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PROCESS FOR FINISHING PANELS FOR RADIO SETS

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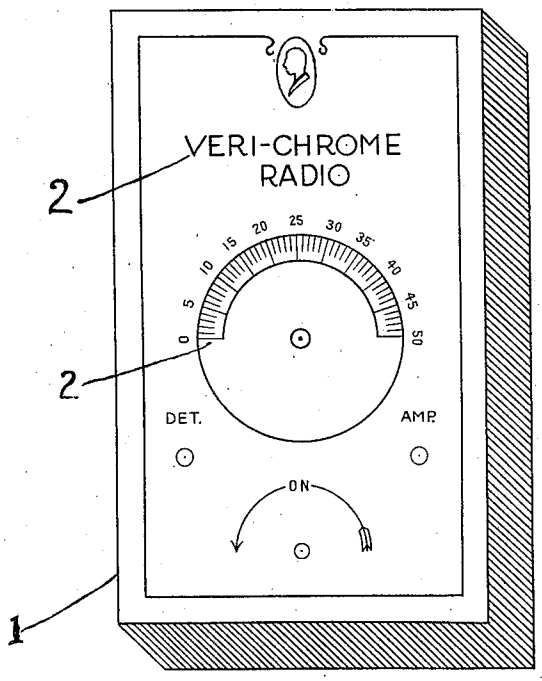


FIG.-1.

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PROCESS FOR FINISHING PANELS FOR RADIO SETS.

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To all whom it may concern:

Be it known that I, PAUL M. HENNEGAN, a citizen of the United States, residing at the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Processes for Finishing Panels for Radio Sets.

My invention relates more particularly to panels for radio sets, upon which are marked the diagram, instructions, lettering, registering points, and the like, so that the operator may follow the proper course in order to tune in or out, or manipulate the radio instrument during broadcasting. These marks vary and change according to the instruments upon which they are used, on the panels thereof. These panels are made of an insulating material and many are made of what is known to the trade as bakelite, formica, micarta, pyradiolin, condensite, special wood, and like materials.

At the present time the markings on these panels are done by an engraving machine. By this process a groove is cut out in the face of the panel and this groove is filled in with a white composition of matter, usually made from whiting and a binding material, being material which never completely dries. Some of these panels are engraved by hand.

It may be stated that some of these panels are made of very hard rubber and the lines are stamped on the face of the panel. In such cases the stamp marking lines, or the like, are rounded at the edges and are not clearly formed so that they do not make a good appearance when filled with a material used for such purposes. Such stamping cannot be done on bakelite, formica, and kindred materials. First class work cannot be done by stamping the grooves in hard rubber and it is not generally used, only on cheap work.

It will be readily understood that by the engraving process a great deal of time is required in preparing the face of the panels as the work is really slow and tedious. It is also very expensive, adding materially to the cost of the panel. On account of the time required in engraving the panels, only a limited amount of work can be done, it requiring the use of a great many machines and men in producing the required amount of panels necessary in manufacturing radio sets. Thus the production of radio sets is hampered.

On account of the time required to do this engraving and the high cost thereof, the amount of engraving placed upon the face of the panels is limited, whereas as the work can be done cheaply, quickly, and effectively by my new process, this limitation would not be present and more information could be given upon the panels and they could also be decorated, making the panels more lucid and effective in their information and enhancing the appearance thereof.

I have evolved a process under which all the objections and drawbacks incident to the finishing of the faces of the radio panels as above set forth is overcome, and the production of a cheaper, more satisfactory, and better-appearing radio panel is the result. In short, I print any lettering, marks, symbols, or the like on the face of the radio panels instead of engraving or stamping them as above set forth.

I will now describe my preferred process and method of carrying out such work, and I will describe my process by steps.

First—I make a drawing as the finished article should appear. This drawing may be plain with only the necessary direction and designating lines thereon, or it may be highly ornamental, and the amount of this work on said drawing need not be limited, but it may be as profuse as desired, as under my process I need not be limited.

Second—I then make a photographic negative of said finished drawing, or I may make a tracing on the proper kind of paper or transparent material and lay this paper on a sensitized plate and make a negative; or I may make the negative in any other preferred way under which the negative can be made.

Third—This negative is then printed on a photolitho plate or I can use an engraved lead plate, zinc etching, or a gelatin plate, or any plate that can be furnished, I, however, preferring the photolitho plate. I may, if I desire, make a litho plate and place the drawing thereon with tusche, a lithographic ink, or I may use a lithographic crayon.

Fourth—This plate is then etched and

rolled up with an ink or a pigment sticky enough to hold different bronzes, powders, or any dry colors.

Fifth—In my next step I take an impression from the plate onto a rubber blanket used on a printing press or any kind of a machine or press.

Sixth—Then an offset print is made by a rotary motion onto the insulating material which is to form the radio panel or the like. Any other motion may be used to do this work, and any kind of a device used for making the impression.

Seventh—The panel made from the insulated material is then dusted with bronzes, powders, or dry colors.

Eighth—It is then dried either by natural oxidation or heat.

Ninth—The radio panel is then varnished or lacquered and put into a heated oven to set, or left out to dry naturally. The varnish or lacquer may be applied with a brush or by a spray.

In the accompanying drawing forming part of this specification:

The figure represents an isometric view of a panel for a radio set finished according to my invention, the character 1, representing a rectangular shaped radio set panel, and 2, is the decoration, printing, or imitation engraving thereon.

The panels may be of any color—black, yellow, blue, red, or any other color, and any colored ink or the like may be used in finishing them.

While I have illustrated a rectangular shaped panel I may use any shape or size or any configuration, as I do not confine myself to the shape of the article upon which my process is used.

It will be understood that the surfaces of the sheets of insulated material like bakelite, formica, and the like, are not absolutely level, but are slightly undulated and for this reason I prefer to use a rubber blanket or pipe for doing the printing thereon.

It should be understood from the above description that instead of engraving the characters needed on the face of radio panels, I print them thereon and I do not wish to be understood as confining myself absolutely to the various steps set forth by me, I having set forth a preferred manner of doing the work. For example, I can print directly onto the panel if found expedient and practical.

What I claim as new and my invention and desire to secure by Letters Patent is:

1. A process for finishing opaque panels of insulating material for radio sets consisting in drawing a design of the character to appear on the front face of the finished article, making a negative of said drawing, printing said negative on a plate, etching said plate and rolling the same with an adhesive material sticky enough to hold colored powder, taking an impression from the plate onto a rubber blanket, making an offset print onto the front face of said opaque panel, applying colored powder to the front face of said panel, drying said panel, coating the front face of the panel with a substantially transparent fluid, such as varnish, and then drying the same.

2. A process for finishing opaque panels of insulating material consisting in placing a drawing upon a plate, etching said plate and rolling the same with an adhesive material sticky enough to hold a powdered substance, taking an impression from the plate onto a resilient blanket, making an offset print onto the front face of said panel, applying a powdered substance to said adhesive material on the front face of the panel, drying said panel, coating the front face of the panel with a transparent fluid, such as varnish, and then drying the same.

3. In a process for finishing opaque panels of insulating material, printing with a sticky composition on the front face of the panel, applying a powdered substance to the printed matter and drying the same, then coating the front face of the thus treated panel with a transparent fluid, and drying said coating.

4. In a process for finishing opaque panels of insulating material, printing by offset on the front face of a panel with a sticky substance, applying finely divided powdered material to such substance, coating the front face of the thus treated panel with a substantially transparent fluid, and then drying the same.

In testimony whereof, I affix my signature at Cincinnati, Ohio, this 6th day of September, 1924.

PAUL M. HENNEGAN.