

Sept. 22, 1942.

A. MEISENHEIMER

2,296,449

HOOK GUARD

Filed Sept. 24, 1938

2 Sheets-Sheet 1

Fig. 1

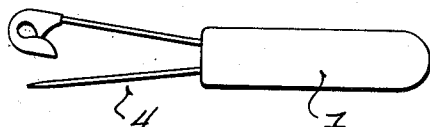


Fig. 2

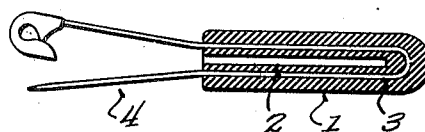


Fig. 4

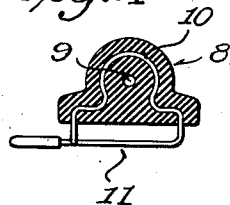


Fig. 3

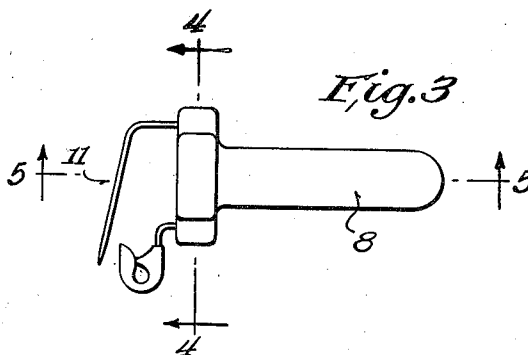


Fig. 5

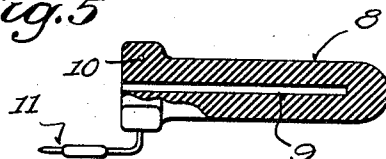


Fig. 6

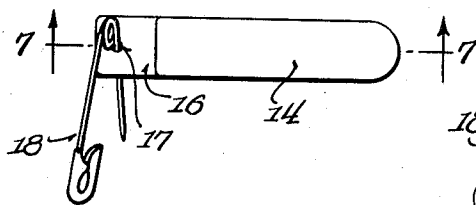


Fig. 7

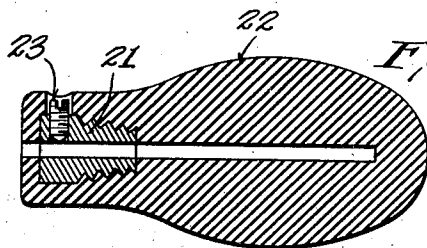
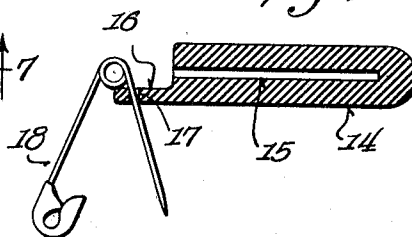


Fig. 8

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Fig. 9

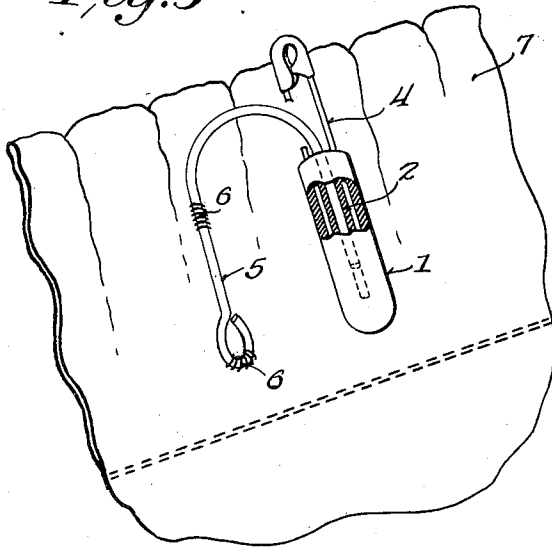


Fig. 10

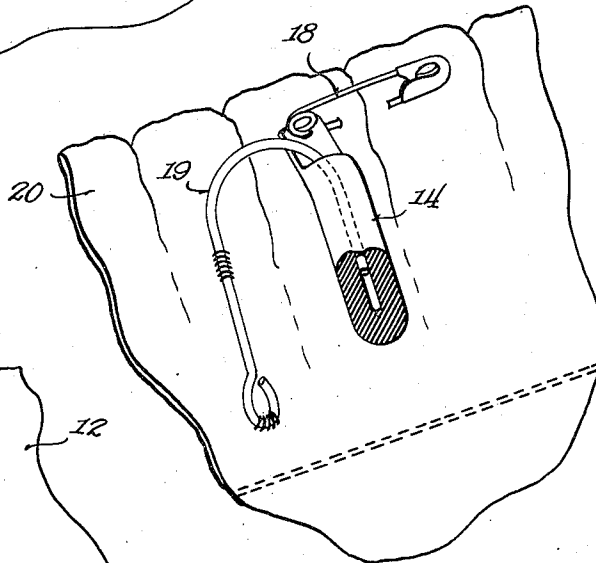
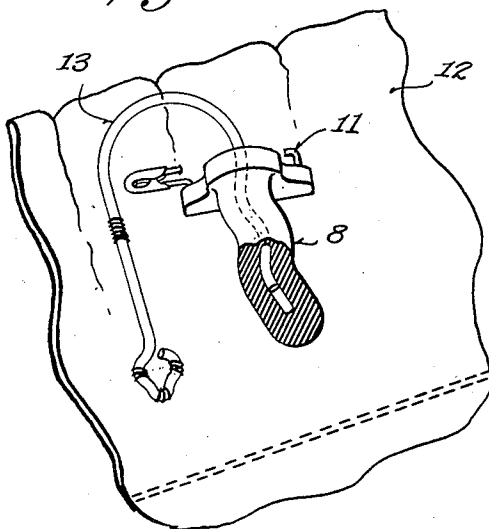


Fig. 11



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2,296,449

HOOK GUARD

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Application September 24, 1938, Serial No. 231,453

1 Claim. (Cl. 68—235)

This invention relates to improvements in methods of protecting fabric articles undergoing dry-cleaning, laundering, dyeing, or other treatment, from damage due to sharp metallic or other hard substance articles attached thereto and relates to an article of manufacture useful in carrying out such methods.

Heretofore, in laundering, dry-cleaning and dyeing fabric articles, for example, draperies and the like, tearing caused by metal hooks customarily attached to such articles has been experienced. Dry-cleaners in particular have found the likelihood of such damage to be highly probable and, as a consequence, have adopted the practice of either removing the hooks before dry-cleaning, to be later replaced, or enclosing the same by a covering strip of muslin securely hand-stitched in place. Each of these methods is laborious and expensive and the latter, although somewhat the cheaper, has a further disadvantage of masking that part of the fabric covered from the action of the cleaning process.

By the method and with the article of this invention, the removal of hooks or other sharp objects from the fabric to be treated is avoided and at the same time such sharp objects are effectively prevented from any damaging action without masking any of the fabric from the action of the cleaning, laundering, or dyeing bath.

In practicing in accordance with this invention, the hooks or other sharp objects attached to the fabric to be treated are deprived of their damaging effects by guarding the same in a novel manner. According to this invention, an elastic, flexible guard, composed of heat-and-solvent resistant elastic composition comprising synthetically polymerized, unsaturated hydrocarbons, or hydrocarbons derivatives, is slipped over the hook and anchored in place. The synthetically polymerized, unsaturated hydrocarbon or hydrocarbon derivative, if desired, is compounded with the usual rubber fillers employing conventional rubber-compounding technique and articles having been shaped therefrom are set in final form by polymerization or vulcanization. Such compounding is performed in the well-known manner practiced in the compounding of synthetic rubber articles.

The guards thus formed are adapted to withstand the action of cleaning solvents, dye baths, or laundering suds and washes at the temperatures normally employed therefor and, further, are adapted to withstand the temperatures prevailing in drying or deodorizing steps practiced in conjunction therewith. The synthetically polymerized, unsaturated hydrocarbons or hydrocarbon derivatives I have found are well suited for such use and withstand the action of the various treating temperatures and fluids without softening to a point where the effectiveness of

the guard is impaired, or to the point where disfiguring of the fabric by smears of decomposed guard material occurs. Elastic natural vulcanized rubber compositions, on the other hand, are not well suited to the purpose, being incapable of withstanding the treating conditions imposed in such treatment. Rubber, when thus employed, for example in dry-cleaning, softens materially under the influence of cleaning solvents and when the heat of the deodorizing step is applied, sometimes melts and disfigures the fabric with a smear which can only be removed at great expense and with great difficulty.

This invention may best be described by reference to the accompanying drawings attached hereto and forming a part hereof in which—

Fig. 1 is a plan view of one form of the guard of this invention;

Fig. 2 is a plan view, in section, of the guard shown in Fig. 1;

Fig. 3 is a plan view of another form of the guard of this invention;

Fig. 4 is a sectional view taken at the plane 4—4 of Fig. 3;

Fig. 5 is a sectional view taken at the plane 5—5 of Fig. 3;

Fig. 6 is a plan view of another form of the guard of this invention;

Fig. 7 is a sectional view taken at the plane 7—7 of Fig. 6;

Fig. 8 is a sectional view of another form of the guard of this invention.

Figs. 9, 10 and 11 are perspective views of the several forms of the guard of this invention, shown, with portions broken away, in position and acting as a guard for a metallic hook applied to a fabric article.

Referring now to Figs. 1 and 2, one form of the guard of this invention is shown being made up of a body 1 of elastic molded polymerized unsaturated hydrocarbon or unsaturated hydrocarbon derivative. The composition suitable for this purpose may be compounded according to the well-known compounding technique for forming elastic bodies from any of the well-known synthetic rubber substances, such, for example, as are available under such trade designations as neoprene, chloroprene, duprene, isoprene and butadiene derivatives known as Buna and others. Herein, for convenience, all substances falling within this classification will be referred to as "heat and solvent resistant vulcanized synthetic elastic polymers." In referring to compounding technique for forming elastic bodies, I mean the treating steps by which the soft partly polymerized starting substance is converted into a stable elastic article which in the case of the substances named above is heat and solvent resistant. These steps include the step of vulcanizing by which the article is converted from its

unvulcanized plastic condition to its vulcanized elastic solvent resistant condition.

Body 1, as shown clearly in Fig. 2, is provided with a pocket or channel 2 in the form of an elongated depression running longitudinally through the body 1. Molded in place within the body 1 is the shank 3 of an especially adapted safety-pin 4. Due to the elastic character of the body 1 and the flexibility of the shank 3 of the safety-pin 4 a wide variety of sizes and shapes of hook-ends may be inserted into channel 2 in the manner more clearly indicated in Fig. 9. In Fig. 9 it will be noted that a hook 5 is shown affixed in the usual manner by stitching 6 to the fabric of the drapery 7. The end of hook 5 has been inserted, as shown, into the channel 2 in the body 1 of the guard and the whole has been anchored securely in place by pinning the safety-pin 4 into the fabric of the drapery 7 and closing the same as shown.

It has been found that when a hook 5, such as is shown in Fig. 9, is protected as above described that the fabric article to which it is attached may be subjected to the usual dry-cleaning, washing, or dyeing operations without any danger or likelihood of the hook 5 catching and tearing any part of the fabric being treated.

In Figs. 3, 4 and 5, a somewhat more flexible and adaptable form of guard body with anchoring means secured thereto is shown. The guard thus constructed comprises a body portion 8 having an elongated channel therein, 9, as shown more clearly in Fig. 5. Molded within the body 8, as shown more clearly in Fig. 4, is an anchoring loop 10, integrally formed as a part of safety-pin 11. The body 8 thus formed, being composed of elastic material and without the stiffening effect of the loop 3 of the form of guard shown in Figs. 1 and 2, is of increased flexibility. A wide variety of sizes and shapes of hard, pointed articles, such as the ends of metal hooks even when curvilinear may be easily inserted into the channel 9. This may be more clearly observed by reference to Fig. 11 in which a guard body 8, with its attached anchorage means in the form of safety-pin 11, is shown pinned in place upon fabric 12 and surrounding and guarding the bent end of drapery hook 13. It will be noted that the body 8 easily conforms to the curvature of the end of hook 13. Fabric articles having hooks attached, protected as shown in Fig. 11, may be treated without danger of damage from the hooks.

Referring now to Figs. 6 and 7, a simplified form of elastic guard member with anchorage means attached thereto is shown. The guard member is composed of a body 14 of elongated shape having an elongated channel 15 therein, as shown more clearly in Fig. 7. Integrally formed with the body 14 and projecting therefrom, is anchorage tab 16, in the form of a flat, projecting tongue, with a hole 17 therein. The anchorage tab 16 may be provided with a safety-pin 18, or other suitable pinning or anchoring means, as shown. The guard, when constructed in the form shown in Figs. 6 and 7, may be applied to a hook for protection of a fabric article, as shown more clearly in Fig. 10, wherein the body 14 of the guard is shown surrounding the end of hook 19, which is attached to fabric 20. The anchorage tab or tongue 16 is securely pinned in place by means of the safety-pin 18.

If desired, the elastic guarding body may be secured directly to the hook or other sharp, hard object which is to be protected. For example, as shown in Fig. 8, the elastic guard body of this invention may be provided with an integrally formed set-screw collar 21, molded in place within the body 22. The body 22 is shaped as shown to furnish access to a set-screw 23 and at the same time to act as a guard for the head of set-screw 23. The manner in which the guard shown in Fig. 8 may be applied to the end of a hook to be protected is apparent from the construction shown.

It will be readily apparent from the foregoing description that the hook guard of this invention may be rapidly and easily attached and detached at a great saving of time and expense over the previous practice of either removing the hooks from the fabric and then sewing them back in place after treatment, or the practice of sewing a shielding strip of muslin in place over the hooks and then later removing the muslin. Furthermore, it will be apparent that the guard of this invention is self-adapting to a wide variety of sizes and shapes of hooks, due to its elastic character. By constructing my novel guard of synthetic rubber-like compositions which are resistant to the action of solvents and heat at the temperatures commonly employed in detergent treatment, additional advantageous results are obtained.

While there has been herein disclosed, for the purpose of illustration and description of this invention, specific adaptations thereof, it is intended that the protection of Letters Patent to be hereon granted be not unnecessarily limited thereby, but extend to the full measure of the advance herein disclosed and represented by the scope of the claim hereto appended.

What I claim as my invention and wish to secure by Letters Patent is:

A guard adapted to encase the sharp pointed end of a metal wire hook attached to a fabric article such as a drapery to prevent damage by said hook to such fabric article while undergoing cleaning treatment comprising an elongated finger-like body formed in one piece of heat and solvent resistant vulcanized synthetic elastic polymer, said body having a medially disposed longitudinal hole entering one end thereof and terminating short of the opposite end thereof, said hole being adapted to receive and grip the sides of one of said wire hooks at and near the end thereof, the transverse dimensions of said body being several times the transverse dimension of said hole and of the wire hook to be accommodated therein so as to effectively blunt the action of the sharp end of said wire hook, said body having transverse dimensions which are about the same in all directions so that said body is capable of easy flexure in any transverse direction for the accommodation of a non-rectilinear hook end; a projecting tab composed of the same material as said body integrally united therewith and disposed adjacent to the entrance end of said hole; and looped pinning means associated with said tab adapted to be opened to expose a pinning point and closeable to protect said pinning point and to form a closed loop for attaching said finger-like body to said textile article.

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