Nov. 2, 1937. W. J. KLEMP 2,097,927

METHOD OF MAKING BAG FRAMES AND BLANKS THEREFOR

Filed June 26, 1936

Fig. 1

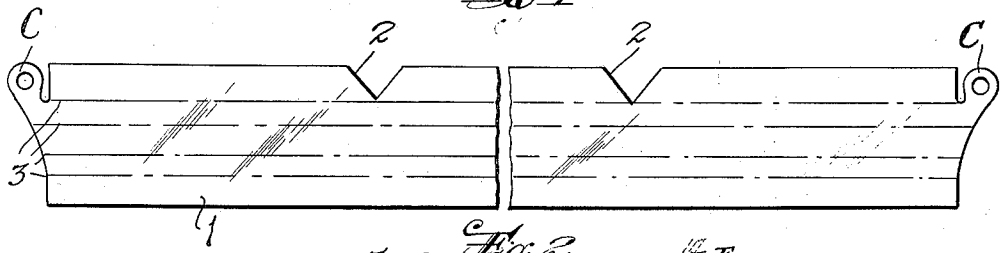


Fig. 2

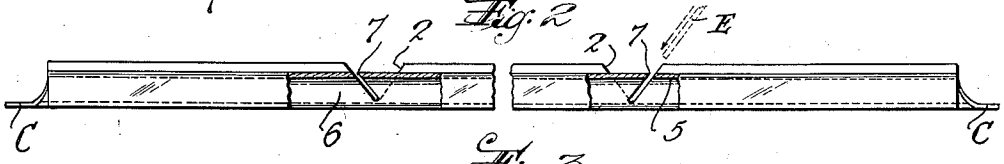


Fig. 3



Fig. 4

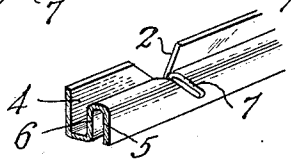


Fig. 5

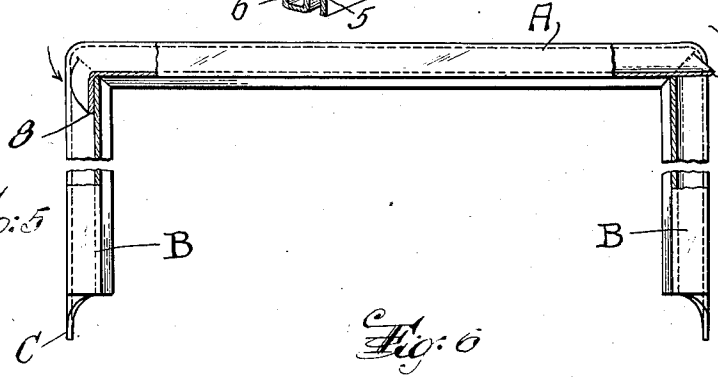


Fig. 6

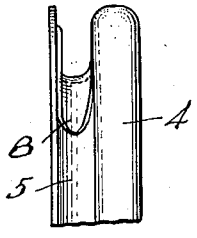


Fig. 7



Fig. 8

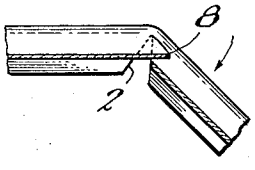
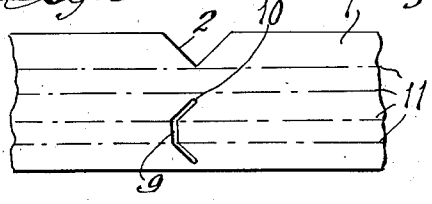


Fig. 9



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METHOD OF MAKING BAG FRAMES AND BLANKS THEREFOR

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10 Claims. (Cl. 113—116)

This invention relates in general to metal frames and especially frames for ladies' hand bags, purses, pocket books and the like, the invention being particularly directed to the structure of the frame for the mouth or opening of the bag.

A frame of this general character includes two approximately U-shaped sections which are pivotally connected together at the extremities of their arms and have the bag covering, such as leather or composition fabric secured thereto, so that upon relative pivotal movement of the sections, the bag may be opened and closed. Inasmuch as such frames are subjected to hard usage, particularly to repeated and severe strains in opening and closing of the bags, it is highly desirable that the frames be very strong, but at the same time it is desirable that the frames be light in weight so that they shall not constitute too great a burden to the persons carrying them.

In my Patent No. 2,006,925, dated July 2, 1935, I have shown one form of bag frame and a method of making it wherein each frame section is made of a single piece of sheet material bent to form a main portion and angularly disposed end portions securely held in proper angular relation without welding or riveting.

One object of the present invention is to provide a novel and improved method of making a metal frame of a single piece of sheet material with angular corners whereby the angularly disposed portions of the frame shall be strongly and durably held in such angular relation by a simple bending of the sheet material, and whereby a strong and durable frame can be inexpensively manufactured.

Other objects of the invention are to provide a novel and improved method of forming a frame section of a single strip of sheet material and including two channels having a common side wall and facing in opposite directions, whereby the channeled strip can be transversely bent to provide angularly disposed portions meeting at a sharp angle and having portions of the side walls and base of one channel at the angle of juncture of the frame portions in telescoped and interlocking relation for holding the angularly disposed frame portions securely in the desired angular relation; to provide such a method whereby the angular corners of the frame section shall be tightly closed and neat in appearance and devoid of cracks, wrinkles and protuberances; to provide a novel and improved blank for a frame section which can be inexpensively, easily and quickly produced and inexpensively fabricated by simple bending operations into a strong and durable frame, and to obtain other advantages and results as will be brought out by the following description.

Referring to the accompanying drawing in which corresponding and like parts are designated throughout the several views by the same reference characters.

Figure 1 is a plan view of a blank for a bag frame section embodying my invention.

Figure 2 is a side elevation of the blank formed into a double channeled strip and showing the manner of slitting one channel preparatory to bending of the strip, portions of the strip being broken away for clearness in illustration.

Figure 3 is a similar view showing the strip from the side opposite from that shown in Figure 2.

Figure 4 is a fragmentary perspective view of the channeled strip prior to bending the strip to form the angularly disposed portions of the frame.

Figure 5 is a side elevation of a bag frame section partially completed, portions being shown in section for clearness in illustration.

Figure 6 is a fragmentary end elevation on an enlarged scale of the completed bag frame section.

Figures 7 and 8 are longitudinal sectional views through the channeled strip showing successive steps in bending thereof to form the side portions of the bag frame section, and

Figure 9 is a fragmentary plan view of a modified form of blank.

Specifically describing the illustrated embodiment of the invention, a bag frame usually comprises two identical sections which are approximately U-shaped, each including a main portion A and two end portions B which are approximately perpendicular to the main portion. The extremities of the end portions B have pivot ears C to receive hollow rivets for pivotally connecting the two sections together so that they may swing toward and from each other.

Inasmuch as the invention relates to the method of forming the frame section, only one section is illustrated. Each section is formed of a blank 1 of bendable sheet material having the pivot ears C at its extremities. According to my method, one longitudinal edge of the blank is formed with two V-shaped mitering notches 2 spaced longitudinally thereof according to the desired length of the main portion A. The blank is then bent longitudinally along lines indicated by the dot and dash lines 3 in Figure 1 to form a channeled

strip having two channels 4 and 5 provided with a common side wall 6 and facing in opposite directions as clearly shown in Figure 4. The notches 2 are thus located in the free side wall of the channel 4. A slit 7 is then formed in the channel 5 in any suitable manner in juxtaposition to each of the notches 2 transversely of the base and side walls of the channel in a plane inclined to said base and common to one side wall of the corresponding notch 2. The ends of the slit 7 preferably terminate short of the free edges of the side walls of the channel 5, although the slit might extend throughout the width of said side walls if desired. The channeled strip is then bent at the slits 7 and notches 2 to force the base and side walls of the channel 5 at opposite sides of the slit 7 into telescoped relation; in other words, the base and side walls at one side of the slit are forced into the channel at the other side of the slit, as clearly shown in Figures 4 and 8. That end portion 8 of the base of the channel 5 which extends into the channel is then bent against the end portion of the base which is at the other side of the slit as indicated at the left hand side of Figure 5 and in Figure 6. In this way, the sides of the mitering notches 2 are brought into abutting relation to each other and the end of the base of the channel at one side of the slit 7 is brought into abutting relation to the outside of the base of the channel 5 at the other side of the slit so as to limit further relative bending of the main portion A and end portions B of the frame section in the same direction. Unbending or relative movement of the main portion and end portions B of the frame in the other direction, is limited by the contact of the portions 8 of the base of the channel 5 on the main portion A with the base of the channel 5 in the end portions B.

The bag frame section thus formed is strong, durable and inexpensive, and the corners at the juncture of the main portion A and end portions B are completely closed and free from cracks, wrinkles or protuberances.

While I have described the method in conjunction with a double channeled strip, it will be understood by those skilled in the art that the step in the method including the formation of the slit 7 in the channel and subsequent bending of the channel may be utilized in connection with forming a frame of a single channel.

If desired, the slit 7 may be formed in the blank before the blank is bent into channeled form, for example as shown in Figure 9, the slit 7 may be stamped out of the flat blank strip 1 by making a U-shaped slit 9 in the blank transversely of the strip having one arm terminating short of the base of the corresponding mitering notch 2 and with its extremity in alinement transversely of the strip with the base of the notch as indicated at 10. After the blank has been so formed, it can be bent longitudinally along lines indicated by the dot and dash lines 11 between the base of the notch 2 and the extremity 10 of the slit and intermediate the extremities of the slit.

If desired, to facilitate the telescoping of the end portions of the channel at opposite sides of the slit, the walls at the entering side of the slit may be rounded as indicated at 12 in Figure 7.

As will be understood by those skilled in the art, the shape of the frame, the manner of forming the slits 7 and 9 and the details of structure of the frame and steps in the method, may be modified and changed without departing from the spirit or scope of the invention.

Having thus described my invention, what I claim is:

1. The steps in a method of forming a metal frame, consisting in forming a strip of metal into channel shape with a slit transversely of the base and side walls of the channel in a plane inclined to said base and terminating short of the free edges of said side walls, and bending the channel at said slit and forcing the ends of the base and side walls at one side of said slit into the channel at the other side of the slit.

2. The steps in a method of forming a metal frame, consisting in bending a flat metal strip into channel form, forming a slit transversely of the base and side walls of the channel in a plane inclined to said base and terminating short of the free edges of said side walls, and bending the channel at said slit to force the base and side walls at opposite sides of the slit into telescoping relation.

3. The steps in the method set forth in claim 1, and the additional step of bending that end portion of said base which extends into the channel against that end portion of the base which is at the other side of the slit.

4. The steps in the method set forth in claim 2, and the additional step of bending the telescoped portions of said base into tight contact with each other.

5. The steps in the method set forth in claim 1, and the additional step of pressing portions of the base and side walls at the first mentioned side of the slit into tight overlying contact with the base and side walls of the channel respectively at the other side of the slit.

6. The step in the method of making a metal frame from a channel-shaped strip of metal consisting in forming a slit transversely of the base and side walls of the channel in a plane inclined to said base and terminating short of the free edges of said side walls, and bending the channel at said slit and forcing the ends of the base and side walls at one side of said slit into the channel at the other side of the slit.

7. The steps in the method of making a metal frame consisting in bending a strip of metal to form two channels having a common wall and facing in opposite directions, forming a mitering notch in the edge of the free wall of one channel, forming a slit transversely of the base and side walls of the other channel in a plane parallel with one side of said notch, and bending the strip transversely through said notch and said slit and forcing the ends of the base and side walls of one channel at one side of said slit into the corresponding channel at the other side of said slit.

8. The steps set forth in claim 7 and the additional step of bending that end portion of said base which extends into the channel against that end portion of the base which is at the other side of the slit.

9. The method of forming a frame section from a single strip of bendable sheet material consisting in forming a V-shaped mitering notch in one longitudinal edge, forming a U-shaped slit transversely of said strip with one arm terminating short of the base of said notch and with its extremity in alinement transversely of the strip with the base of the notch, bending the strip along longitudinal lines between said notch and said extremity of the slit and intermediate the extremities of said slit to form two channels having a common wall and facing in opposite directions,

and bending the strip transversely through said notch and said slit and forcing the ends of the base and side walls of one channel at one side of said slit into the corresponding channel at the other side of said slit.

10. A blank for a frame section comprising a strip of bendable sheet material having a V-shaped mitering notch in one longitudinal edge and a U-shaped slit extending transversely of said strip with one arm terminating short of the base of said notch and with its extremity in alinement transversely of the strip with the base of the notch.

WILLIAM J. KLEMP.