Jan. 17, 1956 R. A. GORDON 2,730,724

TRIMMING AND METHOD OF MAKING SAME

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Fig. 1.

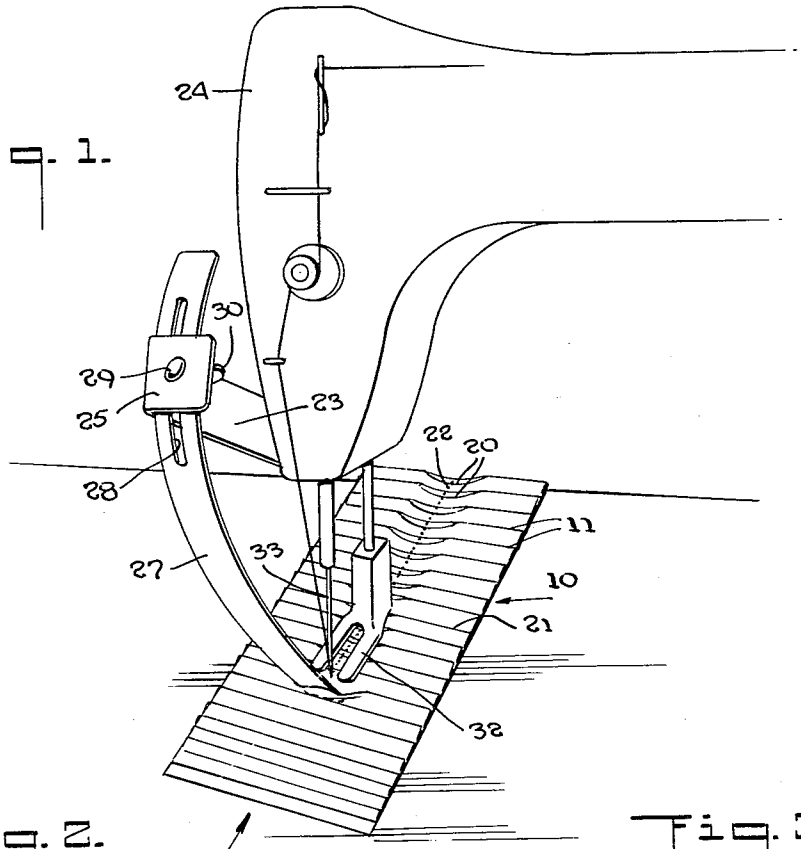


Fig. 2.

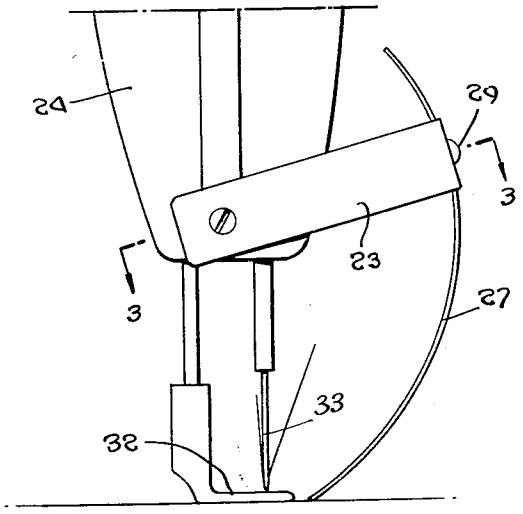
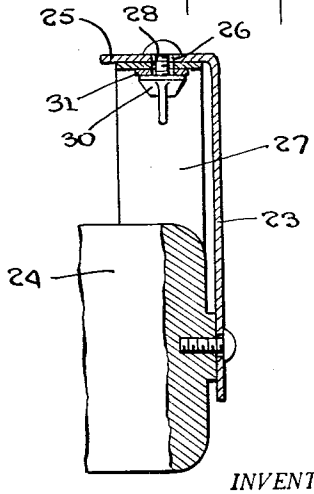


Fig. 3.



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Fig. 4.

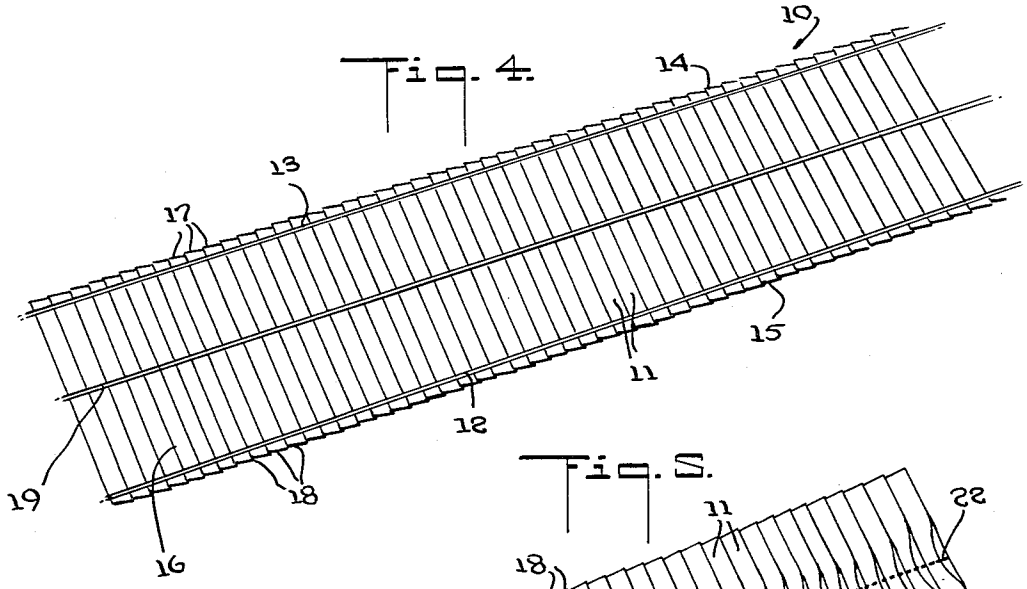


Fig. 5.

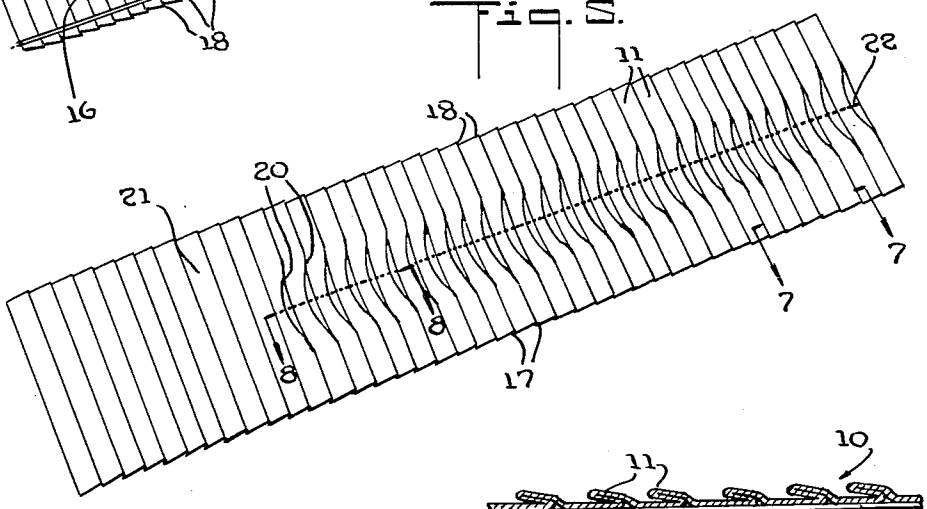


Fig. 7.

Fig. 6.

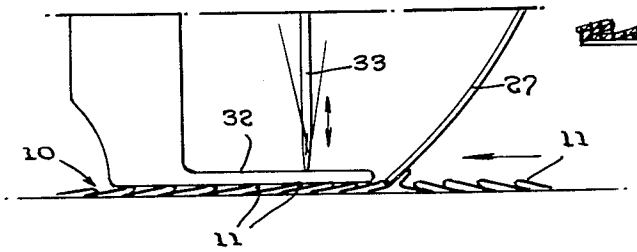
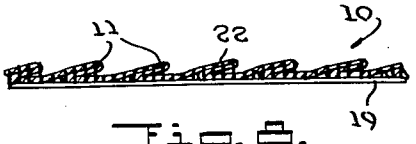


Fig. 8.



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United States Patent Office 2,730,724 Patented Jan. 17, 1956

2,730,724

TRIMMING AND METHOD OF MAKING SAME

Richard A. Gordon, Brooklyn, N. Y.

Application May 17, 1954, Serial No. 430,237

10 Claims. (Cl. 2—278)

This invention relates to the production of trimming formed with a plurality of parallel pleats wherein a portion thereof is twisted to produce an ornamental effect. Pleated trimmings formed with a twisted portion are well known in the art but the manufacture of such trimmings has been a rather difficult and expensive process.

I have discovered a novel process for the manufacture of such trimming which employs novel apparatus and the trimming produced thereby, while superficially resembling the conventional twisted trimming, and which may be employed interchangeably with such trimming, differs from the conventional article in various particulars.

It is an object of this invention to produce a trimming formed with a twisted portion quickly and inexpensively.

It is a further object of this invention to produce a method of making such trimming which will be low in cost and which will involve the least expenditure of labor.

It is a further object of this invention to produce a novel apparatus for the production of such trimming which may be easily used.

It is a further object of this invention to use as much of conventional apparatus in manufacturing the trimming of this invention as possible.

The trimming of this invention may be described in brief as comprising a plurality of parallel pleats each formed with a twisted mid-portion, a securing member disposed upon a surface of the trimming, preferably the undersurface thereof, on each side of the center line of the trimming, the securing member binding the edge portions of the pleats to one another. An additional securing member is disposed between the first-named securing members and beneath the twisted portions of the pleats. Means are also provided, preferably by the use of stitching, to bind the twisted portions of the pleats to the trimming.

The term "mid-portion," as used in this specification, is broader than its conventional meaning and is intended to mean any portion of the trimming between its upper and lower extremities whether or not the portion is near the center of the trimming or not.

The apparatus of this invention may be briefly described as comprising a holding member adapted to be secured to a sewing machine, a flexible twisting member, preferably arcuate in form and adjustable, secured to the holding member, and positioned ahead of the needle and presser foot of the sewing machine to which it is secured, by being secured to the holding member. The twisting member is adapted to be positioned between the pleats of the trimming and it is preferably maintained under appreciable tension. Feed means are also provided adapted to move the trimming in a reverse direction so that the pleats are twisted by the twisting member and the twisted portions sewn to the trimming surface.

The method of this invention may be briefly described as comprising the steps of fastening a securing member to the under surface of the trimming below the portion to be twisted, thence placing a twisting member upon the upper surface of the trimming between the pleats thereof. The twisting member is also disposed above the securing member previously referred to. The trimming is then moved in reverse direction to the folds of the trimming so that a portion of the trimming is twisted, and the twisted portion is then secured to the upper surface of the trimming, preferably by stitching.

In order to insure fastening of the twisted portion of the trimming to the surface thereof a presser member may be employed to hold the portion in place while the stitching or other fastening means are being applied.

A specific embodiment of this invention is shown in the accompanying drawings and the further description will refer to the specific embodiment.

Fig. 1 is a perspective view of the apparatus of this invention.

Fig. 2 is a side view of the apparatus shown in Fig. 1.

Fig. 3 is a sectional view of the apparatus shown in Fig. 2 taken along line 3—3 of Fig. 2.

Fig. 4 is a plan view of the under surface of the trimming of this invention.

Fig. 5 is a plan view of the upper surface of the trimming of this invention.

Fig. 6 is a side view of the apparatus shown in Fig. 1.

Fig. 7 is a sectional view of the trimming shown in Fig. 5 taken along line 7—7 of Fig. 5.

Fig. 8 is a sectional view of the trimming shown in Fig. 5 taken along line 8—8 of Fig. 5.

In the specific form of the trimming shown in Figs. 1, 4, 5, 7, and 8 trimming **10** is formed with a plurality of vertical pleats **11**. Securing members **12** and **13** are disposed on each side of the center line of the trimming close to the upper portion **14** and lower portion **15** of the trimming. Securing members **12** and **13** are disposed upon the under surface **16** of trimming **10** and bind the upper edge portions **17** and lower edge portions **18** of pleats **11** to one another.

Additional securing member **19** is disposed between securing members **12** and **13**.

Pleats **11** are formed with twisted portions **20** on the upper surface **21** of trimming **10**. Twisted portions **20** are at an angle of substantially 180 degrees with respect to the remaining portions of pleats **11** and are secured to the upper surface of trimming **10** by stitching **22**. Securing members **12**, **13**, and **19** are fastened to trimming **10** by conventional adhesive methods or they may be fastened by the methods described in my Patent #2,662,577 or my pending application Serial Number 391,108, filed Nov. 9, 1953.

Turning now to the apparatus of this invention shown in Figs. 1, 2, 3, and 6 holding member **23** is secured to the front portion **24** of the sewing machine. Holding member **23** is formed with offset portion **25** at the front end thereof and is provided with hole **26** therein. Twisting member **27** is provided with slot **28**. Screw **29** fits within hole **26** and is formed to fit into slot **28** in twisting member **27**. Nut **30** and washer **31** are also provided on screw **29**.

Trimming **10** is disposed beneath presser foot **32** of the sewing machine and needle **33** is disposed within presser foot **32**. Twisting member **27** is disposed between pleats **11** of trimming **10** and is maintained under appreciable tension. Trimming **10** is adapted to move in reverse direction to the fold of pleats **11** as shown by the arrow in Fig. 1 by means of feeding devices located below trimming **10**. These feeding devices are the conventional devices that are used in sewing machines to move the cloth rearwardly and thus control the size of the stitch and are therefore not shown here.

The use of this apparatus to produce a twisted portion in a trimming will now be explained. In explaining the use of this apparatus the method of this invention will also be explained.

A conventional pleated trimming formed with securing members upon the upper and lower portions thereof is prepared for use in this method. While it is not essential to have such securing members upon the trimming their presence makes for more satisfactory twisting. An additional securing member is then fastened to the underside of the trimming below the portion which is to be twisted.

Where this method is used by one who prepares his own trimming all three securing members may be simultaneously affixed to the trimming at the time that it is prepared.

The trimming is then placed under the presser foot of the modified sewing machine shown in this invention and the twisting member is adjusted by the loosening of nut **30** so that twisting member **27** may be slidably movable.

Twisting member **27** is then bent and placed between pleats **11** of trimming **10**. Twisting member **27** is placed between pleats **11** under appreciable tension so as to insure proper twisting of the trimming as will be subsequently explained. The degree of tension will depend upon the thickness of the trimming to be twisted since the greater the thickness of the trimming the greater the tension. In addition the thickness of the twisting member may be varied by replacing it with a thicker or thinner member depending upon the results desired.

After twisting member **27** is placed in the proper position nut **30** is tightened thereby locking twisting member **27** in place.

At this point the feeding devices are below fabric **10** and will move this fabric as will be subsequently explained.

The sewing machine is now adjusted for the correct length of stitch and the machine started. The feeding device thereupon moves the fabric rearwardly as shown by the arrow in Fig. 1. This rearward movement is resisted by twisting member **27** so that this member turns portions **20** about. As twisting member **27** passes from the pleat which it has twisted to the next pleat presser foot **32** continues the pressure on twisted portion **20** so that it is still twisted and cannot return to its normal position. At this point, however, needle **33** stitches twisted portion **20** to the remainder of the trimming so that after the portion leaves the presser foot it is permanently stitched to the trimming and a twisted portion has been formed in the trimming.

In order to make this method operative a securing member must be placed below the portion of the trimming to be twisted. If such portion is not placed below the twisting member the trimming will tend to wobble and will not move in only one direction. The machine will therefore be appreciably slowed and an uneven twisted portion of the trimming will be produced.

It is noted that the description herein showed only one twisted portion being formed in a trimming. It is obvious, however, that if the trimming is of sufficient width a number of spaced twisted portions may be produced by placing a plurality of additional securing members below the portions desired to be twisted. The trimming would be placed in the sewing machine and the twisting member would be placed above one of the securing members. The trimming would then be run through the machine thereby forming one twisted portion. After this was accomplished the trimming would be again placed in the machine and the twisting member placed above the other securing member. Repetition of the twisting process would thus produce an additional twisted portion.

While the description of the method of this invention has been made by reference to the specific apparatus shown it is obvious that the method is broader than the apparatus. In utilizing the method of this invention the twisted portions of the pleats of the trimming need not be fastened to the trimming by stitching but may be so fastened by any other process such as chemical adhesion or heat sealing. Also the form of the apparatus used may be changed without departing from the scope of the invention. So long as the method steps as set forth in the claims are employed the invention is being utilized.

The foregoing specific embodiments of this invention as set forth in the foregoing specification are for illustrative purposes and for purposes of example only. Various changes and modifications may obviously be made within the spirit and scope of the invention and would occur to those skilled in this art.

I claim:

1. A trimming comprising a plurality of parallel pleats each formed with a twisted mid-portion, a securing member disposed upon a surface of said trimming on each side of the center line thereof binding the edge portions of said pleats to one another, an additional securing member disposed between said first-named securing members and beneath the twisted portions of said pleats, and means securing the twisted portions of said pleats to said trimming.

2. A trimming comprising a plurality of vertical pleats each formed with a twisted mid-portion, a securing member disposed upon the undersurface of said trimming on each side of the horizontal center line thereof binding the edge portions of said pleats to one another, an additional securing member disposed between said first-named securing members and beneath the twisted portions of said pleats, and means securing the twisted portions of said pleats to said trimming.

3. A trimming comprising a plurality of vertical pleats each formed with a twisted mid-portion, a securing member disposed upon the undersurface of said trimming on each side of the horizontal center line thereof binding the edge portions of said pleats to one another, an additional securing member disposed between said first-named securing members and beneath the twisted portions of said pleats, and stitching securing the twisted portions of said pleats to said trimming.

4. A trimming comprising a plurality of vertical pleats each formed with a mid-portion twisted at an angle of substantially 180 degrees, a horizontal securing member disposed upon the under surface of said trimming on each side of the horizontal center line thereof binding the edge portions of said pleats to one another, an additional horizontal securing member disposed between said first-named securing members and beneath the twisted portions of said pleats, and penetrating stitching securing said twisted portions of said pleats to said trimming.

5. A trimming comprising a plurality of vertical pleats each formed with a mid-portion twisted at an angle of substantially 180 degrees, a horizontal securing member disposed upon the under surface of said trimming on each side of the horizontal center line thereof binding the edge portions of said pleats to one another, an additional horizontal securing member disposed between said first-named securing members at substantially along the horizontal center line of said trimming and beneath the twisted portions of said pleats, and a continuous thread composed of a series of penetrating stitches securing said twisted portions of said pleats to the upper surface of said trimming.

6. A method of producing a twisted portion in a trimming formed with a plurality of parallel pleats comprising fastening a securing member to the under surface of the trimming below the portion to be twisted, thence placing a twisting member upon the upper surface of said trimming between said pleats and above said securing member, thence moving said trimming in reverse direction to the folds of said pleating so that a portion of the trimming is twisted, and thence securing the twisted portion to the upper surface of the trimming.

7. A method of producing a twisted portion in a trim-

ming formed with a plurality of parallel pleats comprising fastening a securing member to the under surface of the trimming below the portion to be twisted, thence placing a twisting member upon the upper surface of said trimming between said pleats and above said securing member, thence moving said twisting member in reverse direction to the folds of said pleating so that a portion of the trimming is twisted, and thence securing the twisted portion to the upper surface of the trimming.

8. A method of producing a twisted portion in a trimming formed with a plurality of vertical pleats comprising fastening a securing member to the under surface of the trimming below the portion to be twisted, thence placing an arcuate flexible twisting member upon the upper surface of said trimming between said pleats and above said securing member, thence moving said twisting member in reverse direction to the folds of said pleating so that a portion of the trimming is twisted, and thence securing the twisted portion to the upper surface of the trimming.

9. A method of producing a twisted portion in a trimming formed wtih a plurality of vertical pleats comprising fastening a horizontal securing member to the under surface of the trimming below the portion to be twisted, thence placing an arcuate flexible twisting member maintained under appreciable tension upon the upper surface

of said trimming between said pleats and above said securing member, thence placing a presser member behind said twisting member, thence moving said trimming in reverse direction to the folds of said pleating so that a portion of the trimming is twisted and the twisted portion is pressed by said presser member, and hence securing the twisted portion to the upper surface of the trimming.

10. A method of producing a twisted portion in a trimming formed with a plurality of vertical pleats comprising fastening a securing member to the under surface of the trimming below the portion to be twisted, thence placing an arcuate flexible twisting member upon the upper surface of said trimming between said pleats and above said securing member, thence moving said trimming in reverse direction to the folds of said pleating so that a portion of the trimming is twisted, and thence securing the twisted portion to the upper surface of the trimming.

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