Jan. 2, 1968 J. W. LESS 3,360,800

ARTICLES OF NECKWEAR

Filed May 4, 1966 2 Sheets-Sheet 1

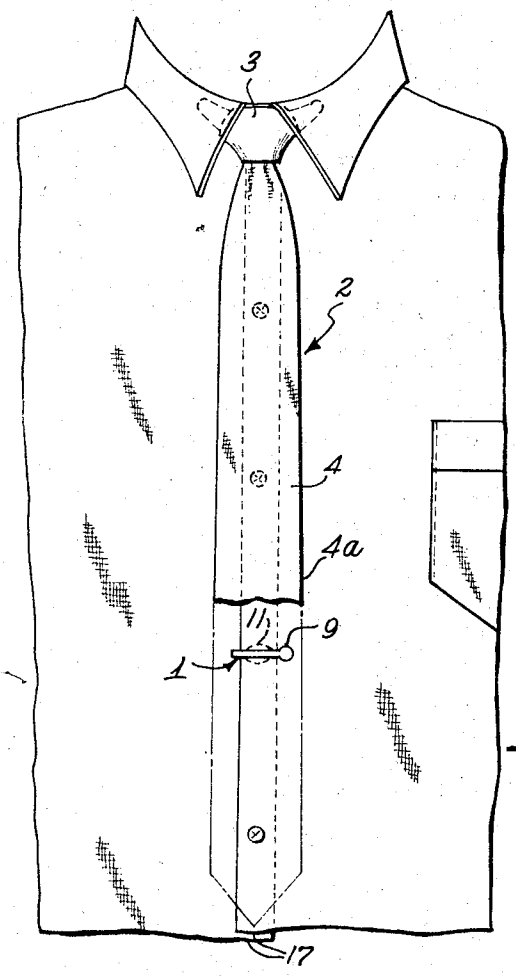


Fig. 1.

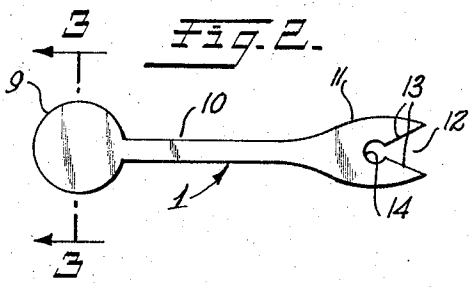


Fig. 2.

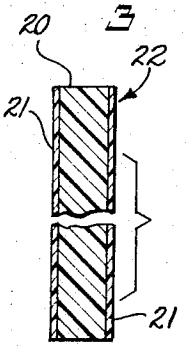


Fig. 3.

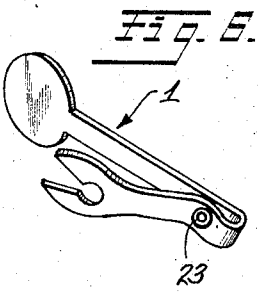


Fig. 5.

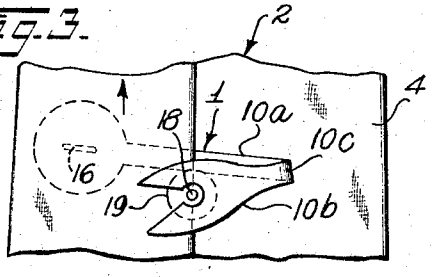


Fig. 4A.

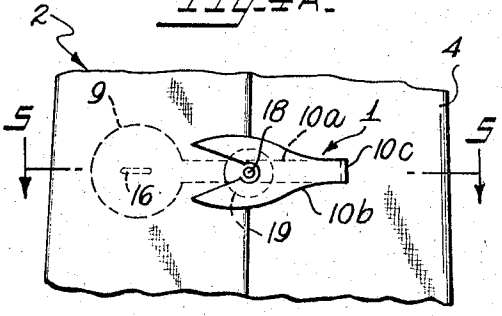


Fig. 4.

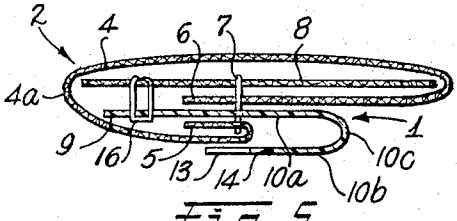


Fig. 5.

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Jan. 2, 1968 J. W. LESS 3,360,800

ARTICLES OF NECKWEAR

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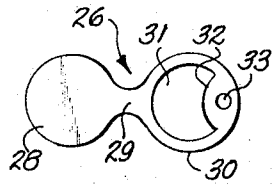


Fig. 7.

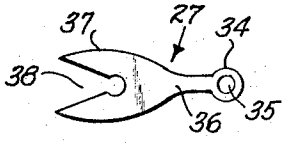


Fig. 8.

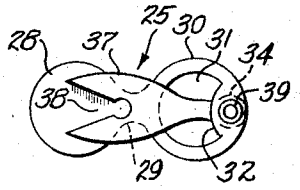


Fig. 9.

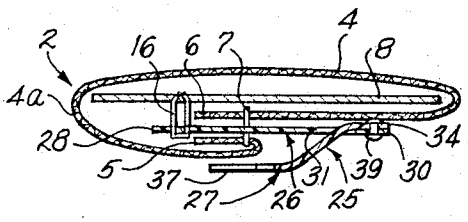


Fig. 10.

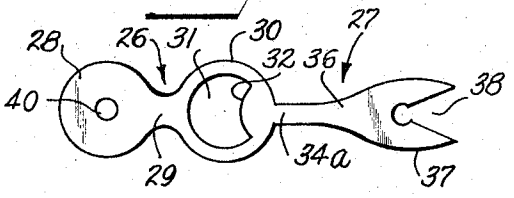


Fig. 11.

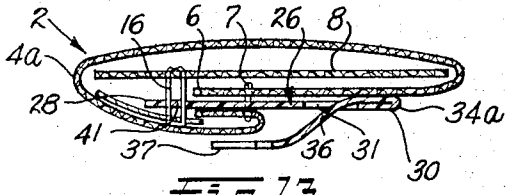


Fig. 13.

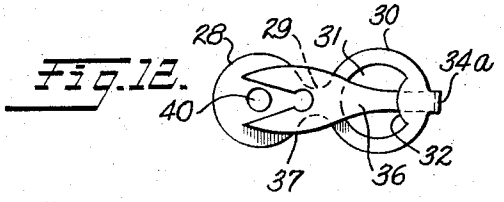


Fig. 12.

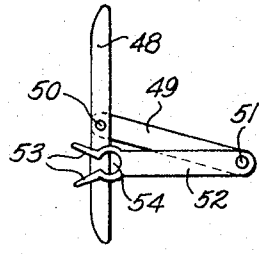


Fig. 15.

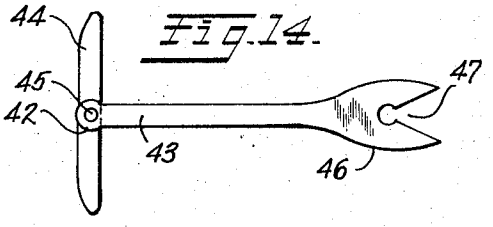


Fig. 14.

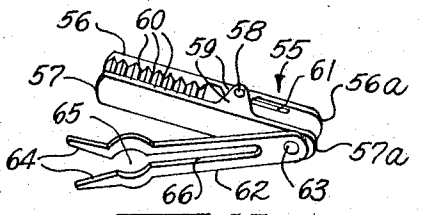


Fig. 17.

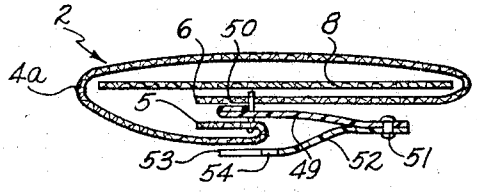


Fig. 16.

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United States Patent Office 3,360,800
Patented Jan. 2, 1968

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ARTICLES OF NECKWEAR

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Filed May 4, 1966, Ser. No. 547,600
16 Claims. (Cl. 2—145)

This invention relates to neckties equipped with tie anchors operative to retain the tie adjacent the wearer's shirt front while allowing the tie to move upwardly and downwardly relative to the shirt front in accordance with movement of the wearer's body. The invention also embraces tie anchors for such neckties. Though also useful in connection with conventional neckwear, the invention is particularly applicable to tailless ties equipped with such tie anchors.

Tie clasps, tie tacks, and tie anchors of many kinds have been proposed by prior-art workers for holding the dependent portion of the tie adjacent the wearer's shirt front. However, such prior art devices have been so constructed that the tie is either so securely attached to the shirt front that there is no significant freedoom of relative vertical movement between the tie and the shirt front, or that the tie is too loosely retained. There has been a continuing need for improvement in such devices, both to attain the desired freedom of relative vertical movement while providing adequate constraint of the tie, and to devise a product of this type which can be produced at less expense than has heretofore been involved. It is accordingly a general object of the invention to provide neckwear which will satisfy this demand.

Another object is to devise an improved, highly simplified and inexpensive tie anchor which will both adequately restrain the tie and yet allow such substantial freedom of relative vertical movement between the tie and the shirt front as will adequately accommodate the wearer's body movements without undue tensioning of the tie.

A further object is to provide a tie anchor particularly adapted for attachment in simple fashion to a tailless tie.

Yet another object is to provide a tie anchor which lies completely hidden behind the tie body when worn.

A still further object is to devise such a tie anchor which can be permanently attached to the tie and will not detract from the appearance thereof.

In order that the manner in which the foregoing and other objects are attained in accordance with the invention can be understood in detail, particularly advantageous embodiments thereof will be described with reference to the accompanying drawings, which form a part of this specification, and wherein:

FIG. 1 is a front elevational view of an article of neckwear, as worn, with part of the body portion of the necktie thereof shown in phantom lines;

FIG. 2 is a plan view of a tie anchor employed in the article shown in FIG. 1;

FIG. 3 is an enlarged transverse sectional view taken on line 3—3, FIG. 2;

FIG. 4 is a rear elevational view showing the tie anchor of FIG. 2 attached to a necktie, with the tie anchor bent upon itself to provide two flexible arms capable of relative movement in generally pivotal fashion;

FIG. 4A is a view similar to FIG. 4 but showing the tie anchor in a different operative position;

FIG. 5 is a sectional view taken on line 5—5, FIG. 4;

FIG. 6 is a perspective view of the tie anchor of FIGS. 2—4 in modified form;

FIGS. 7 and 8 are plan elevational view of two arm portions employed to produce a tie anchor in accordance with another embodiment of the invention;

FIG. 9 is a plan elevational view of the arm portions of FIGS. 7 and 8 in assembled relation;

FIG. 10 is a sectional view, similar to FIG. 5, showing the tie anchor of FIG. 9 attached to a necktie;

FIG. 11 is a plan elevational view of a tie anchor in accordance with another embodiment of the invention;

FIG. 12 is a rear elevational view of the tie anchor of FIG. 11 in a form ready for attachment to a necktie;

FIG. 13 is a sectional view, similar to FIG. 5, showing the tie anchor of FIGS. 11 and 12 attached to a necktie;

FIG. 14 is a plan elevational view of a tie anchor similar to that of FIG. 2 but with modified means for attachment to the necktie;

FIG. 15 is a rear elevational view of a tie anchor in accordance with still another embodiment of the invention;

FIG. 16 is a transverse sectional view, similar to FIG. 5, illustrating the embodiment of FIG. 15 attached to a necktie; and

FIG. 17 is a perspective view of a tie anchor in accordance with another embodiment of the invention.

Turning now to the drawings in detail, FIGS. 1—5 illustrate a tie anchor 1, FIG. 2, attached as a permanent part of the tailless necktie 2. The necktie 2, which can be made in accordance with my U.S. Patent 2,804,627, issued Sept. 3, 1957, or in other conventional fashions, comprises a pre-tied knot structure 3 and a single tie body portion 4 depending from the knot. The knot is provided with suitable means (not shown) for attaching the tie to the wearer's collar, so that the tie body depends in the usual manner before the buttoned central portion of the wearer's shirt.

As seen in FIG. 5, the tie body 4 is made from a single piece of fabric and is generally tubular, one edge portion being inturned at 5 and secured to the other edge portion 6 by stitches 7. The tie body includes the usual fabric lining 8, and the lining is also secured by the stitches 7.

The tie anchor 1 is in the form of a single integral body of relatively thin, flexible sheet material and includes a flat circular portion 9 at one end, a relatively narrow elongated body 10, and a flat, enlarged portion 11 at the remaining end. Considering that the device has a longitudinal axis established by the elongated nature of body 10, the end 11 can be described as having a notch 12 which opens longitudinally, or endwise, away from end portion 9. Notch 12 is defined by two outwardly divergent straight edges 13 and an aperture 14 which is in the form of a circle interrupted by the edges 13.

The manner of attachment of the tie anchor 1 to the tie body is shown in FIG. 5. The enlarged circular end portion 9 is disposed adjacent the rear face of lining 8 near the edge 15 of the tie body, this being the right hand edge of the tie as viewed from the front. Portion 9 is secured to lining 8 by a staple 16 which straddles the center of the circular portion 9. In this embodiment, staple 16 extends only through tie anchor portion 9 and lining 8. The elongated body portion 10 of the tie anchor extends transversely of the tie body 4, passing between edge portions 5 and 6 and between adjacent ones of the stitches 7. At a point intermediate its ends, body portion 10 is bent upon itself, as best seen in FIG. 5, in such fashion that the aperture 14 is at least generally behind the centerline of the tie body. Accordingly, as worn, the tie anchor has two arm portions 10*a* and 10*b*, FIG. 5, which are connected by the bend 10*c*.

As shown in FIG. 1, the notched end portion 11 of the tie anchor is inserted between the overlapping edges 17 of the wearer's shirt, with the aperture 14 engaged about the threads 18, FIG. 4, which secure one of the buttons 19 to the shirt. Thus, the end portion 9 of the tie anchor is permanently attached to the tie body, and the other

end **11** of the tie anchor is detectably secured to the wearer's shirt front.

Since end portion **9** of the tie anchor is secured to the lining **8** at a point which is not only between the centerline of the tie and edge **4***a* of the tie body but also closer to edge **4***a* than to the centreline, only a relatively small portion of the length of body **10** extends exterior to the tie body. Accordingly, arms **10***a* and **10***b* are relatively short and, despite the flexibility of the tie anchor, the tie body can move only a short distance away from the shirt front. Bend **10***c* constitutes a generally pivotal connection between arms **10***a* and **10***b*, allowing the arms to move in generally pivotal fashion about an axis normal to the plane of the tie body and extending through the area of the bend. A limited amount of pivotal movement is also allowed about the axis established by staple **16**, since the material of lining **8** is flexible and allows a slight turning of the staple. It will thus be understood that, when there is relative vertical movement between the tie body and the shirt front, the tie anchor can be distorted so that arms **10***a* and **10***b* extend at an angle relative to each other, the vertex of the angle being at the axis of generally pivotal movement established by bend **10***c*, and the tie anchor can also be displaced angularly, about staple **16**, in the direction dictated by the strain applied between arms **10***a* and **10***b*. FIG. 4A illustrates typical pivotal displacement of the tie anchor resulting from movement of the tie body upwardly relative to the shirt front.

When arm **10***b* lies directly behind arm **10***a*, there being no pivotal displacement between the two arms, circular portion **14** of the notch is approximately centered behind the center line of the tie body **4**.

In manufacture of the tie, the body **4** is made in the usual manner, so that stitches **7** are continuous. The stitches are then cut over a length adequate to allow insertion of end portion **9** of the anchor and also insertion of the stapler head for applying staple **16**. The cut stitches are not replaced, and there is accordingly adequate free room for slight pivoting of the tie anchor about the staple.

Anchor **1** is advantageously made from a thin sheet of synthetic resin material characterized by both high strength and resilient flexibility. The mixed cellulose ester compositions are particularly suitable and especially good results are obtained by using a cellulose acetate-butyrate material having an acetyl-to-butyryl ratio on the order of 1:25 and a degree of polymerization of 250–350. Advantageously, the cellulose acetate-butyrate sheet material **20**, FIG. 3, is laminated with two thin films **21** of a highly oriented polyester material, typically a condensation product of terephthalic acid and a glycol such as ethylene glycol, the cellulose acetate-butyrate sheet constituting the core of the laminate and the two films **21** bearing a continuous decorative metallic coating on their outer surfaces. The metallic coatings are conventionally applied by vapor disposition under vacuum, as described in U.S. Patent 3,152,950, issued Oct. 13, 1964, to Palmquist et al. The laminated sheet **22**, FIG. 3, can be quite thin, on the order of a few hundredths of an inch or less, good results having been obtained with sheet material having a thickness of 0.02".

Because of the resilient nature of such laminated sheet material, the tie anchor returns to its normal flat position, as in FIG. 2, when not in use, but does not detract from the appearance of the tie since the decorative metallic coatings on the surfaces of the anchor lend it an attractive, non-mechanical appearance. Since the tail portion of the tie has been eliminated, providing a substantial saving in cost of the material, more expensive and attractive fabrics can be used without increasing the cost above the price range normally encountered in the trade.

FIG. 6 shows the tie anchor **1** in modified form, with a conventional metal eyelet **23** extending through arm portions **10***a* and **10***b* at a point adjacent the bend **10***c*. In this embodiment, the eyelet establishes the axis for relative pivotal movement between arms **10***a* and **10***c*. The eyelet holds arms **10***a* and **10***b* in face-to-face contact, so that arm **10***b* lies against arm **10***a*. When the tie is worn, however, the flexibility of the sheet material from which the anchor is made allows a limited separation of the notched end of the anchor rearwardly, as illustrated in FIG. 6.

FIGS. 7–10 illustrate another embodiment, in which the tie anchor **25** comprises a first arm **26**, FIG. 7, and a second arm **27**, FIG. 8, both formed from the laminated sheet material described with reference to FIG. 3. Arm **26** includes a circular end portion **28**, a straight relatively narrow body portion **29**, and another circular end portion **30**. End portion **28** is in the nature of a solid disc. End portion **30** has a crescent-shaped opening **31**, the arcuate edge **32** of which is concentric with a small circular opening **33**. Body portion **29** extends with its longitudinal axis coincident with a diameter of portion **28** and with a diameter of portion **30**, so that the centers of the circular edges of the two end portions lie on the axis of the body portion. Arm **27** includes a circular end portion **34** having a centered circular opening **35**. The body portion **36** projects radially from end portion **34** and is enlarged to provide the notched end portion **37**. Portion **37** has a notch **38** in all respects identical with notch **12**, FIG. 2.

As seen in FIGS. 9 and 10, end portion **34** overlies one surface of that part of portion **30** which is between arcuate edge **32** and the opposing arcuate segment of the outer edge of portion **30**, openings **33** and **35** being aligned with each other. An eyelet **39** extends through openings **33** and **35** and secures portion **30** of arm **26** to portion **34** of arm **27**, with freedom of relative movement between the arms pivotally about the axis established by eyelet **39**. Body portion **36** of arm **27** extends through opening **31**, so that the notched end **37** lies on the side of arm **26** opposite from the side with which end portion **34** is engaged. As seen in FIG. 10, it can be considered that end portion **34** of arm **27** lies in front of arm **26**, while the notched end portion **37** is behind arm **26**.

Tie anchor **25** is secured to necktie body portion **4** in the same general manner hereinbefore described with reference to FIG. 5. Arm **26** extends between end portions **5** and **6**, FIG. 10, and is secured to lining **8** by staple **16** located at the center of end portion **28**. A portion of stitches **7** is removed to accommodate body portion **29** of arm **26**. End portion **30** of arm **26**, and all of arm **27**, are located outside of and behind the tubular tie body. Operation of the tie anchor is essentially the same as described with reference to the embodiment of FIGS. 1–5, save that the manner in which arms **26** and **27** are interrelated tends to maintain notched end **37** quite close to the tie body, because of the resilient nature of the sheet material from which the arms are made, and eyelet **39** defines a precise, rather than approximate, pivotal axis.

The embodiment of FIGS. 11–23 employs the tie anchor **25** in modified form. Arms **26** and **27** are portions of an integral unit, as seen in FIG. 11, end portion **34***a* of arm **27** joining the edge of end portion **30** of arm **26** in an area diametrically opposed to body portion **29**, so that the longitudinal axes of the two arms are coincident. Openings **33** and **35**, and eyelet **39**, of FIGS. 7–10 are eliminated. End portion **34***a* is bent upon itself, immediately adjacent end portion **30**, and arm **27** extends in front of arm **26**, and thence through opening **31** so that the notched end **37** is behind arm **26**.

In this embodiment, end portion **28** of arm **26** is provided with a centrally located circular opening **40**. In securing the tie anchor to the tie, as seen in FIG. 13, and additional piece of fabric **41** is provided behind lining **8**, and arm **26** is so positioned that opening **40** is located between lining **8** and the fabric piece **41**. The staple **16** is driven through piece **41** and lining **8**, and extends through opening **40**, the diameter of opening **40** being large enough to allow arm **26** to pivot about the staple so that there is essentially complete freedom of pivotal movement of arm **26** relative to the tie body. Operation of the tie

anchor is otherwise generally as described with reference to FIGS. 1–10.

FIG. 14 illustrates a tie anchor in accordance with another embodiment of the invention. Here, end portion **42** of the main part **43** of the anchor has been reduced in size and is pivotally attached to the central portion of a straight elongated strip **44**, as by means of an eyelet **45**. Part **43** is elongated and straight, terminating at its remaining end in an enlarged end portion **46** provided with a notch **47** which is identical with notches **12** and **38**. Strip **44** is secured to the tie in the manner hereinafter described with reference to FIG. 16. The elongated body portion is bent upon itself so that the notched end portion **46** lies behind the tie, the tie anchor operating in the same general fashion described with reference to FIGS. 1–5, save that the eyelet **45** defines a precise pivotal axis to serve the same purpose as does cooperation of opening **40** and staple **16** in the embodiment of FIG. 13.

In the embodiment of FIG. 15, a straight strip **48** is again used, one end of an arm **49** being pivoted thereto, intermediate the ends of the strip, by eyelet **50**. To the remaining end of arm **49** there is attached, by eyelet **51**, one end of a second arm **52**. The remaining end of arm **52** is provided with a notch which opens endwise of the arm and is defined by outwardly diverging edges **53** and a small circular opening **54** the edge of which is interrupted by the adjacent ends of edges **53**. This embodiment is like that of FIG. 14 save that the eyelet **51** establishes a precisely defined pivotal axis while, in FIG. 14, the pivotal axis between the two arm protions of part **43** is defined only by the bend in that member.

FIG. 16 shows the tie anchor of FIG. 15 attached to necktie **2** and will also serve to illustrate the manner in which the tie anchor of FIG. 14 is applied to the tie. Strip **48** is disposed between edge portions **5** and **6** of the fabric of the tie body and is secured to edge portions **6**, as by two staples (not shown) disposed one above and one below the connection between the strip and arm **49** by eyelet **50**. Arm **49** emerges from between edge portions **5** and **6**, so that most of arm **49** and all of arm **52** are disposed outside of and behind the tubular tie body **4**. Operation is the same as described with reference to FIGS. 7–10, it being understood that circular portion **54** of the notch in the end of arm **52** is engaged about or straddles the threads securing one of the buttons to the wearer's shirt.

In the embodiments of FIGS. 14 and 15, all parts of the tie anchor can be made from thin sheet metal or from thin synthetic resinous sheet material of the type described with reference to FIG. 3.

The embodiment of FIG. 17 comprises an alligator clip indicated generally at **55** and including two bars **56** and **57** pivoted intermediate their ends by a pivot shaft **58** engaged in openings in side ears **59**. One end portion of bar **56** is provided with gripping teeth **60**, the opposing portion of bar **57** presenting a plain surface. A torsion spring (not shown) surrounds shaft **58** and, in conventional fashion, has its end portions **60** engaged with the opposing faces of bar portions **56***a* and **57***a* so as to bias the bars pivotally in a sense urging teeth **60** toward bar **57**.

One end of a flat arm **62** is pivotally connected to end portion **57***a* of bar **57** by a rivet **63**. The appropriate flat face of arm **62** is held in sliding engagement with that surface of bar **57** which faces away from bar **56**. Arm **62** is approximately the same length as clip **55** and terminates in an endwise opening notch defined by outwardly diverging edges **64** leading to a small circular portion **65** capable of embracing the threads securing a button to the wearer's shirt. A straight elongated slot **66** opens into circular portion **65** and extends for a substantial portion of the length of the arm to increase the freedom of transverse movement of the tie anchor relative to the button-securing threads.

In use, the clip **55** is opened by forcing end portions **56***a* and **57***a* toward each other, and the toothed portion of bar **56** is inserted between edge portions **5** and **6**, FIGS. 5, 10, 13 and 16, of the fabric of the tie body portion **4**. The clip is then released, so that edge portion **5** is clamped between teeth **60** and bar **57**. The clip can occupy any transverse position relative to the tie body. The free end of arm **62** is inserted between the edges **17** of the wearer's shirt, and the circular portion **65** of the notch is engaged about the thread securing a button to the shirt. Operation is then generally as described with reference to FIGS. 7–10.

In considering FIGS. 5, 10, 13, and 16, it is to be recognized that these sectional views are "expanded," the various fabric layers being shown as spaced apart, and stitches **7** and staple **16** being distorted, for clarity and simplicity of illustration.

What is claimed is:

1. In an article of neckwear, the combination of

a necktie including tie knot means adapted to be worn at the front of the wearer's collar, and a tie body portion depending from said knot means to occupy, when worn, a position overlying the wearer's shirt front, and

a tie anchor operative to retain said tie body portion adjacent the shirt front while allowing said tie body portion to move upwardly and downwardly relative to the shirt front in accordance with movement of the wearer's body, said anchor comprising

first and second arms located behind said tie body portion and both extending generally transversely thereof,

one end of said first arm being attached to said tie body portion, said first arm being of a significant length such that, when said first arm extends at right angles to the longitudinal center line of said tie body portion, the other end of said first arm is spaced across the tie body portion a substantial distance from said one end.

one end of said second arm being connected to said other end of said first arm, the connection between said arms allowing said arms to move relative to each other in at least generally pivotal fashion about an axis generally normal to the plane of said tie body portion and extending through the area of said connection, whereby said second arm can occupy a position generally parallel to said first arm, and said arms can also assume relative positions in which said second arm extends at an angle to said first arm with the vertex of said angle being located at said axis and with the plane of said angle transverse to said axis,

said second arm being of such length that, when said arms are parallel to each other and extend transversely of said tie body portion, the other end of said second arm is located substantially at the center line of said tie body portion, and

means at said other end of said second arm for releasably attaching the same to the wearer's shirt front.

2. An article of neckwear according to claim **1**, wherein

said other end of said second arm includes spaced portions adapted to straddle the thread which secures a button to the wearer's shirt.

3. An article of neckwear according to claim **1**, wherein

said tie body portion comprises a tubular fabric body enclosing a lining and said one end of said first arm extends within said tubular body and is attached to said lining.

4. An article of neckwear according to claim **1**, wherein

said arms are both portions of an integral elongated flat flexible strip bent upon itself with the bend forming the connection between said arms.

5. An article of neckwear according to claim 4, wherein

said one end of said first arm and said other end of said second arm are both enlarged in the plane of said flat strip, the remainder of said strip being relatively narrow.

6. An article of neckwear according to claim 4, wherein

said anchor further comprises fastener means extending through both of said arms immediately adjacent said bend and effective to retain the connected end portions of said arms close to each other.

7. An article of neckwear according to claim 3, wherein

said first arm is substantially longer than said second arm and said one end of said first arm is spaced from the center line of said tie body portion on the opposite side thereof from said connection.

8. An article of neckwear according to claim 3, wherein

said one end of said first arm is provided with an aperture normal to the plane of said tie body portion, and

said one end of said first arm is attached to said linling by a fastener extending through said aperture, whereby said first arm can be pivoted relative to said tie body portion about the axis established by said fastener.

9. An article of neckwear according to claim 1, wherein

said anchor further comprises an additional member attached to said tie body portion, said one end of said first arm being pivotally connected to said additional member.

10. An article of neckwear according to claim 1, wherein

said necktie is tailless.

11. An article of neckwear according to claim 1, wherein

said first and second arms are separate members, said other end of said first arm and said one end of said second arm overlapping each other, and

said anchor further comprises a fastener extending through said overlapped ends to retain the same together and define said axis.

12. An article of neckwear according to claim 1, wherein

said first arm includes an opening which is adjacent said axis and between said axis and said one end of said first arm,

said one end of said second arm is located between said first arm and said tie body portion, and

said second arm extends through said opening in said first arm, said opening being of such size and configuration as to allow said arms to pivot relative to each other.

13. An article of neckwear according to claim 12, wherein

said opening is generally arcuate and generally centered on said axis.

14. An article of neckwear according to claim 1, wherein

said arms are of thin, resiliently flexible, synthetic resin sheet material.

15. An article of neckwear according to claim 14, wherein

said sheet material is a laminate comprising a core lamina of cellulose acetate-butyrate polymer and surface laminae each of a highly oriented polyester film bearing a continuous decorative metallic film.

16. An article of neckwear according to claim 1, wherein

said first arm is constituted by a pivoted jaw clip, and

said second arm is pivoted to said clip to swing in a plane parallel to the pivotal axis of the jaws thereof.

References Cited

UNITED STATES PATENTS

2,652,568	9/1953	Bagier	2—145
3,116,525	1/1964	Koby	2—145 X
3,204,306	9/1965	Anderson	24—52
1,573,885	2/1926	Weisbaum	2—145

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