

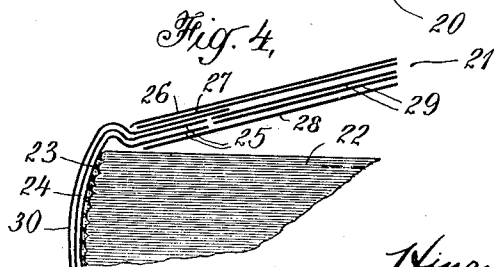
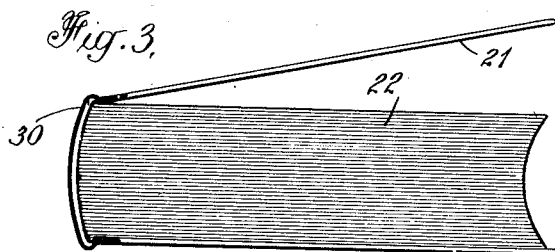
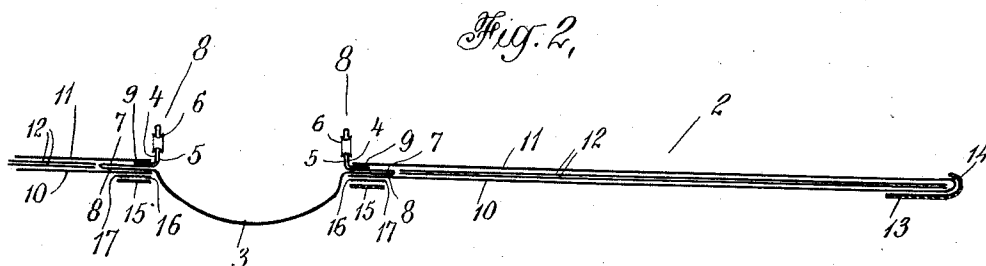
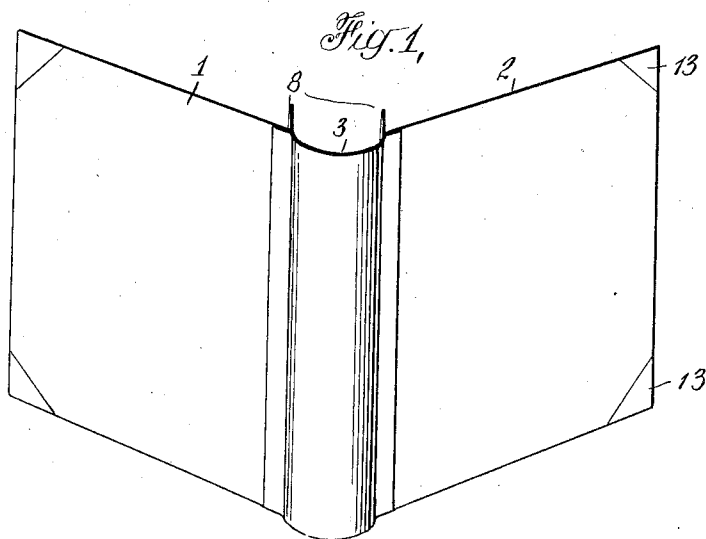
Dec. 15, 1925.

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BOOK AND COVER

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UNITED STATES PATENT OFFICE.

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BOOK AND COVER.

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To all whom it may concern:

Be it known that I, HENRY C. EGERTON, a citizen of the United States, and resident of Ridgewood, county of Bergen, State of New Jersey, have made a certain new and useful Invention Relating to Books and Covers, of which the following is a specification, taken in connection with the accompanying drawing.

This invention relates especially to books or detachable or other book covers for large or heavy books. The cover back which may be of canvas or other suitable fabric, may if desired, be toughened and strengthened against wear by being impregnated or coated with rubber or other suitable material and this back member may have integral attaching portions cemented or otherwise secured to the covers. The book covers may if they are to withstand hard usage be advantageously formed of canvas or other fabric or material carrying phenolic condensation cementing material, and a number of layers of canvas, paper or other fabric, may be simultaneously stiffened, strengthened and secured together and cemented to the back member by such cementing material as cured bakelite, condensite or redmanol varnish compositions. It is quite advantageous in some cases to have vulcanized rubber portions or wear resisting members incorporated with the book covers, and corners or other members thereof may advantageously be secured to the book covers by the same heat curing treatment which cures and solidifies the phenolic condensation cementing material, if desired. Detachable book covers of this general construction may be formed with flexible securing flaps or members attached to the back and cover members and a fold of the back fabric may be utilized for this purpose, preferably after being coated or impregnated with suitable toughening strengthening material, such as a light coating of vulcanized rubber, or if desired, a specially soft flexible phenolic condensation cementing material comprising castor oil or other suitable softening agent which may be used to toughen and strengthen the book back in some cases.

In the accompanying drawing showing in a somewhat diagrammatic way illustrative embodiments of the invention,

Fig. 1 is a perspective view showing one form of book cover.

Fig. 2 is an enlarged transverse section thereof, parts being shown in separated position for greater clearness.

Fig. 3 is a sectional view through another book construction; and

Fig. 4 is a corresponding enlarged detail, parts being shown in separated position.

As indicated in Figs. 1 and 2, the book back 3 may be formed of one or more layers of canvas or other suitable fabric which may have folded or other attaching portions, such as 7, 8, adapted to be cemented or otherwise attached or secured to the book covers. Phenolic condensation cementing material may advantageously be used for this purpose, particularly if the book covers are formed of paper, fabric or other fibrous material carrying or more or less impregnated with such cementing material. A convenient way of forming such attaching portions is to form folds 7, 8 on either side of the book back and coat or impregnate such attaching folds with phenolic condensation cementing material of any suitable character, such, for instance, as bakelite varnish No. 1, which may be conveniently dried at moderate temperatures of 175° to 200° F. Such impregnated or coated attaching folds may be securely cemented to the cover which may be formed of or comprise one or more layers of similarly impregnated canvas or other fabric, or if desired, paper, cardboard, or other fibrous material which is preferably sufficiently impregnated or coated with such cementing material so as to be suitably stiffened and strengthened thereby as well as cemented to the other parts of the cover. As indicated in Fig. 2 the covers may, if desired, comprise the canvas layers 10, 11, which may be formed by folding a single sheet of impregnated canvas around one or more intermediate layers 12 of canvas or other fabric, such as paper, etc. which may extend adjacent the edge of the attaching folds 7, 8 to make the cover member of substantially uniform thickness.

This entire cover member may be cemented together and moulded in shape, and if desired embossed and ornamented, in a suitable mould or press in which it can be submitted to the desired curing heat of 250° to 320° F. more or less for half an hour or an hour or so until the phenolic condensation cementing material is cured preferably

under pressure so as to securely unite all of the parts and force the cementing material uniformly therethrough which gives an extremely strong union and greatly stiffens the cover elements. For some purpose it is desirable to incorporate vulcanized rubber members or portions on the cover, such, for instance, as corner reinforcements 13, which may be carried up around the edges as at 14 in Fig. 2 and a similar vulcanized rubber reinforcing strip 15 may be used, for instance, at the inside edge of the cover adjacent the back. Sheets or layers of such material may be arranged in proper place on the book covers when they are submitted to such a pressure heat curing treatment. A connector strip such as 16 of relatively thin canvas or other fabric and which may have a frictioned or other rubber coating 17 previously provided thereon adjacent the layer 15 of vulcanizable rubber, may be used to promote the union of the rubber to the other elements, the phenolic condensation cementing material sufficiently engaging and entering this connector fabric during the moulding and curing operation to secure it firmly in place. Such a cover may of course be cemented or united at the same time its elements are cured to the ordinary securing flaps or portions of a book body of any suitable character, or if desired, it may be used as a detachable book cover, in which case it is usually desirable to form thereon special disengageable securing flaps or members. For this purpose the back fabric may, for instance, be formed with a single or double fold or flap such as 4, 5, which may be carried up adjacent the inner edge of each cover member and if desired have an attaching portion 9 extending under one or more of the layers of cover fabric 11. This securing flap is of course preferably relatively flexible, but may advantageously in some cases be strengthened by impregnating or coating it with a suitable rubber composition which may be vulcanized during the heat curing process, or if desired such flaps, which may in some cases be provided with eyelets or reinforced apertures 6, may be coated or impregnated with a specially flexible phenolic condensation cementing material, such, for instance, as bakelite varnish No. 1 with which has been incorporated suitable proportions of softening agents such as analin, waxy, fatty or oily material, such for example, as 20 to 35 per cent by weight of castor oil which readily unites when mixed with moderate heat with such cementing material. By applying such special phenolic condensation cementing material to the fabric and forcing it into the same preferably when moderately heated the desired degree of penetration or impregnation can readily be secured and when heated for a sufficient time this cementing material is permanently

cured, although it retains however considerable flexibility, so that the fabric is not undesirably stiff and brittle if sufficient softening material has been used. If desired, the back member may be originally impregnated or coated with such special softened curing bakelite or other phenolic condensation cementing material throughout the back and securing flap portions, and if desired heat cured or treated so as to complete these parts before or after the other parts of the fabric constituting the attaching portions are impregnated with regular hard curing cementing material of this general character and cured and cemented to the other co-operating book elements.

Figs. 3 and 4 show another arrangement in which a regular book body 22 which may have the ordinary tapes 23 and connecting fabric 24 attached thereto so as to form projecting attaching edges 25 of these fabrics, may be bound in a special book cover and back of this general construction. The cover members 20, 21 may be permanently or temporarily connected to a fabric or other back 30 of canvas or other suitable material which may be coated or impregnated with rubber or soft curing bakelite or other phenolic condensation cementing material if desired. These cover members may comprise canvas or other layers 26, 28 on the outside thereof and one or more intermediate layers 27, 29 of canvas or other cloth, paper, etc. carrying sufficient phenolic condensation cementing material so that under the heat and pressure curing treatment all the parts are permanently cemented together and the fabric sufficiently stiffened and strengthened so as to be desirable for this service. In some cases the cover members may be temporarily connected with the flexible back as by sewing or by partially curing the phenolic condensation cementing material they contain while leaving one or more of the cover layers such as 28 in relatively uncured condition so that they may be bent back preferably when somewhat softened by moderate heating to insert the attaching ends 25 of the book tapes or other securing members which may be coated or more or less impregnated with such cementing material and then preferably after drying forced into place and the heat curing completed in suitable moulds or presses of any description.

This invention has been described in connection with a number of illustrative embodiments, forms, proportions, elements, parts, shapes, materials, compositions, and methods of preparation, production and use, to the details of which disclosure the invention is not of course to be limited, since what is claimed as new and what is desired to be secured by Letters Patent is set forth in the appended claims.

I claim:

1. The book having covers comprising a plurality of layers of canvas fabric carrying and impregnated with cured phenolic condensation cementing material, vulcanized rubber corner and other reenforcements secured to said covers, a flexible canvas fabric back carrying soft cured phenolic condensation cementing material and having attaching portions incorporated in and cemented to said covers and book elements having connected attaching connecting portions cemented and permanently connected to said back and covers.
2. The book having covers comprising a plurality of layers of fabric carrying and impregnated with cured phenolic condensation cementing material, vulcanized rubber reenforcements secured to said covers, a flexible fabric back carrying soft cured phenolic condensation cementing material and having attaching portions incorporated in and cemented to said covers and book elements connected to said back and covers.
3. The book having covers comprising a plurality of layers carrying cured phenolic condensation cementing material, a flexible fabric back carrying soft cured phenolic condensation cementing material and having attaching portions incorporated in and cemented to said covers and book elements connected to said back and covers.
4. The book having covers comprising a plurality of layers of fabric carrying cured phenolic condensation cementing material, a flexible canvas fabric back having attaching portions incorporated in and cemented to said covers and book elements having connected attaching connecting portions cemented and permanently connected to said back and covers by such phenolic condensation cementing material.
5. The book having covers comprising fabric carrying cured phenolic condensation cementing material, a flexible fabric back having attaching portions cemented to said covers by such phenolic condensation cementing material and book elements connected to said back and covers.
6. The book having covers comprising fabric carrying cured phenolic condensation cementing material, a flexible back connected to said covers by such phenolic condensation cementing material and book elements connected to said back and covers.
7. The book having covers comprising a plurality of layers of fabric carrying and impregnated with cured phenolic condensation cementing material, vulcanized rubber corner and other reenforcements secured to said covers, a flexible fabric back having portions cemented to said covers by such phenolic condensation cementing material and book elements connected to said back and covers.
8. The book having covers comprising fabric carrying and impregnated with cured phenolic condensation cementing material, vulcanized rubber reenforcements vulcanized to said covers, a flexible fabric back having portions cemented to said covers and book elements connected to said back and covers.
9. The book covers comprising fabric carrying and impregnated with cured phenolic condensation cementing material, vulcanized rubber reenforcements secured to said covers and a flexible back having portions cemented to said covers.
10. The book cover comprising stiffened cover members having a plurality of layers of fabric carrying and impregnated with cured phenolic condensation cementing material, a flexible fabric back carrying soft cured phenolic condensation cementing material and having attaching portions incorporated in and cemented to said cover members and flexible attaching members connected to said back cover members.
11. The book cover comprising stiffened cover members carrying cured phenolic condensation cementing material, a flexible fabric back having attaching portions incorporated in and cemented to said cover members by such phenolic condensation cementing material and flexible attaching members connected to said back cover members.
12. The book cover comprising stiffened cover members carrying cured phenolic condensation cementing material, a flexible fabric back connected to said cover members by such phenolic condensation cementing material and flexible attaching members connected to said back cover members.
13. The book cover comprising stiffened cover members carrying cured phenolic condensation cementing material, and a back connected to said cover members by such phenolic condensation cementing material.
14. The detachable book cover comprising stiffened cover members having a plurality of layers of fabric carrying and impregnated with cured phenolic condensation cementing material, a flexible fabric back having portions incorporated in and cemented to said cover members by such phenolic condensation cementing material and flexible fabric securing members united to said back and cover members.
15. The detachable book cover comprising stiffened cover members having fabric carrying cured phenolic condensation cementing material, a flexible back having portions incorporated in and cemented to said cover members by such phenolic condensation cementing material and securing members united to said back and cover members.
16. The book cover comprising stiffened

cover members of fabric carrying cured phenolic condensation cementing material, a back connected to said cover members and wear resisting cushioning reinforcements including vulcanized rubber heat united to said cover members.

17. The detachable book cover comprising stiffened cover members carrying cured phenolic condensation cementing material and corner or other wear resisting cushioning reinforcements including vulcanized rubber heat united to said cover members.

18. The detachable book cover comprising stiffened cover members comprising fibrous material and incorporated cured phenolic condensation cementing material and cushioning reinforcements including fibrous material heat united to said cover members by such phenolic condensation cementing material.

19. A book cover comprising superimposed layers of fibrous material impregnated with a hardened binder and a hinge member interposed between certain of the layers and extending beyond the edges thereof.

20. A book cover comprising superimposed layers of fibrous material impregnated with a hardened phenolic condensation product and a hinge member interposed between certain of the layers and extending beyond the edges thereof.

21. A book cover comprising superimposed layers of duck impregnated with a

hardened binder and a hinge member interposed between certain of the layers and extending from the edges thereof.

22. A book cover comprising a plurality of plates including layers of duck impregnated with a hardened binder and a hinge member interposed between certain of the layers of each plate and extending beyond the edges thereof whereby the plates may be connected together.

23. A book cover including a plurality of plates comprising superimposed layers of sheet material impregnated with a hardened phenolic condensation product and a layer of material molded to each plate having a pliable portion which connects the plates.

24. A book cover comprising a plurality of plates including layers of duck impregnated with a hardened binder and a portion of untreated material having one of its ends interposed between certain of the layers of each plate.

25. A book cover including a plurality of plates comprising layers of fibrous material impregnated with a phenolic condensation product and a portion of untreated material having one of its ends interposed between certain of the layers of each plate, the assembled structure having been subjected to heat and pressure in a mold to compact the material and harden the phenolic condensation product.

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