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1,999,283

PROCESS OF MANUFACTURING WRAPPER PADS

Filed July 11, 1933

Fig. 1

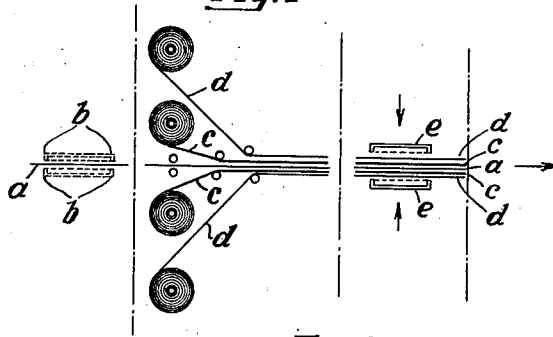


Fig. 2

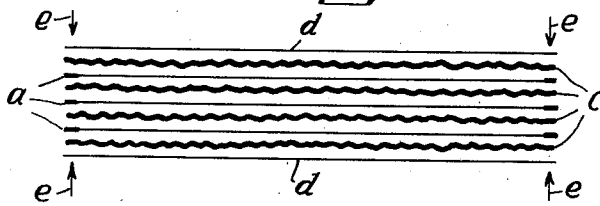
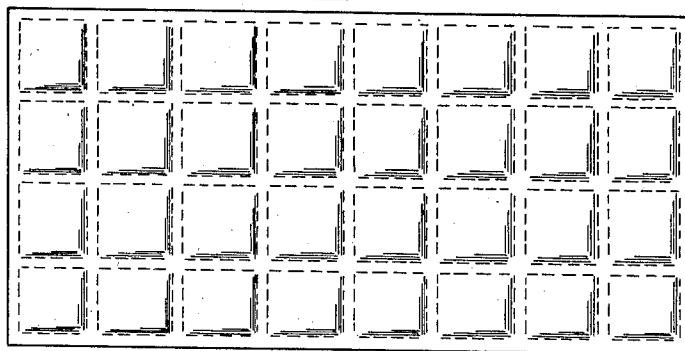


Fig. 3



Fig. 4



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PROCESS OF MANUFACTURING WRAPPER
PADS

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Application July 11, 1933, Serial No. 679,924
In Germany April 4, 1930

1 Claim. (Cl. 154—33)

The present invention relates to a process of manufacturing wrapper pads, consisting of several layers of paper, for articles susceptible to pressure.

5 An important object of the invention is to provide a simple and convenient process of manufacturing wrapper pads from padding paper, as described in my application Ser. No. 600,714, filed March 23rd, 1932. Such wrapper pads are made
10 up of several layers of paper, some with flat and some with raised surfaces, it being optional to have the top and bottom layers made up of some other material than paper, for instance silk, to give the product a pleasing look.

15 There existed the difficulty to make the rigid, heavily embossed paper suitable for adhesion to glazed and smooth paper by a practical method, as the paper with bullet embossing as well as such with wafer and grate pattern embossing,
20 made it impossible up till now to achieve an effective joining of the various sheets at the required or desired places of adhesion, according to the pattern of the pad. This difficulty has now been solved by the new process according to
25 this invention.

For the consideration of what I believe to be novel and my invention attention is directed to the accompanying description and the claim appended thereto.

30 In the drawing:

Fig. 1 is a diagrammatic representation of the complete working method,

35 Fig. 2 represents a moment of the art of making, before the joining together of the sheets, which have been placed over each other in layers according to a chosen pattern,

Fig. 3 represents another moment of the process of making, after the joining together of the sheets according to another pattern,

40 Fig. 4 represents a top-view of the ready pad. The procedure during the manufacturing process, (see Fig. 1) is as follows:—

At the initial stage of manufacture a sheet "a", is gummed on both sides in one single action, according to a definite pattern and, actually in such manner or according to such pattern, as is provided for the manufacture of the pad. The feeding of the glue is performed mechanically, by way of example, by the feed "b", which
45 deposits the glue on both sides of the sheet in the form of dabs or dots, while the sheet "a" is kept moving. It will be appreciated that the invention is not limited to this mechanical device only and that other methods of feeding can be
55 adopted.

At the second stage of manufacture, the sheet of indented padding material "c", and simultaneously the wrapping sheet of paper "d", for this purpose conveniently placed on rollers; join the sheet "a" already provided with the necessary glue. Immediately above the sheet "a" is placed a sheet of indented padding paper and above this a sheet of wrapping paper; while simultaneously a padding and a wrapping sheet are placed in the same order of succession under the sheet "a". All the sheets move forward in this order and simultaneously.

At the third stage of manufacture these various sheets move into position, one above the other, and a heated stamping apparatus "e", equal in form as the glue-feed, is pressed or struck against these layers on both sides. The heavily indented padding material or sheet of paper padding is thereby flattened at the places provided for by the intended pattern and also accordingly made smooth again. In this way the intermediate layer, sheet "a", can lie flat against, and in close touch with the wrapping layer "d", at those places on the padding or embossed sheets, which were made flat by the striking or the pressure of the stamp; at that same moment the heat of the stamp forces the glue through the padding material, thereby joining together permanently all the layers.

It will be appreciated that this process of making is new and different from any existing method of manufacturing pads, in as much as the pads in use at present have either no wrapping sheets at all, or have wrapping sheets that are kept completely apart from each other; whereas by this process of making the top and bottom wrapping sheets are purposely joined together at special intervals, thereby forming a solid contact at these places only.

Fig. 2 illustrates the structure of a wrapper pad manufactured according to the present invention. Several padding layer (c) of paper stamped in relief are separated from one another by flat layers (a). The whole is provided with two covering layers, one on top and another at the bottom (d) and is firmly and permanently tied and held together by the process as described above.

Wrapper pads of such thickness, however, are exceptions intended to serve for special purposes. Regularly, they are made up as shown in Fig. 3, consisting of only 2 padding layers (c) separated from each other by a glued intermediate layer (a) and enclosed between 2 covering layers (d).

Fig. 4 represents a finished wrapper pad, manufactured according to the new and practical process. It can be plainly seen there how the paddings at the points of connection between the smooth and the stamped papers are flattened down so that the layers may be properly united.

As material for the wrapping sheets and the intermediate sheets, glazed paper may be used; whereas a soft and porous paper is required for the padding layers, in order to enable the glue, deposited for that purpose on the surfaces of the intermediate sheet, to force its way through the flattened places of the padding layers on to the wrapping sheets at the specific moment during the process of manufacture.

It will be appreciated that the process of making, as specified in this invention, contains the possibility to manufacture also single pads of a size specially selected for their purpose, as well as the manufacture of sheets of pads, which have

the appearance of a quilt and afterwards can be divided in single pads of any required size.

Further particulars about the different compositions of the article as regards shape or pattern are mentioned in my application, Serial No. 600,714.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

A process of making pads from plane and indented sheets of paper by applying adhesive to both sides of a plane sheet of paper in restricted areas of said plane sheet, applying indented sheets of paper to both sides of the adhesive coated plane sheet, applying facing sheets and consolidating the various layers by heat and pressure applied along lines corresponding to the adhesive coated areas of said plane sheet whereby the adhesive will penetrate and bond the various layers.

LUDWIG CLEMENS.