Jan. 16, 1968 J. C. VINGREN ET AL 3,363,956

WOOD GRAIN CABINET

Original Filed Sept. 15, 1964

Fig. 1.

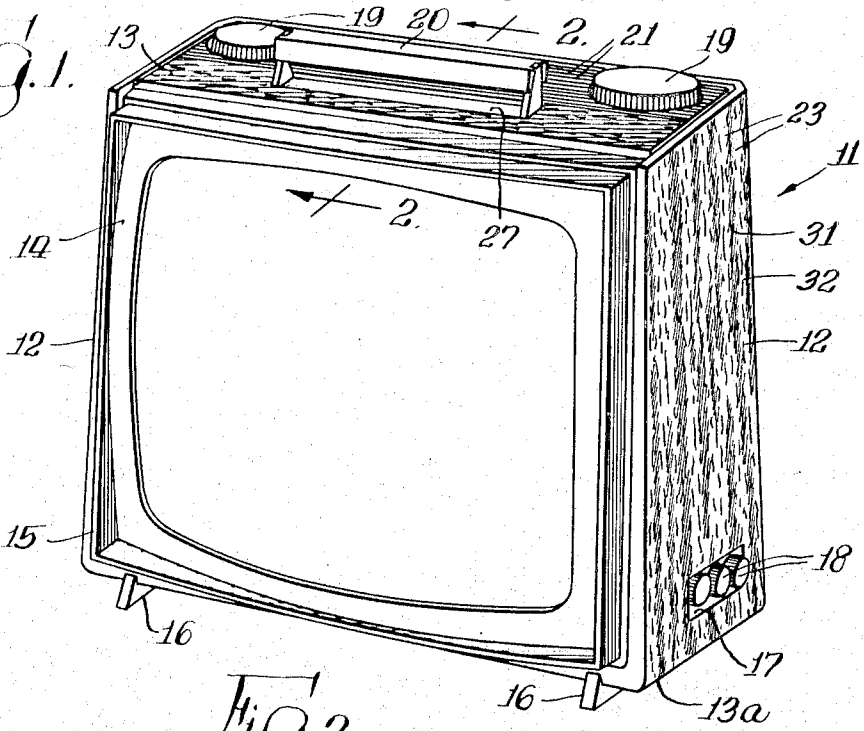


Fig. 2.

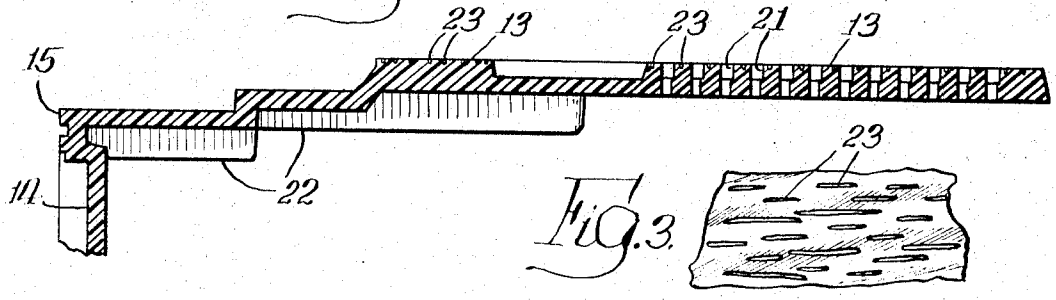


Fig. 3.

Fig. 4.

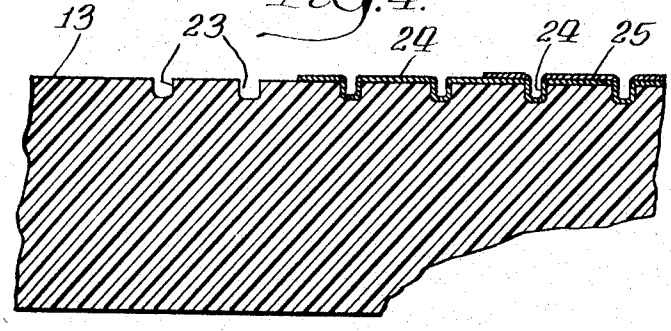
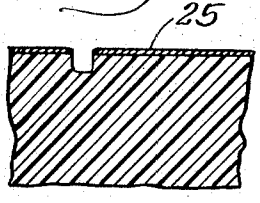


Fig. 5.



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WOOD GRAIN CABINET

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Continuation of application Ser. No. 396,492, Sept. 15, 1964. This application May 11, 1967, Ser. No. 637,849
6 Claims. (Cl. 312—204)

This invention relates to cabinets, and more particularly to a cabinet, such as a television cabinet, having a decorative surface which simulates the natural appearance of wood, and to a method for producing such a cabinet.

This application is continuation of S.N. 396,492, filed Sept. 15, 1964, and now abandoned.

Wood surfaces are desirable for many decorative applications, especially with respect to certain types of furniture. For example, television or radio cabinets often have a richer appearance and better complement other furniture in the same room when the cabinets are wood. Wood, however, is generally expensive, takes time to assemble and finish, and requires care in handling to avoid damage. Attempts have heretofore been made to simulate wood surfaces, but these attempts have often proved expensive or artificial in appearance.

Accordingly, it is an object of this invention to provide a simulated wood surface which is natural in appearance and low in cost.

Another object of the invention is to provide a cabinet having improved and natural appearing simulated wood surfaces and a method for producing the same.

A further object is to provide a low cost, light weight molded plastic cabinet.

A feature of the invention is the provision of a molded cabinet surface having a plurality of elongated grooves therein with the surface having an overlay coat of wood grain finish resulting in a woodgrained three-dimensional surface simulating natural wood.

Another feature of the invention is the provision of a molded surface of a given shade of color and with mutually aligned elongated grooves formed therein during molding to represent wood pores, with the surface excluding the grooves being provided with a coating having elongated areas of contrasting shades extending in the same direction as the grooves and contrasting with the given shade.

In the drawings:

FIG. 1 is a perspective view of a molded plastic television receiver cabinet constructed in accordance with the invention;

FIG. 2 is an enlarged sectional view taken along the line 2—2 of FIG. 1;

FIG. 3 is a plan view of a section of the surface of the cabinet of FIG. 1, which section of surface is shown in the drawing enlarged beyond actual size;

FIG. 4 is a greatly enlarged cross-sectional view of a portion of the cabinet illustrating the steps involved in producing a cabinet surface in accordance with the invention; and

FIG. 5 is a view similar to FIG. 4 illustrating a variation in the steps of producing a cabinet surface according to the invention.

Generally, the invention involves the production of a decorative molded plastic cabinet which simulates the natural appearance of wood. The cabinet is molded with a plurality of mutually aligned, shallow, elongated grooves to represent wood pores and the surface, including the grooves, is of a given shade of color. The surface excluding the grooves is then covered with an overlay coat having elongated areas of contrasting shades extending generally in the same direction as the grooves but obliquely thereto to represent wood grain. Such overlay coat may

be applied by a roller grain gravure process, the end result being a wood grained three-dimensional surface which is strikingly similar to natural wood.

In the preferred form the cabinet also includes molded recesses looking like grill work. The outer surface is then planar to readily receive the decorative coating. The plastic may be dark in color, a first coat extending into the grooves or pores (but not the recesses) may be light in color, and a second coat on the surface exclusive of the pores and recesses may be dark and varied in color forming a grain-like appearance.

In FIG. 1, a television receiver having a unitary molded plastic cabinet with decorative surfaces constructed in accordance with the invention is shown. The invention is particularly advantageous from a cost and consumer appeal standpoint in that molded forms which are substantially low in cost may be given a rich and attractive appearance. The television receiver cabinet **11** is provided with sides **12**, a top **13**, a bottom **13***a*, a bezel **14**, and a projecting rim **15** surrounding the bezel. The cabinet **11** is molded of a unitary piece of plastic in a single operation and provides a strong low cost cabinet. Supports **16** are molded integral with the cabinet and a recess **17** is provided on one of sides **12** for control knobs **18**. Openings are provided in the top **13** for control knobs **19**, and a recess **27** is provided for carrying handle **20**. A plurality of grill slots **21** are molded into the top **13** to provide an opening for sound emission from a speaker mounted on the interior of the cabinet.

As previously mentioned, the entire cabinet **11** is molded of a unitary piece of plastic material. As may be seen from FIG. 2, strengthening ribs **22** are provided on the interior of the cabinet to give the cabinet desired rigidity. Further chassis or frame members within the cabinet also add rigidity. In the cabinet shown, the top **13** and sides **12** are provided with decorative surfaces in accordance with the invention. The surfaces of top **13** and sides **12** have a plurality of mutually aligned elongated grooves **23**. Grooves **23** are molded into the surface simultaneously with the molding of the cabinet. The plastic may be molded with a color pigment impregnated therein or a color coat may be applied subsequent to molding. This latter step is illustrated in FIG. 4 wherein a base coat **24** has been applied to the molded plastic surface, including grooves **23** of top **13**.

The printing of the grain design comprises longitudinally extending areas **31** and **32** of contrasting shades to simulate a natural wood appearance. The grain design may be printed on the surface by utilizing a metal cylinder having a grain design etched in its surface. The cylinder is coated with an ink and the pattern is transferred to the surface to be imprinted by means of a gelatin roller which is first rolled on the metal cylinder to pick up the inked design and then rolled on the surface being imprinted. Such a procedure may be referred to as a roller print or roller transfer process.

In accordance with the invention, a grain design is applied to the highly detailed molded plastic surfaces of the cabinet by means of a roller print process. The design coat is applied to the surfaces exclusive of the grooves **23** therein as illustrated by number **25** in FIGS. 4 and 5. FIG. 4 shows the final printed coating applied over a base coat on the plactic, whereas FIG. 5 shows the printed coating applied over a molded plastic surface wherein the color is in the plastic as molded.

In either case the printed design coat **25** is selected to contrast with the color of the plastic surface. For example, a dark base coat may be sprayed on first, or a dark base color molded into the plastic, with a grain of lighter contrasting shades of color roller printed over as coat **25**. With this procedure, the grooves **23** remain the darker color for contrast and depth emphasis. On

the other hand, the shading may be reversed if a lighter appearing wood is desired. That is, the base coat or basic color of the plastic may be light color, and the overlay coat roller printed with darker contrasting shades. Thus, for a darker color wood, the grooves **23** will be of the darkest shade with the roller printed grain coating being of two different but lighter shades. On the other hand, a lighter color wood finish would require that the grooves **23** be of the lightest color and the roller printed grain of contrasting darker shades. In the finished product, the grooves **23** simulate the pores of the wood while the roller printed overlay simulates the grain or figure of the wood. Where there are recessed portions of the surface molded into the plastic cabinet, such as illustrated at **17**, **21** and **27** in FIG. 1, the plastic may be molded with a dark pigment. This makes such recessed portions less conspicuous, enhancing the overall appearance of the cabinet.

The advantages of such a construction are apparent. In addition to providing an extremely realistic outward appearance simulating the natural appearance of wood, the process is simple and involves a minimum of operations. The cabinet is molded in a unitary piece with the recessed portions **17**, **21** and **27** and the grooves **23** molded in the plastic itself. The finishing is a simple procedure which includes the application of a roller printed coating to the surface of the panel exclusive of the recesses, slots and grooves. It may therefore be seen that the invention provides a simulated wood surface which is natural in appearance and low in cost.

We claim:

1. A mold plastic cabinet having top, bottom, sides and front portions, and having a planar exterior surface with recesses molded therein which constitute a variable surface depth to form a grill-like appearance in such surface, said surface further having a pattern of elongated grooves molded therein and being short with respect to the size of said surface, said grooves being generally mutually aligned and of variable length and of a depth small compared to the depth of said recesses to represent pores of wood, a first relatively light decorative coating applied to said planar exterior surface and into said grooves but exclusive of said recesses, and a second relatively dark decorative coating applied to said planar surface exclusive of said recesses and said grooves so that said surface contrasts with said grooves to provide said surface with depth emphasis, said dark decorative coating having a variation in color thereof extending generally obliquely to the direction of said grooves to represent the natural grain of wood.

2. A molded plastic cabinet having top, bottom, sides and front portions, and having a planar exterior surface with recesses molded therein which constitute a variable surface depth to form a grill-like appearance in such surface, said surface further having a pattern of elongated grooves molded therein and being short with respect to the size of said surface, said grooves being generally mutually aligned and of variable length and of a depth small compared to the depth of said recesses to represent pores of wood, said surface and said grooves having a given shade of color, a decorative coating applied to said planar surface exclusive of said recesses and said grooves which contrasts with said given shade of color so that said grooves causes said surface to have depth emphasis, said coating having elongated areas of varied light and dark color extending generally obliquely to the direction of said grooves to represent the natural grain of wood.

3. A plastic cabinet having top, bottom, sides and front portions, said cabinet being molded of relatively dark color plastic and having a planar exterior surface with recesses therein which constitute a variable surface depth to form a grill-like appearance in such surface, said surface further having a pattern of elongated grooves molded therein and being short with respect to the size of said surface, said grooves being generally mutually aligned and of variable length and of a depth small compared to the depth of said recesses to represent pores of wood, a decorative coating applied to said planar surface exclusive of said recesses and said grooves and having a color which is lighter than and contrasts with the color of said plastic to cause said surface to have depth emphasis, said coating having varying shades of color extending generally obliquely to the direction of said grooves to represent the natural grain of wood.

4. A plastic cabinet having exterior surfaces including a top and a pair of sides having a pattern of grooves molded therein which are short with respect to the size of said top and said sides to represent pores of wood, said grooves being generally mutually aligned and of variable length and of a depth small with respect to the depth of said top and said sides, said top and said sides and said grooves having a given shade of color, a decorative coating applied to said top and said sides and substantially exclusive of said grooves, said coating being of a shade of color to contrast with said given shade of color to cause said grooves to provide depth emphasis for said top and said sides, said coating forming elongated areas of varying light and dark colors extending generally obliquely to the direction of said grooves to represent the natural grain of wood.

5. A molded plastic cabinet having exterior surfaces including a top and a pair of sides having a pattern of grooves molded therein which are short with respect to the size of said top and said sides, said grooves being generally mutually aligned and of variable length and of a depth small with respect to the depth of said top and said sides to represent pores of wood, a first decorative coating of a given shade of color applied to said top and said sides and extending at least partially within said grooves, a second decorative coating applied to said top and said sides and substantially exclusive of said grooves, said second decorative coating being of a shade of color to contrast with said first decorative coating to cause said grooves to provide depth emphasis for said top and said sides, said coatings forming elongated areas of varying light and dark colors extending generally obliquely to the direction of said grooves to represent the natural grain of wood.

6. The plastic cabinet set forth in claim **5** wherein said first decorative coating is relatively light and said second decorative coating is relatively dark.

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