

June 5, 1956

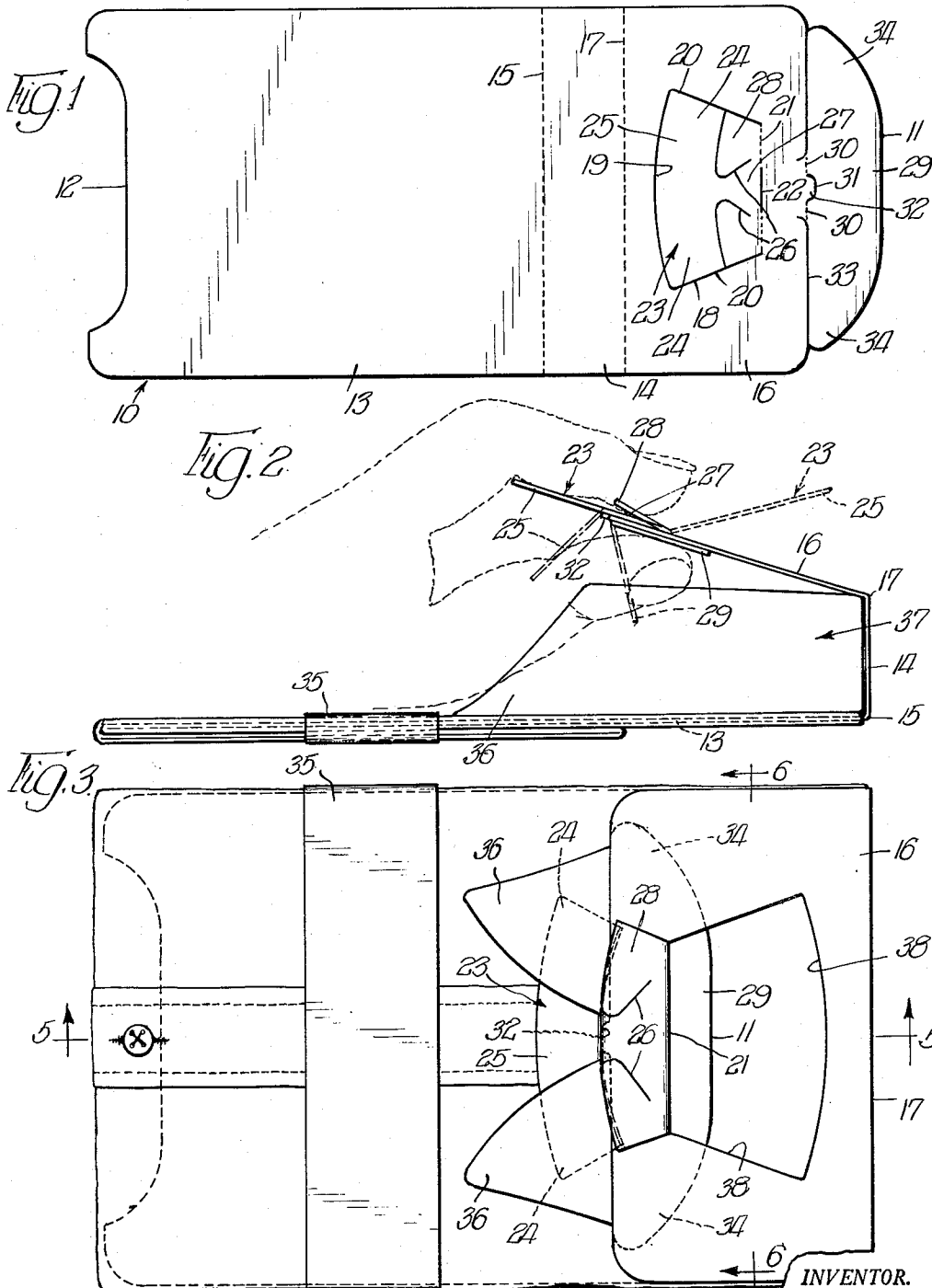
A. L. IVERSON

2,748,929

COMBINATION COLLAR PROTECTOR AND SHIRTBOARD

Filed Nov. 2, 1953

3 Sheets-Sheet 1



INVENTOR.

Arden L. Iverson,

BY

Cromwell, Christ-Warden
attys.

June 5, 1956

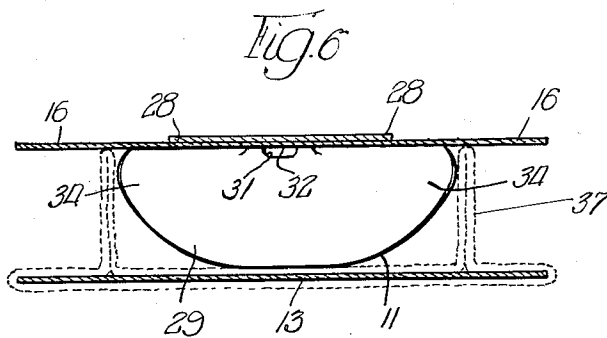
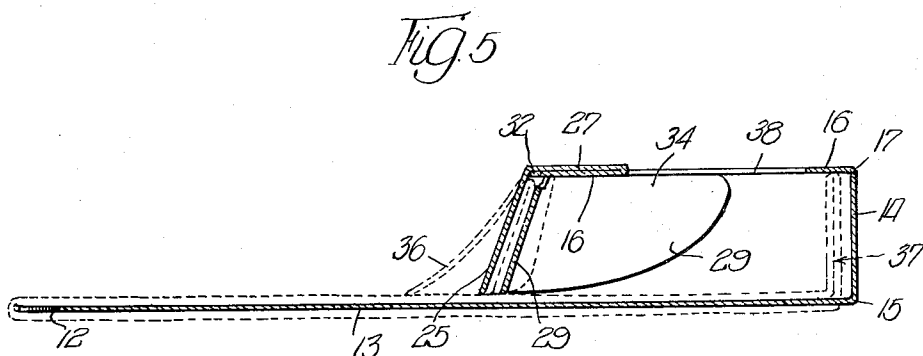
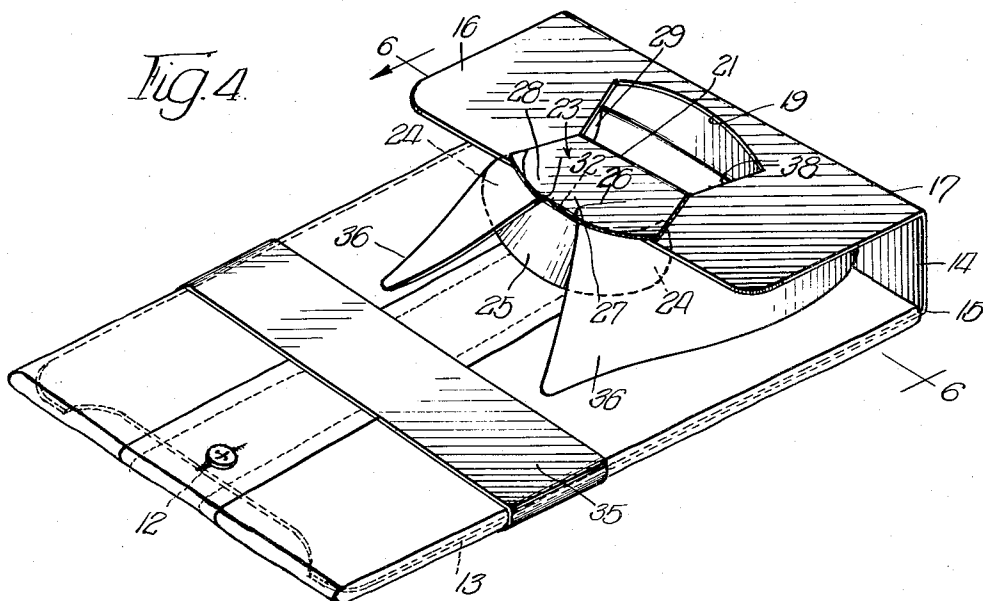
A. L. IVERSON

2,748,929

COMBINATION COLLAR PROTECTOR AND SHIRTBOARD

Filed Nov. 2, 1953

3 Sheets-Sheet 2



INVENTOR.

Arden L. Iverson

BY

Cromwell, Christa Ward
attys

June 5, 1956

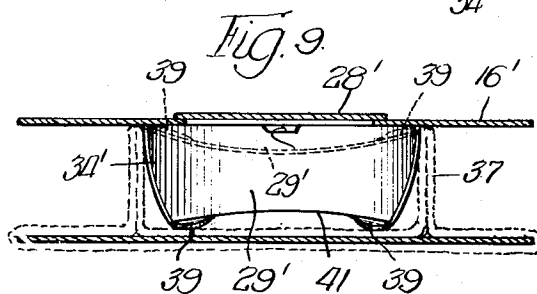
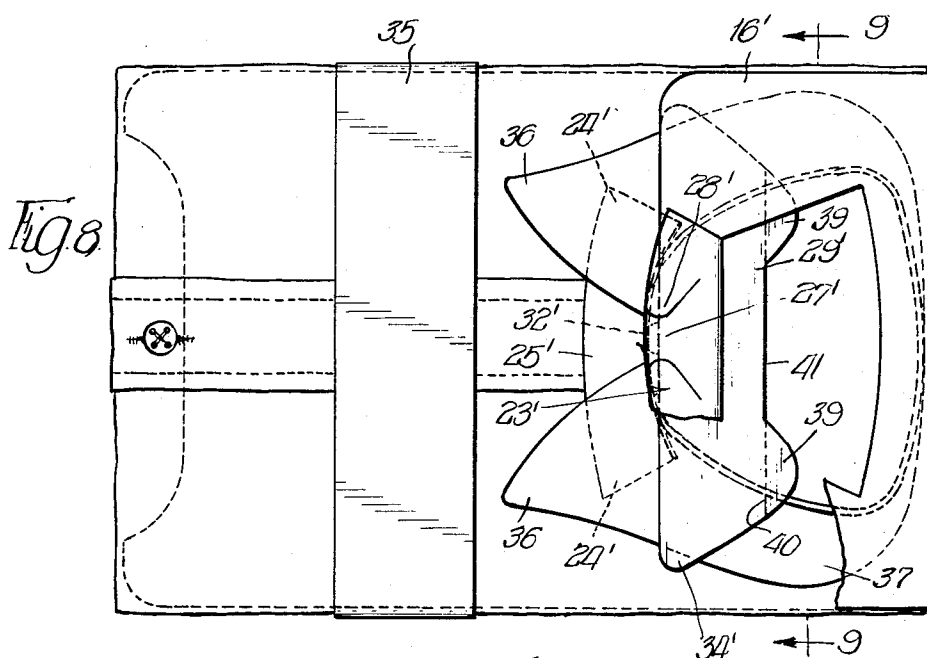
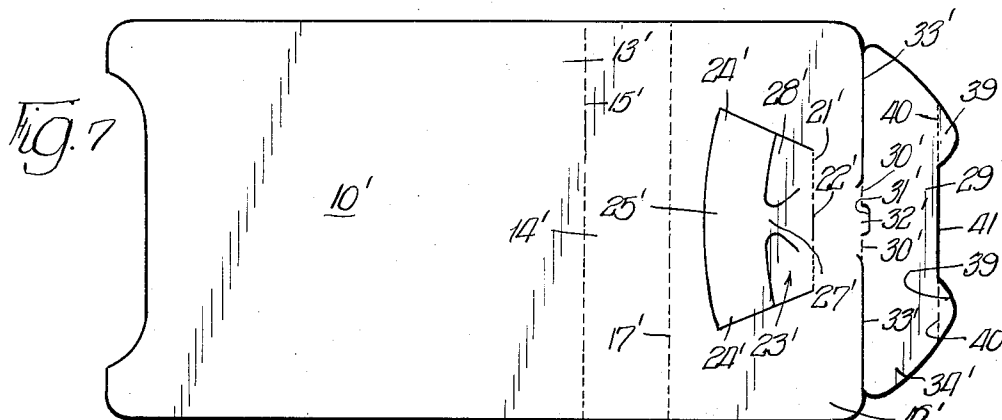
A. L. IVERSON

2,748,929

COMBINATION COLLAR PROTECTOR AND SHIRTBOARD

Filed Nov. 2, 1953

3 Sheets-Sheet 3



INVENTOR.

Arden L. Iverson,

BY

Cromwell, Christ & Warden

Attys

1

2,748,929

COMBINATION COLLAR PROTECTOR AND SHIRTBOARD

Arden L. Iverson, Lincolnwood, Ill., assignor to Para-Lux Products Company, Chicago, Ill., a corporation of Illinois

Application November 2, 1953, Serial No. 389,645

11 Claims. (Cl. 205—46)

The present invention relates to improvements in equipment for packaging men's collar-attached shirts, in the form of a combined unit presenting a shirtboard, about which freshly laundered shirts are folded, and an integral collar protector held in bracing and shielding relation to the shirt collar in a novel manner. The unit affords a vertical strut locking firmly in place at the throat of the shirt collar, both inwardly and outwardly of the neckband of the latter, so that the neckband is effectively braced to withstand crushing load. The desired locking action results from an improved interrelationship of certain parts of the combined unit to one another and to the neckband and wing or lapel parts of the shirt. More particularly, this results from a novel preliminary interlocking or anchoring of certain wings of the unit between the shirt collar lapels, outwardly of the neckband, from a toggle-sustained conformation of a bracing member of the unit to the inner contour of the neckband at the throat of the latter, and from the engagement of the integral shirtboard member of the unit within the folded body portion of the shirt.

It is an object of the invention to provide a combined shirtboard-collar protector unit of this sort, and a shirt package of which the same is a component, in which the unit is fabricated from a flexible paperboard blank of minimum size and in such an outline as to permit a maximum number of units to be produced from a given size sheet of paperboard stock. This is due to an adaptability of the units to nest end to end with one another most economically in the sheet.

It is a more specific object of the invention to provide a shirt package including a collar-attached shirt and a combined collar protector and shirtboard unit, whose integrally connected parts are so related that a forward wing-like locking member of the combined unit is reversely positioned in relation to a top protective panel, being then swung downwardly and locked in internal bracing relation to a forward throat zone of the shirt's neckband. While this is being done, certain locking tongues excised from the top panel are interengaged forwardly and downwardly between the neckband and the collar lapels of the shirt, thus serving as a temporary anchor holding the parts of the unit in place pending completion of the locking and bracing of the member.

Still more specifically, it is an object of the invention to provide a combined shirtboard and collar protector unit in the form of a rectangular backing board having an outer collar engaging panel hinged to a forward margin thereof and a top collar protecting panel forwardly hinged in turn to the outer panel. The top panel has a wing-like locking and bracing member on a forward free edge thereof which is reversely manipulated to underlying, face contacting relation to the top panel in applying the unit to a shirt, and is then swung downwardly and forwardly within the shirt collar opening, engaging the neckband across its throat. So positioned, the member constitutes an upstanding strut locked by an inherent toggle effect in a forwardly convex, neckband

2

bracing position. The toggle effect is enhanced by the rearward doubling and down-swinging of the member, and an integral, forwardly and downwardly swung holding wing, excised from the top, collar covering panel and preliminarily engaged beneath the collar lapels, holds the panel and bracing member in proper position pending the described manipulation of the latter.

The holding wing last referred to may be made of width approximately the same as that of the internal locking and bracing member, so as to supplement the strut action of the latter in the area forwardly of the neckband throat and to constitute a two-ply column across the latter. However its essential action is a preliminary locking and anchoring one. To disengage the unit from a shirt, the holding wing is simply disengaged from beneath the collar lapels and lifted upwardly and rearwardly, freeing the internal bracing member so that the top panel backing board can be slid rearwardly and outwardly from the shirt.

In a slightly modified form of the invention the locking and bracing member is shaped to provide bendable lobe extensions which considerably facilitate its manipulation over the top of the shirt neckband and downwardly into bracing relation to the collar.

The foregoing statements are indicative in a general way of the nature of the invention. Other and more specific objects will be apparent to those skilled in the art upon a full understanding of the construction and use of the novel combined unit, as well as the finished shirt package of which it is a part.

A single embodiment of the invention is presented herein for purpose of illustration. It will be appreciated that the invention may be incorporated in other modified forms coming equally within the scope of the appended claims.

In the drawings:

Fig. 1 is a top plan view of a flexible paperboard blank from which the improved unit is fabricated, illustrating the manner in which the blank is contoured, creased and slitted;

Fig. 2 is a view in side elevation illustrating in dotted and solid lines preliminary manipulation of the unit as it is applied to a collar-attached shirt;

Fig. 3 is a top plan view of the partially packaged shirt showing the position of the parts of the paperboard unit just prior to final folding and locking thereof;

Fig. 4 is a perspective view illustrating the completed package;

Figs. 5 and 6 are, respectively, views in vertical cross section through the completed package, along lines corresponding to lines 5—5 and 6—6 of Figs. 3 and 4.

Fig. 7 is a plan view of a paperboard blank for a modified type of combined unit, featuring terminal lobe extensions on its locking and bracing member;

Fig. 8 is a top plan view similar to Fig. 3 of the modified unit as partially applied to a shirt, being partially broken away to illustrate the relation of the lobes thereof to the shirt collar and neckband prior to final manipulation; and

Fig. 9 is a view, in transverse vertical section similar to Fig. 6, of the unit in finally assembled position, indicating in dotted line an intermediate position of the locking and bracing member of the unit.

Referring first to Fig. 1, showing the improved shirtboard and collar protector unit 10 as a blank, it is died out in a generally rectangular outline from flexible paperboard, it being noted that a forward, mildly rounded margin 11 at one end of the blank is duplicated by a rear concave cavity 12 at the opposite end, thereby enabling economical manufacture by end to end nesting of successive blanks.

Unit 10 comprises a generally rectangular backing board

3

13 about which a laundered shirt is folded, and an outer rectangular collar engaging panel 14 of transversely elongated shape is integrally hinged to the forward extremity of panel 13, by means of a transversely extending crease 15. A collar-protecting top panel 16, also rectangular in outline, is integrally hinged to the forward extremity of panel 14 by a crease 17 paralleling crease 15.

Panel 16 is cut at the center thereof by a laterally opening, generally C-shaped slit 18 including a gradually curved transversely extending rear portion 19 and convergent forwardly extending portions 20 at opposite ends of portion 19. The forward ends of slits 20 meet opposite termini of a transverse crease 21. If desired, the midpoint of crease 21 may be weakened for further ease of flexure by means of a slit score 22.

These provisions result in the formation, from material excised from top panel 16, of a bendable protective and holding panel 23. It is adapted to be deflected upwardly and forwardly about hinge crease 21 and over the top of the forward portion of panel 16, so as to enable divergent wings 24 of an integral holding and bracing tongue 25 on panel 23 to be inserted under the lapels of the shirt collar forwardly of the neckband thereof.

Panel 23 is subdivided to define the tongue 25 by means of a pair of opposed angled slits 26 which terminate in outwardly divergent forward extremities, defining a generally triangular bridge piece 27 connecting the tongues 25 with a hinging area of equal width immediately forwardly of crease 21. Slits 26 also outline a pair of mutually inwardly pointed sections 28 which are adapted to overlie the top margin of the shirt collar, which would otherwise be exposed at its throat, when unit 10 is in place.

Finally, a forward toggle bracing and locking member 29, defined at its free edge by the end margin 11, is hinged to the forward, right hand side of top panel 16 by a pair of short, transversely aligned creases 30. The inner ends of creases 30 are connected by an aligned, forwardly convex slit 31, which thus defines a forwardly projecting lug 32 integrally and non-hingedly connected to the forward edge of panel 16. Its purpose is to provide a fulcrum for a folding of the tongue 25, as will be described. Locking and bracing member 29 is otherwise severed from panel 16 by means of a pair of aligned, transversely elongated slits 33 which are hooked to the left at their inner extremities, at which they meet the outer ends of the respective creases 30. Divergent arms 34 of substantial length on member 29 are thus freed from panel 16.

The width of the member 29, i. e., from right to left at the center thereof as viewed in Fig. 1, approximately equals the height of a shirt neckband, at the forward throat portion thereof, hence member 29 is adapted to serve as an upstanding strut to brace the collar neckband. The same is true of the holding and bracing tongue 25 of which wings 24 are a part. Accordingly, in addition to holding the unit 10 in place as its other parts are manipulated, tongue 25 subsequently acts as one element of a two-ply throat sustaining strut, in conjunction with the member 29.

In use, the body of the shirt is folded about the backing board 13 of unit 10, in the usual fashion, and is secured thereto, as by means of an encircling paper band 35. Panel 14 projects rearwardly of the shirt collar, and is bent upwardly about crease 15 to the upstanding position shown in Fig. 2, while top cover panel 16 is being flexed forwardly about its connecting crease 17 towards parallelism with the backing board.

As the parts are being brought to these positions, or after they are so positioned, the operator manually deflects the forwardly extending panel 29 downwardly and rearwardly about its creased connection 30, 30, as indicated in Fig. 2, disposing the panel 29 in upwardly contacting engagement with the lower surface of top panel 16 and leaving fulcrum lug 32 to project forwardly of the latter. As a continuation of this manipulation, and as

4

illustrated in dotted and solid line in Fig. 2, the member 23, of which locking tongue 25, triangular bridge 27 and protective sections 28 are parts, is deflected upwardly as a unit about its crease connection 21 and forwardly into overlying relation to the portion of panel 16 lying between the crease 21 and member 29. These operations dispose the parts as shown in solid line in Fig. 2.

Fig. 3 also shows the locking and bracing member 29 in its reversed, upwardly deflected position in flush engagement with the bottom of panel 16. Fig. 3 also shows the locking tongue wings 24 as they are inserted in the next succeeding operation beneath the lapels 36 of the shirt collar, which is generally designated 37. So inserted, arms 24 loosely anchor unit 10 in place on the shirt pending a final setting up and locking operation.

It will be observed by reference to Fig. 3 that the convergent sections 28 of panel 23 overhang the tops of collar lapels 36 directly at either side of the throat thereof, so as to prevent soilage thereof. It will also be observed by reference to Figs. 2, 3 and 5 that the small, forwardly projecting center lug 32 serves as a fulcrum about which the tongue 25 is locally bent downwardly relative to sections 28 and to the remainder of panel 23, i. e., at the junction of the tongue with triangular bridge 27. Thus it is unnecessary to crease the unit for bending at this focal point, so that the inherent spring of the material is fully retained. Yet the tongue unfailingly flexes at the proper zone to enable the tongue wings 24 to be properly inserted beneath lapels 36. In this position the wings upwardly brace the collar forwardly of its throat.

The operator inserts his fore fingers into an opening 38 left in top panel 16 by the displacement of panel 23 therefrom, grasping the centers of bracing member 29 and tongue 25 between his index finger and thumb. Upon squeezing these parts together the reversely disposed member 29 swings forwardly and downwardly about its creases 30, 30 until it assumes a forwardly bowed, convex outline. In this position it is in conformed contacting engagement with the rear of the neckband at the forward throat portion of the latter. Since the arms 34 of member 29 are restrained from above by the panel 16 overlying the same, a spring stress is stored in the member as it is being swung downwardly in this fashion, so that it snaps forward to a toggle bracing relation to the neckband.

The completed package is shown in Figs. 4, 5 and 6 of the drawings, perhaps best in Fig. 5, in which member 29 is shown in its final position. It parallels the locking tongue 25 and its wings 24 on the forward side of the neckband throat, so that a two-ply load sustaining and collar bracing strut of considerable rigidity is formed in this zone. Member 29 is automatically held in its erected position by the toggle effect referred to, and the collar of the shirt is effectively and completely protected by a box-like construction which covers every part of the collar, including that under the forward sections 28.

When it is desired to remove the collar from the packaging unit, it is simply necessary to insert a finger beneath the middle of the tongue 25 and flip the same upwardly to disengage wings 24 from beneath the lapels 36. With this done, the panel 16 can be swung upwardly and rearwardly about its connecting crease 17, withdrawing internal member 29, and the entire unit is then withdrawn slidably from the shirt.

The provision of a forward locking and bracing member 29 on the unit which is first reversely foldable into underlying relation to panel 16, and a holding tongue which is upwardly and forwardly folded in relation to that panel, to then serve as a temporary anchor while the member 29 is being finally disposed in its locked collar bracing position, affords a collar support and shirtboard having many advantages, particularly in point of ruggedness and resistance to crushing, effectiveness of collar protection and ease of application and removal. Board 13 serves as a secondary anchor to prevent the other parts from becoming disengaged from the collar. The

5

tongue 25 unfailingly folds as intended at a predetermined local zone due to the presence of fulcrum lug 32, and this improvement is possible while still permitting the forwardly convergent sections 28 to serve as top protectors for the extreme upper portions of the shirt lapels.

Unit 10 does not depend on the shape, size or condition of the shirt to hold the unit in place. It is wholly self-locking and self-sustaining when applied to the shirt in the novel manner described above. There are no excess areas requiring stripping from the blank after it is died out, and there are also no flaps or tabs requiring special manipulation to position the same, other than the essential novel operations of tongue 25 and member 29.

Figs. 7, 8 and 9 illustrate a further refinement of the unit illustrated in Figs. 1 through 6, featuring improved means to facilitate the engagement of its internal locking and bracing member behind the neckband throat portion of the shirt. Inasmuch as most of the essential parts and relationships of this form substantially duplicate those of the embodiment of Figs. 1 through 6, such parts and relationships will be designated by corresponding reference numerals, primed, and further description thereof will be dispensed with.

It will be noted that the locking and anchoring tongue 25' has wings 24' which are of somewhat less width, in the direction from right to left of the blank 10' than the corresponding wings of the first embodiment. Such diminution of the size of the wings tends to facilitate their insertion beneath the collar lapels 36 of some types of shirt, and the internal locking and bracing member 29' still affords requisite vertical strut support.

Member 29' differs from member 29 of the embodiment of Figs. 1 through 6 in that its laterally extending arms 34' are provided with projecting, forwardly convex lobes or ears 39 adjacent its ends. These are rendered readily bendable relative to the remainder of member 29' by transversely extending the creases 40 which are aligned with one another as extensions of the extreme forward margin 41 of member 29'. Member 29' is, like member 29, of sufficient width to constitute a vertical strut for top panel 16' when finally manipulated to toggle-locked position in which it is curved in forward contacting engagement with the inner surface of the shirt neckband at the shirt throat portion.

The operations of manipulating the unit 10' for application to a shirt are essentially the same as those described in connection with the first embodiment. However, it will be noted by reference to Fig. 8 that the convex lobes 39 are so positioned relative to the top of the neckband 37, when member 29' has been preliminarily swung to the rear beneath panel 16', that they overlie the top of the neckband, resting in the main somewhat inwardly thereof and relative to the collar opening.

This means that when the member 29' and tongue 25' are pinched together, as the former is swung down to complete the insertion of the member in the collar, the rounded surfaces of lobes 39 will readily slide downwardly and inwardly, flexing upwardly about creases 40 and guiding the wings 34' as they in turn slide inwardly to final locked position. Lobes 39 preclude the possibility of the edges of arms 34' snagging against the collar and thereby making it difficult to effect a smooth downward swinging and toggle locking of the member behind the forward throat portion of some types of shirt. When member 29' reaches its final locked position, illustrated in Fig. 9, the lobes 39 project rearwardly and downwardly, frictionally engaging the shirt and acting as a further brace to restrain member 29' from accidental displacement relative to the collar opening.

I claim:

1. A shirt package comprising a man's collar-attached shirt characterized by an upwardly opening collar and neckband thereof and forwardly divergent lapels on the collar at a forward throat portion thereof, and a one-piece collar protector unit applied to this shirt, comprising

6

a top panel disposed in overlying relation to the collar, a locking and bracing member having an integral hinge connection to a forward part of said top panel and folded reversely beneath the same, said locking member being bent behind the inner surface of said neckband adjacent said collar throat portion, and a locking tongue excised from said top panel rearwardly of said integral hinge connection and bent forwardly above the top panel, said tongue having restraining engagement between said lapels and neckband.

2. A shirt package comprising a man's collar-attached shirt characterized by an upwardly opening collar and neckband thereof and forwardly divergent lapels on the collar at a forward throat portion thereof, and a one-piece combined shirtboard and collar protector unit applied to this shirt, comprising a backing panel about which the shirt is folded, a rear wall panel forwardly engageable with the outer rear of said shirt collar, a top panel integrally hinged to said rear wall panel and disposed in overlying relation to the collar and extending forwardly over the same, a locking and bracing member having an integral hinge connection to a forward part of said top panel and folded reversely beneath the same, said locking member being bent behind the inner surface of said neckband adjacent said collar throat portion, and a locking tongue excised from said top panel rearwardly of said integral hinge connection and bent forwardly above the top panel, said tongue having restraining engagement between said lapels and neckband.

3. A shirt package comprising a man's collar-attached shirt characterized by an upwardly opening collar and neckband thereof and forwardly divergent lapels on the collar at a forward throat portion thereof, and a one-piece collar protector unit applied to this shirt, comprising a top panel disposed in overlying relation to the collar, a locking and bracing member having an integral hinge connection to a forward part of said top panel and folded reversely beneath the same, said locking member being bent in rearwardly concave curved outline and in contacting engagement with and behind the inner surface of said neckband adjacent said collar throat portion, and a locking tongue excised from said top panel rearwardly of said integral hinge connection and bent forwardly above the top panel, said tongue having restraining engagement between said lapels and neckband, said top panel being provided with a forwardly projecting fulcrum lug about which said tongue is flexed to localize the bending of the latter.

4. A shirt package comprising a man's collar-attached shirt characterized by an upwardly opening collar and neckband thereof and forwardly divergent lapels on the collar at a forward throat portion thereof, and a one-piece combined shirtboard and collar protector unit applied to this shirt, comprising a backing panel about which the shirt is folded, a rear wall panel forwardly engageable with the outer rear of said shirt collar, a top panel integrally hinged to said rear wall panel and disposed in overlying relation to the collar and extending forwardly over the same, a locking and bracing member having an integral hinge connection to a forward part of said top panel and folded reversely beneath the same, said locking member being bent in rearwardly concave curved outline and in contacting engagement with and behind the inner surface of said neckband adjacent said collar throat portion, and a locking tongue excised from said top panel rearwardly of said integral hinge connection and bent forwardly above the top panel, said tongue having restraining engagement between said lapels and neckband, said top panel being provided with a forwardly projecting fulcrum lug about which said tongue is flexed to localize the bending of the latter.

5. The shirt package of claim 4 wherein said locking member is provided with laterally projecting arms bent behind the inner surface of said neckband adjacent said collar throat portion, said arms each having a projecting

lobe thereon bent in frictional engagement with said shirt within the collar opening.

6. A shirt package comprising a man's collar-attached shirt characterized by an upwardly opening collar and neckband and forwardly divergent lapels on the collar at a throat portion thereof, and a one-piece collar protector unit applied to this shirt, comprising a top panel disposed in overlying relation to the collar, a locking and bracing member having an integral hinge connection to a forward margin of said top panel and folded reversely beneath the same, said locking member having laterally projecting arms bent behind the inner surface of said neckband adjacent said collar throat portion, said arms each having a projecting lobe thereon bent in frictional engagement with said shirt within the collar opening, and a locking tongue excised from said top panel rearwardly of said integral hinge connection and bent forwardly above the top panel, said tongue having restraining engagement between said lapels and neckband.

7. A shirt package comprising a man's collar-attached shirt characterized by an upwardly opening collar and neckband and forwardly divergent lapels on the collar at a throat portion thereof, a one-piece collar protector unit applied to this shirt, comprising a top panel disposed in overlying relation to the collar, a locking and bracing member having an integral hinge connection to a forward part of said top panel and folded reversely beneath the same, said locking member being bent in rearwardly concave curved outline and in contacting engagement with and behind the inner surface of said neckband adjacent said collar throat portion, said arms each having a projecting lobe thereon bent in frictional engagement with said shirt within the collar opening, and a locking tongue excised from said top panel rearwardly of said integral hinge connection and bent forwardly above the top panel, said tongue having restraining engagement between said lapels and neckband, a rear collar engaging panel integrally hinged to a rear margin of said top panel, and a panel about which the shirt is folded hinged in turn to said rear panel.

8. A shirt collar protector unit comprising a top panel disposable to overlie a shirt collar, a locking member having an integral hinge connection to the forward margin of said top panel and disposable adjacent a collar throat, and a locking and bridging panel cut from the material of said top panel and integrally hinged to said top panel rearwardly of the forward margin thereof, said locking and bridging panel being defined by cut lines extending rearwardly in a direction from its hinge connection and by a laterally extending cut line intersecting said last mentioned cut lines to define a rear margin thereof, said locking and bridging panel being subdivided into a locking tongue and bridging portions by cut lines extending inwardly of the side margins thereof spaced forwardly from the rear margin thereof and joining in spaced relation with forwardly extending cut lines, said locking and bridging panel being of sufficient length to allow the locking tongue thereof to be folded downwardly over the forward margin of said top panel.

9. A shirt collar protector unit comprising a top panel disposable to overlie a shirt collar, a locking member having an integral hinge connection to the forward margin of said top panel and disposable adjacent a collar throat, and a locking and bridging panel cut from the material of said top panel and integrally hinged to said top panel rearwardly of the forward margin thereof, said locking and bridging panel being defined by cut lines extending divergently and rearwardly in a direction from its hinge con-

nection and by a laterally extending cut line intersecting said first mentioned cut lines to define the rear margin thereof, said locking and bridging panel being subdivided into a locking tongue and bridging portions by cut lines extending inwardly of the side margins thereof spaced forwardly from the rear margin thereof and joining in spaced relation with divergently and forwardly extending cut lines, said subdividing cut lines describing laterally spaced acute angles with said divergently and forwardly extending cut lines, said locking and bridging panel being of sufficient length to allow the locking tongue thereof to be folded downwardly over the forward margin of said top panel.

10. A shirt collar protector unit comprising a top panel disposable to overlie a shirt collar, a locking member having an integral hinge connection to the forward margin of said top panel and disposable adjacent a collar throat, and a locking and bridging panel cut from the material of said top panel and integrally hinged to said top panel rearwardly of the forward margin thereof, said locking and bridging panel being defined by cut lines extending rearwardly in a direction from its hinge connection and by a laterally extending cut line intersecting said first mentioned cut lines to define the rear margin thereof, said locking and bridging panel being subdivided into a locking tongue and bridging portions by cut lines extending inwardly of the side margins thereof spaced forwardly from the rear margin thereof and joining in spaced relation with forwardly extending cut lines, said locking and bridging panel being of sufficient length to allow the locking tongue thereof to be folded downwardly over the forward margin of said top panel, said top panel being cut adjacent its integral hinge connection to the locking member to provide a forwardly projecting fulcrum lug on the top panel about which said locking tongue is flexed.

11. A shirt collar protector unit comprising a top panel disposable to overlie a shirt collar, a locking member having an integral hinge connection to the forward margin of said top panel and disposable adjacent a collar throat, and a locking and bridging panel cut from the material of said top panel and integrally hinged to said top panel rearwardly of the forward margin thereof, said locking and bridging panel being defined by cut lines extending divergently and rearwardly in a direction from its hinge connection and by a laterally extending cut line intersecting said first mentioned cut lines to define the rear margin thereof, said locking and bridging panel being subdivided into a locking tongue and bridging portions by cut lines extending inwardly of the side margins thereof spaced forwardly from the rear margin thereof and joining in spaced relation with divergently and forwardly extending cut lines, said subdividing cut lines describing laterally spaced acute angles with said divergently and forwardly extending cut lines, said locking and bridging panel being of sufficient length to allow the locking tongue thereof to be folded downwardly over the forward portion of said top panel, said top panel being cut adjacent its integral hinge connection to the locking member to provide a forwardly projecting fulcrum lug on the top panel about which said locking tongue is flexed.

References Cited in the file of this patent

UNITED STATES PATENTS

1,816,539	Lerman	July 28, 1931
2,550,333	Crossley	Apr. 24, 1951
2,568,843	Bartholome	Sept. 25, 1951
2,622,727	Dimond et al.	Dec. 23, 1952