March 28, 1939. W. RUBINSTEIN 2,152,093

COLLAR

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Fig. 1.

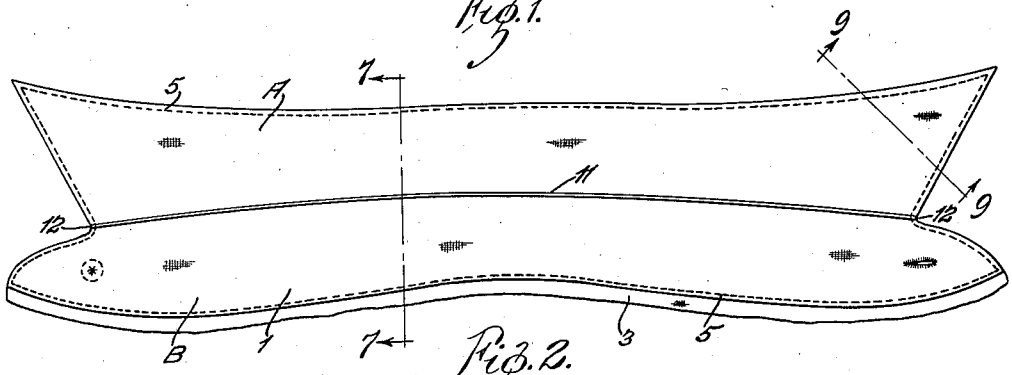


Fig. 2.

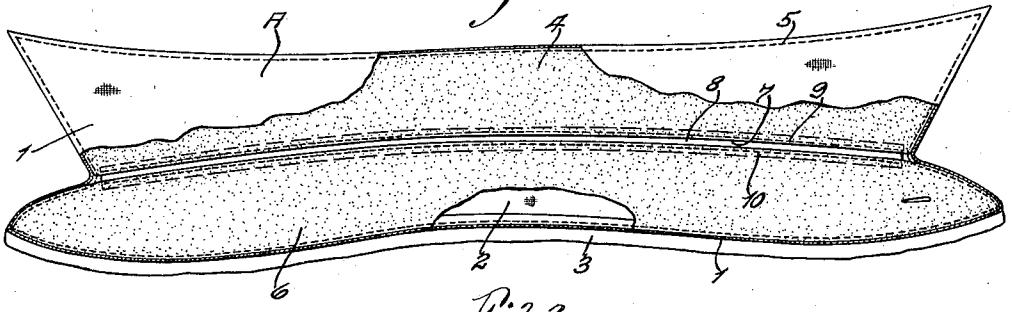


Fig. 3.

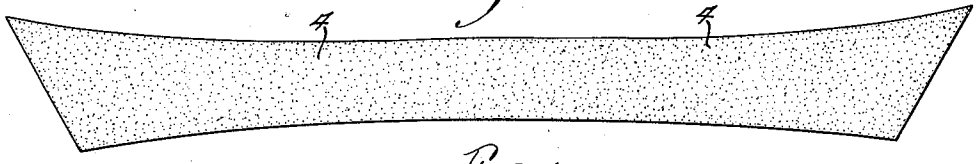


Fig. 4.

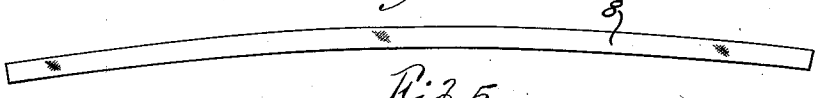


Fig. 5.

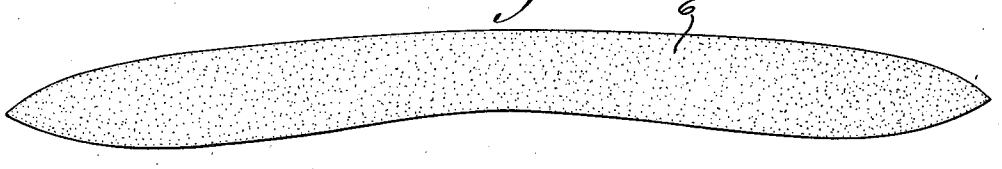
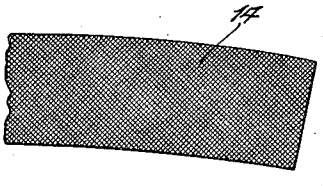


Fig. 6.



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Fig. 7.

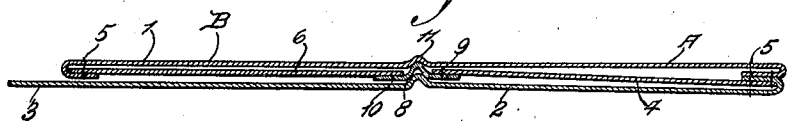


Fig. 8.

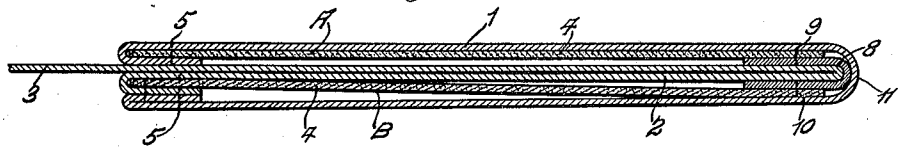


Fig. 9.

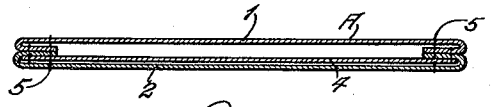


Fig. 10.

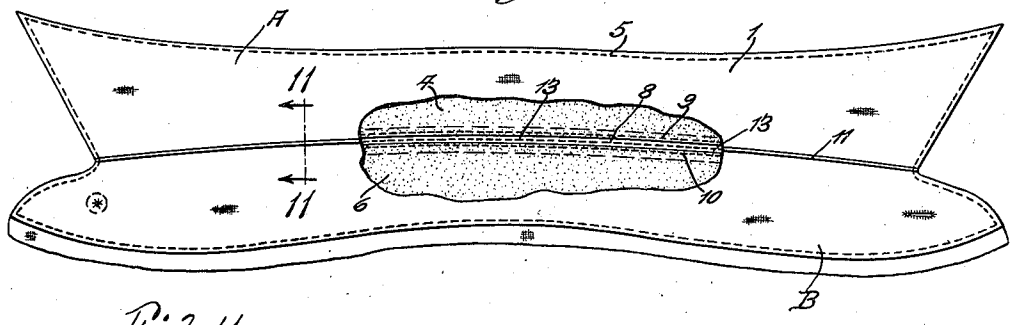
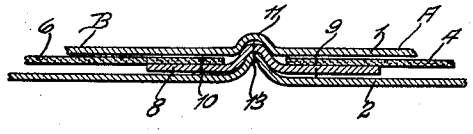


Fig. 11.



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Fig. 12.

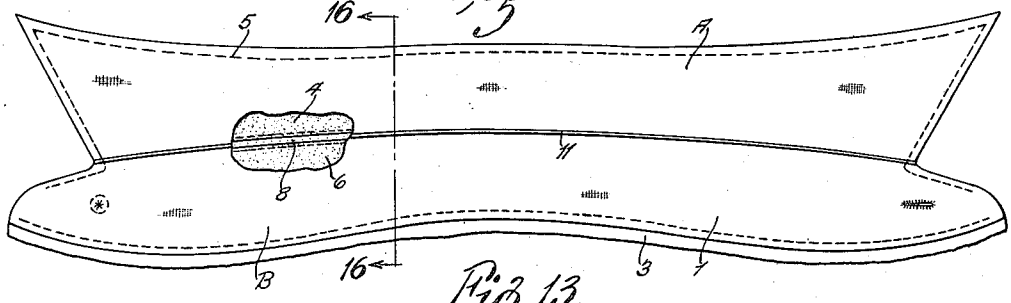


Fig. 13.

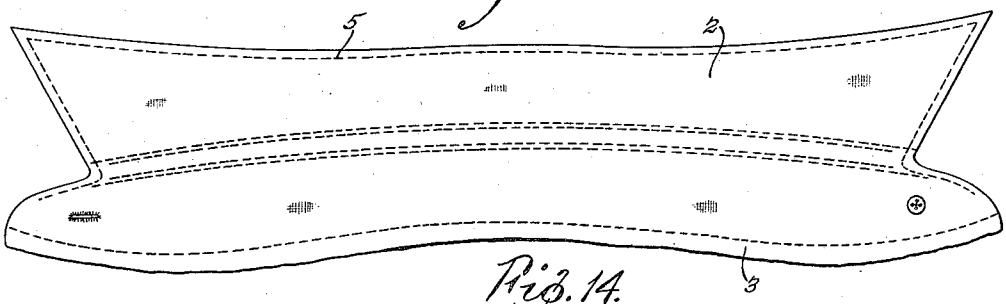


Fig. 14.

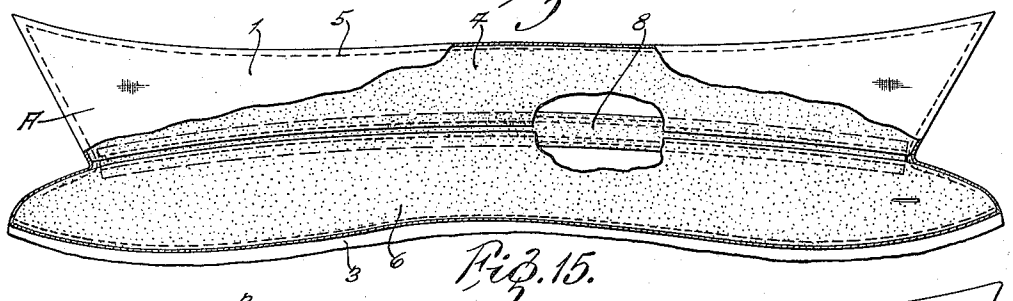


Fig. 15.

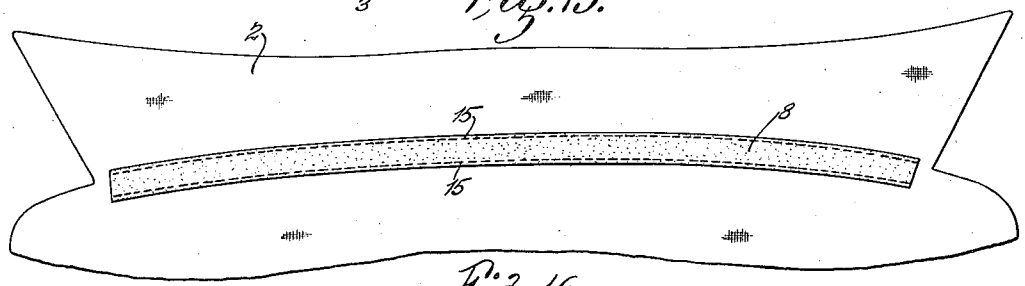
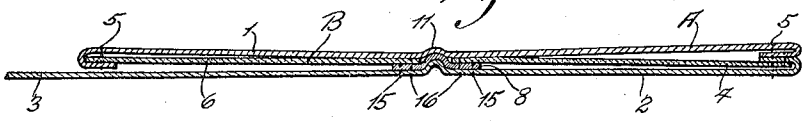


Fig. 16.



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UNITED STATES PATENT OFFICE

2,152,093

COLLAR

Wilton Rubinstein, Clayton, Mo.

Application April 7, 1938, Serial No. 200,636

16 Claims. (Cl. 2—131)

This invention relates to collars, and particularly to collars of the type including a band and a cape irrespective of whether the collars are permanently attached to the shirts or are detachable therefrom.

An object of the invention is to provide a collar including a front or exposed ply for the band and the cape and an infold ply for the band and the cape, in combination with two sections of material between the front ply and the infold ply and contained in the band and the cape, respectively, and adhesively united to one or both of said plies of the band and cape as desired, and having their adjacent edges separated by a longitudinal space extending from end to end of the collar and defining the fold line between the band and the cape, and a relatively narrow strip of textile fabric crossing said space and attached to the adjacent marginal portions of said sections and stitched thereto, so that, when the collar is laid flatwise, a visible fold line is formed and provided from end to end of the collar along said strip and between the adjacent edges of said sections.

The sections that are between the exposed and infold plies of the collar may be of thermoplastic material and adhesively united to both plies; or, the sections may be thermoplastic on one side only, in which case they are adhesively united to the infold ply and are attached to the exposed ply only along their margins by the stitches that unite the plies of the collar.

A collar embodying the construction and arrangement of parts mentioned in the preceding statement attains many advantages. Breaking down of the collar along the fold line, as occurs in fused collars of the usual construction, is eliminated. It is along the fold line that the collar receives the greatest wear, and also becomes soiled to a greater extent than elsewhere. Many laundering operatives, in attempting to cleanse the collar along the fold line, manipulate the collar in such a way as to add stresses and strains to the collar along said line, thereby causing that portion of the collar to become worn out before the remaining portions of the collar become damaged; or, in the case of an attached collar, long before the shirt itself is worn out. This new construction, with the soft fold line defining the cape from the band, reduces the brittleness and increases the life of the collar to a point where it will last as long as any soft collar of the conventional type which does not include the thermoplastic attaching material between the exposed and infold plies.

In addition, a collar embodying the construction defined by the preceding statement of object of invention provides a fold line that is clearly visible at all times because the sections of fused thermoplastic material immediately adjacent to the fold line constantly hold firmly together the plies of the band and cape and form a slightly raised rib or welt in exact contour with and along the arc of the fold line, and thereby defining the fold line. Thereby a natural hinge between the band and cape of the collar is formed and provided so that, when the ends of the collar are held by the hands, the band and the cape will fold naturally along the proper fold line by their own weight and without the application of pressure, as is usually required.

My improved collar also retains the natural and usual porosity of the exposed and infold plies along the fold line, even though the thermoplastic plies in the band and cape respectively are attached together along their adjacent margins by the textile fabric, which may be attached to the infold ply or not, as desired.

In fused collars of familiar type, in which the plies are in single or two pieces and which are united throughout their width and across the fold line by thermoplastic material between the exposed and infold plies, the folding of the cape with respect to the band frequently forces separation of one of the plies from the thermoplastic material, causing blistering and uneven and unsightly appearance along the exposed ply of the cape below the fold line. The provision of the soft fold line of this invention relieves the stress otherwise caused by the folding of the collar and prevents this objectionable effect.

Additionally, a collar of this improved construction is more comfortable to wear and minimizes irritation about the neck of the wearer; the definiteness of the fold line confines it within a predetermined range which is the width of the space between the fused sections, and I have determined by experiment that ironing of the collar is not essential or indispensable in order to obtain a pleasing appearance after the collar has been washed, but that a pleasing appearance of my improved collar can be obtained merely by stretching the collar after it has been washed, as is done normally in positioning the collar for ironing.

Various other objects and advantages of the collar exist and should be apparent from the following description, reference being made to the annexed drawings, in which—

Fig. 1 is a view showing a turned down collar extended and unfolded, and illustrating clearly the visible fold line between the band and the cape.

Fig. 2 is a similar view with portions of the exposed ply broken away to illustrate the thermoplastic sections separated by an intervening space and attached together by a strip of textile fabric to define the fold line.

Figs. 3, 4 and 5 are plan views of the section of thermoplastic material in the cape, the attach-

ing strip, and the thermoplastic section in the band, respectively.

Fig. 6 is an enlarged plan view of a portion of the attaching strip having the threads thereof extending obliquely from the edges of the strip.

Fig. 7 is an enlarged sectional view on the line 7—7 of Fig. 1.

Fig. 8 is an enlarged view similar to Fig. 7, showing an attached collar folded.

Fig. 9 is a sectional view on the line 9—9 of Fig. 1.

Fig. 10 is a plan view similar to Fig. 1 with a part of the exposed ply broken away to illustrate a modified arrangement in which the connecting strip is attached to the infold.

Fig. 11 is an enlarged sectional view on the line 11—11 of Fig. 10.

Fig. 12 is an outside view of a collar extended and unfolded in which the strip attaching the thermoplastic sections is also attached to the infold ply of the collar.

Fig. 13 is a view of the same collar showing the infold ply and the lines of stitching for the attaching strip of the thermoplastic sections.

Fig. 14 is a view showing the outfold ply of the collar broken away to disclose the thermoplastic sections, and also showing the thermoplastic sections broken away to disclose the attaching strip.

Fig. 15 is a plan view of the infold ply having the attaching strip attached thereto preparatory for attachment to the exposed ply and the thermoplasic sections.

Fig. 16 is an enlarged sectional view on the line 16—16 of Fig. 12.

This improved collar, which is of the turned down type, comprises an exposed ply 1 and an infold ply 2, both of which extend the full width and full length of the collar and terminate at the margins of the collar when the collar is of the detachable type; but, when the collar is of the attached type, the infold ply may include a portion 3 extending beyond the lower edge of the collar band for permanent attachment to the yoke of a shirt in the usual and known manner.

The plies 1 and 2 are formed and shaped as usual to provide a cape A and a band B. In this improved collar, I include a section 4 of thermoplastic material between the plies 1 and 2 of the cape and of approximately the same width and length as the cape, and having its marginal edges attached to the inner and outer plies by the marginal line of stitches 5. This section of thermoplastic material is of slightly less width than the full width of the cape so that, when the collar is assembled with a section 6 of thermoplastic material in the band of slightly less width than the width of the band, the adjacent edges of the two sections of thermoplastic material are separated by an intervening space 7.

A strip 8 of appropriate textile fabric extends a little less than the length of the collar (Fig. 2). The longitudinal margins of said strip overlap the adjacent longitudinal margins of the thermoplastic sections 4 and 6 and, in this embodiment, are attached to said strips by longitudinal rows of stitches 9 and 10, respectively. Said strip 8 extends a little less than the full length of the collar and terminates short of the stitches 5 in order to minimize the bulk or thickness of the collar at its ends and to facilitate folding of the collar along the fold line. This arrangement also prevents the points of the collar from rolling outwardly or upwardly and, by cooperation with the attached portions of the collar, holds the points down.

In making the collar, the sections 4 and 6 of thermoplastic material are placed in proper relationship with the textile strip 8. The strip 8 may be thermoplastic on the side toward the infold ply of the collar and adhesively attached thereto, and also attached to the thermoplastic sections 4 and 6 by the longitudinal rows of stitches 9 and 10. Then the exposed ply of the collar is laid upon the infold ply in inside-out relationship, and the unitary part comprising the sections 4 and 6 is laid upon the upper surface of the exposed ply, and said parts are attached together by the rows of stitches 5 which extend along all marginal edges of the collar, including the band and the cape, as shown. Thereafter, the collar is turned to proper position to bring the ply 2 to the opposite side of the sections 4 and 6 of thermoplastic material from the exposed or front ply 1 so as to conceal the raw marginal edges of the plies 1 and 2 and confine the sections 4 and 6 of thermoplastic material and the attaching strip 8 between said plies 1 and 2. This places the strip 8 between the infold ply 2 and the sections 4 and 6, and causes the same to form a curved rib or welt 11 between the corners 12 at the ends of the collar, constituting a visible fold line throughout the length of the collar between the band and the cape. Thereafter, when the collar is properly treated by heat and pressure, the exposed ply 1 and the infold ply 2 of the band and the cape are adhesively united or attached to the plies of thermoplastic material, excepting that, along the space 7 separating the adjacent marginal edges of said sections of thermoplastic material, the plies are not adhesively united. On the contrary, the strip 8 of non-adhesive material effectively prevents adhesive attachment of the exposed and infold plies along the space 7, which constitutes the fold line of the collar. Therefore, when the collar is finished in the manner described, a rib or welt 11 is the fold line of the collar so that, when the collar is held extended in the hands, either by holding the band or by holding the cape, the collar will fold naturally and without pressure and in the proper direction along the fold line defined by the rib or welt 11. If desired, the sections 4 and 6 may be thermoplastic on one side only, in which case they are adhesively united to the infold ply 2 and not to the exposed ply 1 of the collar.

If desired, the strip 8 may be provided with an adhesive or thermoplastic coating on one side only for attachment to the infold ply 2; or, as shown in Figs. 10 and 11, said strip 8 may be secured to the infold ply 2 by a longitudinal row of stitches 13 midway between the sections 4 and 6 of thermoplastic material, and left unattached to the exposed ply 1 of the collar.

The strip 8 may be cut in arcuate or straight form as desired. If cut in straight form, it may be forced or stressed to proper shape along the curved adjacent margins of the sections 4 and 6. If desired, the strip 8 may be cut along biased lines to form a strip 14 (Fig. 6) in which the threads are shown running obliquely from edge to edge of the strip so as to cooperate more efficiently with the attached portions of the collar.

The modification shown in Figs. 12 to 16, inclusive, illustrates a collar in which the strip 8 is first attached to the infold ply 2 by longitudinal rows of stitches 15 and are then further

attached to the marginal edges of the sections 4 and 6, and also to the infold ply 2 by longitudinal rows of stitches 16. The sections 4 and 6 may be thermoplastic on one or both sides and adhesively united to both plies 1 and 2, or only to the infold ply 2, as desired.

From the foregoing it should be perfectly apparent that the present invention attains all of its intended objects and purposes efficiently and satisfactorily, and provides a collar overcoming all of the objections and attaining all of its intended objects and purposes herein indicated. The construction and arrangement of the parts of the collar may be varied otherwise than as specifically mentioned within the scope of equivalent limits without departure from the nature and principle of the invention. Contemplating such variations as may be deemed expedient and, without limiting myself in unessential particulars, I claim:

1. A turned down collar comprising an exposed ply and an infold ply both of which extend the full length and width of the collar and forming a band and a cape, sections of pliable material in the band and the cape respectively having their adjacent edges separated by an intervening space along the fold line of the collar, a strip overlapping the adjacent marginal edges of said sections and being unattached to the exposed ply of the collar between said sections, stitches attaching said strip and the adjacent margins of said sections, and means attaching the edges of said strip to said infold ply apart from said stitches.

2. A turned down collar comprising an exposed ply and an infold ply both of which are unitary and extend flatwise the full length and width of the collar when the collar is unfolded and form a band and a cape, sections of pliable material in the band and the cape respectively having their adjacent edges separated by an intervening space along the fold line of the collar, and an element extending across and along said space and attached to said infold ply along both sides of said space and also to the adjacent marginal edges of said sections and cooperating therewith to raise the exposed ply along the fold line of the collar and thereby provide a visible fold line.

3. A turned down collar comprising an exposed ply and an infold ply both of which are unitary and extend flatwise the full length and width of the collar when the collar is unfolded and form a band and a cape, sections of pliable material in the band and the cape respectively having their adjacent edges separated by an intervening space along the fold line of the collar, and a strip of material extending across said space and attached to the adjacent margins of said sections and also to the infold ply along opposite sides of said space and unattached to the exposed ply of the collar.

4. In a turned down collar having an exposed ply and an infold ply forming the band and the cape of the collar, and sections of pliable material between said plies holding said plies in fixed relationship along the band and along the cape and having their adjacent edges separated by an intervening space along the fold line of the collar; means attached to said infold ply and also to said sections along opposite sides of said space and cooperating with said sections to raise the outer ply along the fold line of the collar and form a visible fold line throughout the length of the collar after the collar is ironed and remains extended flatwise.

5. In a turned down collar having an exposed ply and an infold ply forming the band and the cape of the collar, and sections of pliable material between said plies holding said plies in fixed relationship along the band and along the cape and having their adjacent edges separated by an intervening space along the fold line of the collar; a strip of fabric attached to the adjacent edges of said sections and to said infold ply along the band and the cape at opposite sides of said space and cooperating therewith to provide a visible fold line for the collar approximately throughout the length of the collar when the collar is extended flatwise.

6. A turned down collar comprising an exposed ply and an infold ply both of which are unitary and extend the full length and width of the collar and form a band and a cape, sections of unfolded thermoplastic material extending approximately the full length of the band and the cape and attaching said plies in fixed relationship in the band and the cape and having their adjacent edges separated by an intervening space along the fold line of the collar, and a strip of fabric extending across and along said space directly engaging and being attached to the adjacent marginal edges of said sections, lines of stitches attaching said strip to said infold ply beyond opposite sides of said space and leaving said strip unattached to the exposed ply of the collar between said sections and cooperating with said sections to provide a visible fold line for the collar when the collar is extended flatwise.

7. A turned down collar comprising an exposed ply and an infold ply both of which are unitary and extend the full length and width of the collar and form a band and a cape, sections of thermoplastic material extending approximately the full length of the band and the cape and attaching said plies in fixed relationship in the band and the cape and having their adjacent edges separated by an intervening space along the fold line of the collar, and a strip of fabric extending across and along said space directly engaging and being attached to the adjacent edges of said sections and to the infold ply along opposite sides of said space and being unattached to the exposed ply of the collar along said space.

8. A turned down collar comprising an exposed ply and an infold ply both of which extend the full length and width of the collar and forming a band and a cape, sections of material in the band and cape respectively attached to said infold ply throughout the length and width of said sections and having their adjacent edges separated by an intervening space along the fold line of the collar, and a strip directly contacting and overlapping and attached to the adjacent marginal edges of said sections and also attached to said infold ply along opposite sides of said space and being unattached to the exposed ply of the collar between said sections.

9. A turned down collar comprising an exposed ply and an infold ply both of which extend the full length and width of the collar and forming a band and a cape, sections of material in the band and cape respectively attached to said infold ply approximately throughout the surfaces of said sections and having their adjacent edges separated by an intervening space along the fold line of the collar, and a strip extending across said space and sewed to said infold ply by lines of stitches adjacent to its edges and also sewed

to said sections and said infold ply by separate lines of stitches between said first lines of stitches and cooperating with said infold ply and with said sections to raise the exposed ply along the fold line of the collar and thereby provide a visible fold line when the collar is extended flatwise.

10. A turned down collar comprising an exposed ply and an infold ply both of which extend the full length and width of the collar and forming a band and a cape, sections of material in the band and cape respectively attached to said infold ply throughout the length and width of said sections and having their adjacent edges separated by an intervening space along the fold line of the collar, a strip extending across said space and adhesively attached to the infold ply of the collar, lines of stitches attaching the margins of said strip to said infold ply apart from said sections, and other lines of stitches attaching together said sections and said strip and said infold ply between said first named lines of stitches, said strip cooperating with said sections to raise the exposed ply along the fold line of the collar and thereby provide a visible fold line.

11. A turned down collar comprising an exposed ply and an infold ply each of which is composed of a single piece of material and which extend the full length and width of the collar and form the band and the cape, sections of pliable material in the band and cape respectively and having their upper edges unfolded and separated by an intervening space along the fold line of the collar and confined between unfolded portions of said plies, and a strip of pliable material extending across said space and downwardly into said band and cape and having its unfolded margins overlapping and attached to unfolded marginal edges of said sections and to said infold ply at opposite sides of said fold line.

12. A turned down collar comprising an exposed ply and an infold ply each of which is composed of a single piece of material and which extend the full length and width of the collar and form the band and the cape, sections of pliable lining material in the band and cape respectively and having their upper edges unfolded and separated by an intervening space along the fold line of the collar and confined between unfolded portions of said plies, a strip of pliable material extending across said space and downwardly into said band and cape for a relatively short distance at each side of said fold line and having its margins unfolded and overlapping unfolded margins of said sections, longitudinal lines of stitches attaching said margins of said strip to said sections and to said infold ply, and a longitudinal row of stitches attaching said strip to said infold ply between said sections and leaving said strip unattached to said exposed ply between said sections.

13. A turned down collar comprising an exposed ply and an infold ply forming the band and the cape of the collar, band and cape sections of pliable lining material between said plies and having thermoplastic attachment to one of said plies and having their upper edges separated by an intervening space along the fold line of the collar, a strip of pliable material having a greater width than said space extending longitudinally thereof approximately throughout the length of the collar and downwardly into the band and cape for a relatively short distance at each side of said fold line and having the margin within the cape located between said cape lining section and said inner ply, and means attaching the lower margins of said strip to the upper margins of said sections and causing said strip to raise the exposed ply along said fold line and form a visible fold line along the length of the collar after the collar is ironed and remains extended flatwise.

14. A turned down collar comprising an exposed ply and an infold ply each of which is composed of a single piece of material and which extend the full length and width of the collar and form the band and the cape, sections of pliable lining material in the band and cape respectively having their upper edges unfolded and extended flatwise and separated by an intervening space along the fold line of the collar and confined between extended and unfolded portions of said plies, a strip of fabric extending longitudinally of the collar and having its margins unfolded and extended downwardly flatwise for a relatively short distance into the band and cape of the collar and overlapping the upper margins of said sections, lines of stitches attaching said strip and the upper margins of said sections to said infold ply, and lines of stitches apart from said first lines of stitches attaching said strip to said infold ply downwardly beyond said first lines of stitches.

15. A turned down collar comprising an exposed ply and an infold ply each of which is composed of a single piece of material and which extend the full length and width of the collar and form the band and the cape, sections of pliable thermoplastic lining material in the band and cape respectively and having their upper edges unfolded and separated by an intervening space along the fold line of the collar and confined between unfolded portions of said plies, a strip of fabric extending along said space approximately the full length of the collar and downwardly into the band and cape and having unfolded margins overlapping the upper unfolded margins of said sections and being unattached to the exposed ply of the collar between said sections, and lines of stitches attaching the unfolded margins of said strip to the unfolded margins of said sections and to said infold ply and forming a visible fold line for the collar along the exposed ply when the collar is extended flatwise.

16. A turned down collar comprising an exposed ply and an infold ply each of which is composed of a single piece of material and which extend the full length and width of the collar and form the band and the cape, sections of pliable thermoplastic material in the band and cape respectively and having their upper edges unfolded and separated by an intervening space along the fold line of the collar and confined between unfolded portions of said plies, a strip of fabric extending along said space and downwardly at opposite sides thereof short distances into the band and cape and having its lower unfolded margins overlapping the upper unfolded margins of said sections and directly attached to the adjacent margins of said sections and to the infold ply at opposite sides of said space, and a line of stitches attaching said strip to the infold ply along said space between the upper edges of said sections and leaving said strip unattached to the exposed ply.

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