. 12, the cut away portion of the bead of my hoop is indicated as 15, this portion being approximately rectangular in general outline so that the lower portion of the body of the hoop will rest directly upon the body of the other end of the hoop and is secured thereto by the rivets 16. As illustrated in Fig. 13, the cut away ends of the hoop are indicated as 17, these being cut in a beveled manner, as illustrated, leaving the projecting tongue 18, the end of which is inserted into the perforation 19 and the end bent over as illustrated, thereby securing the two ends of the hoop together. As illustrated in Fig. 14, the flattened ends of the hoop are illustrated as 21, and these are passed through a rectangular opening in the buckle or link 22, which is composed of a flat piece of metal, as shown, with a hole in the center. The ends 23 of the hoop are bent over, as illustrated, and when the hoop is in place on the keg or barrel, these ends of the hoop contact with the keg or barrel and further help to secure the ends of the hoop together. As illustrated in Fig. 17, the bead 24 is approximately cylindrical and the marginal

edge 25 is supported by the externally extending abutment 3. In Fig. 18, the bead is substantially cylindrical and the marginal portion 27, adjacent to the free edge of same, is supported by the outwardly extending abutment 3 formed on the body of the hoop. As illustrated in Fig. 19, the bead 28 is substantially semi-cylindrical and the marginal portion 29 adjacent the free edge thereof is supported at the outwardly extending abutment 3, formed on the body of the hoop.

Although I have described and illustrated my invention in considerable detail, I do not wish to be limited to the exact and specific details thereof, as shown and described, but may use such modifications in, substitutions for, or equivalents thereof, as are embraced within the scope of my invention, or as pointed out in the claims.

Having described my invention, what I claim and desire to secure by Letters Patent is:

1. A thin band hoop provided with an integral hollow bead formed by bending the edge thereof outwardly and an abutment formed on the body of the hoop adapted to contact with the edge portion of said bead.

2. A metal hoop composed of a thin band, an integral outwardly extending bead formed by bending the edge portion thereof outwardly, a projection outwardly extending from the body of the hoop adapted to contact with said bead, whereby the bead is supported and prevented from deformation by pressure to which it is subjected in placing or use.

3. A thin band hoop having an integral hollow bead formed by bending the edge thereof outwardly, and a continuous integral outwardly extending projection formed on the body of the hoop adapted to contact with and support said bead.

4. A thin band hoop, one edge of which is bent over outwardly and adapted to contact with the body portion of said hoop, the portion adjacent the free edge of said bead be-

ing approximately straight and at an angle with the surface of the body portion, and an outwardly extending projection on said body portion adapted to contact with the free edge of said bead and to support the same.

5. A thin band hoop provided with an integral hollow bead formed thereon, the upper portion of which is curved, the free edge of which is straight and extends at an angle to the body portion, an outwardly extending projection formed continuously of said hoop, the portion of the projection adjacent to the bead being approximately at right angles with the surface of the body portion of the hoop and thereby adapted to support said bead.

6. A metal hoop composed of a thin band, a hollow integral bead formed by bending the edge portion thereof outwardly, the upper portion of said bead being curved and the edge portion approximately straight and extending at an angle with the surface of the body of the hoop, and an outwardly extending projection on the body of the band adapted to contact with the free edge of the bead and support it against deformation.

7. A thin band hoop having an integral hollow bead formed by bending the edge thereof outwardly, the free edge of said bead contacting with the outside body portion of the hoop, and an abutment formed by pressing a portion of the hoop outwardly, said abutment being adapted to contact with the free edge of the bead of said hoop and to support it.

8. A thin band hoop having an integral edge bead of approximately triangular cross section with rounded corners, and a projection extending outwardly of the outer surface of the hoop and adapted to contact with the free edge of said bead.

In witness whereof I hereunto affix my signature.

GEORGE E. THACKRAY.