Feb. 9, 1932. W. MEYER ET AL 1,844,516

CASING-IN PROCESS

Filed April 26, 1930

Fig. 1.

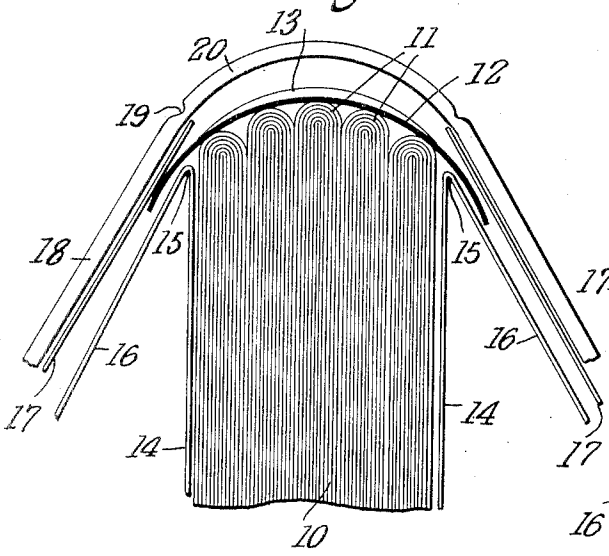


Fig. 2.

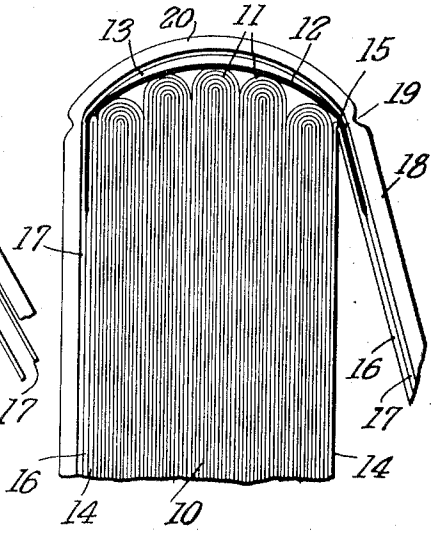


Fig. 3.

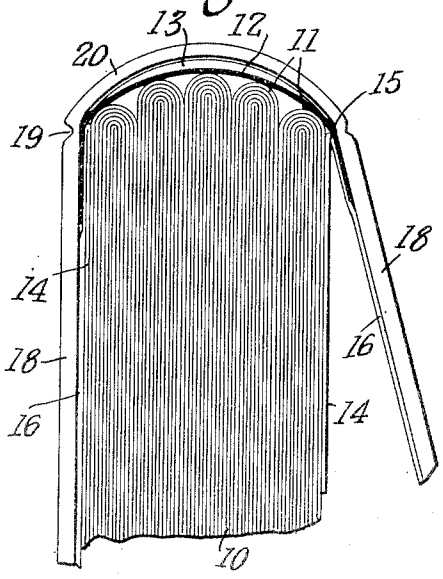
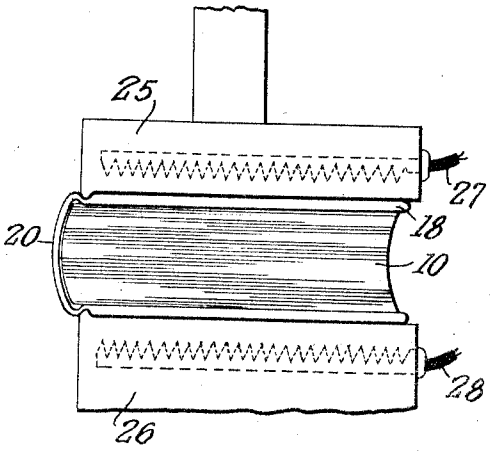


Fig. 4.



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UNITED STATES PATENT OFFICE

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CASING-IN PROCESS

Application filed April 26, 1930. Serial No. 447,448.

This invention relates to improvements in the art of bookbinding, in which a plurality of pages or sheets of paper or the like, arranged commonly by doubling each sheet, the folded edges being superposed one upon another to form groups and these groups again arranged side by side, each group being secured by stitching or adhesives to a flexible backing.

Finally the book thus formed is put in covers, this process being known as "casing in", and consists of applying protective layers, flexible or rigid on the sides, these covers being connected by a flexible backing to permit opening the leaves of the book.

The backing and covers have hitherto been secured to the outer blank pages of the book by an adhesive which requires considerable time during which the books must be placed in a binder's press to thoroughly set and dry.

The present invention has as its object the attachment of covers to a book by a dry adhesive rendered operatively soft by the application of heat rather than moisture and which after setting, has no tendency to stick to extraneous objects.

A further feature is in the provision of paper properly impregnated with a suitable adhesive for use as the paste-down of the lining sheets of a book.

Another aim is to provide a rapid, efficient process for casing-in books whereby a neat appearance is produced together with unusual strength and solidity and without the loss of time heretofore required for drying and setting while at the same time obviating the use of a binder's press.

These several advantageous objects are attained by the novel and practical process hereinafter described and clearly shown in the accompanying drawings, forming part of this disclosure, and in which:

Fig. 1 is a partial end elevational view of a book with the binding elements in position for attachment.

Fig. 2 is a similar view of the same parts after attachment, one of the covers being closed and the other partially open.

Fig. 3 is a view similar to Fig. 4, but showing the omission of tissue adhesive.

Fig. 4 is an end view of a complete book as held between the heated pressure-plates of a finishing press.

In the several views a plurality of folded leaves 10 are gathered into a series of sections 11, the several folded edges of each section being sewn or cemented to a sheet 12 of strong open meshed textile fabric, as crash, its longitudinal edges extending uniformly outward at both sides.

On the outer side of the fabric is secured a paper reinforcement 13, preferably increasing in thickness towards its central portion.

Against the outer surfaces of the outermost or fly leaves of the book are disposed lining sheets of any suitable material 14, folded at 15, and turned reentrantly outward, the outer fold or paste-down 16 being disposed within the loose flaps of the sheet 12.

A second single sheet 17 of tissue or like material is disposed over the flap on each side, these elements 17 being coated or impregnated on both sides with a dry adhesive subject to the effects of heat whereby it is rendered temporarily viscuous and strongly adherent until the stage of dryness has been reached, no moisture being used.

The book covers 18, while shown as stiff, may be flexible if preferred, and are provided with creases or joints 19 leading from the back 20, which is of such flexibility as to permit free opening of the book.

The whole is placed between dies or plates 25—26 arranged as a press and provided with a heating means, as the electrical coils 27—28 shown.

The heat transmitted from the plates passes through the book covers causing the adhesive with which the elements 17 are provided to unite with the covers and lining sheets as is plainly indicated in Fig. 2, completing the operation.

In the modification shown in Fig. 3, the parts and process are as previously described, the only difference being the omission of tissue 17, in which case the adhesive had been previously applied to the paste-down 16 and flows from the elements 16 through the flaps of the fabric 12 to become united to the inner surface of the covers, and from the fly

leaves 14 if provided with adhesive, to the outer leaf of the first and of the last signatures.

Obviously, the inner face of cover 18 itself may be coated with the dry adhesive in which case no adhesive is provided on the "paste-downs" 16, nor is any adhesive tissue 17 required.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent, is:

1. The process of bookbindery which consists of grouping leaves into unitary sections or signatures, securing a sheet of textile fabric to the back of said sections or signatures, said sheet having extending side flaps, applying a cover consisting of sides and back over the connected signatures, inserting a sheet of adhesive impregnated material between the outermost leaves of said signatures and the inner surfaces of the covers to cover said side flaps, pressing the covers on the book, and applying heat during the pressing operation thereby to cause the adhesive to adhere.

2. The process of bookbinding which consists in attaching the grouped leaf sections or signatures and the lining sheets to a flexible backing having laterally extending flaps, enshrouding the backed sections or signatures and lining sheets in a cover the outer leaf of said lining sheet constituting a paste-down, inserting between the paste-downs and cover, sheets of material impregnated with a dry substance rendered adhesive by heat, said material contacting with the inner surface of said flaps, and applying pressure in the presence of heat to said covers.

3. In the bookbinding art, the process of casing-in which consists of tipping to the book the lining sheets, the outer leaf of which constitutes a paste-down, placing on each paste-down a dry adhesive sheet, placing the entire assembly within a casing, and submitting the casing and contents to pressure between heated plates whereby said dry adhesive causes a union between the paste-downs and the casing.

Signed at New York, in the county and State of New York, this 15 day of March, 1930.

RALPH M. DUENEWALD.
WALTER MEYER.