

W. GOLDIE.
METALLIC HOOP.
APPLICATION FILED NOV. 9, 1907.

929,666.

Patented Aug. 3, 1909.

FIG. 1

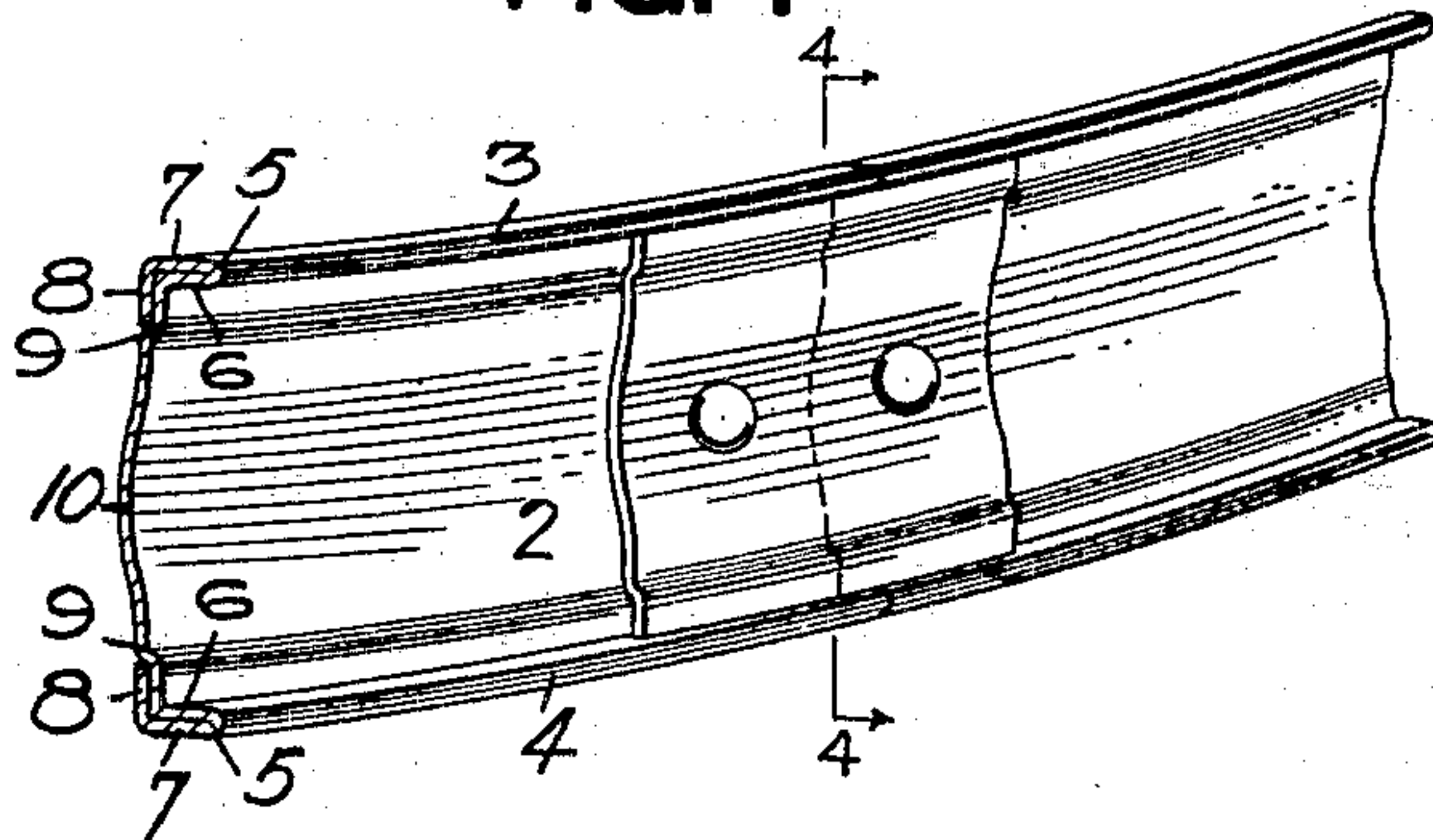


FIG. 4

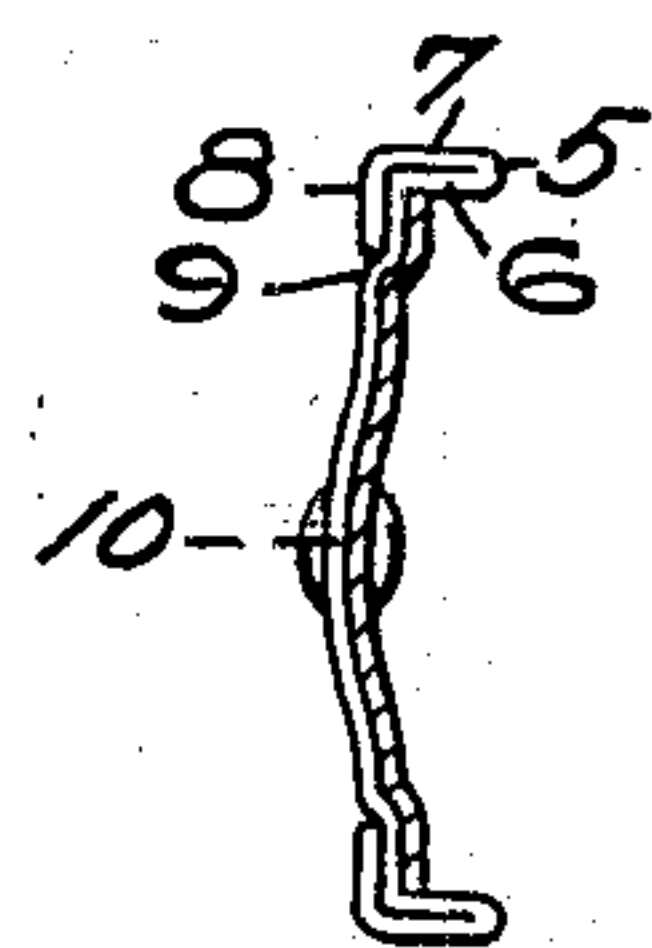


FIG. 2

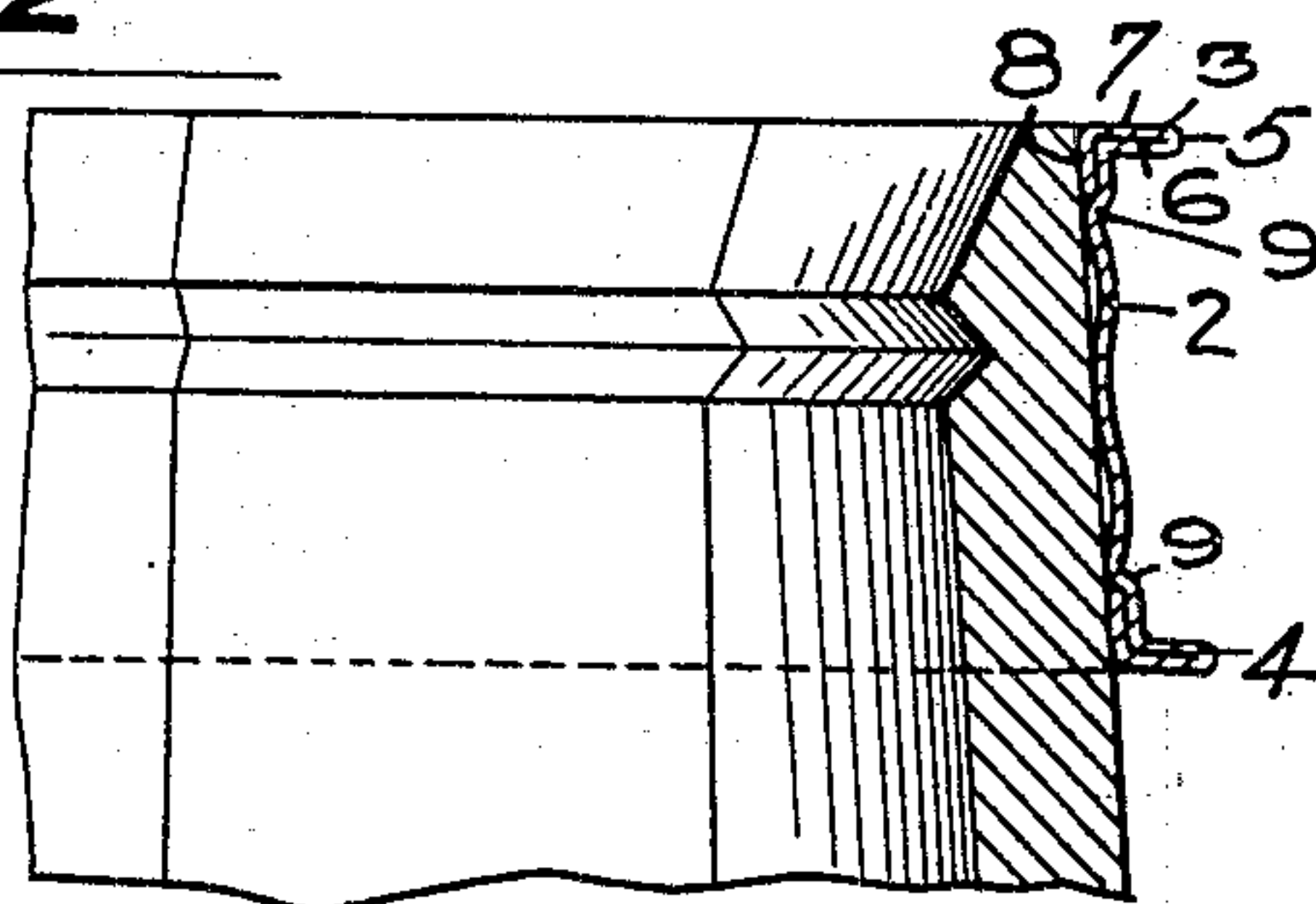
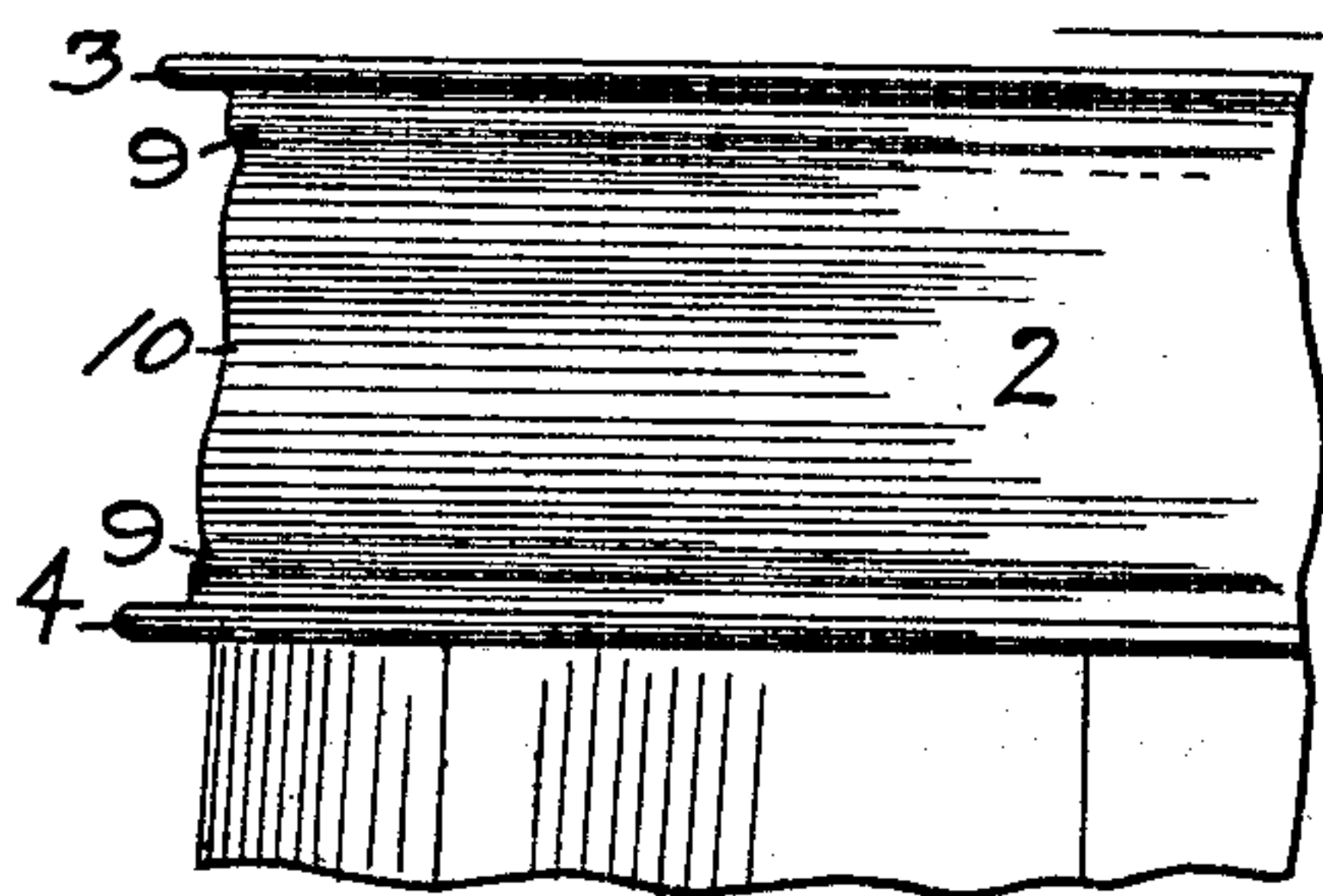


FIG. 3

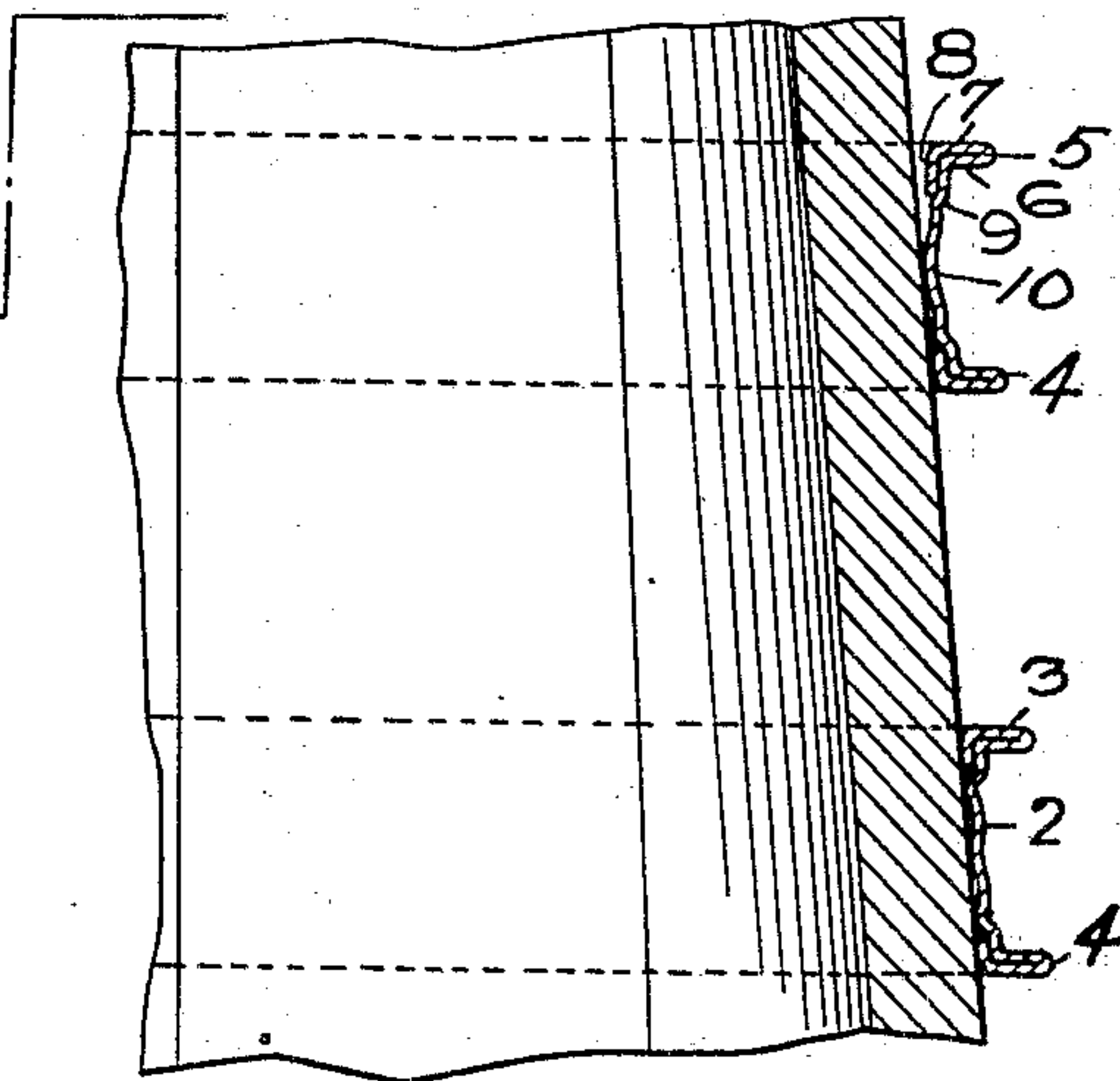
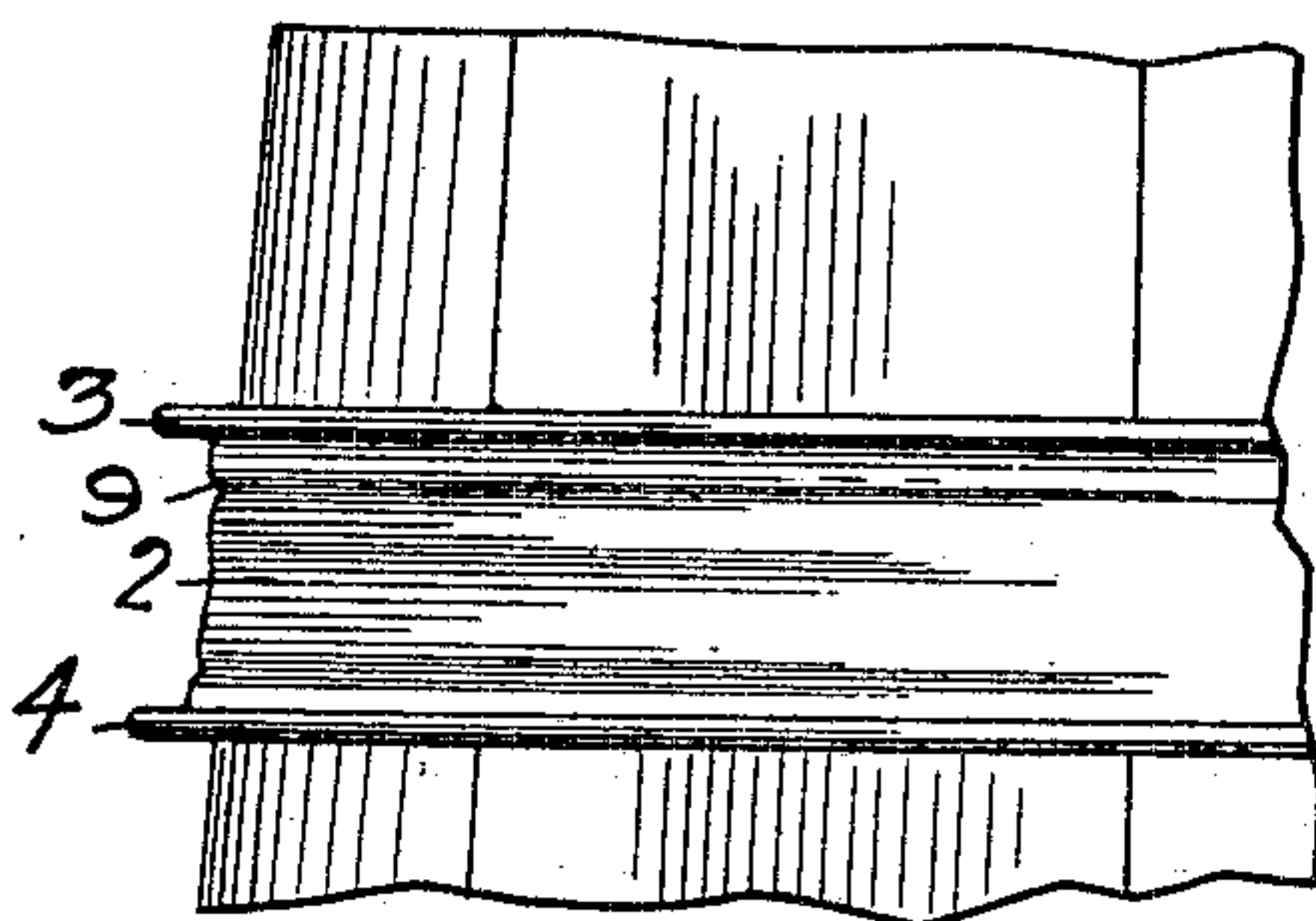
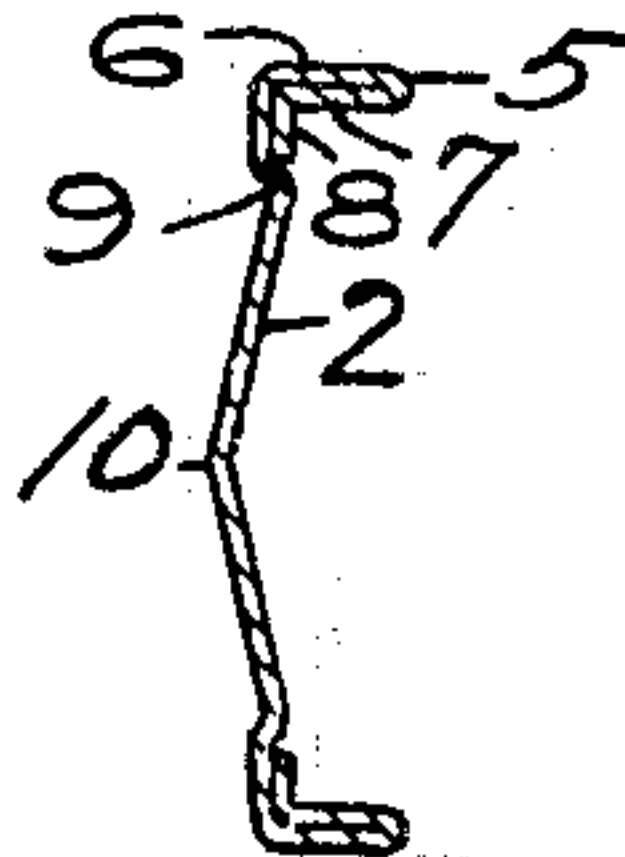


FIG. 5



WITNESSES.

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UNITED STATES PATENT OFFICE.

WILLIAM GOLDIE, OF WILKINSBURG, PENNSYLVANIA.

METALLIC HOOP.

No. 929,666.

Specification of Letters Patent.

Patented Aug. 3, 1909.

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To all whom it may concern:

Be it known that I, WILLIAM GOLDIE, a resident of Wilkinsburg, in the county of Allegheny and State of Pennsylvania, have
5 invented a new and useful Improvement in Metallic Hoops; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to metallic hoops for
10 barrels, kegs, casks, tubs, and the like, and its object is to provide a hoop having a broad driving edge and one which is properly trussed to give strength to the barrel to sustain loads.

15 It has particular reference to hoops for barrels for containing dry material, such as flour and lime, in which it is important to provide a hoop very light in weight and cheap, and yet sufficiently stiff to sustain the
20 blows in driving, and of sufficient truss strength to hold the barrel to shape; though it of course may be employed to advantage with heavier hoops for barrels containing liquids.

25 To these ends my invention consists in a hoop composed of a metal strip having a concentric edge rib formed of an outwardly extending closed fold to provide a broad surface for driving and impart truss strength
30 to the hoop.

It also consists in combining with said rib a lap portion parallel to the body of the hoop, so imparting both truss strength and longitudinal stiffening to the hoop.

35 It also consists in forming the hoop body with its mid-portion curved or corrugated and extending inwardly beyond the other portions of the body, so as to cause the neutral axis or mid-portion of the hoop to bear
40 upon the barrel, and also to overcome the necessity of expanding the hoop prior to driving the same upon the barrel.

In the accompanying drawing Figure 1 is a perspective view of the end portions of the
45 hoop; Fig. 2 is a side view partly broken away of part of the barrel showing the hoop applied to the chime portion; Fig. 3 is a like view showing the hoop applied to the bilge portion of the barrel; Fig. 4 is a cross section of the hoop at the joint; and Fig. 5
50 shows another form of hoop embodying the invention.

The hoop is preferably made of very thin sheet metal, such as 28 to 30 gage, which can
55 be cut to proper width and the resulting

strips fed to proper lapping and bending machinery to shape them. The hoop has the body portion 2, the upper rib 3, and the lower rib 4, in its preferred form these ribs being the same so that the same description
60 will apply to them. Each such rib portion is formed of the outwardly extending folded lip or flange 5, the metal being first bent outwardly and then bent backwardly parallel thereto, as at 6, 7. The lip can be formed
65 either outside of or inside of the flange. Both forms are illustrated in Fig. 5 showing the simplest form of the invention. Such folded rib thus provides a broad surface for driving and greatly increases the truss
70 strength of the hoop. In the preferred form the extreme edge 8 of the metal beyond such outwardly extending folded rib is bent parallel with the body of the hoop and fitted close thereto, as shown in Figs. 1 to 4. This edge
75 portion 8 may fit either on the outer or on the inner face of the hoop, the former being shown in Figs. 1 to 4, and the latter in Fig. 5. At the base of said edge portion 8 the body of the hoop is beaded as at 9 extending
80 under the same to form a shoulder directly under such edge portion 8 to strengthen the same and aid it in sustaining the blows in driving.

The mid portion of the body 2 of the hoop
85 is curved or bent inwardly as at 10, such bend being preferably made about mid-way of the width of the hoop and forming an inwardly projecting web corrugation this corrugation extending inwardly beyond the
90 other portion of the body, so reducing the diameter of the mid-portion of the hoop as applied to the barrel. This part of the invention may be employed without the use of the reinforced edge portions above described.
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In the use of the hoop the outwardly projecting folded ribs provide broad surfaces for driving the hoop to receive the blows of the maul or driving tool, such outwardly
100 extending folded rib being aided in sustaining such blows by the downwardly projecting lip 8 forming the extreme edge of the strip from which the hoop is formed, and the flange providing a very stiff trussed construction which after the hoop is driven to
105 place will sustain outward or bursting strains and at the same time will hold the barrel to shape and impart to it sufficient load carrying strength, such as where the barrels resting on their bilge are piled one
110

upon the other, while such outwardly projecting flanges will not cut the hands of the workmen.

As illustrated in Fig. 3 the hoop can be easily placed over the barrel, the inwardly extending curved corrugation 10 in the mid-portion of the body overcoming the necessity for expanding the hoop before it is placed on the barrel and bringing the mid-portion of the body into contact with the barrel before the hoop is driven to place, the blows upon the hoop of course expanding the lower edge thereof and somewhat flattening such inwardly curved portion 10, this inwardly curved portion 10 so enabling the hoop to conform more easily to the barrel and insure perfect contact between the hoop and the barrel at or about the neutral axis of the hoop, bringing the strain of driving at or about such mid-portion and enabling the hoop to adjust itself more quickly to the barrel. By thus insuring contact with the mid-portion of the hoop at or about the line where the two ends of the hoop are riveted together, as shown in Figs. 1 and 4, the strains are thrown onto the hoop body in direct line with the points of riveting, and the outward strains upon the hoop in sustaining bursting action are brought to the mid-portion thereof, being then distributed out toward the trussed rib portions at the outer edges.

The hoop can be formed of very thin metal and can be rapidly bent to shape, and provides a hoop exceedingly light in weight and therefore very cheap in cost. It is evident that the peculiarly formed ribs can be employed at either or both of the hoop edges.

By the word corrugation, as used in the claims, I include any suitable inward ex-

tension beyond the other portions of the body.

What I claim is:

1. A metallic barrel hoop having a web portion and having an edge rib formed of an outwardly extending closed fold.

2. A metallic barrel hoop formed of a metal strip having a concentric edge rib formed of an outwardly projecting fold and a downwardly projecting portion in line with the body of the hoop.

3. A metallic barrel hoop formed of a metal strip having a concentric edge rib formed of an outwardly projecting fold and a downwardly projecting portion in line with the body of the hoop, said downwardly projecting portion being formed on the inner face of the hoop.

4. A metallic barrel hoop formed of a metal strip having its mid-portion provided with a corrugation extending inwardly beyond the other portions of the body, and having a flanged upper edge.

5. A metallic barrel hoop formed of a metal strip having its mid-portion provided with a corrugation extending inwardly beyond the other portions of the body, and having an outwardly extending rib at each edge thereof.

6. A metallic barrel hoop having its mid-portion provided with a corrugation extending inwardly beyond the other portions of the body, and having edge ribs formed of outwardly extending closed folds.

In testimony whereof, I, the said WILLIAM GOLDIE, have hereunto set my hand.

WILLIAM GOLDIE.

Witnesses:

ROBERT C. TOTTEN,
J. R. KELLER.