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C. J. MOSKOWITZ ET AL

2,188,981

LABEL

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Fig. 1.

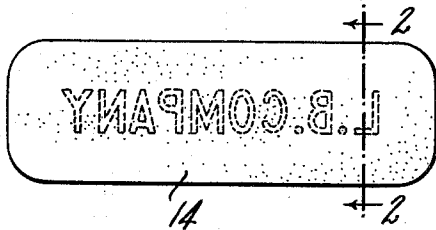


Fig. 6.

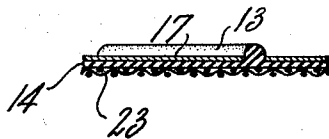


Fig. 2.

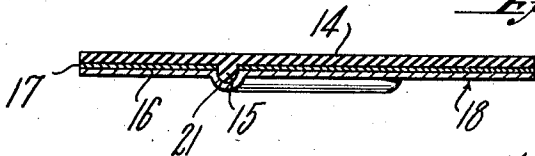


Fig. 3.

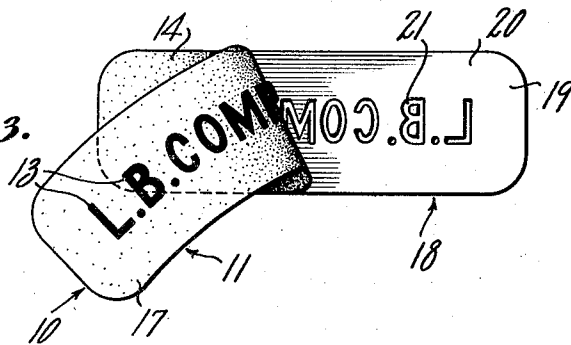


Fig. 4.

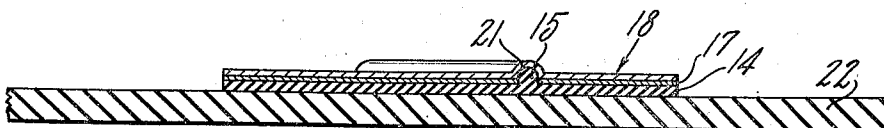
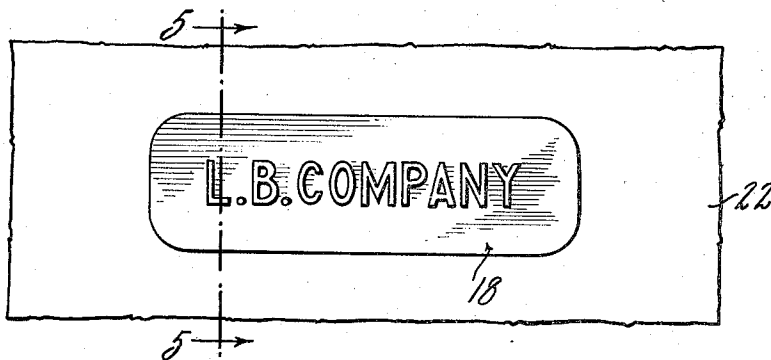


Fig. 5.

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UNITED STATES PATENT OFFICE

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LABEL

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Application April 3, 1937, Serial No. 134,804

3 Claims. (Cl. 40—2)

This invention relates to the combination of a label and a molding and printing plate for forming the label. This invention also relates to the label and the method of making the same.

5 Rubber labels having figures imprinted on the face of the label in the color of the background have been made by molding a sheet of rubber with an imprinted molding plate. In accordance with such practice the figures may be im-
10 printed in relief or in intaglio which gives them depth, but the figures so formed in the color of the background are not clearly outlined and are not very attractive.

Multi-colored labels having figures of a pre-
15 determined color formed on a background of a different color have been made by printing the figures on the plane surface of a backing-up sheet which forms the background of the label. The material deposited as an ink upon the back-
20 ing-up sheet in that type of label is relatively thin as compared to the thickness of the backing-up sheet and it is slightly raised above the surface of the sheet. Structurally this is not desirable because the thin deposit is subject to as
25 great or greater wear than the thicker backing-up sheet. Furthermore the figures are not raised sufficiently to give them the desired depth as may be obtained when they are formed by imprinting them either in relief or in intaglio.

30 In accordance with the present invention the desirable features of both types of labels are obtained and the undesirable features are eliminated by producing imprinted figures upon the face of a rubber composition label in which the
35 raised or elevated portions of the face are formed of the same material as the backing-up material and the depressed portions are formed of a relatively thin flexible material having a color which contrasts with that of the raised portions of the face and of the backing-up material. The label
40 is made by imprinting figures upon the surface of a plate and coating the elevated surface portion with a relatively thin flexible adhesive material such as rubber ink. The backing-up material, comprising soft vulcanizable rubber composition, and the treated face of the plate are
45 pressed together to force the soft rubber of the backing-up material into the depressions of the plate and to cause the other portions of the backing-up material to adhere to the thin coating of adhesive material applied to the elevated surfaces of the plate.

50 The impression thus produced to form the label may be made directly upon the surface of the rubber article before it is vulcanized. The

article with the plate impressed thereon is then vulcanized. In this case the rubber material of the article forms the backing-up material.

The impression may also be made on a soft vulcanizable sheet of rubber composition separate from the article. The label so made and while applied to the plate may be partially vul-
5 canized or completely vulcanized. Where the label is partially vulcanized it may be vulcanized to the article while the article itself is being
10 vulcanized. In this case the label is vulcanized to the article while the plate is applied thereto so that the elevated surfaces of the label will not be deformed by the vulcanizing press or mold. When the label is completely vulcanized it may
15 be stripped from the backing-up sheet and subsequently cemented to the article.

The elevated portions of the face of the label embodying this invention are composed of the same material as the backing-up sheet or the
20 backing-up material of the rubber article on which the imprint may be made. As such elevated portions are relatively thick and stand out above the relatively thin material of a different color which may form the background of the
25 label, the thin material is protected and the contrasting color effect will be maintained usually until the face of the label has been worn to or below the thin material.

An embodiment of the invention and the method of making same is described in reference to the accompanying drawing in which:

Fig. 1 is the back view of the label secured to the printing and molding plate;

Fig. 2 is an enlarged section on line 2—2 of
Fig. 1;

Fig. 3 is a partial view of the molding and printing plate face showing the label partly removed therefrom;

Fig. 4 is a plan view of the plate having a
40 label applied thereto and vulcanized to a rubber article;

Fig. 5 is an enlarged cross-section of Fig. 4 taken on line 5—5.

Fig. 6 is a partial section of a label having the
45 backing-up material deposited on fabric.

As illustrated in the drawing, the label 10 is provided with an imprinted face 11 on which the figures 13 are impressed or formed in relief, but they may be formed in intaglio. The label 10
50 comprises a layer of relatively thick rubber composition backing-up material 14 having projecting surface portions 15 which form the relief portion or elevated portion of the figures. The depressed surface portion 16 of the face of the
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label 10 is covered with relatively thin flexible material 17 which is made of a different color from and is united to the backing-up material 14. The face of the label is imprinted by a plate 18 having a molding and printing face 19 which conforms to the shape or contour of the face of the label 10. The label 10 may be applied to a rubber article while it is assembled on the plate 18 as shown in Figs. 4 and 5, or the label 10 may be removed from the plate 18 in the manner illustrated in Fig. 3 and then applied to the rubber article.

The label may be made by forming an imprint upon the face 19 of the plate 18. In accordance with such method the plate 18 is preferably made of relatively thin aluminum sheet material and the figures are pressed into the face of the plate. As illustrated herein, the figures formed in the printing plate are imprinted in intaglio, but the figures may also be imprinted in relief so that the figures formed thereby on the label may come out in intaglio. The elevated surface 20 only of the face of the printing plate is coated with relatively thin coating material 17. The coating is made of such a consistency that it will not flow into the depressions 21 in the face 19 of the plate. Preferably the coating is made of a rubber ink of any desired color which may be made by thoroughly breaking down rubber and then dissolving it in a suitable solvent, and coloring with the desired pigment or the ink may be made from suitably compounded and colored rubber latex. A rubber ink of the proper consistency may be applied by inking rollers of any suitable type, either hand or machine operated. In order to insure that the elevated surface 20 of the printing plate is completely covered, the plates are preferably given two passes with the inking rollers and the second pass is made before the first coating has dried. The ink is then dried.

The label 10 may be formed by super-imposing the inked face 19 of the plate 18 upon the soft unvulcanized surface of a rubber composition article or upon the soft unvulcanized surface of a rubber composition backing-up sheet separate from the article. In either case the material of the article or the backing-up sheet will provide the backing-up material 14 which contrasts in color with the ink 17. The plate 18 and the backing-up material 14 thus assembled are placed in a vulcanizing press or mold. The face 19 of the plate is pressed against the material 14 with sufficient pressure to force the material into the depressions 21 of the molding and printing plate 18 to form the elevated portions 15 upon the label 10 and cause the ink coating 17 to adhere to the backing-up material 14. The degree to which the vulcanization of the rubber composition 14 is carried depends upon how the label is applied to the article.

If the label 10 is formed by applying the plate 18 directly to the surface of the article to be labeled, the plate can be placed in the mold in which the article is vulcanized. In this case the label 10 is vulcanized in the surface of the article while the article is being vulcanized. After the article is vulcanized and removed from the mold, the plate 18 is removed from the article and the ink 17 sticks to the depressed surface portions of the label 10.

In the event the label 10 is formed by applying the inked face 19 of the plate 18 to a backing-up sheet separate from the article to which the label is to be later applied, the rubber composition backing-up sheet is either partially or completely

vulcanized in the vulcanizing press. Before the sheet material 14 and the plate 18 applied thereto is placed in the press, the exposed back surface of the sheet is dusted with talc and placed upon fabric to prevent the labels from sticking together or to the press. After the labels have been vulcanized to the desired degree the plate 18 with the label 10 adhering thereto is removed from the press. The backing-up sheet material 14 is trimmed around the edges of the plate 18 and the talc is removed from the sheet.

In the event it is desired to vulcanize the label formed on a backing-up sheet to an unvulcanized rubber composition article, the sheet is partially vulcanized and applied to the article with the plate attached thereto as shown in Figs. 4 and 5. In this operation the back of the partially vulcanized label is placed upon the unvulcanized article 22 and the two are vulcanized together which may be done in a vulcanizing press or mold. The plate prevents the label from being deformed by the pressure of the press and is removed from the label after it has been vulcanized to the article.

In case the label is cemented to the article it is preferably completely vulcanized and is stripped from the molding plate 18 as shown in Fig. 2 and is applied to the article by applying cement to the back of the label and adhering it to the article which may already be vulcanized. To prevent the label from stretching the backing-up layer of rubber composition 14 may be deposited upon a fabric sheet 23 as shown in Fig. 6, all other operations being carried out as hereinbefore described.

While certain forms of this invention have been described, it will be understood that changes in details shown and described may be made without departing from the spirit of the invention and the scope of the appended claims.

Having thus described our invention, what we desire to protect by Letters Patent is:

1. A new article of manufacture comprising the combination of a protective molding and printing plate and an imprinted multi-colored label removably adhered thereto, said plate having a molding face provided with depressed portions for forming raised portions on the face of said label and elevated portions for molding and printing depressed portions on the face of said label, said label having a depressed surface composed of material applied only to said elevated surface of said plate, said label having a backing-up layer of material filling said depressions in the face of said plate and united to and contrasting in color with said material deposited on said elevated surface of said plate.

2. A new article of manufacture comprising the combination of a protective relatively thin metal molding and printing plate and an imprinted multi-colored label removably adhered thereto, said plate having a face provided with depressed portions for molding figures in relief on said label and elevated portions for molding and printing the background of said label, said label having a depressed background composed of material deposited only upon said elevated surface of said plate, said label having a backing-up layer of material united to and contrasting in color with said background material, said backing-up layer having portions filling the depressed portions of said plate surface and forming figures in relief on said label contrasting in color with said background material.

3. A new article of manufacture comprising the

combination of a protective molding and printing
plate and a multi-colored rubber label having its
face removably adhered to said plate, said plate
having a face provided with depressed portions
5 for molding figures in relief on the face of said
label, said plate having elevated face portions
for forming and printing the background of said
label, said label having a face provided with a
depressed background composed of a thin layer
10 of rubber ink deposited only upon said elevated

face portions of said plate, said label having a
backing-up layer of rubber sheet material united
to and contrasting in color with said rubber ink
background material, said backing-up layer ma-
terial having portions filling the depressed por- 5
tions of said plate face and forming figures in
relief on said label which contrast in color with
said background material.

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