

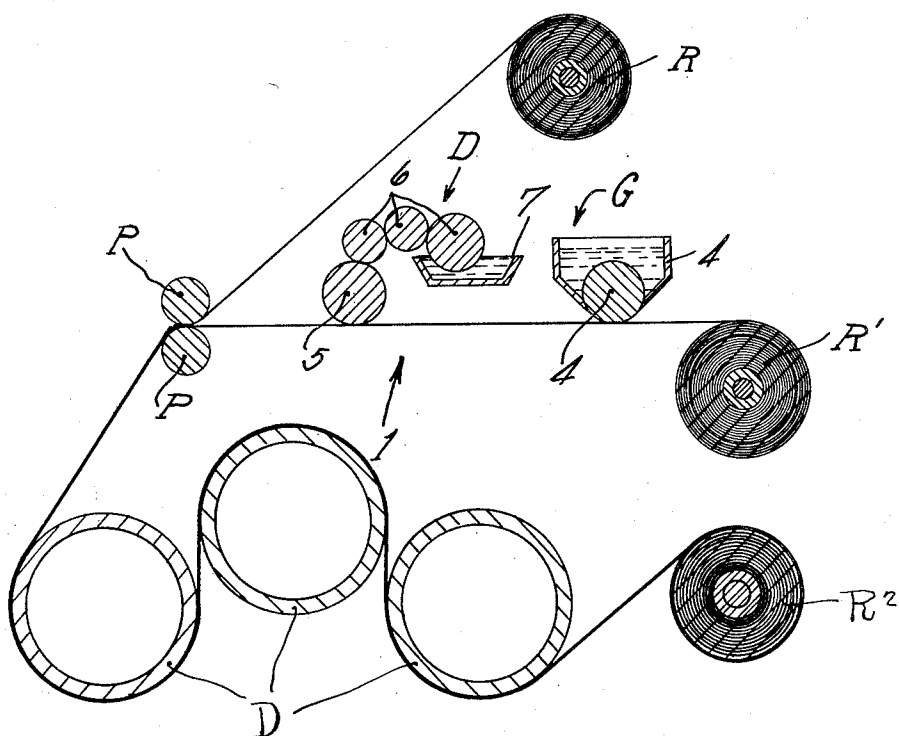
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LAMINATED ORNAMENTAL PAPER

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LAMINATED ORNAMENTAL PAPER

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This invention relates to improvements in the method of and apparatus for producing ornamental laminated paper.

One object of the invention is to provide a method of and apparatus for securing together in superposed relation plies of paper or the like which have applied to their adjacent face or faces a decorative design the effects of which are diffused or subdued by the plies so as to produce a pleasing artistic effect.

Another object of the invention is the provision of a method and apparatus wherein the design and adhesive for securing the plies together are applied simultaneously to the plies and is accomplished according to one novel feature of the invention by the novel mode of operation and apparatus to be described.

The invention in its broad aspect is adapted for use in connection with various materials, but in order to facilitate a clear understanding thereof, it will be described in connection with the paper making art, and while it may be practiced by the employment of various forms of apparatus, it will be described for purposes of disclosure in connection with the diagrammatic illustration of the accompanying drawing, in which—

The figure is a diagrammatic view of one form of an apparatus for carrying out the novel steps of the process and thereby producing the novel ornamental sheet.

In carrying out the process I employ at least a pair of webs of material such as paper in rolls R and R1 which are mounted so that the webs may be unwound therefrom. The webs are led between the bite of coacting pressure rolls P, then over drying rolls D' and finally taken up in superposed relation in the form of a laminated web on a roll R2. One of the webs travels past a gumming or pasting device G which may consist of a reservoir 3 and a roll 4 which contacts with the web for applying a coating of adhesive material to the surface thereof. This part of the apparatus secures the webs together in superposed relation and may be termed a web pasting apparatus.

A design applying device D of one form

for applying a design to one of the webs may consist of a roll 5 carrying a design for contacting with the web and which is inked or supplied with a coloring material by another roll 6 which receives color from a font 7.

The design applying device may take any form desired and as distinguished from the form shown and may consist of apparatus for either brushing or spattering colors on to the web in some predetermined manner to obtain the desired design effect.

By selecting various forms of design applying devices it is possible to provide many and various designs and it will be obvious that a design or designs may be applied to either or both of the webs as may be desired or required.

The webs are unwound from their respective rolls and after having the adhesive material and design applied thereto are pressed together and led over the drying rolls and then taken up in the form of a laminated web by the take up roll R2.

Where webs of paper are decorated the material is more or less transparent according to the thickness, texture, etc., so that the plies of material or webs partially conceal the design and subdue or diffuse the effects thereof to various degrees so that instead of the vivid contrasting color effects as when a design is applied to a web of paper there is produced a new and pleasing artistic appearance.

Ornamented paper produced by the novel method is useful wherever ornamental paper is required, the design in all cases being toned down so that it is not only artistic because of its subdued nature, but the paper possesses the advantage that the design itself is protected against injury because it is between the plies of material.

It may be desirable in some cases to apply the design prior to the pasting step or to apply the design to one of the webs and the paste to the other. These variations will depend upon the effects it is desired to create and the character of the materials, but will not detract from the spirit and scope of the invention.

It will be observed from the foregoing that the novel process facilitates the production of an ornamented laminated web and is accomplished by simultaneously applying a design by some convenient means and an adhesive thereto. Also it will be noted that the interior decoration is not only protected but that the overlying sheets are made use of to diffuse or subdue the design and thereby create a great variety of ornamental effects.

The webs of paper employed may have particular characteristics in that they may consist of stock which is more or less mottled, which characteristics may be taken advantage of to vary the diffused effect and produce pleasing ornamental effects.

What I claim and desire to secure by Letters Patent is:

1. The process of producing an interiorly decorated laminated paper web which consists in, leading webs of paper from separate rolls, simultaneously applying adhesive material and decorative designs to an inner face of one of said webs and finally passing said webs between pressure rolls whereby the webs are pressed together to provide a laminated web.

2. An apparatus for producing laminated paper with designs between the plies thereof comprising, means for simultaneously unwinding webs of paper from separate rolls so that said webs may travel one above the other in a spaced relation, coacting pressure rolls for receiving the webs in superposed relation therebetween and for pressing them together, a roll for winding up the superposed webs, a design applying roll and an adhesive applying roll for simultaneously applying designs and adhesive to an inner face of a web while a web is travelling therepast, the said rolls being disposed between said pressure rolls and the rolls from which the webs are unwound and drying rolls for engaging the superposed webs after they have been pressed by the pressure rolls.

3. The process of producing an interiorly decorated laminating paper web which consists in, leading webs of paper from separate rolls, simultaneously applying adhesive material and decorative designs to the inner faces of said webs and finally in passing said webs between pressure rolls whereby the webs are pressed together to provide a laminated web.

4. The process of producing an interiorly decorated laminating paper web which consists in, leading webs of paper from separate rolls, simultaneously applying adhesive material and decorative designs to the inner faces of said webs, passing said webs between pressure rolls and finally in drying said webs.

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