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GUARD FOR GARMENT HANGER

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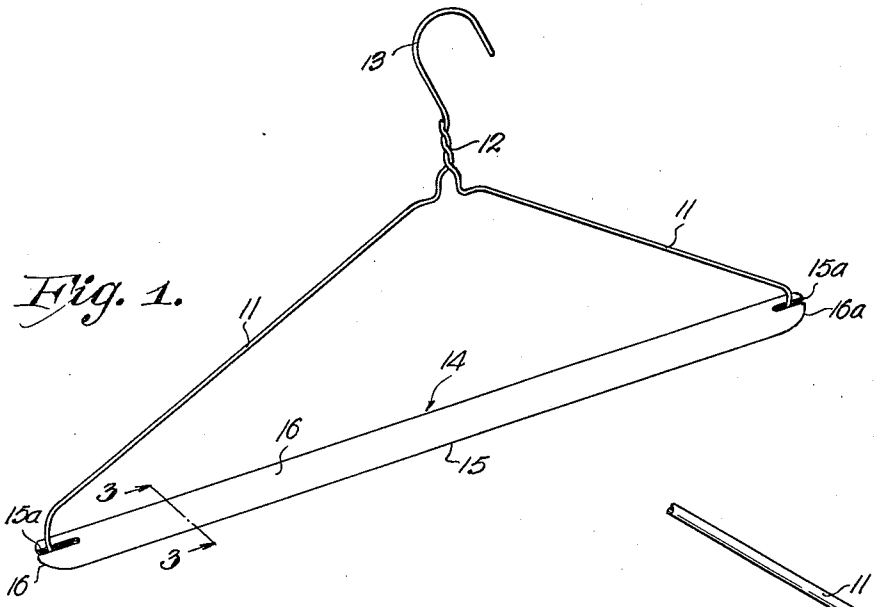


Fig. 1.

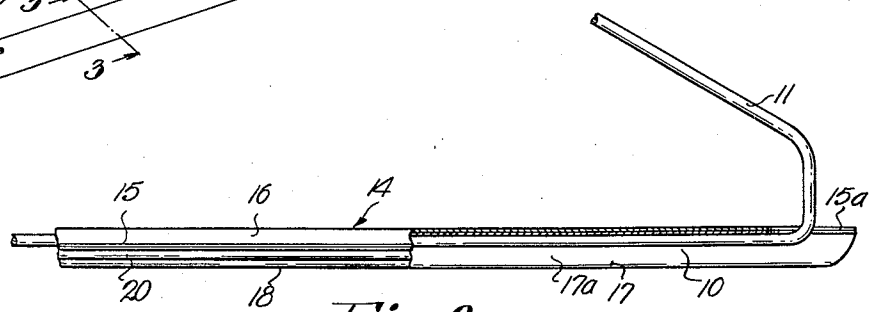


Fig. 2.

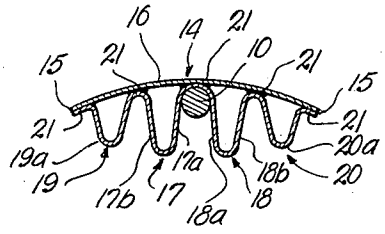


Fig. 3.

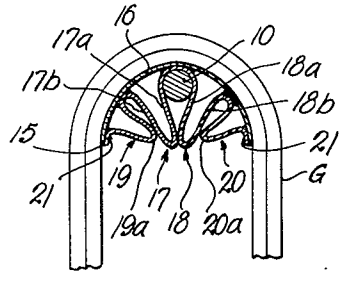


Fig. 4.

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GUARD FOR GARMENT HANGER

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4 Claims. (Cl. 223—98)

This invention relates to protective guards for wire garment hangers of the conventional style and refers more particularly to a guard having the property of being firmly locked to the hanger under the influence of a garment, for example a pair of trousers, as it is draped over the guard.

It has become accepted fact within the dry cleaning industry to supplement the conventional wire hanger with a larger diameter guard on the crossbar in order to prevent the formation of sharp creases in trousers or other garments which are hung by simply draping them across the crossbar. Usually such guards are constructed of paper or paperboard. While in some cases hanger manufacturers have attempted to supply the demand for guards by incorporating them with the hanger at the time of manufacture (e.g., a tube of paperboard around the crossbar) by far the greater amount of hangers sold are not so constructed, thus leaving it up to the dry cleaning establishments themselves to procure and install suitable guards when needed.

The dry cleaning establishments have through the years arrived at empirical standards for the ideal guard. From their standpoint the more important requirements are that it must be low in cost, occupy little storage space and yet be capable of connection with the hanger in such fashion that it will not be accidentally pulled from the hanger or broken when draping the garment thereover. Furthermore, not only must the guard be so constructed as to be readily attached to the hanger, it must, to be satisfactory to the customers of the dry cleaner, have the property of remaining firmly attached during subsequent use. To comply with all of these conditions presents a difficult problem for the guard manufacturer since ordinarily the more effective the guard for its intended purpose the more bulky and expensive it becomes.

One of the principal aims of the present invention is to provide a hanger guard which for reasons to be more fully dealt with hereinafter satisfactorily answers practically all of the requirements which must be met in order to provide a guard with the ultimate in strength, durability and permanent connection with the hanger while still demanding little time and effort on the part of the dry cleaner in joining the guard with the hanger.

An object of the invention is to provide a guard which is capable of being firmly attached to the hanger but which, when supplied to the dry cleaner, is in substantially flat form and can be installed on the hanger in its flat form. It is a feature of the invention in this respect that the guard according to the invention is self-guiding into the proper position on the crossbar of the hanger and is so constructed that it resists accidental removal prior to the time that it has been locked into position.

A further object of the invention is to provide a guard of the character described which, as the garment is draped thereon, is so affected by the weight of the garment as to cause the guard to firmly connect itself with the hanger. In my invention the guard is permanently deformed by the weight of the garment into a configuration which renders it substantially permanently attached to the hanger. A feature of the invention in this respect resides in the fact that the heavier the garment, the more substantial the connection between the guard and the hanger.

Still another object of the invention is to provide a guard of the character described which has excellent resistance to torsional or twisting deformation about its longitudinal axis and which, in addition, has considerable beam strength. There is little or no danger of the accidental production of lateral breaks or "knees" in the guard either in handling prior to installation on the hanger or in removal of hung garments therefrom.

Yet another object of the invention is to provide a guard of the character described in which the garment supporting surface thereof is permanently braced in the desired smoothly curved configuration. The support for the curved surface in my invention is to be distinguished from simple reliance on the resistance to bending afforded by ordinary sheets of strips of paperboard. I provide a positive underlying structural support which also serves the purpose of assisting in maintaining the locked connection between the guard and the hanger.

Yet another object of the invention is to provide a guard of the character described which can be constructed entirely of relatively light grades of paper and yet which meets all of the preceding objectives of strength, durability and long life.

Other and further objects of the invention together with the features of novelty appurtenant thereto will appear in the course of the following description.

In the accompanying drawing which forms a part of the specification and is to be read in conjunction therewith and in which like reference numerals indicate like parts in the various views;

Fig. 1 is a perspective view of a typical wire hanger to which a guard according to the invention has been attached, the guard being shown in its initial configuration, that is, prior to the draping of a garment thereover;

Fig. 2 is an enlarged fragmentary side elevation of the hanger and guard, parts of the guard being broken away for purposes of illustration;

Fig. 3 is an enlarged sectional view taken along the line 3—3 of Fig. 1 in the direction of the arrows; and

Fig. 4 is a view similar to Fig. 3 but showing the configuration of the guard following the application of a garment thereto.

Referring to the drawing there is shown in Figs. 1 and 2 a conventional wire garment hanger having the crossbar **10** and upwardly and inwardly turned bails **11**. The bails **11** are twisted together to form a neck **12** and one bail has an extension which forms hook **13**.

The guard for the hanger is represented generally by reference numeral **14**. The guard is designed to be supported on and by the crossbar **10** of the hanger. In its preferred form it is slightly longer than the crossbar and of substantially greater width than the diameter of the crossbar. While the width may be varied, I prefer a uniform width of approximately one inch between the longitudinal edges **15**. The ends should be slightly rounded as at **16***a* to eliminate any sharp corners which might otherwise catch on garments being handled or passed in the vicinity. The ends of the guard also are provided as at **15***a* with notches or recesses adapted to receive and engage the bails **11** and prevent the guard from rotating about the crossbar.

In its preferred form the guard may be considered as being composed of a garment supporting strip **16**, which is essentially that part of the guard seen in Fig. 1, and a locking and forming structure on the underside of the support strip, the details of which appear more clearly in Figs. 2, 3, and 4.

The garment support strip **16** is preferably constructed from a good grade of relatively heavy paper of from approximately .006 to .018 inch in thickness. In its inital configuration it is substantially flat although it may have the slight curvature illustrated in Fig. 3.

The locking and forming structure on the underside of the support strip comprises as its main elements a first pair of spaced locking members **17** and **18** and a second more widely disposed pair of similarly shaped members **19** and **20**. These members are preferably all in the form of continuous ridges or ribs running lengthwise and parallel with the longitudinal axis of the support strip **16**. A practical and effective manner of providing the ridges or ribs is by utilizing a paper similar to that employed for the support strip **16**, the paper sheet being pleated in order to provide connecting portions **21** which adjoin and are secured to the underside of the strip **16** by any suitable adhesive.

As will be evident from Fig. 3, the central two locking members **17** and **18** have inner confronting faces **17***a* and **18***a* and are adapted to straddle the crossbar **10**. The latter faces diverge somewhat in the downward direction so that at their tips or apices the locking members **17** and **18** are spaced apart a distance slightly greater than the diameter of the crossbar **10**. Preferably at or near the base of the valley between the ridges the faces **17***a* and **18***a* are slightly closer together than the diameter of the crossbar in order to bring about a slight wedge fit when the guard is placed on the crossbar.

It will be observed that the outer locking members **19** and **20** comprise ribs or ridges of slightly lesser depth than the central members **17** and **18** and that normally the apices or lower ends **19***a* and **20***a* thereof are spaced well away from the outside faces **17***b* and **18***b* of the central members. The depth of the outer members **19** and **20** and their spacing respectively from the adjacent central members **17** and **18** is such that when the edges of the support strip **16** are depressed from their normal position of Fig. 3 to the position of Fig. 4 under the weight of a garment G, the tips **19***a* and **20***a* will be brought into engagement with the outside faces **17***b* and **18***b* of the central locking members.

It is important in producing a satisfactory embodiment of the invention to make sure that the paper grades and weights selected for formation of the support strip **16** and the locking structure thereunder is such that the guard as a whole will respond to the weight of the garment to be draped thereover to the extent of curving more closely about the crossbar **10** as illustrated in Fig. 4. As this occurs the lower ends or tips of the central locking members are brought together beneath the crossbar, thus forming a closed pocket within which the crossbar is retained. The tips of the outside locking members **19** and **20** are instrumental in forcing the central locking members together and at the same time the outside locking members provide foundation support for the outer margins of the support strip, thus to cause it to conform to a smooth arc absent any sharp break or fold lines.

In manufacture and supply of the guards to the dry cleaning establishment or other user, the guard is given the initial substantially flat configuration illustrated in Figs. 1 to 3, inclusive. In other words, as received by the dry cleaner, and prior to threading of the guard on the hanger, the guard will have a configuration in which the ridges of the central locking members are spaced so as to freely straddle the crossbar **10** without interference. To thread the guard on the hanger, the operator aligns it generally with the crossbar with one end adjacent a bail. By longitudinally slipping the guard toward the bail thus to engage a recess **15***a* at one end with the bail to the full depth thereof, the other end can be swung into a position which will permit the guard to be placed on the hanger with the locking members **18** and **19** on opposite sides of and parallel with the crossbar. A slight downward pressure on the guard establishes a preliminary wedging fit which serves to hold the guard on the crossbar during subsequent handling of the hanger as earlier mentioned.

As the garment G is placed on a guard the weight of the garment bearing on the unsupported area of the guard to either side of the crossbar causes the guard to reform to the more curved configuration illustrated in Fig. 4 and brings into operation the locking structure as described above. The lack of resilience in the material of which the guard is made, assisted in many cases by the presence of residual moisture and heat in the garment, causes the guard to become permanently set in a locked condition and it cannot be removed from the hanger without exerting far more force than usually occurs in the hanging and removal of garments under normal conditions.

The ribs or ridges provided by the locking structure provide the guard with considerable beam strength thus negativing likelihood of breakage on a transverse axis. They also assist materially in providing the guard with high torsional resistance.

From the foregoing it will be seen that this invention is one well adapted to attain all of the ends and objects hereinabove set forth together with other advantages which are obvious and which are inherent to the structure.

It will be understood that certain features and subcombinations are of utility and may be employed without reference to other features and subcombinations. This is contemplated by and is within the scope of the claims.

Since many possible embodiments may be made of the invention without departing from the scope thereof, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim:

1. A weight lockable guard for garment hangers of the type having a crossbar, said guard comprising, in combination, a garment supporting strip constructed of deformable material, said strip having considerably greater length than width and adapted to be centered above and on said crossbar with the long axis of the strip aligned with the crossbar and the longitudinal edges spaced beyond the opposite sides of the crossbar, said strip having an initial unstressed configuration and a second more curved configuration induced by downward displacement of the longitudinal edges as the weight of a garment is placed thereon, a first pair of spaced locking members depending from the underside of said strip and adapted to extend downwardly on opposite sides of the crossbar with the lower ends of said members below the lowermost point on said bar, and a second pair of locking members also depending from the underside of said strip, said second locking members each between one of said first locking members and an edge of said strip, said second locking members constructed and arranged to engage and press said first locking members toward one another as said strip is deformed into said second configuration whereby to cause said first locking members to tightly grip and surround the crossbar.

2. A weight lockable guard as in claim 1 wherein said first locking members have side surfaces adjacent the crossbar converging toward one another from their lowermost ends toward the garment support strip whereby to provide an initial wedge fit with the crossbar.

3. A weight lockable guard for garment hangers of the type having a crossbar, said guard comprising, a combination, a normally substantially flat garment supporting strip constructed of deformable material and having a garment supporting surface and an underside, said garment supporting strip of considerably greater length than width and adapted to be centered above and on said crossbar with the long axis of the strip aligned with the crossbar and the longitudinal edges of the strip spaced beyond the opposite sides of the bar, at least four laterally

spaced ridges running lengthwise of and projecting from the underside of said strip, the center two ridges normally spaced from one another at their apices a distance greater than the diameter of the crossbar whereby to lie on opposite sides of the crossbar with the inside surfaces of the center ridges adjacent the bar, the depth of said center ridges greater than the diameter of the crossbar whereby the apices of said center ridges extend below the bottom of the crossbar, the garment supporting strip being deformable from its flat position by the weight of a garment on the respective longitudinal edges thereof thus to curve the garment supporting strip in an arc about the bar, the outside ridges having surfaces which engage respectively the outside surfaces of the central two ridges as the garment supporting strip is deformed whereby to press the apices of said central ridges toward one another and reduce the distance between them to less than the diameter of the crossbar thus to lock the guard to the crossbar when a garment is placed thereon.

4. A weight lockable guard for garment hangers of the type having a crossbar, said guard comprising, in combination, a garment supporting strip constructed of deformable material and having considerably greater length than width and adapted to be centered above and on said

crossbar with the long axis of the strip aligned with the crossbar and the longitudinal edges spaced beyond the opposite sides of the crossbar, a backing member secured to the underside of said strip and forming at least four longitudinal corrugations running longitudinally of the strip, the two center corrugations straddling the crossbar and having tip portions extending therebelow and normally spaced apart a distance greater than the diameter of the crossbar, the outside corrugations being of lesser depth than the central corrugations whereby when a garment is placed on the guard the downward deformation of the longitudinal edges of the strip will cause the outside corrugations to move inwardly toward and engage the central corrugations thereby to press the central corrugations toward one another thus to cause the central corrugations to firmly grip the crossbar between them and lock the guard to the crossbar.

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