

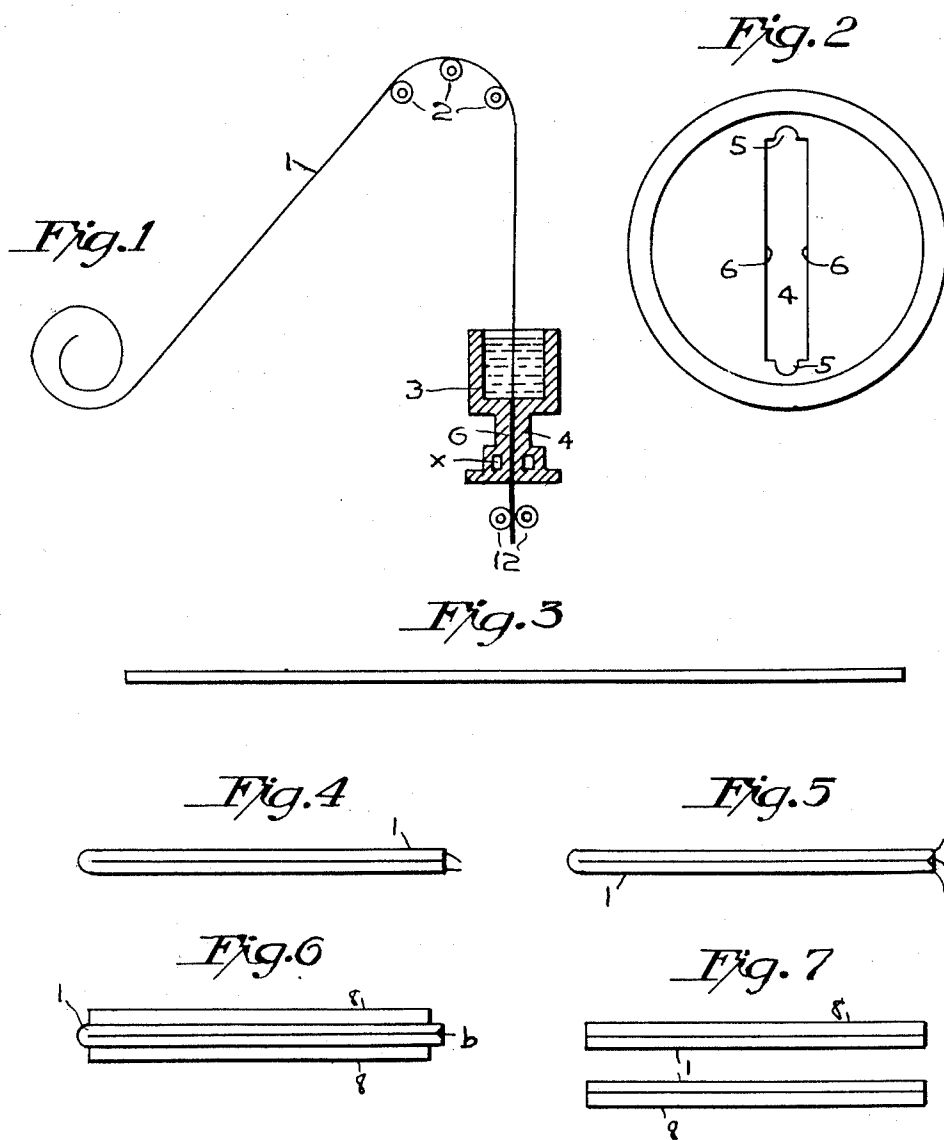
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METHOD OF MANUFACTURING STRIP METAL BEARING STOCK

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METHOD OF MANUFACTURING STRIP  
METAL BEARING STOCK

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3 Claims. (Cl. 29—189)

My invention relates to an improved method of manufacturing strip metal stock for the production of bearings, relating more particularly to sleeve bearing stock formed of bearing metal having a steel backing. This is a divisional application of my former application Serial No. 46,296, October 23, 1935.

In the manufacture of such bearings, particularly in the class having a bronze bearing surface with a steel backing or jacket, it has been generally considered impossible to fuse bearing metal to one side of the backing strip without also coating with or fusing the bearing material to the outer sides while the steel strip passes through the molten bath, thus making it unfit for use.

I have discovered a method whereby the bearing metal can be readily fused to the one side only of a steel backing strip, and at the same time leave the opposite side as smooth and uncoated as originally. By this method I have overcome the above difficulty as well as cheapened the production of bearing manufacture.

In the accompanying drawing, I have illustrated my improved method, wherein like numerals and letters of reference indicate like parts, in which drawing—

Figure 1 is a diagrammatic side elevation of a device involving features to assist in carrying out my invention.

Figure 2 is an enlarged end sectional view of the chamber showing the forming outlet or die therein.

Figure 3 is an end view of a sheet of metal such as employed in the method.

Figure 4 is an end view of the sheet of metal doubled over at its middle longitudinally.

Figure 5 is an end elevation of the steel strip folded upon itself.

Figure 6 is a similar view with the bearing metal applied.

Figure 7 is an end elevation of the same separated by removal of the margin.

In the practice of my improved method, I provide a sheet of steel plate 1 of the desired thickness and other dimensions, which is then bent or folded over at its middle longitudinally upon itself in superposed relation by suitable means, as by passing it between rollers to form it into a laminated strip or member of dual layer. It is then united along its longitudinal meeting edges 1' by welding 5.

After being thus formed it passes up over a plurality of rollers 2 and down into a suitable vessel 3 containing molten bearing metal heated to and maintained at the desired temperature

by any suitable means, not shown. The dual strip is then passed through a suitable controlled opening or forming die 4 comprising the slots 5 corresponding in width and thickness to that of the layer of bearing metal to be fused to the steel member, as at 6. As it passes through the die it is engaged by the drawing rollers 12—12.

In continuing the passage of the strip through the lower portion of the outlet or die, which is chilled by suitable means, as by running water in the space x about the lower part of the die, it causes the bearing metal to solidify and form a strip of bearing metal on each outer side of the steel member 1 of uniform thickness and width, leaving a margin of the steel at the edges.

After the strip or member is thus formed, the margin or longitudinal edges 1' are removed by suitable cutting means, and when so removed the member 1 separates into two like laminated members, as shown in Fig. 7.

The margin on the edge of the steel strip is, as will be apparent, preferred in the passing of the steel backing strip through the die to guide same through the die opening, maintain it in position and cause the bearing metal to be of equal thickness and width throughout as well as have the strips all of like form.

It will also be apparent that the margin or edges of stock strips may be retained and later removed.

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

1. A method of forming dual strip material for the manufacture of bearing strips therefrom, consisting of providing a blank sheet of steel backing, folding the same longitudinally in superposed relation, unitedly sealing the meeting edges thereof, applying a layer of bearing metal to the outer surfaces of said strips by passing the same through a body of molten bearing metal in a container, shaping the said layers on the strip by removing the strip through a die outlet in the container, and finally chilling the layers of bearing metal on the strips while passing out of the die.

2. The method of forming two like strips of bearing material simultaneously, which consists in the following steps; providing a sheet of backing steel, folding the same longitudinally in superposed relation, unitedly sealing the meeting edges thereof to form a unit, passing said unit into and through a body of molten bearing metal in a container to form a layer thereof on the outer faces of the unit, removing said unit from

the container through a shaping outlet beneath the metal body to shape the layers of bearing metal on the unit, and then trimming off the edges of the member to form two like bearing strips.

5 3. The method of forming two like strips of bearing material simultaneously, which consists in providing a strip of steel, folding the same longitudinally of its middle into flat superposed re-

lation with the edges registering, applying a strip of bearing metal while in a molten state to the two opposite sides leaving a margin of the steel backing at its longitudinal edges, then removing the margins to separate the strip into two like 5 parts.

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