March 28, 1939. W. RUBINSTEIN 2,152,094

COLLAR

Filed June 13, 1938 2 Sheets-Sheet 1

Fig. 1.

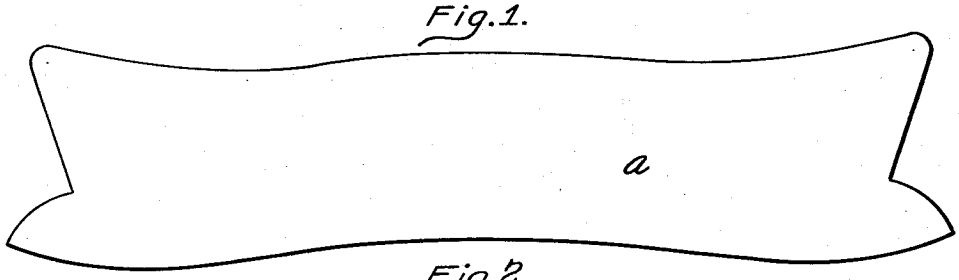


Fig. 2.

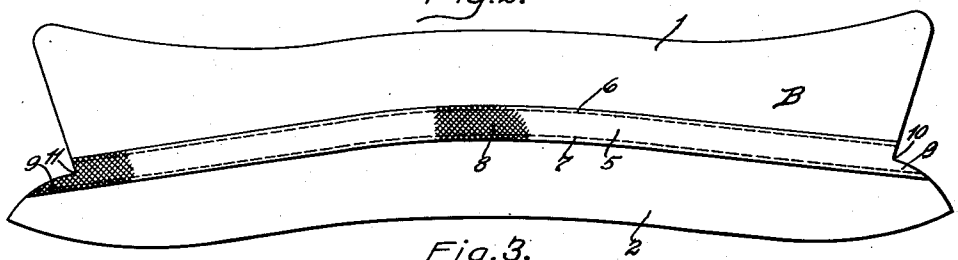


Fig. 3.

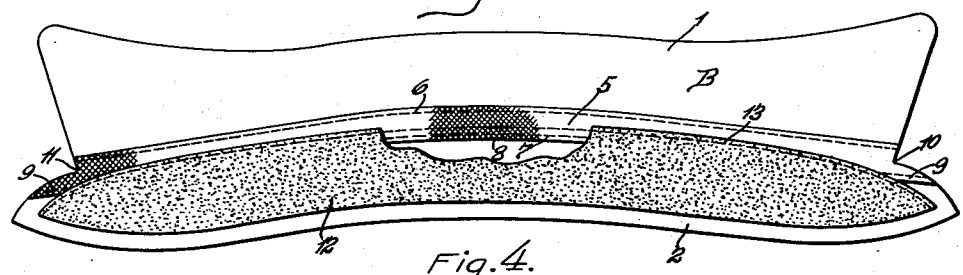


Fig. 4.

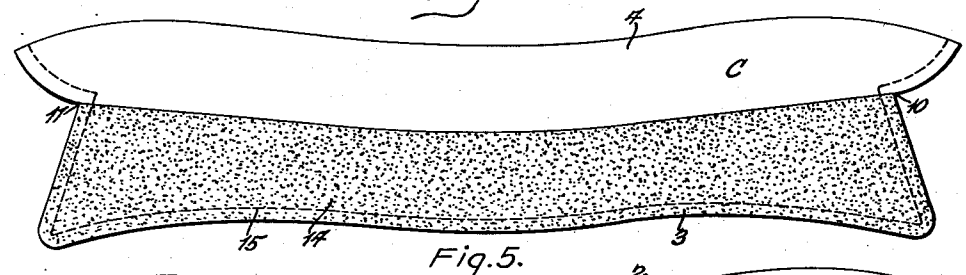


Fig. 5.

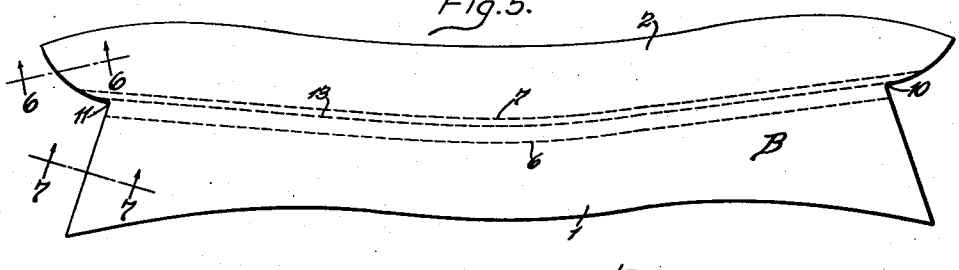


Fig. 6.

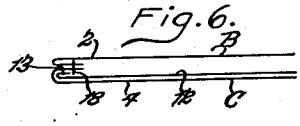
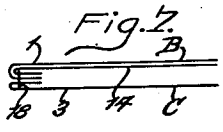


Fig. 7.



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Fig.8.

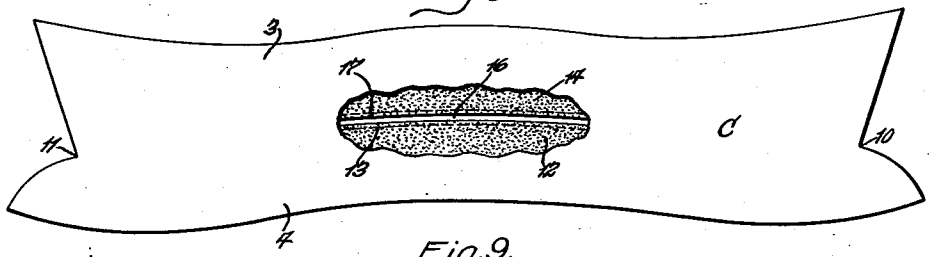


Fig.9.

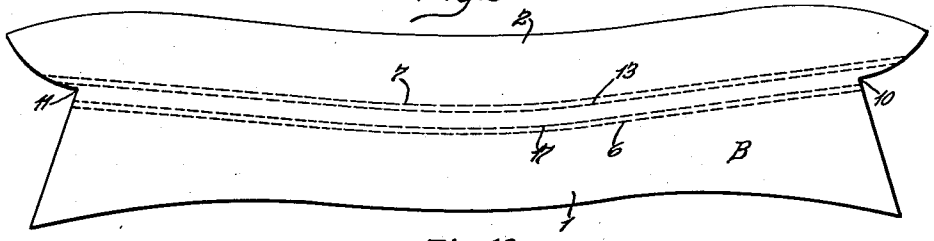


Fig.10.

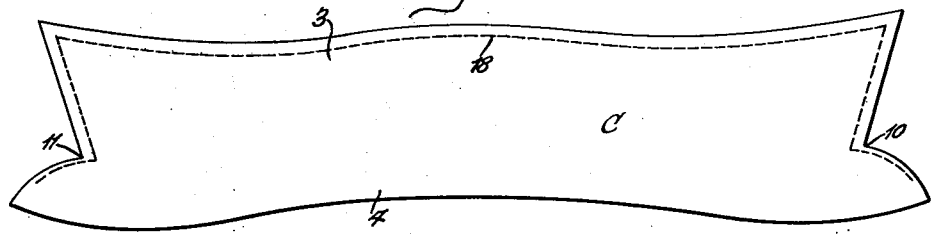


Fig.11.

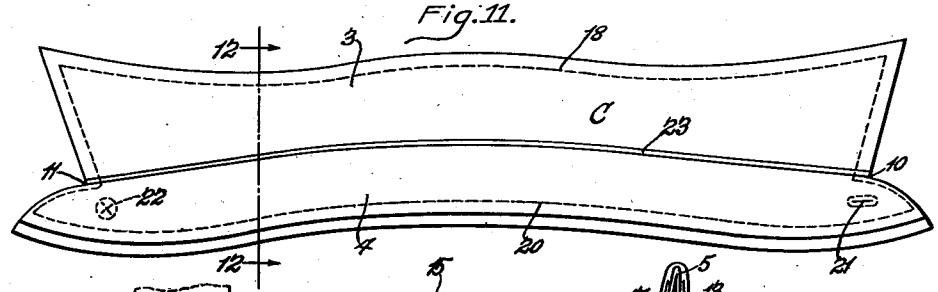


Fig 14

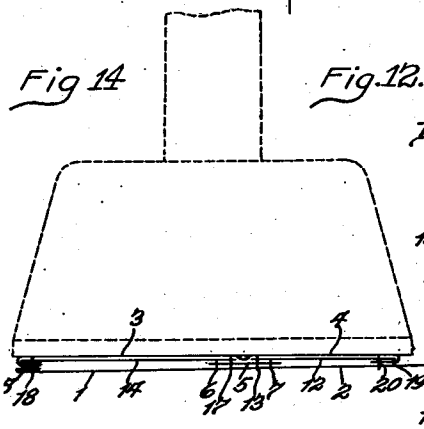


Fig.12.

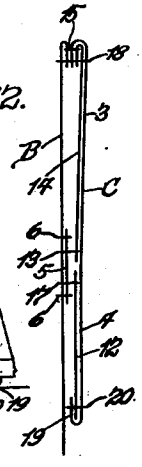
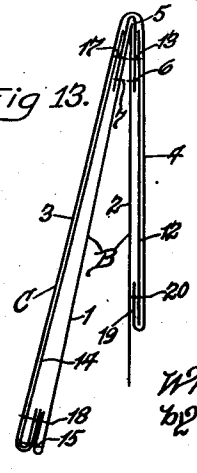


Fig 13.



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Patented Mar. 28, 1939 2,152,094

UNITED STATES PATENT OFFICE

2,152,094

COLLAR

Wilton Rubinstein, Clayton, Mo.

Application June 13, 1938, Serial No. 213,347

7 Claims. (Cl. 2—131)

This invention relates to collars; and has special reference to collars for use in connection with men's shirts, and including a band and a cape, irrespective of whether the collars are permanently secured to the shirts or are detachable therefrom.

An object of the invention is to provide a collar of the type mentioned having a fold line provided by an area definitely incorporated within the collar and the purpose of which is to provide a line along which the collar will positively fold so that it is practically impossible to fold the collar incorrectly. In one form of the invention, this definite fold line is provided by a bias section of fabric of predetermined width definitely confining the fold line permanently to this area, located between two lining sections one of which is in the cape and the other of which is in the band of the collar. This constitutes a type of hinge or line along which the collar will fold and which will withstand launderings and other processes indefinitely.

In a collar of this construction, the bias strip rises above the adjacent edges of the lining sections included in the cape and band, and forms an effective guard against possible friction between the edges of the lining sections included in the cape and band respectively, so that it is impossible for such edges to wear or cut through the outer ply of the collar, as would otherwise occur. In this way, the invention provides a collar that will endure and withstand the processes to which it is subjected longer than collars not including these features.

Another object of the invention is to provide a collar of this type embodying novel features and elements arranged and assembled in a novel cooperative relationship that will attain all of the objects of the invention before or hereinafter indicated.

Various advantages of this improved collar will become apparent from the following description, reference being made to the annexed drawings, in which—

Fig. 1 is a plan view of one of the plies of my improved collar.

Fig. 2 is an inside plan view of the infold ply after the bias strip has been attached thereto by two lines of stitches.

Fig. 3 is a plan view of the infold ply after the bias strip has been attached thereto and after the lining section of the collar band has been attached to the bias strip and the infold ply by a line of stitches.

Fig. 4 is a plan view of the collar turned inside-out and showing the lining section attached thereto.

Fig. 5 is a plan view of the collar turned to expose the outer surface of the infold ply and showing the lines of stitches attaching the bias strip to the infold ply, and also the single line of stitches attaching the lining section of the collar band to the bias strip and the infold ply of the collar.

Fig. 6 is a diagrammatic sectional view along the line 6—6 of Fig. 5.

Fig. 7 is a diagrammatic sectional view along the line 7—7 of the cape in Fig. 5.

Fig. 8 is an outside plan view of a collar made in accordance with this invention, a part of the exposed ply being broken away to illustrate the manner in which the lining sections are spaced to provide the fold line and are attached to the infold ply of the collar.

Fig. 9 is a plan view of the infold ply of the collar after both lining sections have been attached to the bias strip and to said infold ply.

Fig. 10 is a plan view of the collar after a marginal row of stitches has been formed adjacent to the edges of the cape and extended into the ends of the collar band.

Fig. 11 is a plan view of a collar after the marginal edge of the exposed ply has been turned inward and attached to the band lining section by a continuous row of stitches extending from end to end of the collar band and meeting the stitches shown in Fig. 10.

Fig. 12 is an enlarged diagrammatic sectional view on the line 12—12 of Fig. 11.

Fig. 13 is an enlarged diagrammatic sectional view of the collar folded, showing the manner in which the bias strip forms the fold line of the collar and also prevents the relatively sharp edges of the lining sections from damaging adjacent portions of the collar.

Fig. 14 illustrates a construction by which friction along the fold line is minimized when the collar is ironed.

In making a collar in accordance with this invention, two plies like the ply A (Fig. 1) are made, one of which is used as the infold ply B and the other of which is used as the exposed ply C. The infold ply includes a cape portion 1 and a band portion 2, and the exposed ply includes a cape portion 3 and a band portion 4 matching the cape and band portions of the infold ply. A strip of fabric 5 is then attached to the ultimately concealed side of the infold ply

by lines of stitches 6 and 7. The strip 5 must be impregnated with a chemical, as in permanent finished organdy, so that the fabric will not become dead soft or flimsy when laundered repeatedly; and it must be made of threads of such fineness that the fabric is sufficiently transparent so that it will not produce a shadow in that portion of the collar cape into which it extends. This strip is preferably cut on a bias so that all of the threads 8 of which the strip is woven extend diagonally across the strip. The lines of stitches 6 extend from end to end of the ply B, there being elongated portions at the ends of said strip extending to the ends of the band portion 2. This strip extends along and spans the fold line of the collar, which curves from the corner 10 to the corner 11 along the median line of the strip, as is clear from Fig. 2.

Next, a lining section 12 for the band of the collar is laid upon the band portion 2 of the infold ply of the collar with its upper margin overlapping the lower portion of the strip 5, and the upper margin of said strip is attached to the strip 5 and to the infold ply B by a line of stitches 13, preferably running between the lines of stitches 6 and 7. The upper edge of the lining section 12 terminates below the longitudinal median line of the strip 5.

Next, the exposed ply C is placed upon the infold ply in a relationship in which the surfaces of said plies that are ultimately exposed when the collar is finished, are toward each other; and a lining section 14 for the cape is placed upon that side of the cape 3 of the exposed ply of the collar and attached to said exposed ply and to the infold ply by a line of stitches 15 running along the margin of the cape and the ends of the band. Then the collar is turned to a position in which both lining sections and the strip 5 are between the exposed and infold plies of the collar, as shown in Fig. 5. This causes the upper margin of the lining section 14 to overlap that margin of the strip 5 which extends into the cape in a relationship in which a curved fold line space 16 is left between the adjacent edges of the lining sections 12 and 14. The provision of this space 16, which constitutes the fold line of the collar, is highly important even if the strip 5 is omitted in some constructions, as is possible though not highly desirable. I prefer and recommend the use of the strip 5 because my experiments have established that a collar embodying the strip is better than a collar from which the strip is omitted because, in the latter construction, the collar sometimes buckles, and also because, when the strip is omitted, the edges of the lining sections are in direct contact with the collar fabric, causing premature wear.

In collars embodying the bias strip, said strip rises above the margins of both lining sections when the collar is folded along the line 16, and positively prevents abrasion of the collar fabric through friction with the edges of said lining sections.

After the collar has been turned as described, the upper margin of the lining section 14, which overlaps the lower margin of that portion of the strip 5 extending into the cape, is attached to said strip 5 and to the infold ply B by a line of stitches 17 between the lines of stitches 6 and 13. This definitely holds these attached parts in the precise arrangement desired, irrespective of whether the lining sections 12 and 14 are composed of thermoplastic material or not, although I prefer to make said lining sections of thermoplastic material.

Next, a line of stitches 18 is formed along the lower margin and along the end margins of the cape and the lower edge 19. Then the lower edge 19 of the exposed ply C is folded inwardly to enclose the lower margin of the lining section 12 and attached thereto by a line of stitches 20 connected with the ends of the line of stitches 18, as shown in Fig. 11. The collar may be provided with the usual buttonhole 21 and button 22 for attaching together the ends of the collar.

When the lining sections 12 and 14 are composed of thermoplastic material, they will secure together the band and cape portions of the infold and exposed plies of the collar under the influence of heat and pressure, and these plies will be held together thereafter. Or, lining material may be used that will require immersion in a solvent and subsequent application of heat and pressure, as in the known Trubenizing and Celanese processes. When the cape and band are folded to the form in which the collar is worn, the folding occurs along the line 23 (Fig. 11), which is the space line 16. After the collar is folded and then extended flatwise, the line 23 of the exposed ply remains slightly but visibly raised throughout the length of the collar. In the folding of the collar, the strip 5 between the lines of stitches 13 and 17 is caused to extend between the adjacent marginal edges of the lining sections 12 and 14, and thereby prevent the edges of said lining sections from abrading either ply of the collar. Said strip also functions to form the definite line 23, which is plainly visible when the collar is again extended flatwise.

The order in which the operations are performed may be varied to any extent desired within the range of successful manufacture without departure from the invention, irrespective of whether the lining sections 12 and 14 are thermoplastic on one or both sides, or whether one or both of said sections are without thermoplastic quality. In any instance, it is necessary that the adjacent edges of said sections be separated by the fold line space 16, and it is preferable that the adjacent edges of said sections be attached by the stitches 13 and 17 to the infold ply B and to the bias strip 5, irrespective of whether said sections are composed of thermoplastic material or not. When made in this way, the bias strip 5 extends slightly beyond the upper edges of both lining sections when the collar is folded, and creates the fold line 23 along the exposed ply, which is plainly visible when the collar is unfolded, as in Fig. 11. The strip 5 also functions to prevent the upper edges of the sections 12 and 14 from damaging the fold line 23 of the collar, which is between the edges of said lining sections, thereby greatly prolonging the life of the collar beyond the extent to which it would endure if said lining sections 12 and 14 were permitted to abrade the fold line.

The presence of the space 16 along the fold line of the collar permits that portion of the exposed ply covering said space to enter said space when the collar is being ironed, because the margins of the sections 12 and 14 overlying the margins of the strip 5 produce a greater thickness than along the fold line itself. Therefore, the iron exerts no pressure whatever on the exposed ply C along the fold line. A collar of this construction is the only one known to me which assures perfect smoothness throughout the entire area of the fold line when the collar is ironed.

This construction eliminates the formation of wrinkles and ruffles, etc., as so frequently occurs in the case of other collars with which I am familiar.

From the foregoing description, it should now be apparent that this invention completely attains all of its intended objects and purposes. Also, it should be apparent that the specific form and relationship of the parts may be varied within the scope of equivalent limits without departure from the nature and principle of the invention.

I claim:

1. In a turned down collar having an exposed ply and an infold ply both of which extend the full length and width of the collar forming a band and a cape, and having a fold line along which the band and cape may be turned against each other; a bias strip extending longitudinally the full length of the collar and having a width greater than the width of the fold line and extending a short distance into the band and cape respectively, means attaching the longitudinal margins of said strip to said infold ply, and sections of lining material in the band and cape respectively covering the margins of said strip and said attaching means and having their adjacent edges separated by a longitudinal space along the fold line of the collar throughout the length of said sections and said strip, and each having its upper edge attached to said strip and to said infold ply by a longitudinal row of stitches.

2. In a turned down collar having an exposed ply and an infold ply both extending the full length and width of the collar and forming a band and a cape, and having a fold line extending between corners formed by the band and the cape along which the band and cape may be turned against each other; a bias strip extending longitudinally the full length of the collar and having a width greater than the width of the fold line and extending downwardly a short distance into the band and cape respectively and also extending longitudinally into the band beyond said corners, means attaching said strip to said infold ply, sections of lining material in the band and cape respectively having their adjacent edges separated by a longitudinal space along said strip and said fold line of the collar, and means attaching the adjacent margins of said sections to said strip and said infold ply whereby said strip will extend upwardly beyond the upper edges of said sections when the collar is folded along said fold line.

3. In a turned down collar having an exposed ply and an infold ply both extending the full length and width of the collar and forming a band and cape having corners at the ends thereof; a bias strip extending longitudinally in a curved line between said corners and extending beyond said corners into the band, spaced lines of stitches attaching said strip to said infold ply throughout the length of the strip, sections of lining material in the band and cape respectively having their adjacent edges curving between said corners and separated by a longitudinal curved space along said strip and between said corners, and means attaching adjacent margins of said sections to said strip and said infold ply between said lines of stitches and causing said strip to extend upwardly beyond the upper edges of said sections when the collar is folded along said space and preventing abrasion of the exposed ply of the collar by the upper edges of said sections.

4. In a turned down collar having an exposed ply and an infold ply both extending the full length and width of the collar and forming a band and a cape having corners at the ends thereof; a bias strip extending longitudinally the full length of the collar between said corners, and sections of lining material thermoplastic on one side in the band and cape respectively having their adjacent edges separated by a longitudinal space along said strip and each having its upper edge attached to said strip and said infold ply by a line of stitches to form a fold line along said longitudinal space and cause said strip to extend upwardly beyond the edges of said sections when the collar is folded, each of said sections being adhesively united to one of said plies.

5. In a turned down collar having an exposed ply and an infold ply both extending the full length and width of the collar and forming a band and a cape with corners at the ends thereof; a strip curving longitudinally the full length of the collar between said corners, and sections of lining material in the band and cape respectively, one of which is thermoplastic on one side and is adhesively united to one of said plies and both having their adjacent edges overlapping and attached to said strip and said infold ply by longitudinal lines of spaced stitches, the adjacent edges of said sections being separated by a curved longitudinal space along said strip into which said strip extends against said exposed ply to define a visible fold line when the collar is folded.

6. In a turned down collar having an exposed ply and an infold ply both extending the full length and width of the collar and forming a band and a cape with corners at the ends thereof; a strip curving longitudinally the full length of the collar between said corners and extending beyond said corners into the end portions of the band, sections of thermoplastic lining material in the band and cape respectively having their adjacent edges separated by a longitudinal curved space along said strip, and spaced rows of stitches attaching the adjacent margins of said sections to said strip and said infold ply and causing said strip to extend upwardly beyond the upper edges of said sections and against the exposed ply when the collar is folded along said space and preventing the upper edges of said sections from abrading the inner surface of the exposed ply when the collar is folded.

7. In a turned down collar having an exposed ply and an infold ply both extending the full length and width of the collar and forming a band and a cape with corners at the ends thereof; sections of lining material in the band and cape respectively having their adjacent edges separated by a curved longitudinal space between said corners, spaced lines of stitches attaching the adjacent margins of said sections to said infold ply, and means engaged by said stitches extending between the adjacent edges of said sections when the collar is folded along said space and preventing said edges of said sections from abrading the inner surface of the exposed ply of the collar.

WILTON RUBINSTEIN.