

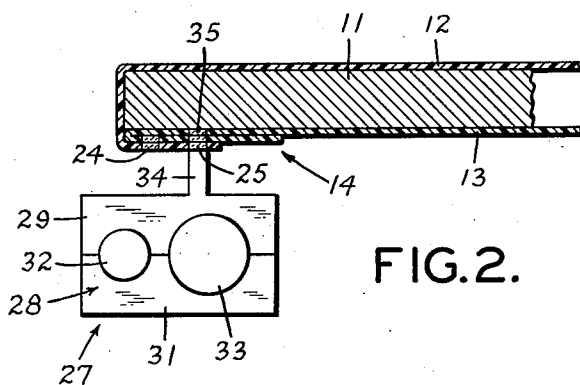
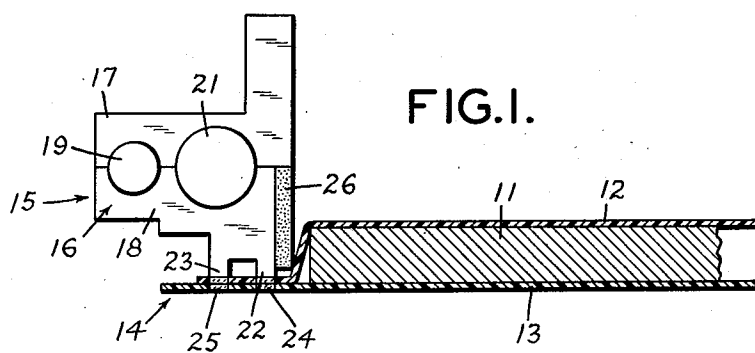
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PACKAGING

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PACKAGING

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4 Claims. (Cl. 206—46)

This invention relates to packaging and relates more particularly to an improved package and process for forming the same.

In producing one type of package that is widely used at the present time, the article being packaged is enclosed in a wrapping material in such a manner that two layers of said wrapping material extend beyond the article in face-to-face relationship to form a flap. The two layers of wrapping material in the flap are sealed to one another, advantageously as close to the article as possible to hold the article in a definite position in the package. The flap is then folded into face-to-face contact with the wrapping material lying against the article being packaged and the flap is sealed in place against the said wrapping material.

During the production of the aforementioned package, it has been found that there is a tendency for the wrapping material to wrinkle and distort when the two layers of said wrapping material forming the flap are sealed to one another. This tendency is particularly pronounced when the wrapping material is thermoplastic in nature, such as cellulose acetate or other organic acid ester of cellulose, polyethylene or the like, and the sealing is effected through the use of heat since the heat emitted from the sealing member will cause the dimensions of the thermoplastic wrapping material to alter and the surface thereof to wrinkle and distort. The wrinkling and distortion of the wrapping material will detract from the appearance of the finished package and lower its acceptability to the consumer.

It is an important object of this invention to provide an improved package and process for forming the same which will be free from the foregoing and other difficulties.

A further object of this invention is to provide an improved package and process for forming the same which will be relatively free from wrinkling and distortion.

Other objects of this invention will be apparent from the following detailed description and claims.

According to the present invention, the article being packaged is enclosed in a wrapping material in such a manner that two layers of said wrapping material extend beyond the article in face-to-face relationship to form a flap. Two seals are formed in the wrapping material making up the flap, one seal being advantageously positioned close to the article to hold the article in a definite position in the package and the other seal being spaced from the first seal and being close to the free edge of the flap. The two seals are preferably made simultaneously and act to hold the material in the flap relatively smooth and flat. The flap is then folded into face-to-face contact with the wrapping material lying against the article being packaged and is sealed to said layer. Through the use of this procedure in forming the package, it is possible to obtain a finished product that will be relatively free from distortion and wrinkling. As a result,

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the package will have a good appearance and exhibit a high degree of consumer acceptance.

While this invention is applicable generally to the production of packages, it is especially useful where the wrapping material is thermoplastic in nature, such as cellulose acetate or other organic derivative of cellulose, polyethylene or the like, and the seals in the package are effected through the use of heat. In this case, the package obtained is of markedly better appearance than the packages obtained by following the processes previously used for this purpose and, as a result, is more acceptable to the consumer.

In other respects the package may be of any desired design. For example, two sheets of wrapping material may be used to form the package, or a single sheet of wrapping material may be folded around the article to form the package. While it is preferred to use seals of the type described on each of the sealed edges of the package, other types of seals may be used on some of the edges of the package, particularly where said edges will be covered or otherwise concealed in the final package.

A preferred embodiment of this invention is shown in the accompanying drawing wherein

Fig. 1 is a cross-sectional detail view showing the sealing of the two layers of material forming the flap, and

Fig. 2 is a cross-sectional detail view showing the sealing of the flap to the wrapping material lying against the article being packaged.

Referring now to the drawing, the reference numeral 11 indicates a portion of the article being packaged. The article 11 is enclosed in layers of wrapping material 12 and 13, comprising cellulose acetate, that extend beyond said article in face-to-face relationship to form a flap 14. The layers of wrapping material 12 and 13 in the flap 14 are sealed together by means of a heat sealing element, indicated generally by reference numeral 15, comprising a split metallic block 16 having an upper half 17 and a lower half 18. Positioned in the block 16 are a heater 19 and a thermostat 21 by means of which the said block may be brought to the desired temperature for sealing. The lower half 18 of the block 16 has depending therefrom a pair of sealing bars 22 and 23 which act to form a pair of autogenous seals 24 and 25 in the flap 14. As shown in Fig. 1, the seal 24 is close to the article 11, while the seal 25 is spaced from said article and is close to the free edge of the flap 14. Because of the two seals 24 and 25, there is very little opportunity for wrinkling and distortion of the material in the flap 14 to occur. To keep the heat emitted by the heat sealing element 15 from having any wrinkling or distorting effect on the wrapping material enclosing the article 11, there is secured to the lower half 18 of the block 16 a layer of thermal insulation 26.

After the seals 24 and 25 have been made, the flap 14 is folded into face-to-face contact with the layer 13 of wrapping material lying against the article 11. The flap 14 is then sealed to the layer 13, as shown in Fig. 2, by means of a heat sealing element, indicated generally by reference numeral 27, comprising a split metallic block 28 having an upper half 29 and a lower half 31. Positioned in the block 28 are a heater 32 and a thermostat 33 by means of which the said block may be brought to the desired temperature for sealing. The upper half 29 of the block 28 has projecting upwardly therefrom a sealing bar 34 which acts to form an autogenous seal 35 between the flap 14 and the layer 13. As shown in Fig. 2 of the drawings, the seals 25 and 35 may be superimposed. However, this is not essential and the said seals may be spaced from one another.

By forming the package in the manner described above it is possible to reduce the wrinkling and distortion of the wrapping material in the flap 14 to a minimum and

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to produce a package that will have a good appearance and a high degree of consumer acceptance.

It is to be understood that the foregoing detailed description is given merely by way of illustration and that many variations may be made therein without departing from the spirit of my invention.

Having described my invention, what I desire to secure by Letters Patent is:

1. In a process for the production of packages, the improvement which comprises enclosing the article in a homogeneous thermoplastic wrapping material in such a manner that two layers of wrapping material extend beyond the article in face-to-face relationship to form a flap, forming two spaced heat seals in said flap whereby the wrapping material between said seals is held relatively smooth and flat, one of said seals being close to the article to hold the article in a definite position in the package, and the other of said seals being spaced from said first seal and being close to the free edge of said flap, folding said flap into face-to-face contact with the wrapping material lying against the article being packaged, and heat sealing said flap to said wrapping material, the seal between said flap and said wrapping material being superposed on the seal in said flap that is close to the free edge of said flap.

2. A package comprising an article enclosed in a homogeneous thermoplastic wrapping material, two layers of wrapping material extending beyond the article in face-to-face relationship to form a flap, a pair of spaced heat seals in said flap whereby the wrapping material is held relatively smooth and flat between said seals, one of said seals being close to the article to hold the article in a definite position in the package, and the other of said seals being spaced from said first seal and being close to the free edge of said flap, said flap being folded into face-to-face contact with the wrapping material lying against the article being packaged, and a heat seal between said flap and said wrapping material, the seal between said flap and said wrapping material being superposed on the seal in said flap that is close to the free edge of said flap.

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3. In a process for the production of packages, the improvement which comprises enclosing the article in a cellulose acetate wrapping material in such a manner that two layers of wrapping material extend beyond the article in face-to-face relationship to form a flap, forming two spaced heat-seals in said flap whereby the wrapping material between said seals is held relatively smooth and flat, one of said seals being close to the article to hold the article in a definite position in the package, and the other of said seals being spaced from said first seal and being close to the free edge of said flap, folding said flap into face-to-face contact with the wrapping material lying against the article being packaged, and heat-sealing said flap to said wrapping material, the seal between said flap and said wrapping material being superposed on the seal in said flap that is close to the free edge of said flap.

4. A package comprising an article enclosed in a cellulose acetate wrapping material, two layers of wrapping material extending beyond the article in face-to-face relationship to form a flap, a pair of spaced heat-seals in said flap whereby the wrapping material is held relatively smooth and flat between said seals, one of said seals being close to the article to hold the article in a definite position in the package, and the other of said seals being spaced from said first seal and being close to the free edge of said flap, said flap being folded into face-to-face contact with the wrapping material lying against the article being packaged, and a heat-seal between said flap and said wrapping material, the seal between said flap and said wrapping material being superposed on the seal in said flap that is close to the free edge of said flap.

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