Aug. 20, 1968 R. E. FERREE 3,398,041

WRAPPER MATERIAL

Filed June 22, 1966

Fig.1.

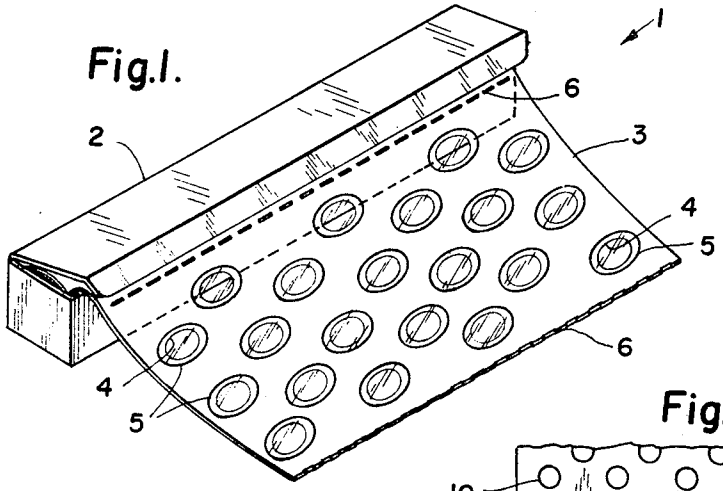


Fig.2.

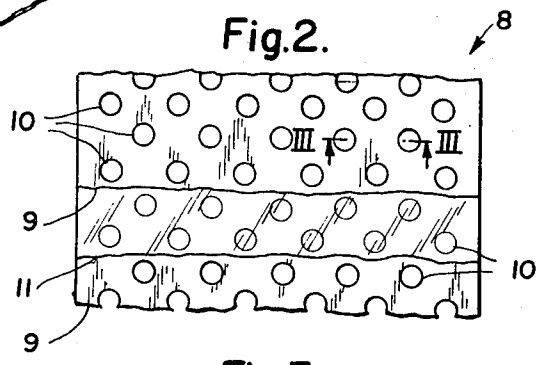


Fig.3.

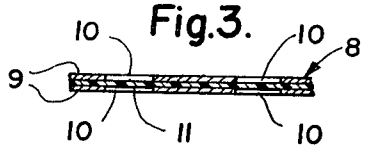


Fig.4.

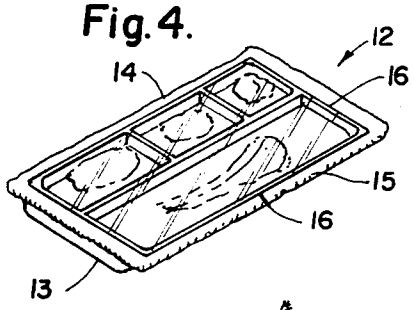
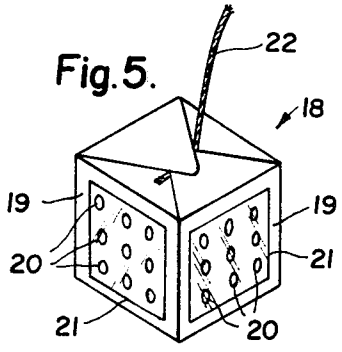


Fig.5.



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WRAPPER MATERIAL

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ABSTRACT OF THE DISCLOSURE

A wrapping material in elongated sheet form, such as in a roll, for packaging or fabricating into containers. The wrapping material comprises an elongated transparent plastic film sandwiched between two superimposed elongated sheets of metallic foil having registering holes cut out therefrom in rows to enable viewing therein.

This invention relates to a novel type of wrapping material which may be used as such, or fabricated into containers, and, more specifically, to a wrapping material consisting of a combination of metallic foil and organic transparent sheet material, which combines the merits of both.

An outstanding disadvantage of metallic foil wrapping material is that it is opaque, therefore the contents of any container covered thereby, or material wrapped thereby cannot be seen, such as during storage of left-over food in a refrigerator. While transparent plastic material had been used instead to overcome this disadvantage, such material has certain disadvantages, as compared to metallic foils, such as (1) a lower heat transfer rate, therefore slower heating or cooling; (2) lesser strength; (3) less decorativeness; (4) inability to retain predetermined shape or form; (5) combustibility; (6) lower heat reflectivity; and (7) higher permeability of fluids therethrough.

Of course, metallic foils have certain disadvantages, such as (1) lack of transparency; (2) lack of heat sealability of certain materials; (3) lack of water solubility; and (4) lack of combustibility or ability to rupture at low temperatures.

An object of the present invention is to provide a novel wrapping material which is devoid of the above named disadvantages of either metallic foil or of organic transparent plastic material and which combines the advantages of both when used either as a wrapping material or when fabricated into panels of a metallic foil container.

A more specific object of my invention is to provide a novel wrapping material comprising a continuous sheet of metallic foil having windows of organic transparent material and so constructed as to emphasize the advantages of both materials and minimize their disadvantages.

Other objects and advantages of the invention will become more apparent from a study of the following description taken with the accompanying drawing wherein:

FIG. 1 is a perspective view of a box of wrapping material, which material is shown partly pulled out and which embodies the principles of the present invention;

FIG. 2 is a fragmentary portion of a modified construction of the wrapping material and comprising essentially transparent foil sandwiched between metallic foil;

FIG. 3 is a fragmentary, cross-sectional view taken along line III–III of FIG. 2;

FIG. 4 is a perspective view of an open-top container covered with wrapping material embodying the present invention; and

FIG. 5 is a perspective view of a container having panels formed of material embodying the present invention.

Referring more particularly to FIG. 1, numeral **1** denotes, generally, a package of wrapping material comprising a box **2**, of cardboard or other suitable material, which contains a roll **3** of wrapping material of continuous length, which may be provided with perforations **6** at evenly spaced intervals to facilitate tearing of predetermined lengths of the wrapping material. The wrapping material comprises a roll of continuous metallic sheet made of any suitable thin gauge metal, such as aluminum foil, having a plurality of holes **4** cut out therefrom at even intervals. These holes are covered by circular tabs **5** of slightly greater diameter which are made of transparent plastic material or other organic wrapping material such as polyvinyl chloride, polyvinyl alcohol, polyethylene, polypropylene, cellophane, wax paper or the like.

A modification of the combination wrapper sheet is shown in FIGS. 2 and 3 in the form of a transparent plastic sheet **11** which is sandwiched between and adhered to two outside perforated sheets **9** of metallic foil having holes **10** which are in registry so that the combination sheet will be provided with windows to enable viewing therethrough.

A further modification would comprise the elimination of one of the outer metallic sheets **9** of FIG. 2 so as to provide a double layer, instead of a triple layer combination.

The hole arrangement in FIG. 2, of course, may be modified so as to provide larger openings of windows with more or less spacing, and perhaps, in some instances, so as to provide but a single central large window in each of the panels defined by slits **6**.

FIG. 4 shows, generally, a compartmented container **12** for food or other material comprising a metallic container portion **13** having flanges **16** and which is covered by a wrapper of transparent plastic film or one such as shown in FIGS. 1 or 2, with projecting edge portions, such as **14** and **16**, which are folded over the top edges of the perimeter of the container to provide an air-tight seal.

The container of FIG. 4 may contain fire-retarding or extinguishing material, if desired, in which case the metallic container **13** would contain such material, whereas the cover of a transparent organic plastic sheet alone or combined with metallic material, will keep the fire extinguishing material from escaping from the container until the heat of the fire causes the organic film to shrink, rupture, decompose, disintegrate, or perhaps burn.

FIG. 5 shows, generally, a container **18** made of metallic foil **19** and provided with openings **21** which are covered by a wrapping material, such as shown in FIGS. 1, 2 and 3, which covers the inner surface of the box (or outer surface if desired) so as to furnish a plurality of windows **20** which are transparent and covered solely by the transparent wrapping foil to enable viewing of the contents. A string **22** may be provided to facilitate opening of the container.

The combination of metal foil and organic film as a wrapping material is useful for many practical applications. For example, where identification of the product is desirable and wherein it is also desirable to warm the product wrapped at defined temperatures, the perforations may be covered by a transparent organic plastic sheet which will withstand higher temperatures, such as Teflon film which withstands cooking temperatures. This would provide the advantages of both types of wrapping material.

Where identification of the product is desirable and it is also desirable to warm the product at defined temperatures, the perforations may be covered by a transparent film or sheet that will either decompose or shrink at a predetermined temperature to purposely rupture or break open the opening.

If the packaged product is placed in contact with water,

and the product contained therein is to be dissolved at a controlled rate, the container may be made of metallic foil with the proper number and sizes of holes, which holes are covered with a water-soluble product, such as one of the polyvinyl alcohols. The container holds its product until it is ready for use, whereupon it is exposed to water and the water soluble film will dissolve and provide contact of the product with water. The strength of the metallic container would provide certain advantages over a package made entirely of a water-soluble film. The size and frequency of the holes would influence the dissolving rate.

The wrap embodying the present invention also has high merchandising value, that is, higher than either that of metallic foil or of organic film, since the package is more adaptable to being made decorative, or to show the name of the product or the manufacturer by properly arranging the perforations.

Thus it will be seen that I have provided an efficient wrapping or container material comprised of metallic foil and transparent film, wherein the foil has sufficient perforations to enable viewing therethrough to see the product wrapped; furthermore, I have provided a wrapping material, or container made partly thereof, which is suitable for baking, since the film can withstand cooking temperatures, and which will keep foods moist and enable viewing thereof while being cooked; furthermore, I have provided a novel container comprising metallic foil with windows covered by a transparent film that will either decompose or shrink to purposely perforate the sealed openings; furthermore, I have provided a container which is covered by metallic foil and organic film,

which film will shrink, rupture, decompose, disintegrate, or burn at predetermined temperature so as to release fire extinguishing material; furthermore, I have provided a packaged product that may be placed in contact with water and having transparent windows of organic plastic, such as polyvinyl alcohol, which are dissolved at a controlled rate.

While I have illustrated and described several embodiments of my invention, it will be understood that these are by way of illustration only, and that various changes and modifications may be made within the contemplation of my invention and within the scope of the following claim.

I claim:

1. A wrapping material comprising two superimposed, elongated sheets of metallic foil having registering holes cut out therefrom and a sheet of transparent plastic film sandwiched therebetween and adhered to said sheets of metallic foil, said holes being arranged in staggered rows to provide greater strength of the wrapping material and to enable viewing therethrough.

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