

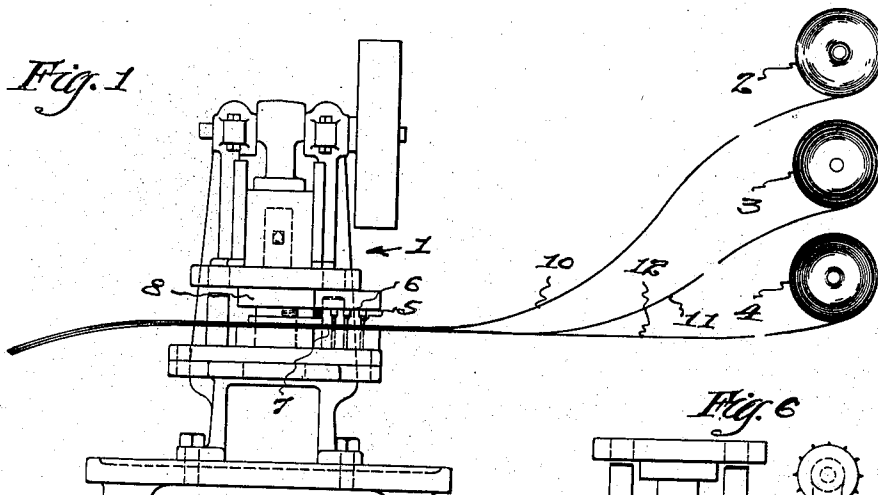
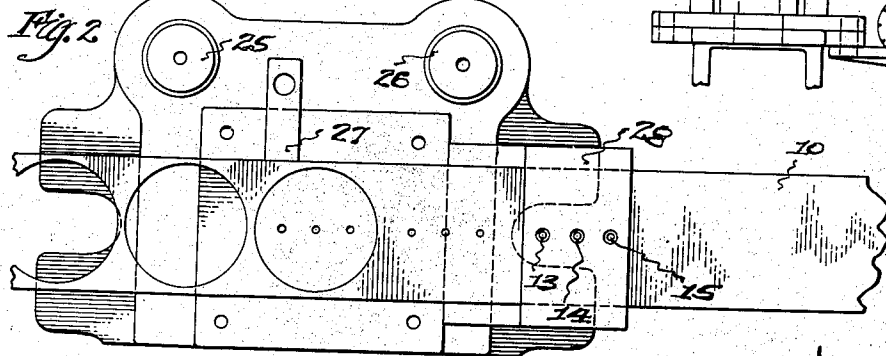
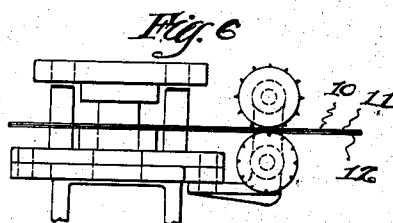
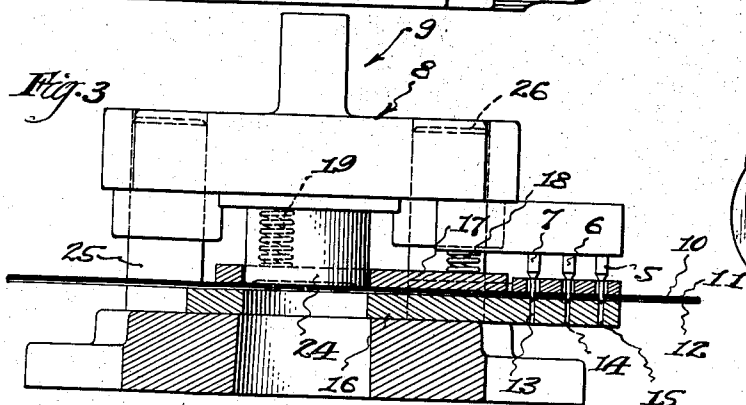
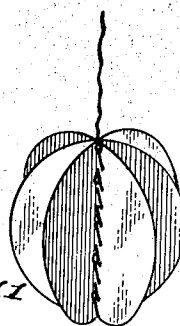
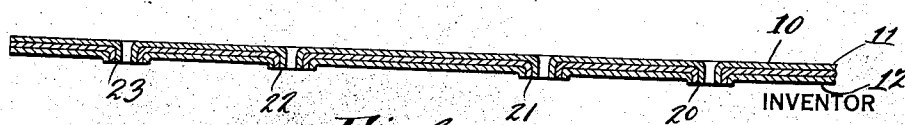
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METHOD OF MANUFACTURING ORNAMENTAL ARTICLES

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METHOD OF MANUFACTURING
ORNAMENTAL ARTICLES

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3 Claims. (Cl. 41—11)

The object of my invention is to provide a method of manufacturing ornamental articles which is simple in form and greatly lessens the time required in the manufacture of same, thereby greatly reducing the cost.

The invention relates more particularly to a method of manufacturing ornaments or decorative articles made of thin sheets of metal foil. The metal foil ornaments are made of a multiple number of leaves and sewed together, after which the leaves are opened up from the line of sewing. Various methods of manufacture have been used in the past in making this type of ornament, one of them being to gang numbers of plies of the metal, so that with each stroke of the punch press, which is used for stamping out the various shapes, many stampings are obtained.

After the stampings are made, it has been the practice to take whatever number of leaves are desired in the finished ornament and fit them together by hand before running them through the sewing machine operation where the leaves are permanently assembled together. This method of hand assembly, particularly where it is necessary to match edges closely (as, for instance, in star or bell shapes or anything except a true circle) is slow and expensive, and it is the purpose of my invention to greatly reduce the time and cost of such manufacture.

My novel method of manufacture will be more easily understood by reference to the accompanying drawing, in which Figure 1 is a view showing the method of feeding the ribbon material from spools into the punch press. Figure 2 is a plan view of the lower part of the die assembly, showing the ribbon material passing through. Figure 3 is an elevation of the die assembly, partly in section, showing the pinning operation. Figure 4 is an enlarged view of the ribbon material, the plies of which have been pinned and riveted together. Figure 5 is a perspective view of the finished ornament assembly. Figure 6 is a view showing a modified form of roller feeding of the material and pinning thereof.

In Figure 1 the material to be used in the manufacture of the ornament or decorative article is fed into the punch press 1 from a multiple number of spools 2, 3 and 4, only three of said spools being shown. It must be understood, however, that any number desired may be used, depending, of course, on the number of leaves desired in the finished ornament.

The spools of stock material would be supported upon a rack, not shown, so that the material would be unwound from the revolving spools

as required. The layers of material, after leaving the spools, are brought together and the first operation in the press is one of pinning the multiple number of leaves together. This is accomplished by means of a number of pin punches 5, 6 and 7, which are fixed to the punch part 8 of the die assembly 9. The ribbons of material 10, 11 and 12 from the feeding spools, upon entering the press, are pierced with the pinning punches as the punch part of the die assembly descends upon the die part. The pin punches, which have pointed ends, enter small holes 13, 14 and 15 in the plate 16 fixed to the lower part of the die assembly.

The material used in this type of article is usually a semi-hard aluminum and the punch pins are so shaped that in piercing they drag the metal down into the holes in the lower plate. As the material progresses through the die, a stripper plate 17 with a slight spring pressure exerted by light springs 18 and 19 presses down upon the material and rivets over the material which has been dragged down into the holes by the punch pins operation, as shown at 20, 21, 22 and 23.

This pressure of this stripper plate temporarily rivets the multiple number of material leaves together, so that when the punch 24 stamps the desired shape of ornament it is now a complete unit and ready for the sewing operation and requires no hand fitting and assembly whatsoever. The dies used in the stamping operation outside of the special mentioned pinning and flattening operations, are of usual construction having guide posts 25 and 26 and guides 27 and 28 for properly aligning the spool material as it is fed through the press. It must be understood that once the material has started into the press the piercing and flattening and stamping operations are all done with one stroke of the press.

While the method just described shows a hand feeding of the material through the press, it may be desirable to provide an automatic feed. This feed is by means of rolls, which is standard practice, and the movement is synchronized with the movement of the press; that is, the metal is rolled or drawn forward at the proper time. In Figure 6 I have shown a modified form of pinning arrangement in the way of rolls, through which the material is drawn before it reaches the press. One of the rolls would have protruding punch pins and the other would have recesses to allow the punch and drawn down material to enter therein. With this roll method it may not be necessary to have a flattening operation interposed between the rolls and the punch of the

die, but should same be required, it could easily be provided.

One of the simplest finished ornaments, after it has had the sewing and the opening up operations, is shown in Figure 5, the points of pinning being shown and also that the sewing operation usually follows the line of pinning, so that the small holes are not noticeable. However, following such a procedure, while preferred, is not essential.

While in the foregoing method of manufacture we have used the foil material itself to rivet the several leaves of the ornament together, it may be desirable to use other methods of fixing the plies, such as the use of rivets of relatively soft material or a very light wire staple. The use of such means would not interfere in any way with the sewing operation which follows.

From the foregoing description, it is clearly apparent the enormous saving in time obtained by using this method, which necessarily means greatly reduced cost of manufacture and an article of improved appearance. Other methods to produce the same results may suggest themselves to one skilled in the art, but I do not wish

to be limited to what is shown and described except as pointed out in the appended claims.

I claim as my invention:

1. The method of manufacturing ornamental articles consisting of fixing of multiple leaves to be used together at several points, stamping the shape desired, sewing multiple leaves permanently together and opening same along the line of sewing.

2. The method of manufacturing ornamental articles which consists of feeding a number of thin strips of foil in superposed relation, temporarily fastening them together on a median line, then punching the multiple strips into desired shapes and then permanently stitching the assembly along said median line.

3. The method of manufacturing ornamental articles which consists of feeding a number of thin strips of foil in superposed relation, temporarily fastening them together on a median line and then punching the multiple strips into desired shapes, and permanently stitching the assembly along said median line, leaving a length of the stitching thread for an attaching string.

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