Feb. 4, 1947. G. E. SEDGLEY 2,415,375

METHOD AND APPARATUS FOR FORMING PLAITS

Filed April 16, 1946

Fig. 1.

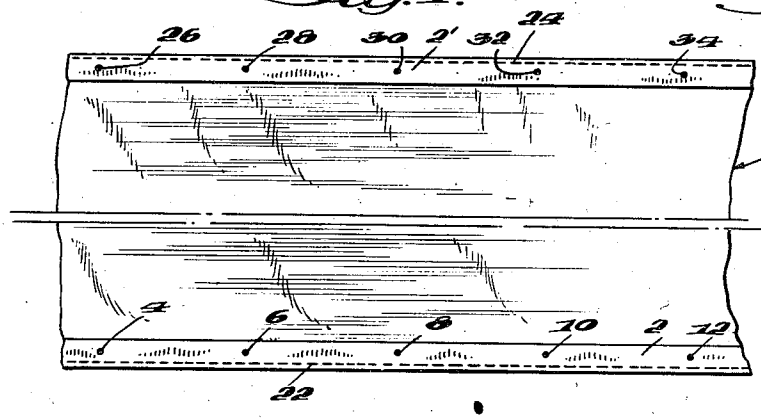



Fig. 2.

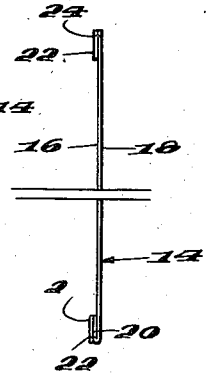



Fig. 3.

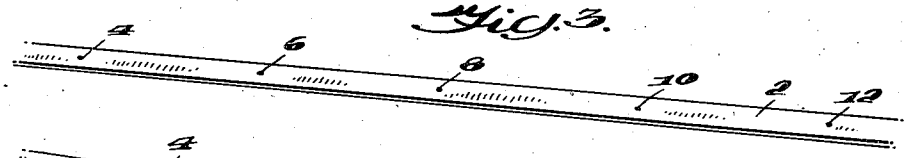



Fig. 4.

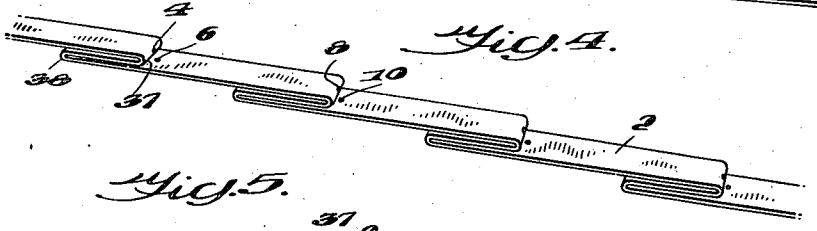



Fig. 5.

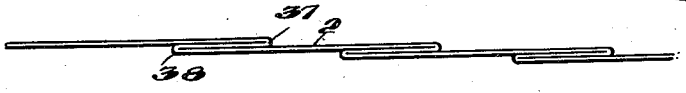



Fig. 6.

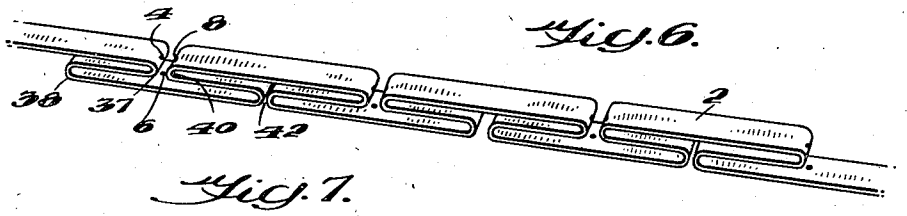



Fig. 7.




Inventor

GRACE E. SEDGLEY,

By Robert G. Pierce

Attorney

Patented Feb. 4, 1947

2,415,375

# UNITED STATES PATENT OFFICE

2,415,375

## METHOD AND APPARATUS FOR FORMING PLAITS

Grace E. Sedgley, Alexandria, Va.

Application April 16, 1946, Serial No. 662,511

10 Claims. (Cl. 2—274)

1

This invention relates to a method and apparatus for forming plaits in all types of flexible materials and more specifically, to a method and apparatus for forming plaits in fabric materials.

It is a primary object of this invention to provide a method and apparatus for quickly forming plaits which are accurately spaced and sized.

A further object of this invention is to provide a method and apparatus for quickly forming, in fabrics, accurately spaced and sized plaits of the standard knife, box or inverted types, without requiring changes in the method or the design or construction of the apparatus.

As a further object of this invention it is proposed to provide apparatus for forming plaits which is inexpensive to manufacture and durable in service.

A still further object of this invention is to provide a method and apparatus for forming plaits of the type described, said method and apparatus adapted for use by persons unskilled in the art.

Other and further objects and advantages of this invention will become more apparent from a consideration of the following specification when read in conjunction with the accompanying drawing, in which:

Figure 1 is a rear elevation, in part, of a skirt for women's dress apparel, showing the plaiting apparatus as applied thereto;

Figure 2 is a side elevation of Figure 1;

Figure 3 is a perspective view of the plaiting apparatus per se;

Figure 4 is a perspective view of the plaiting apparatus illustrating the modus operandi in forming the standard knife plait;

Figure 5 is a side elevation of Figure 4;

Figure 6 is a perspective view of the apparatus and method utilized in forming a box or inverted plait; and

Figure 7 is a side elevation of Figure 6.

Referring now more specifically to the drawing, Figure 3 illustrates the apparatus designed to carry out the teachings of this invention. In this figure, the reference numeral 2 indicates a strip or tape of relatively flexible material which is provided with a plurality of indicating elements or markers 4, 6, 8, 10 and 12. As depicted in Figure 3, these elements are aligned and spaced from each other at equal intervals, the spacing being in the direction of the longitudinal axis of the strip.

The indicating elements 4, 6, 8, 10 and 12 may be printed on the strip 2 and may be of any desired configuration. It is obvious, of course, that these elements may comprise separate members which could be secured to the strip by any desirable and convenient expedient.

Figures 1 and 2 of the drawing illustrate one application of the plaiting apparatus. In these figures the reference numeral 14 indicates a fabric such as the skirt portion of a lady's dress, having an inner surface 16 and an outer or exterior surface 18. As shown in Figure 2, the lower edge of the garment is folded inwardly to form a hem 20 and a strip 2 having the described indicating elements is secured thereto by stitches 22.

2

A second strip 2', bearing similar indicia 26, 28, 30, 32, 34 and 36, and having the same spacing between adjacent markers, is then secured by stitches 24 to the inner surface 16 adjacent the waist of the garment, and the garment is now ready for the plaiting operation.

The method employed in folding the fabric 14 and its annexed strips 2 and 2' to form the standard knife type plaits is illustrated in Figures 4 and 5. In these figures the fabric material and one of the strips has been omitted for the purpose of simplicity.

In forming the knife plait the operator first folds the material on a line extending between elements 4 and 26 (Figures 1 and 4) forming the fold 37. The folded material is then moved toward the indicating elements 6 and 28 and the indicating elements 4 and 6, 26 and 28, are brought into substantial contact with each other to form the fold line 38 (Figure 4). The folded material is then pressed to complete the formation of the plait. Thereafter, the operations are identical with respect to each pair of succeeding indicating elements on each strip.

If it is desired to form a box plait the elements 4 and 6, and 26 and 28 (Figures 1, 6 and 7) are brought into contact to form the fold lines 37 and 38, in the manner described above. The material is then folded on a line extending between elements 8 and 30 to form the fold 40. Thereafter, the elements 8 and 30 are moved laterally (to the left in Figure 6) into contact with elements 4 and 6, and 26 and 28, respectively, to form the fold 42. The process is then repeated for the next succeeding series of elements on each strip.

The apparatus and method employed in carrying out the teachings of this invention are quite simple, and as a result thereof, the invention finds many uses. For example, women's clothing manufacturers may reduce the time consuming, expensive and tedious work of hand forming plaits through the application of this invention, and further, the plait forming method does not require the services of a skilled employee.

The invention facilitates the pressing operations in dry cleaning establishments and in the home; and it is obvious that it may be expeditiously employed in dressmaking schools of all types.

Having described one embodiment of the invention in detail, it is to be understood that various modifications and departures therefrom may be made within the scope thereof, and that

the invention is to be limited only by the scope of the following claims.

I claim:

1. In combination with a fabric to be plaited, a plait fold-line indicating device comprising a strip of flexible material secured to and positioned adjacent one edge of said fabric and a second strip of flexible material secured to and disposed adjacent the opposite edge of said fabric, said first and second strips each being provided with a plurality of fold-line markers at regularly spaced intervals, each marker on each of said strips being juxtaposed with respect to an immediately adjacent marker on each respective strip, the spacing of said markers on each of said strips being in a direction substantially parallel to the longitudinal axis of their respective strip, the spacing interval for said markers of said first strip having a value equal to the value of the spacing interval of said markers for said second strip.

2. In combination with a fabric to be plaited, a plait fold-line indicating device comprising a strip of flexible material secured to and positioned adjacent one edge of said fabric and a second strip of flexible material secured to and disposed adjacent the opposite edge of said fabric, said first and second strips each being provided with a plurality of fold-line markers at regularly spaced intervals, each marker on each of said strips being juxtaposed with respect to an immediately adjacent marker on each respective strip, the spacing of said markers on each of said strips being in a direction substantially parallel to the longitudinal axis of their respective strip.

3. In combination with a fabric to be plaited, a plait fold-line indicating device comprising a strip of flexible material secured to and positioned adjacent one edge of said fabric and a second strip of flexible material secured to and disposed adjacent the opposite edge of said fabric, said first and second strips each being provided with a plurality of fold-line markers at spaced intervals, each marker on each of said strips being juxtaposed with respect to an immediately adjacent marker on each respective strip, the spacing of said markers on each of said strips extending in the direction of the longitudinal axis of their respective strip.

4. In combination with a fabric to be plaited, a plait fold-line indicating device comprising a strip of flexible material secured to and positioned adjacent one edge of said fabric and a second strip of flexible material secured to and disposed adjacent the other edge of said fabric, said first and second strips being provided, respectively, with a plurality of fold-line markers, each marker on each of said strips being juxtaposed with respect to an immediately adjacent marker on each respective strip.

5. In combination with a fabric to be plaited, a plait fold-line indicating device comprising at least one strip of flexible material secured to and disposed adjacent one edge of said fabric, said strip being provided with a plurality of spaced, aligned fold-line indicating elements, each indicating element being juxtaposed with respect to an immediately adjacent indicating element.

6. In combination with a fabric to be plaited, a plait fold-line indicating device comprising at least one strip of flexible material secured to and disposed adjacent one edge of said fabric, said strip being provided with a plurality of spaced fold-line indicating means, each of said indicating means being positioned contiguous to an immediately adjacent indicating means.



7. A method for folding fabrics to form plaits comprising the steps of first securing to each edge of a pair of oppositely disposed edges of said fabric a strip of material having a plurality of fold-line indicating elements spaced at regular intervals, second, folding said fabric and said strips on a line extending between the first of said indicating elements of each of said strips, third, forming a second fold by moving said first indicating elements of each of said strips, respectively, into substantial contact with the next adjacent indicating element on each of their respective strips, whereby said first fold-line substantially coincides with a line extending between said adjacent elements on each of said strips, fourth, exerting pressure on said fabric and said strips on said fold-lines, and fifth, repeating steps two to four, inclusive, with respect to each pair of succeeding indicating elements appearing on said strips.

8. A method for folding fabrics to form plaits comprising the steps of first securing to each edge of a pair of oppositely disposed edges of said fabric a strip of material having a plurality of fold-line indicating elements spaced at regular intervals, second, folding said fabric and said strips on a line extending between the first of said indicating elements of each of said strips, third, forming a second fold by moving said first indicating elements of each of said strips, respectively, into substantial contact with the next adjacent indicating element on each of their respective strips, whereby said first fold-line substantially coincides with a line extending between said adjacent elements on each of said strips, and fourth, exerting pressure on said fabric and said strips on said fold lines.

9. A method for folding fabrics to form plaits as defined in claim 8, and fifth, folding said fabric and said strip on a line extending between the third indicating elements of said strips, sixth, movng said third indicating elements substantially into contact with their respective said adjacent elements to form a fourth fold-line, and seventh, subjecting all of said fold lines of said fabric to pressure.

10. A method for folding fabrics to form plaits comprising the steps of first providing said fabric with fold line indicating elements adjacent a pair of oppositely disposed edges, second, folding said fabric on a line extending between the first of said indicating elements, third, forming a second fold by moving said first indicating elements into substantial contact with the next adjacent indicating element on each edge, respectively, of said fabric, whereby said first fold-line substantially coincides with a line extending between said adjacent elements, and fourth, exerting pressure on said fabric on said fold-line.

GRACE E. SEDGLEY.


## REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

| Number | Name | Date |
|---|---|---|
| 2,124,650 | Chessler | July 26, 1938 |
| 1,185,245 | Sadtler | May 30, 1916 |
| 1,265,920 | Lack | May 14, 1918 |