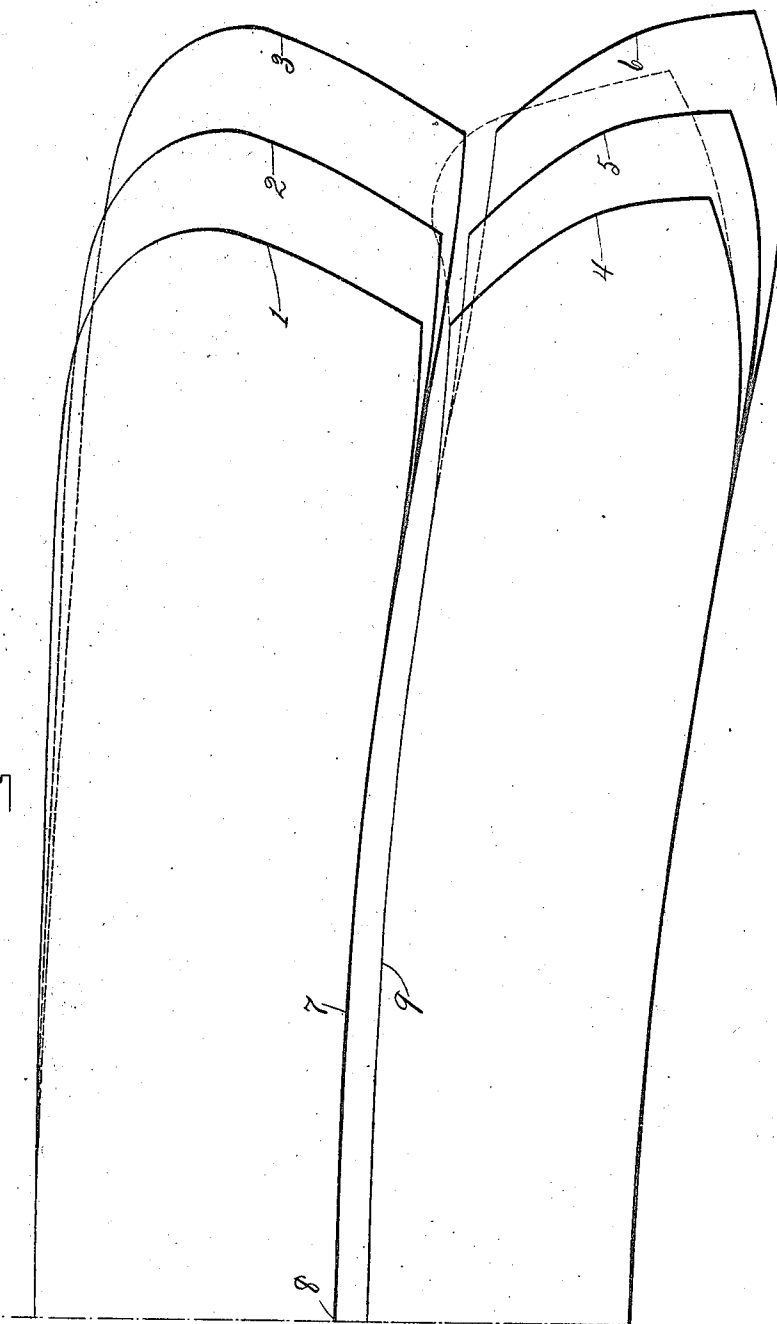


1,045,724.

J. McKAY.
MANUFACTURE OF FOLD COLLARS.
APPLICATION FILED APR. 9, 1910.

Patented Nov. 26, 1912.
3 SHEETS—SHEET 1.

Fig. 1.



WITNESSES

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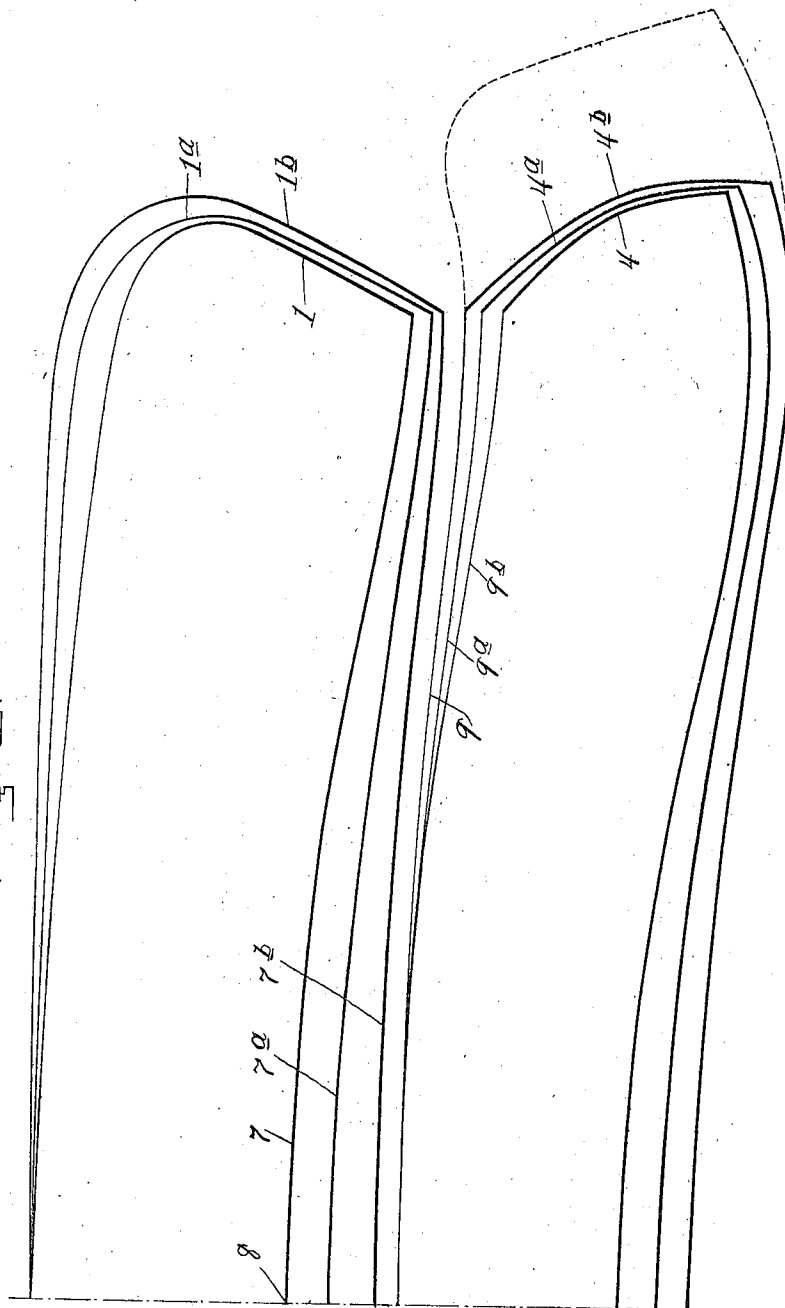
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Fig. 2.



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Fig. 3.

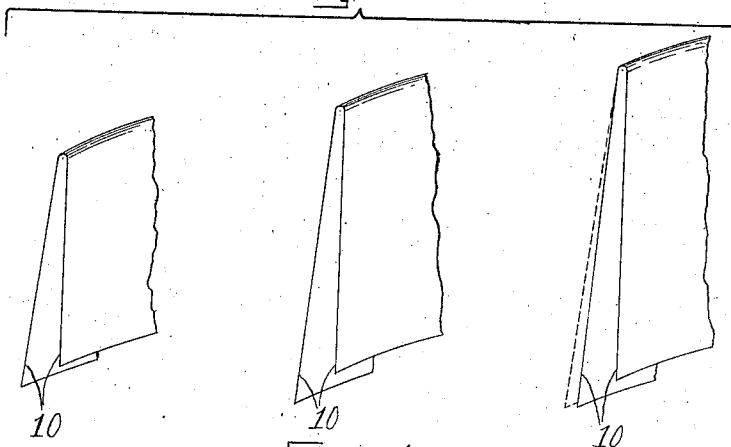
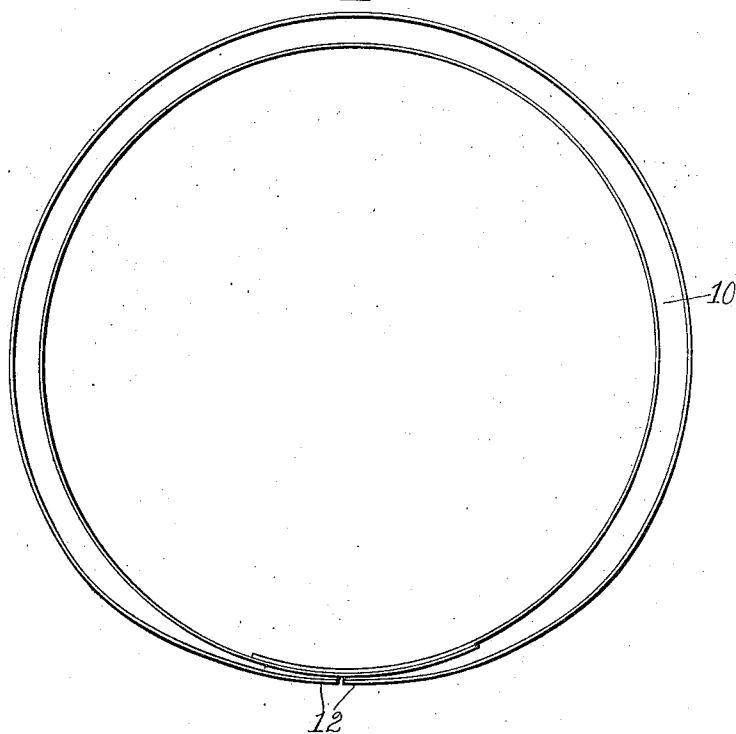


Fig. 4.



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JOSEPH MCKAY, OF TROY, NEW YORK, ASSIGNOR TO HALL, HARTWELL & CO., OF
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MANUFACTURE OF FOLD-COLLARS.

1,045,724.

Specification of Letters Patent.

Patented Nov. 26, 1912.

Application filed April 9, 1910. Serial No. 554,320.

To all whom it may concern:

Be it known that I, JOSEPH MCKAY, a citizen of the United States, residing at Troy, county of Rensselaer, and State of New York, have invented certain new and useful Improvements in the Manufacture of Fold-Collars, of which the following is a specification.

The invention relates to such improvements and consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the reference characters marked thereon, which form a part of this specification.

Similar characters refer to similar parts in the several figures therein.

In the use of the prevailing styles of fold-collars, it is customary to wear a scarf or tie which passes around the neck of the wearer between the band and the folded-over top of the collar.

By the usual methods of manufacture, fold-collars are produced characterized by irregularity and variation in the width of space between the band and folded-over top opposite the lower edge of the band along the back and sides of the collar, leaving at certain points more space, than is necessary for the tie, while at other points said space is so narrow and restricted as to impede the free sliding movement of the tie in knotting the same.

The principal object of the present invention is to insure the provision in fold-collars differing in length and height of a tie-space of substantially uniform width extending around the back and sides of the collar between the band and top thereof, from a point near one end of the collar to a point near its other end. I have ascertained that this object can be accomplished by cutting in the manner hereinafter described the edges of the top and band which are secured together in completing the collar.

Other objects of the invention will appear in connection with the following description.

Figure 1 of the drawings is a view showing superimposed one upon another patterns or forms for tops, side by side with similarly superimposed patterns or forms for the corresponding bands for three different lengths of fold-collar, all of the same height in the finished product. Fig. 2 is a

similar view of the patterns or forms for three different heights of collar of the same length and style. Fig. 3 is a diagrammatic representation of vertical cross-sections of three fold-collars of different heights arranged side by side for comparison, to illustrate the uniformity in width of the tie-space secured by my improved method. Fig. 4 is a bottom plan view of a completed collar made in accordance with my improved method.

For convenience of illustration, I have in Figs. 1 and 2 shown only half of each pattern extending from the middle to one end thereof, the broken-away part of the pattern being a mere duplication of the part shown.

In the manufacture of fold-collars, the connected edges of the top and band are cut along lines more or less curved in whole or part, so that when the top is folded over and the collar bent to circular form, the top and band diverge downward at a greater or less angle, which angle frequently varies in different parts of the same collar as made by methods heretofore employed. Such divergence provides the space between the band and top which receives the scarf or necktie.

As heretofore practised, it has been customary to lay out the patterns for the longer sizes by projecting to the proper distance apart the halves of a pattern for a shorter size, and then filling in the gap along lines approximately straight, or varying materially from the lines of curvature immediately adjacent to the filled-in portion. The connected edges of the band and top of collars cut from such patterns would thus present a more or less irregular line beginning at a point near one end of the collar, and extending to a point near the other end thereof. It has also been customary to cut the edge of the top which is connected with the band along different lines from the edge of the band which is connected therewith in order to secure greater "spring" in the collar, that is, a greater angle of divergence between the top and the band. Collars of the same length but of different heights, as well as collars of the same height but of different lengths, when made by the method above set forth are found to vary materially in the width of the tie-space, while in the individual collars the tie-space will be found to vary in width at different points along the back and side portions of the collar.

This is in part due to the fact that in collars of different heights, having the same angle of divergence between the top and band, the width of the tie-space opposite the lower edge of the band will necessarily vary in accordance with the height of the collar.

I have ascertained that substantially the same width of tie-space can be provided in collars of the same height but of different lengths, as well as in collars of the same length but of different heights, by cutting the connecting edges of the top and band along the back and side portions of the collar, from a point near one end to a point near the other end thereof, upon arcs, the radii of which vary in length in accordance with the height of the collar at the back, and the lengths of which arcs vary in accordance with the lengths of the collars, and by having the connecting edges of the top and band of each collar cut upon like lines.

In Fig. 1, I have shown the patterns for three different lengths of collar all of one height superimposed one upon another for comparison, 1, 2 and 3, being the patterns for the tops, and 4, 5 and 6, the patterns for the corresponding bands. The middle portions of the edges of the tops which are to be attached to the band are all laid out upon a curved line, 7, forming part of a circle having a radius of an ascertained proper length to give the desired width of tie-space for the height of collar to be made. The arc of the line, 7, which is taken for the several lengths of collar-tops will be seen to vary in length, extending from the middle of the collar at 8, in opposite directions to points near the respective ends of the collar, such variation in length being in accordance with the length of the collar. In like manner the intermediate portions of the edges of the bands which are to be attached to the respective tops are all laid out upon a curved line, 9, forming part of a circle having a radius substantially the same as that of the arc, 7, the length of arc of the line, 9, varying in accordance with the length of the collar. Without regard to the length of the collar, every collar of the same height cut upon said arcs, 7 and 9, as set forth, will have the same angle of divergence between its top and band opposite every point in the connected top and band edges which are cut on said arcs.

In Fig. 2, I have shown the patterns for three different heights of collar all of the same length which is substantially that of the collar having the top, 1, and the band, 4, shown in Fig. 1, the different heights of top being designated in Fig. 2 as, 1, 1^a and 1^b, and the corresponding bands as, 4, 4^a and 4^b.

From an inspection of Fig. 2, it will be seen that the edges of the tops which are to be attached to the bands are, from the middle of the top at, 8, to a point near each end thereof, cut upon arcs, 7, 7^a and 7^b, respec-

tively, the curvature of which varies for the different tops, being greatest in the lowest top and correspondingly less in each of the higher tops.

As the greater or sharper the curvature, (that is, the shorter the radius) of the arcs, 7, 7^a and 7^b, the greater will be the angle of divergence between the top and the band of the finished collar, it will be seen that by properly varying the degree of curvature or length of radius, I can vary the angle of divergence in collars of different heights, so that the width of the tie-space at the lower edge of the band will be substantially the same in all of said collars. This will be understood from an inspection of Fig. 3, showing three different heights of collars with three correspondingly different degrees of divergence, having the tie-space, 10, of the same width in all at a point opposite the lower edge of the band.

By dotted lines I have indicated the increased width of tie-space which would result from having the angle of divergence in the highest the same as that in the lowest of the three collars.

Referring further to Fig. 2, it will be seen that the edges of the bands which are to be attached to the tops are from the middle of the band to a point near each end thereof cut upon arcs, 9, 9^a and 9^b, respectively, having substantially the same radii as the respective arcs, 7, 7^a and 7^b.

For the purpose of facilitating the adjustment of the scarf or necktie, it is necessary to provide ample width of space between the band and top, only at the back and side-positions of the collar; as at the front of the collar the ends of the collar-top are unrestricted by the curvature of the collar and freely yield in the manipulation of the tie.

For sightliness, it is desirable in many styles of fold-collar to have the ends of the collar-top sit in as closely to the band as the tie will permit. To secure this effect, I preferably cut the end-positions of the tops and corresponding portions of the bands which are to be attached thereto, along lines reversely curved relatively to the intermediate portions of such edges, whereby the angle of divergence between the band and top is greatly reduced at the front of the collar, whereat reduction in width of tie-space does not materially restrict the slide-movement of the scarf or necktie.

The collar will thus have a close-fitting front effect, as shown at, 12, in Fig. 4, while provided with a tie-space of substantially uniform and ample width at the back and sides of the collar.

I make no claim herein to the fold-collar shown and described herein as an article of manufacture, the same forming the subject-matter of an application filed by me October 26, 1912, Ser. No. 727,933, as a division of

this application; nor to the fold-collar patterns herein shown and described, the same forming the subject-matter of an application filed by me October 26, 1912, Ser. No. 727,984, as a division of this application.

What I claim as new and desire to secure by Letters Patent is—

1. That improvement in the art of making fold-collars which consists in cutting the intermediate portions of the edges of collar-tops which are to be attached to bands for collars of the same height at the back, upon arcs of the same radius varying in length in accordance with the lengths of said collars, stitching said tops to the bands and completing the manufacture of the collars by known methods.

2. That improvement in the art of making fold-collars which consists in cutting the intermediate portions of the edges of collar-bands which are to be attached to tops for collars of the same height at the back, upon arcs of the same radius varying in length in accordance with the lengths of said collars, stitching said bands to the tops, and completing the manufacture of the collars by known methods.

3. That improvement in the art of making fold-collars which consists in cutting the intermediate portions of the edges of collar-tops which are to be attached to collar-bands for collars of different heights at the back, upon arcs the radii of which vary in length in accordance with the heights of said collars at the back thereof, stitching said tops to the bands, and completing the manufacture of the collars by known methods.

4. That improvement in the art of making fold-collars which consists in cutting the intermediate portions of the edges of collar-bands which are to be attached to collar-tops for collars of different heights at the back, upon arcs the radii of which vary in length in accordance with the height of said collars at the back thereof, stitching said bands

to the tops and completing the manufacture of the collars by known methods.

5. That improvement in the art of making laundered fold-collars which consists in cutting the intermediate portions of the edges of collar-tops which are to be attached to collar-bands for collars of different heights at the back, upon arcs the radii of which vary in length in accordance with the heights of the collars at the back, and the length of which arcs vary in accordance with the lengths of said collars, stitching said tops to the bands and completing the manufacture and laundering of the collars by known methods.

6. That improvement in the art of making fold-collars which consists in cutting the intermediate portions of the edges of collar-bands which are to be attached to collar-tops for collars of different lengths and different heights at the back, upon arcs the radii of which vary in length in accordance with the heights of the collars at the back, and the length of which arcs vary in accordance with the lengths of said collars, and completing the manufacture of the collars by known methods.

7. That improvement in the art of making fold-collars which consists in cutting the connecting edge-ports of the collar-tops and collar-bands upon like lines for the several collars, intermediate portions of which comprise arcs varying in length in accordance with the lengths of the collars, and the radii of which arcs vary in length in accordance with the height of said collars at the back, and completing the manufacture of the collars by known methods.

In testimony whereof, I have hereunto set my hand this 7th day of April, 1910.

JOSEPH McKAY.

Witnesses:

FRANK C. CURTIS,
J. E. DONSACH.