March 18, 1941. R. C. EPWORTH 2,235,703

LABEL FOR FABRICS

Filed June 9, 1939

Fig. 1.

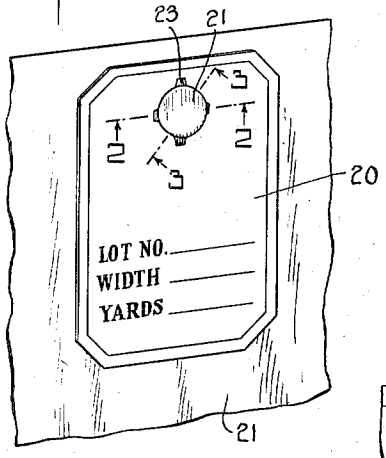


Fig. 2.

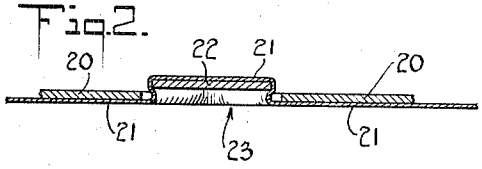


Fig. 3.

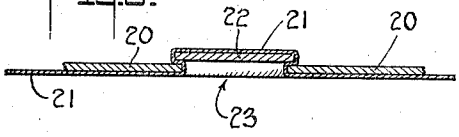


Fig. 4.

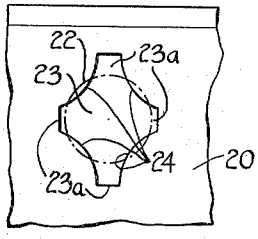


Fig. 5.

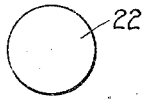


Fig. 6.

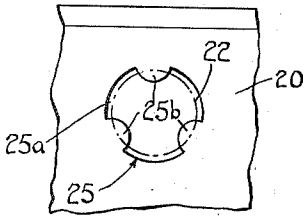


Fig. 7.

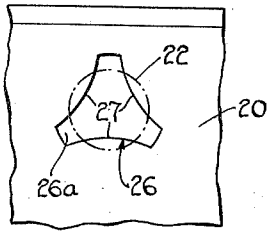


Fig. 8.

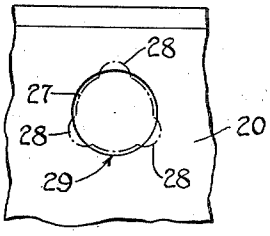


Fig. 9.

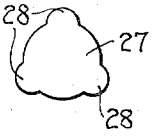


Fig. 10.

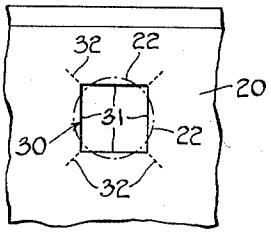


Fig. 11.

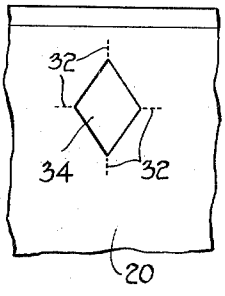


Fig. 12.

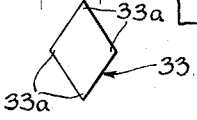
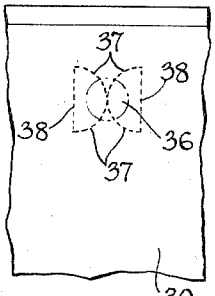


Fig. 13.



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UNITED STATES PATENT OFFICE

2,235,703

LABEL FOR FABRICS

Renaldo C. Epworth, Hackensack, N. J.

Application June 9, 1939, Serial No. 278,228

4 Claims. (Cl. 40—20)

My present invention relates to improvements in labels.

An object of the invention is to apply a label of relatively stiff and flexing material to fabric or an article of fabric by the employment of a keeper of flexing material and having a substantially flat configuration, the keeper, enveloped by the fabric being passed through an opening in the label by a movement substantially normal to the plane of a flat face of the keeper, whereby the label may be attached to the fabric or article of fabric by means of a machine in which the label is positioned and the reciprocable plunger of such machine is arranged to engage the flat face of the keeper, during the stage of inserting the keeper in the label opening.

Pursuant to my invention, the label per se may be of any design or contour, the obverse face of the label bearing the desired indicia.

Pursuant to preferred forms of my invention, the contour of the keeper enveloped by the fabric is related to the contour of the opening in the label to effect overlapping areas, such overlapping areas being arranged to be yieldable whereby during the stage of insertion of the keeper enveloped by the fabric through the opening of the label, the yielding of such overlapping areas ensues without rupture or breakage, thus maintaining the inherent flexural strength of such areas. Such overlapping areas are desirably symmetrically disposed mutually with respect to one another, to thereby maintain substantially uniform yielding resistance during the passage of the keeper and enveloped fabric through the opening of the label and also ensuring retention of the keeper relative to the label during the stage of attachment of the label to the fabric or article.

My invention is applicable not only to attaching a label to a piece of fabric or article of fabric, but also for serving to attach two or more pieces of fabric together, two articles such as a pair of stockings, etc. to one another, and the like.

Pursuant to the various embodiments of my invention, the keeper may be a circular configuration or of triangular, square, lozenge shaped, or other polygonal configuration, the sides of which may be rectilinear or arcuate or both, the opening in the label being optionally of circular, square, lozenge shaped, or other polygonal configuration, the sides of which may be rectilinear or arcuate or both, in certain instances the edge material of the opening in the label may originally be provided with lines of minute perforations to afford controlled severing at such lines while preserving the inherent flexural strength of the material of the label. The flexing action of the overlapping areas of the keeper and/or edge material of the opening in the label ensues during the stage of release of the keeper and therewith of the label from the fabric or article of fabric.

In practical utilization of my invention, my label affords attachment and detachment of the label to the fabric or article of fabric wholly without injury to the fabric. During the stage of attachment of the label to the fabric or article pursuant to my invention, the fabric may be subjected to the various manners of testing usually applied by prospective customers, such as applying the fabric about the body of the person, passing the fingers upon or on opposing sides of the fabric, stretching the fabric, etc., without disengaging the label from the fabric or article.

Further features and objects of the invention will be more fully understood from the following detail description and the accompanying drawing, in which—

Fig. 1 illustrates in perspective view generally a label attached to a piece of fabric or to an article of fabric pursuant to my invention.

Figs. 2 and 3 are detail sectional views on lines 2—2 and 3—3 respectively, on an enlarged scale, of Fig. 1, employing a circular keeper and an opening in the label of general lozenge shape configuration.

Fig. 4 is a detail plan view of the portion of the label in proximity to its lozenge shape opening and an indication of the circular keeper shown in Figs. 1, 2 and 3, to illustrate the resulting overlapping flexing areas. Fig. 5 is a plan view of the keeper.

Figs. 6 and 7 are views similar to Fig. 4 showing respectively label-provided openings of arcuate-sided triangular configurations in combination with circular keepers, illustrating other embodiments of my invention.

Fig. 8 is a detail plan view of a portion of a label provided with a substantially circular opening in combination with a keeper of arcuate-sided polygonal configuration, and Fig. 9 is a plan view of such keeper.

Figs. 10, 11 and 13 are detail plan views of portions of labels respectively provided with openings of square, lozenge shape and multi-arcuate configuration, combined with radiating lines of minute perforations disposed adjacent such openings, illustrating further embodiments of my invention; in the embodiments shown in Figs.

10 and 13, a keeper of substantially circular configuration is illustrated. Fig. 12 is a plan view of a lozenge shape keeper applicable in combination with the lozenge shape opening of Fig. 11.

Referring to Figs. 1 through 5, **20** represents a label of suitable paper stock or the like relatively stiff and flexing material, constructed to be attached to fabric or a garment **21** pursuant to my invention. In the embodiment of these figures, the mode of attachment is illustrated by means of a substantially circular disk **22** of paper stock or the like of relatively stiff and flexing material serving as a keeper and correlated with an opening **23** formed in the material of the label having a polysided configuration, shown as four-sided, which may be, and preferably is, generally symmetrical and embodying inwardly extending integral projections **24** shown as four in number, which may be and preferably are symmetrical with respect to the symmetrical center of the opening and individually may be arcuate in contour. The minimal dimension of spacing of such projections **24** mutually with respect to one another is substantially less than the diameter of the keeper **22** but of such limited excess of dimension that, when the keeper **22** with an enveloped portion of the fabric interposed between one face of the keeper **22** and the label **20**, is forced in direction substantially normal to its flat face through the opening **23**, the projections **24** function as overlapping areas and are flexed to an extent within the flexural strength of the material of the label **20**. By such relationship of mutual configuration and relative dimensions of the keeper with respect to the peripheral material of the label opening through which the keeper and the enveloped fabric, are inserted, the material of the label adjacent the opening, and inclusive of the overlapping projections **24**, is preserved from tearing or other rupture, precluding the formation of any resulting sharp edges, and maintains its weakening inherent flexing qualities.

The resulting attachment of the label to the fabric enables the fabric to be readily subjected to the usual treatment of customers, such as placing the fabric or garment about the person of the customer, stretching the fabric or garment, etc., while insuring the retention of the label to the fabric.

To remove the label from the fabric or garment, the keeper **22** may be subjected either manually or by a suitable machine, to pressure applied normally to the flat face of the keeper **22** to force the keeper and enveloping fabric **21** through the opening **23**, the overlapping projections **24** being thereby flexed to afford the return of the keeper through the opening, thus releasing the label from the fabric.

In practical uses of the above embodiment of my invention, I have observed that the terminal clearances **23***a*, see Fig. 4, afford zones of freedom of engagement between the enveloped portion of the fabric and the material of the label and function to relieve the fabric from strain incident to the retention of the fabric by the keeper.

In the embodiment illustrated in Fig. 6, the keeper **22** corresponds substantially to the keeper shown in Fig. 5 and indicated in Figs. 1 through 4, whereas the opening **25** formed in the label **20** has a symmetrical polysided configuration, the inward flexing overlapping projections **25***b*, shown as three in number and of arcuate contour, are mutually related in dimension of spacing to the diameter of the keeper **22** similarly as above described, and giving rise to the clearances **25***a* when the fabric is attached between the keeper and the label, similarly as above referred to.

The embodiment depicted in Fig. 7 utilizes a similar substantially circular keeper **22**, the opening **26** formed in the label **22** being in this instance three sided and providing inward flexing overlapping projections **27** of relatively long arc of desired radius of curvature in contour, giving rise to tri-laterally disposed clearances **26***a*, similar as in the above described embodiments.

In Figs. 8 and 9, the embodiment comprises a keeper **27** of generally symmetrical configuration and itself possessing overlapping projections **28**, shown as three in number, which are of a contour correlated with the opening **29** formed in the material of the label **20** to provide flexing action of such overlapping areas **28**. Such opening **29** may be substantially circular, as shown, or may be of other configuration, preferably symmetrical, the diameter or diagonal dimension of which is less than the maximal diagonal dimensions of the keeper **27**, inclusive of its projections **28**, and similarly related, as aforesaid, to afford the aforesaid normal movement of the keeper **27** and interposed enveloping fabric through the opening **29**, accompanied by flexing of the projections **28** within the coefficient of flexural strength of the material of the keeper **27**.

Pursuant to the embodiment of Fig. 10, the keeper **22** is of substantially circular configuration, similar as above; the opening **30** is polysided, shown as four-sided, and substantially symmetrical, the minimal dimension of the mutual spacing of the sides **31** of the opening **30** being less than the diameter of the keeper **22**. Flexing in this embodiment is afforded by the provision of lines **32** of minute perforations or scoring extending radially relative to the opening **30** and effective to create clean lines of severing at the lines **31**, upon the aforesaid normal movement of the keeper **22** with interposed enveloping fabric material through the opening **30**. The resulting integral projections, i. e., of the material of the label at the edge portions **31** between its respective severings **32** and the overlapping portions of the material of the keeper **22** function in the flexing movement.

The embodiment illustrated in Figs. 11 and 12 is of a type comprising a non-circular, preferably a symmetrically configurated keeper **33**, shown as of lozenge shape, correlated with an opening **34** of non-circular, preferably of symmetrical configuration, which may also be of lozenge shape, as shown; the respective dimensions of the keeper and of the opening **34** may be substantially the same, or if preferred the dimensions of the keeper **33** may be slightly greater than those of the opening **34**, in which latter case the provision of lines **33** of minute perforations or scoring, similarly as in Fig. 10, gives rise to resulting overlapping and flexing projection portions of the material of the label adjacent the opening **34**, during the stage of insertion of the keeper and enveloping fabric through the opening **34**.

Fig. 13 represents a type of embodiment of my invention utilizing a preferably symmetrically configurated keeper **36**, which may be circular as shown, and an opening in the material of the label **20** defined by radiating lines **37**, **37**, of mi-

nute perforations or scoring effected upon application of normal force upon the keeper **36** and enveloping fabric through the stated perforated or scored portion of the material of the label **20**. Such resulting overlapping projections are integral with the material of the body of the label and flex relative to the indicated dot-and-dash lines **38** serving as hinges.

Keepers having the above described configurations, as preferred, may be formed from suitable paper stock or like relatively stiff and flexing material by means of a suitable punch machine, the male die, i. e., movable punch element being reciprocated by suitable mechanism. Desirably, the material is in the form of a strip and fed to the punch machine. Preferably, the male punch die is hollow to receive a follower which at the stage of cutting is disposed wholly within the hollow punch element and succeeding the stage of severing the follower is moved in advance of the cutting edge of the punch element to positively feed the keeper, as through a chute, into engagement with the fabric and thence force the keeper and enveloped portion of the fabric through the label opening.

Whereas I have described my invention by reference to specific forms thereof, it will be understood that many changes and modifications may be made without departing from the spirit of the invention.

I claim:

1. A label for a piece of fabric, article of fabric or the like, constructed for securement to the fabric at any location remote as desired from the edges of the fabric, said label being of substantially flat and relatively stiff and flexible material and having an opening therein, a separate keeper of substantially flat and relatively stiff and flexible material, the said opening and keeper comprising securing means whereby the label is secured to the fabric, the securing means being such that one of the said elements thereof is of generally circular outline and that the other of the said elements is provided with at least two projections which project beyond the circular outline of the said first element and providing clearances between the said projections which permits flexing of the projections at the time of insertion and removal of the keeper from the opening in the label when fabric is disposed over the said keeper, and said clearances affording zones in which fabric is received free from strains incident to the retention of the fabric by the keeper.

2. A label for a piece of fabric, article of fabric or the like, constructed for securement to the fabric at any location remote as desired from the edges of the fabric, said label being of substantially flat and relatively stiff and flexible material and having an opening therein, a separate keeper of substantially flat and relatively stiff and flexible material, the said opening and keeper comprising securing means whereby the label is secured to the fabric, the securing means being such that at least two projections of one member of the same extend beyond the periphery thereof thereby providing clearances between the said projections which permit flexing of the projections at the time of insertion and removal of the keeper from the opening in the label when fabric is disposed over the keeper and said clearances affording zones in which fabric is received free from strains incident to the retention of the fabric by the keeper.

3. A label for a piece of fabric, article of fabric or the like, constructed for securement to the fabric at any location remote as desired from the edges of the fabric, said label being of substantially flat and relatively stiff and flexible material and having an opening therein, a separate keeper of substantially flat and relatively stiff and flexible material, the said opening and keeper comprising securing means whereby the label is secured to the fabric, at least two projections integral with the label and extending inwardly of and coplanar with the opening being provided so that clearances between said projections are formed which permit flexing of said projections at the time of insertion and removal of the keeper from the said opening in the label when fabric is disposed over the keeper, and said clearances between said projections affording zones in which fabric is received free from strains incident to the retention of the fabric by the keeper.

4. A label for a piece of fabric, article of fabric or the like, constructed for securement to the fabric at any location remote as desired from the edges of the fabric, said label being of substantially flat and relatively stiff and flexible material and having an opening therein, a separate keeper of substantially flat and relatively stiff and flexible material, the said opening and keeper comprising securing means whereby the label is secured to the fabric, said keeper being provided with at least two projections which projections extend beyond the periphery thereof thereby providing clearances between the projections of the keeper which permit flexing of said projections at the time of insertion and removal of the keeper from the opening in the label when fabric is disposed over the keeper, and said clearances between the projections on the keeper affording zones in which fabric is received free from strains incident to the retention of the fabric by the keeper.

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