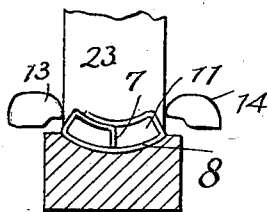
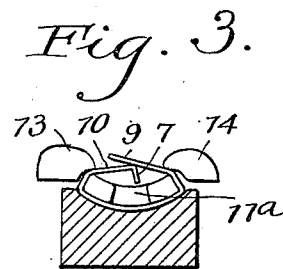
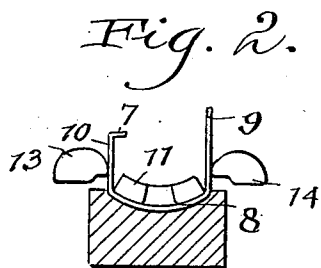
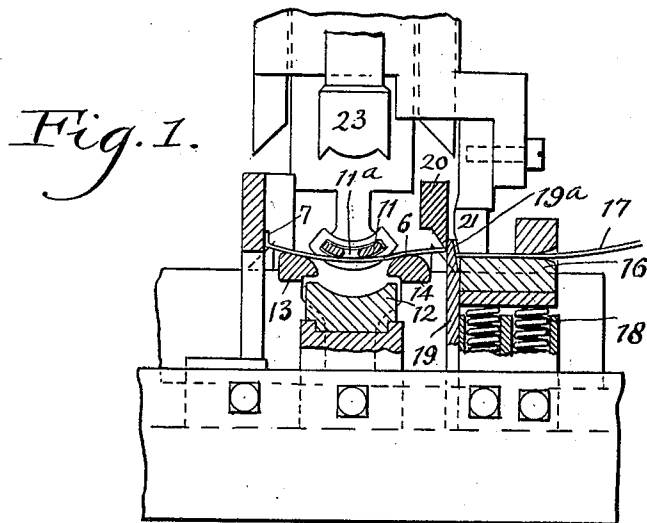


Jan. 30, 1923.

1,443,737

S. H. GIBSON.
METHOD OF MAKING CHAPLETS.
FILED MAY 9, 1919.



Inventor:
Samuel H. Gibson
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UNITED STATES PATENT OFFICE.

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METHOD OF MAKING CHAPLETS.

Application filed May 9, 1919. Serial No. 295,961.

To all whom it may concern:

Be it known that I, SAMUEL H. GIBSON, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Methods of Making Chaplets, of which the following is a full, clear, and exact description.

The present invention relates to a method of making chaplets, which as is very well known, are usually formed from strips or bars of metal which are bent to assume a variety of different shapes and forms and one of the common forms may be described as substantially rectangular, although the chaplet may be curved.

These chaplets frequently employ a central bridge which spaces the long sides of the chaplet and holds them against bending inwardly toward each other.

The purpose of this invention is to provide a method which is applicable alike to the manufacture of chaplets by hand or by machine wherein the chaplet is formed from a strip or bar of metal by a series of operations which result in forming the chaplet with a central bridge portion.

Generally speaking, the invention may be said to comprise the method and the steps thereof set forth in the accompanying claims.

Reference should be had in the accompanying drawings forming a part of this specification, in which Fig. 1 is an elevation with portions in section showing a portion of a machine by which the method may be carried out. Figs. 2, 3 and 4 represent various stages of operation in the method of producing the finished chaplets. Fig. 5 is a perspective view showing a finished chaplet made by the method forming this invention.

One form of chaplet produced by the method which is about to be described is shown in Fig. 5 and comprises oppositely disposed side members 1 and 2 with end members 3 and 4. Extending between the opposite sides 1 and 2 is a bridge portion 5 which contacts with the inner portion of the side 1 thereby forming a bridge or brace.

The chaplet which is shown in Fig. 5 is curved but it will be readily understood that this is in no way limited as illustration is only intended to indicate one form in which a chaplet produced by the herein described method may be produced.

The chaplet may be formed from a bar of

metal or from a strip of metal, but in the present instance I will describe the invention when utilizing a strip.

The first step in the method of making the chaplet is to provide a substantially flat strip of metal such as indicated at 17 in Fig. 1 which at its end is provided with a substantially right-angled extension 7. The length of the extension 7 is of course predetermined, its length being determined by the proper height which the ridge portion of the chaplet should finally be.

The strip 6 is first bent into the position shown in Fig. 2 in which there is a lower side portion 8 and upstanding ends 9 and 10. The upstanding portion 9 is slightly longer than the similar portion 10.

The strip 6 is preferably manipulated into this position as illustrated in Fig. 2 by means of a mandrel 11 and while as here shown the mandrel is cooperating with certain other instrumentalities. It will be obvious that so far as the method is concerned any appropriate means may be employed for bending the strip about the mandrel 11 in such a manner that the extension 7 thereof will enter a central slot 11^a of the mandrel and subsequently bending the portion 9 of the strip so that it will lie above the portion 10.

The next step in the method is to apply suitable pressure upon the portions 9 and 10 of the strip so that they will be folded closely around the mandrel and will lie in close contact with the surfaces of the mandrel and bending the metal such that the extension 7 will firmly contact with the lower portion 8 of the strip.

The next operation is to strip the finished chaplet from the mandrel.

A suitable machine for carrying into effect the herein disclosed method is shown in my Patent No. 1,348,215, granted August 3, 1920.

A part of the machine there shown is illustrated in Fig. 1 and may be briefly described as comprising a bed 12 having a recess in the top thereof, folding members 13 and 14 which are located above and at opposite sides of the die and form in effect portions of the die with respect to the forming action upon the metal strip. Above the bed die 12 there is located the mandrel 11 provided with the slot 11^a.

At one side of the machine there is a support 16 from which the strip of metal 17 which is to be operated upon may pass. This

platform 16 is depressible and for this purpose is mounted upon springs 18.

Adjacent to the platform 16 there is an upright member 19 which is provided with a slanting surface as indicated at 19^A. Cooperating with the member 19^A is a reciprocating member 20 which is formed with an edge as clearly shown in Fig. 1 and these members 19 and 20 act as shears to sever the strip of metal 17 thereby producing an appropriate length of strip to be operated upon by the machine.

There is located above the support 16 a reciprocating member 21 which is adapted to descend and engage with the strip 17 upon the platform.

In operation it will be seen that when the strip 17 has been severed by the cooperation of members 19 and 20, the member 21 descending bends the end portion of the strip 17 against the slanting face 19^A and so produces an approximately right angle bend at the end of the strip.

Portion of the strip 17 which has been fed to the machine prior to the shearing action which has just been described was likewise provided with a right angle bend at the end thereof and the strip when severed occupies substantially the position shown in Fig. 1.

The mandrel 11 descends bending the strip into the position shown in Fig. 2 then the member 13 moves inwardly thereby bending the portion of the strip which is adjacent to it and this movement is closely followed by the movement of the member 14 which results in folding that portion of the strip adjacent to the member 14 above the other end of the strip.

Following this action the header 23 descends and this header is of such form that it presses the ends of the strip firmly about the mandrel 11 so that the strip conforms to the mandrel.

As explained in the application before mentioned, automatic means are provided for expelling the chaplet from the mandrel after it has been completely formed.

It will be apparent that as stated earlier in the specification, it is not necessary to the successful operation of the method which

has been described that the same shall be effected by a machine but the process may be operated by bending the metal strip about a mandrel or suitable form which is provided with a central slot such as the mandrel 11 of the machine which has been described.

Having described my invention, I claim:

1. The method of making chaplets which comprises bending a strip of metal with an approximate right angle bend at one end thereof, then bending the metal strip into a substantially U-shape, then bending the end of the strip having the angle bend therein into a position such that the bent end is in substantial contact with the base of the strip, then folding the other end of the strip of metal against the end of the strip which has been previously folded.

2. The method of forming chaplets which comprises bending the end of a strip with a short approximate right-angle bend, then bending the strip to assume a substantially U-form, then simultaneously bending the ends of the strip toward each other with the end having the angle bend beneath the other end of the strip of metal and continuing the fold until the substantially right-angle bend at the end of the strip is in contact with the base of the chaplet and the other end of the strip is in contact with the end of the strip which has the right-angle bend therein.

3. The method of forming a chaplet which comprises bending one end of a strip of metal with a short approximate right-angle bend, then bending the strip about a mandrel which has a slot therein so that the strip is substantially U-shaped, then bending the end of the strip with the angle bend about the mandrel so that the said bend enters the slot in the mandrel, then bending the other end of the strip so that it lies above the first-mentioned end of the strip and then forming the said ends of the strip into conformity with the mandrel with the bent end of the strip in engagement with the base of the chaplet.

In testimony whereof, I hereunto affix my signature.

SAMUEL H. GIBSON.