No. 634,615. Patented Oct. 10, 1899.

W. GOLDIE.

METAL HOOP.

(Application filed June 17, 1899.)

(No Model.)

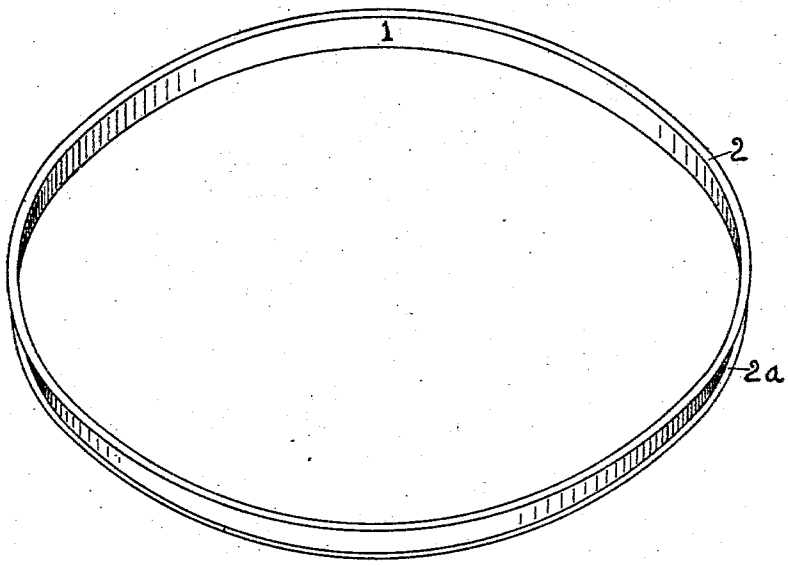

Fig. 1.

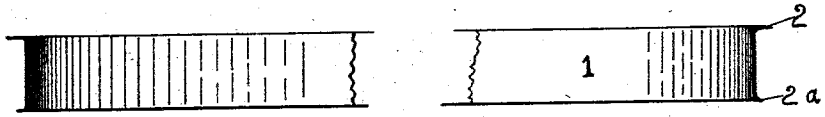

Fig. 2.

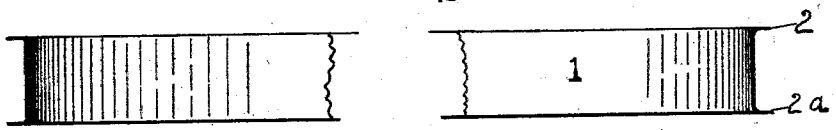

Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM GOLDIE, OF WILKINSBURG, PENNSYLVANIA.

METAL HOOP.

SPECIFICATION forming part of Letters Patent No. 634,615, dated October 10, 1899.

Application filed June 17, 1899. Serial No. 720,903. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM GOLDIE, a citizen of the United States, residing at Wilkinsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Metal 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 barrel-hoops, and more particularly to barrel-hoops that are made of metal.

The improvement consists in the means herein described by which I accomplish the objects of my invention, which are, first, to produce a metal hoop that is lighter and stronger than the metal hoops heretofore used and that has ample bearing-surface against the barrel combined with a proper degree of stiffness and at the same time is sufficiently flexible to be easily adjusted to the barrel; second, to so construct and distribute the metal throughout the cross-section of the hoop as to combine great strength with sufficient lightness of metal to permit of fastening the hoop to the barrel by driving nails through the body of the hoop.

My invention is illustrated in the accompanying drawings, in which similar characters of reference designate corresponding parts.

Figure 1 is a perspective view of a complete hoop. Fig. 2 is a cross-section of the hoop shown in Fig. 1. Fig. 3 is a cross-section of a modified form of the hoop.

As is plainly shown in the drawings, the hoop, which is made either of thin band-iron or of sheet metal cut into strips, consists of a web 1 and flanges 2 and 2^a, formed by bending over the edges of the thin metal strip. The ends of the hoop may be secured together by any suitable or usual means, such as riveting, as in the well-known flat iron hoop, or by electric welding, as in various forms of round wire hoops. The manner of securing the ends is immaterial to my invention, the spirit of which is embodied in the flanged edges and flat web of the hoop and by means of which I produce results of great practical value that have not heretofore been attained in a metal hoop. The upper and lower flanges may be of the same width, as is shown in Fig. 3, or they may be of different widths, as is shown in Fig. 2, without departing from my invention.

The flat iron flangeless hoops in common use are necessarily of considerable thickness in order to provide an upper edge of sufficient strength to resist the force of the iron driver without distortion of the hoop. Such hoops are usually made of band-iron, which is expensive, and, moreover, the iron driver is apt to mar the stave. The thickness of the iron hoop makes it impracticable to secure the hoop to the barrel by nails, which is now the customary way of securing the flat wooden hoops used in making sugar and other "slack" barrels. Hoops that are made of flat iron strips without flanges and are sufficiently light to permit of driving nails through them have neither strength enough to withstand the blows in driving nor stiffness enough to resist bending, indenting the stave, and, perhaps, fracturing when subjected to a heavy side blow. Round wire hoops have also been used to some extent; but they are not neat in appearance, and when subjected to blows and jars in transit the inner portion indents the stave, and later the hoop becomes slack and loosens the barrel.

To avoid the difficulties encountered in the use of former hoops, I have devised the improved hoop herein described, that can be driven with a wooden driver, that will not mar the barrel, that has great strength and lightness, and can be secured to the barrel by nails driven through the web. This hoop is by reason of its flanged edges well adapted to be driven onto the barrel by mechanism commonly used for driving wooden hoops.

What I claim is—

1. A metal hoop having flat outwardly-flanged edges projecting substantially at right angles from the web of the hoop, substantially as described.

2. A metal hoop having two flat outwardly-flanged edges, said edges projecting substantially at right angles to the web of the hoop,

the flanges being of unequal depth, substantially as described.

3. A metal hoop having a thin web portion and flat outwardly-flanged edges projecting at right angles from the web of the hoop, as herein shown and described.

4. A metal hoop having a thin web portion and an upper outwardly-extending flat flanged portion projecting at right angles to the web of the hoop, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM GOLDIE.

Witnesses:
GEO. B. WILLCOX,
M. H. IRWIN.