

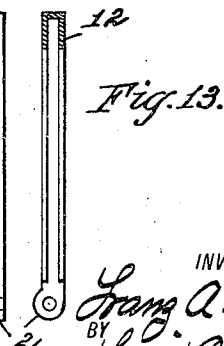
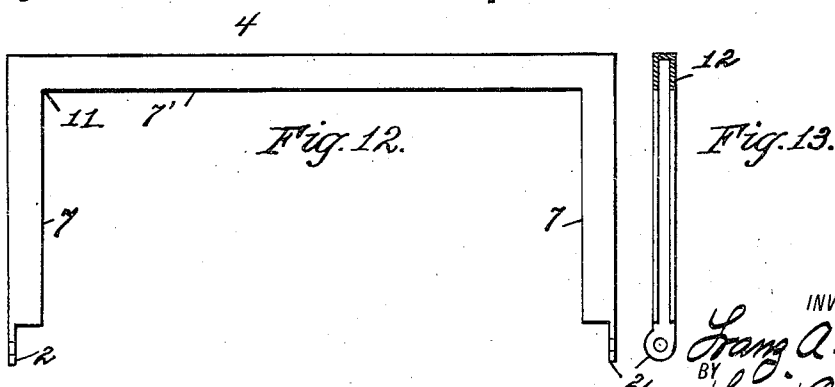
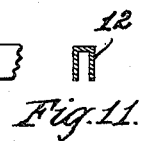
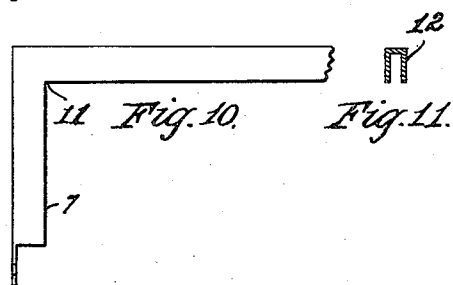
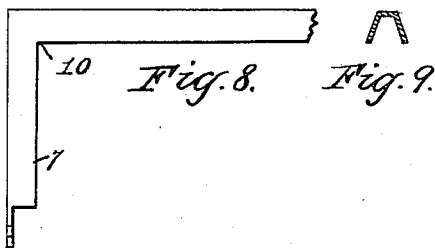
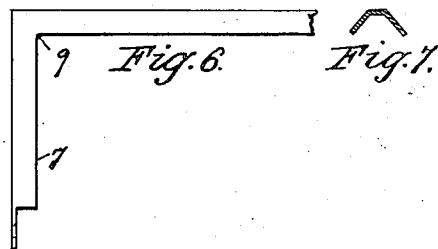
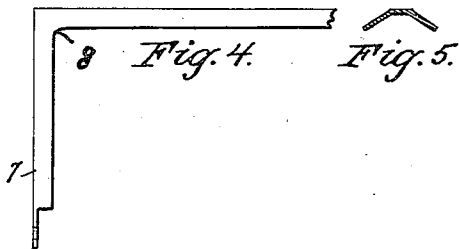
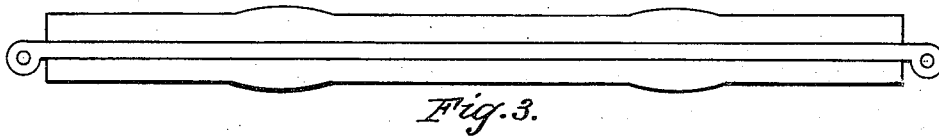
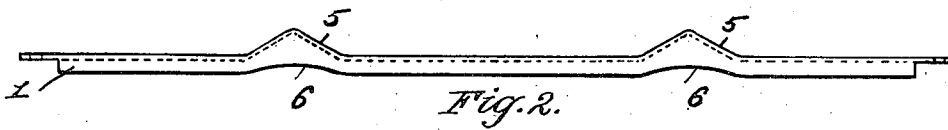
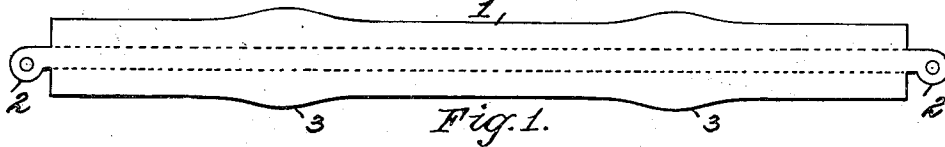
Sept. 25, 1923.

F. A. FULLER

1,468,941

PROCESS FOR MANUFACTURING BAG FRAMES

Filed June 18, 1921



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UNITED STATES PATENT OFFICE.

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PROCESS FOR MANUFACTURING BAG FRAMES.

Application filed June 18, 1921. Serial No. 478,624.

To all whom it may concern:

Be it known that I, FRANZ A. FULLER, a citizen of the United States, residing in the city of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Processes for Manufacturing Bag Frames; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make, construct, and use the same, reference being had to the accompanying drawings, and to numerals of reference marked thereon, which form a part of this specification.

This invention has reference to improvements in the manufacture of frames for bags and purses, especially for travelling, chate-laine and similar bags.

The object of my invention is to overcome present difficulties in dispensing with the numerous simple means for connecting the pivot members with the main body of the frame section, in order to produce a bag frame with sharp angular corners, by making a frame from one piece of material, thereby producing a neat, sharp and solid corner angle, free from open joints, and one in which the cracking or puckering of the metal at the corners of the frame during the process of the manufacture of the same, is entirely overcome.

In the accompanying drawings forming a part of this specification,

Figure 1 illustrates the blank which subsequently forms the bag frame member, preparatory to channeling the member and making the bend to form the square corner.

Fig. 2 illustrates the blank after being channelled.

Fig. 3 illustrates a plan view of the same.

Figs. 4, 5, 6, 7, 8, 9, 10 and 11 represent, respectively, fragmentary views and transverse sections of the bag frame member illustrating the progressive steps of forming the sharp corners.

Fig. 12 illustrates a front elevation of a bag frame; and

Fig. 13 illustrates a cross-section of the same.

Similar numerals of reference refer to like parts throughout the specification and drawings.

In describing the process forming a part

of my invention, I will simultaneously describe the product of the same, so that those skilled in the art to which it pertains, may gain a full knowledge of the process, as well as of the product.

The present invention, as previously stated, relates to an improved process for manufacturing frames for bags and purses, and more particularly for travelling, chate-laine and similar bags. These bag frames are in many instances, U-shaped in cross-section so that the material of the bag may be secured within the frame members, and it is desirable in many instances to form the bag frames with sharp angular corners.

For reasons of economy and durability it is desirable in many instances to form these frames of hard sheet metal and with the methods heretofore practiced it has been found practically impossible to form bag frames of this character by a bending operation without materially weakening the frame at the corners thereof and causing the metal to pucker at such points which frequently causes the bag frame to crack and also presents an unseemly appearance.

Hitherto bag frames of the character described have been made in accordance with the process described in my Patent No. 1,056,272, March 18, 1913, in which a blank of uniform width was employed and which was well adapted for the use of metals of the softer varieties, but my present process is adapted to bag frames made from hard metal and for that reason a blank of uniform width is dispensed with and a blank is used which is provided with enlarged portions intermediate of its ends, the enlarged portions of said blank subsequently constituting the inside corners of the frame.

To obviate this objection, the general practice has been to make sharp cornered bag frames of this character, when hard metal is used, by cutting away a portion of the metal to facilitate bending of the same to form the corners thereof. This method of procedure is objectionable, however, in that a joint must be formed at the corners of the bag frame which not only materially impairs the appearance of the frame but which also opens frequently after the bag has been in use for a short period. The present method enables the formation of a bag frame of this character of hard metal

and having sharp angular corners without forming any joints or seams at the corners thereof, the bag frame being formed in such a manner that no puckers or crimps are formed in the side walls thereof at the corners and that the corners thereof after the frame has been bent to its completed form, are not weakened in any way, but are equally as strong as any other portion of the frame.

In Figure 1 I have shown a sheet metal blank 1 as it is punched out. The blank 1 comprises a main body portion provided at its extremity with ears 2. Intermediate of its ends the blank is provided with enlarged portions 3—3. To complete the frame member 4 with sharp corners, the blank 1 is first placed in a suitable die and the central portion of the blank 1 is channelled along the dotted lines of Figure 1, so that a cross-section is, as shown in Figure 5, and a side elevation is as shown in Figure 2. It will be seen from an inspection of Figure 2, that the blank when channelled as described is also simultaneously formed with the cusps 5—5 on the upper side and the notches or depressed portions 6—6 on the opposite or underside.

After the blank 1 is channelled, and provided with the cusps and notches as heretofore described, the hinge members 7—7 are bent at right angles to the main body member 7', as illustrated in Figures 4, 6, 8 and 10.

The cusps 5—5 will be found to contain a sufficient amount of material provided for by the enlarged portions 3—3 of the blank so as to stretch around the angle of the bend without weakening the same.

To complete the frame member 4 with sharp corners after the blank 1 has been placed in a suitable die and the central portion thereof channelled along the dotted lines of Figure 1 which has a cross-section as illustrated in Figure 5, the frame member is subjected to several pressing operations each one of which compresses the channel of the frame member more and more as clearly indicated in Figures 6, 7, 8, 9, 10 and 11, in which the last operation completes the sharp corners and the channel.

In Figure 4 it will be noticed that the corner 8 of the frame member is provided with a surplusage of metal, which when the frame member is subjected to another pressing operation results in the frame illustrated in Figures 6 and 7, the rounded corners 9 having been made more square and the channel more contracted. The frame member when subjected to another pressing operation results in the frame illustrated in Figures 8 and 9 in which the corner 10 is practically square and the channel further contracted. A final pressing operation results in the sharp corner 11 and the completed channel 12.

The progressive pressing operations above described cause the surplusage of metal at the enlarged portions 3—3 of the blank 1 to be gradually and evenly forced into the corner of the frame thereby producing a corner which is equally as strong, if not stronger, as any other portion of the frame. It is to be understood that the number of pressing operations is governed by the depth of the channel; a frame of less depth requiring fewer pressing operations.

By the process described, I am enabled to produce a bag frame member which is composed of a single piece of metal, and without the usual open joints and angled connections, and yet, by the exercise of this process, I am able to produce the frame with a minimum of waste material, and at the same time, preserve maximum strength at the hitherto weakened points in the frame.

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

1. The process of forming channelled sheet metal frames consisting in forming a flat sheet metal blank, provided with enlarged portions intermediate its ends, bending said blank transversely to form a channelled member U-shaped in cross-section, forming said channelled member with notches in the edges of the side walls thereof and with cusps projecting from the top wall thereof at said enlarged portions, and bending the channelled member at the notches in the side walls thereof to form the hinge members of the frame.

2. The process of forming sheet metal frames consisting in forming a flat sheet metal blank, provided with enlarged portions intermediate its ends, channeling the central portion of said blank longitudinally and simultaneously forming cusps projecting from the upper wall of said channelled portion of the blank at said enlarged portions and notches adjacent said cusps in the edges of the side walls of the channelled portions of the blank, and bending the blank at the notched portions thereof to form a completed member with sharp corners.

3. The process of forming channelled sheet metal frames consisting in forming a flat sheet metal blank, provided with enlarged portions intermediate its ends, bending said blank transversely to form a channelled member U-shaped in cross-section, forming said channelled member with notches in the edges of the side walls thereof and with cusps projecting from the top wall thereof at said enlarged portions, and bending the channelled member at the notches in the side walls thereof to form the hinge members of the frame, and thereafter pressing the blank to form a completed member with sharp corners.

4. The process of forming sheet metal frames consisting in forming a flat sheet metal blank, provided with enlarged portions

intermediate its ends, channeling the central
portion of said blank longitudinally and si-
multaneously forming cusps projecting from
the upper wall of said channeled portion of
5 the blank at said enlarged portions and
notches adjacent said cusps in the edges of
the side walls of the channeled portions of
the blank, and bending the blank at the
notched portions thereof and thereafter

pressing the blank to form a completed mem- 10
ber with sharp corners.

This specification signed and witnessed
this sixteenth day of June, 1921.

FRANZ A. FULLER.

Witnesses:

FRED'K C. FISCHER,
A. B. UNDERHILL.