METHOD OF MAKING A SPRING HANGER

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Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

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The present invention relates to a spring hanger for automobile frames.

An object of the invention is to provide a novel and economical method of forming a sheet metal spring hanger for automobile frames.

Another object of the invention is to produce an inexpensive spring hanger having characteristics of increased strength per unit weight.

The invention resides in producing a unitary spring hanger of novel structure from a single piece of sheet metal.

The invention will be best understood by referring to the accompanying drawing, in which:

Figure 1 is a side view of a finished spring hanger made in accordance with an embodiment of the present invention.

Figure 2 is an end view.

Figure 3 is a top view of the spring hanger showing the method of attaching it to the channel side bar of an automobile frame.

Figure 4 is a view of a sheet metal blank showing the methods used in performing the preliminary shaping operations.

Figure 5 is a perspective view of the blank after it has been bent transversely on the line 5—5 of Fig. 4.

Figure 6 is a perspective view of the blank after it has been bent on a line 6—6 of Fig. 4.

Figure 7 is a view of the blank after bending the same on line 7—7 of Fig. 4.

It is desirable, in the manufacture of automobile frames and parts thereof, to eliminate wherever possible, intricate and expensive designs. Forged pieces, as a result, are replaced by sheet metal pieces when it can be accomplished without sacrificing strength. The use of sheet metal eliminates heating of the parts, for sheet metal may be formed cold, and expensive forging dies are also eliminated.

In carrying out the invention, a sheet metal blank of suitable width is cut by stamping or other means to form a piece 10, as shown in Fig. 4, of more or less irregular shape which forms a development of the finished spring hanger 11 as shown in Figs. 1, 2, and 3.

The segments 12 and 13 of the piece 10 are connected by an integral web 14. The blank 10 is then bent transversely on line 5—5 of Fig. 4 to offset the bases 15 and 16 of the bracket as shown in Fig. 5. Thereafter the blank is bent transversely on the line 6—6 of Fig. 4 to form the ears 17 and 18 of the bracket, and to bring said ears into a substantially parallel relationship with the longitudinal axis of the shank 19, as shown in Fig. 6.

The web 14 is then bent on the line 7—7 of Fig. 4 to produce a forked spring hanger 11 having ears 17 and 18 spaced apart, in a substantially parallel relationship.

The folded web 14 serves to stiffen and brace the spring hanger, its metallic grain structure being particularly well adapted to this purpose, by reason of the method of forming the web from a flat sheet.

The holes 20 and 21 for the spring bolt which are formed in the ears 17 and 18 are preferably punched during the preliminary forming of the blank. Likewise, the holes 22 and 23 in the shank 19 and hole 22 in the stub shank 24 are preferably formed by punching during the preliminary operations, but it is not necessary to the present invention that they be so formed. Rivet holes corresponding to the holes 22 and 23 are provided in the side bar 25 of the frame. Rivets 26 and 27 are inserted in the aligned holes in the spring hanger and frame and spread, thereby firmly securing the spring hanger 11 to the metal side bar 25.

The forward end of the front spring is adapted to fit between the ears 17 and 18 of the bracket, and may be secured by a suitable spring bolt.

While the invention has been specifically set forth, I claim all modifications within the scope of my invention.

I claim:

1. The method of making a spring hanger for an automobile frame or the like which comprises providing a sheet metal blank, cutting the same to form a piece having a central longitudinal slit at one end and having...
a non-central projection at the other, bending the piece transversely at the closed end of the slit to form bases for the forked member, bending the piece transversely intermediate the bases and the slit end, and thereafter bending the blank on the longitudinal line of the slit to form a forked spring hanger.

2. The method of making an integral sheet metal spring hanger which comprises cutting a sheet metal blank to form shank and bracket portions, slitting the bracket portion longitudinally to form segments of substantially the same dimensions, bending said segments transversely to offset the same, and bending the blank on the longitudinal line of the slit to form a forked spring hanger.

3. The method of making a spring hanger for an automobile frame or the like which comprises providing a sheet metal blank having a single projection extending longitudinally from one end of the blank and a pair of projections extending longitudinally from the other end of the blank, bending the blank on a line adjacent the bases of the pair of projections and extending transversely of the blank, bending the pair of projections on a line intermediate their ends and bases and substantially parallel to the first line, and bending the blank about its longitudinal center line.

4. The method of making a spring hanger which comprises providing a sheet metal blank having a pair of projections extending longitudinally from one of the blanks and a single projection extending longitudinally from the other end of the blank in substantial alignment with one of said pair of projections, bending the blank on a line adjacent the bases of the pair of projections and extending transversely of the blank, bending the pair of projections into a plane substantially parallel with the plane of the blank, on a line intermediate their ends and bases and substantially parallel to the first line, and bending the blank on its longitudinal center line.

In witness whereof I have signed my name at Milwaukee, Wisconsin, this 3rd day of May, 1930.

HENRY MILLER.