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HANDBAG AND METHOD OF MAKING THE SAME

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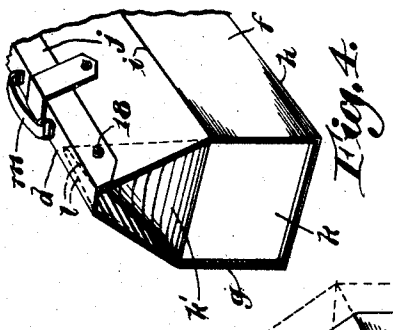


Fig. 4.

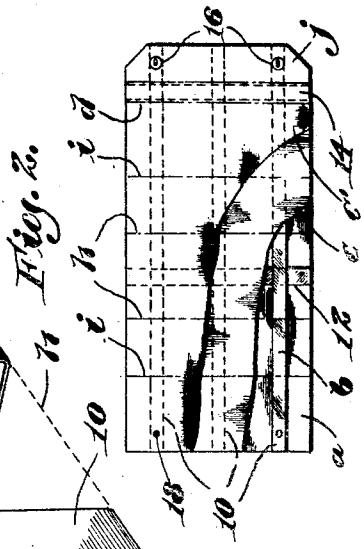


Fig. 2.

Fig. 1

Fig. 3.

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UNITED STATES PATENT OFFICE.

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HANDBAG AND METHOD OF MAKING THE SAME.

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This invention relates to improvements in hand bags and methods of making the same. The utility of a durable, inexpensive and light weight hand bag would be almost universal, there being a demand for them by school children, workers, shoppers, professional men, shippers of parcel post or despatch, and travelers. Heretofore, so far as I am aware, no bag has embodied all three of the said desired features, for the light and inexpensive bags have not proven durable, while the durable bags are both heavy and costly.

It is an object of the present invention to provide a hand bag that shall be sufficiently strong to carry any reasonable load placed within it; that shall be sufficiently light to be easily handled by a child; that shall be sufficiently waterproof and dirt proof, to withstand weather conditions; and withal that shall be producible at so low a cost that its retail purchase need involve only a modest expenditure. And it is a feature of the invention that in attaining the foregoing objects, there is no sacrifice of appearance, space or shape, from that which has been considered more or less the standard of present day high grade bags.

These objects are attained by providing a thin metallic ribbon frame which is light in weight, strong in tensile stress, as flexible as may be needed, and capable of being put together in the configuration of any ordinary hand bag such as a Boston bag, brief case, etc. Preferably this material, for example thin sheet steel, aluminum, or the like, is used in the form of narrow strips or bands, so as to constitute a skeleton which may extend around the bag from the top down one side, across the bottom and up the other side to the top, thence downward again to overlap itself a short amount. Two of these thin bands, placed one near each end of the bag, are enough, but others may be added; and if desired, a single strip equal in width to the longitudinal extent of the bag may extend entirely around the bag between its ends. The overlapped portions of these strips are fastened together by any suitable means when the bag is closed so that in effect each band constitutes a continuous metallic strap. Strips of stiffer metallic stock, herein called bars, extend along the top and bottom of the bag, across the thinner and flexible strips, being attached to them, as by spot welding. These rigid bars aid in the distributon of the load among the several bands, and the top bar serves to centralize the entire weight upon the handle.

In making the bag it is preferable that the metallic frame should be constructed flat, i. e., in a plane, and in that form be placed upon the already prepared covering or face material of the bag. This latter may be of imitation leather or a thin skiving of real leather, for, as will hereinafter appear, it need not be made of strong material because substantially no portion of the load is to be supported by it. Upon the metallic frame is then placed a suitably thick and strong layer of paper board or any other preferred material, cut flat according to pattern in the shape required to form the top, bottom and sides of the bag. Preferably an adhesive is used to stick the facing and paperboard body sheet together, with the frame embedded between them, and, if the bag is to be lined, the lining, comprising a light cloth or imitation leather backing may be glued to the inner side of the paper-board. Also the covering may be cut with a margin that can be turned over the edges to improve the general appearance and a line of stitches added around the composite sheet while it is still flat. The sheet may then be bent along predetermined lines to form the bottom, sides and top; after which end pieces, similarly made and shaped, though without any metallic reinforcement, can be inserted and secured in place as by stitching. The handle is riveted to the top bar, and means are added to lock the overlapped portions of the sides together. Obviously a bag so constructed is light, for the imitation leather and the paper board, together with the thin metallic flexible bands and the rigid horizontal strips, or bars, total very small in weight.

The contents press primarily upon the layer of paper board at the bottom and sides, but since this is backed up at short distances by the stiff bar along the bottom and by the encircling bands, the latter really carry the load, the stresses being transmitted directly by the bands to the upper metallic bar and by this to the handle, so that no appreciable strain is placed upon either lining or covering. The bag is light, strong and durable. By suitably overlapping the top and nicely fitting the end pieces, it can be

made substantially moisture and dust proof. And withal, the bag is producible at an extremely low cost.

A single form of bag is shown illustrative of the principles of the invention. It is intended that the patent shall cover, by suitable expression in the appended claims, whatever features of patentable novelty exist in the invention disclosed.

In the accompanying drawings:—

Figure 1 is a perspective, showing a metallic frame, constructed in accordance with the principles of the invention, in full lines, with the outline of the bag suggested by short dash lines;

Figure 2 is a plan view, on reduced scale, with parts cut away, showing the top, bottom and sides as made up before being folded;

Figure 3 is a section as on line 3—3 of Figure 1, somewhat enlarged, to show the details of construction of the finished bag; and

Figure 4 is a perspective of a portion of the complete bag.

Referring to the drawings, in which all dimensions of thickness are greatly exaggerated for clearness, the covering may be a thin facing sheet of real or imitation leather, *a* cut to size. On this is placed the metallic frame *b* whose thin bands or ribbons 10, and stiff bars 12 and 14 have been previously secured together. A suitable body sheet of strong paper board *c*, or other suitable material, preferably tough, light and inexpensive, either with or without a cloth or thin leather lining or backing *c'* is placed next to the metallic ribbon frame *b*, and the several layers are glued, or stitched together around their edges, with the ribbon frame embedded between the said facing and body sheets.

At opposite edges of the composite sheet, that are eventually to overlap each other, fastening means are attached, such as an eyelet 16 at one side, and a binding post 18 with button at the other. These fastening means are so arranged as to pass through the metallic ribbons near their ends, to bind the ribbons, covering and lining securely together.

The complete sheet is then bent to form the top, *d*, bottom *e* and side walls *f* and *g* of the bag, being folded at right angles to form the bottom edges *h*, and being folded above these edges at obtuse angles to form the upper side edges *i*, from which the sides converge to the top where one side wall terminates and where the other is further bent to form both the flat top piece, embodying the rigid bar 14, and the flap *j* which overlies the upper portion of the first mentioned side wall. In the flap near the ends of the ribbons of the flexible frame are the eyelets 16, predeterminately located so as to pass around the binding posts 18 which are of any suitable type, secured in the other top side wall which at this point is under when the two portions are overlapped. By turning the buttons on these posts the flap is secured firmly in place and the ends of each metallic ribbon locked together. Thus the bottom, top and sides are formed. The end pieces *k* are inserted and fastened in place in any well known manner. Each of these is, as a whole, rectangular in shape, its lower portion being made up of a facing, paper board body and an inner lining as heretofore described in connection with the sides, and the upper portion *k'* having only the facing and the lining. When the sides of the completed bag are brought together to close the bag, the flexible upper portions of these end pieces buckle within the converging top of the sides, with their top edges *l* resting snugly against the under side of the narrow flat top *d* which the bag has when closed, so that moisture and foreign matter are well excluded. When the bag is opened, the flexible top portions of the ends flatten out into alignment with the lower stiffer portions thus giving a full opening at the top of the bag. The handle *m* is riveted or otherwise secured to the rigid metal bar 14 in the top of the bag.

When being carried, the weight of the contents rests upon the stiff paper board bottom or presses against the stiff paper board sides. This pressure is taken up by it through the flexible ribbons 10 to the stiff upper bar 14 and by it to the handle *m*. The load therefore is borne by the metallic frame.

Since the stresses in the side ribbons are wholly tension stresses, these metallic ribbons can be made extremely thin and light, and yet be strong enough to transmit the load to the stiff bar at the top. They also serve to prevent bulging of the sides, so that in fact very little strain is permitted to be exerted upon the cover or lining.

The thinness of the ribbons may vary, according to desired design and purpose of the bag, but the possibilities of the described metallic ribbon frame for lightness combined with strength may be understood from the fact that flexible metallic ribbons can be made which are so extremely thin that light can pass through. While such extreme thinness would not ordinarily be used, a suitable degree of sheet metal thinness can be employed without adding appreciably to the thickness, or falling undesirably short of the flexibility required in the walls of a bag. The ability of sheets of such a thin metal to transmit stresses to the handle may be increased by distributing the stresses at the points of junction over relatively large areas of ribbon, as by welding large flat surfaces together where they cross, and by set-

ting eyelets therein for receiving the post and button connections.

I claim as my invention:—

1. A hand bag comprising a skeleton frame of ribbons and a cover therefor, said frame having members encircling the bag which are of ample rigidity to, of themselves, determine the shape of the bag and having longitudinal members at the top and bottom connecting said encircling members; each of the latter said members being suspended from the said top longitudinal member and having one end overlapping its other end and there being fastening means for removably securing the overlapped ends together.

2. A hand bag comprising a frame, a cover therefor, and a handle; said frame comprising a sheet metal member encircling the bag which is of ample rigidity to, of itself, determine the shape of the bag with its end portions overlapping each other; means for fastening said overlapped portions removably together; and a longitudinal member on which the encircling member hangs and which is itself connected with the handle.

3. A hand bag comprising a skeleton of metallic ribbons, a cover therefor, and a handle; said ribbons being flexible but of ample rigidity to, of themselves, determine the shape of the bag and extending around the bag with ends overlapping; fastening means for removably securing said overlapped ends together; and a rigid member connecting said ribbons and handle together.

4. A hand bag having a composite wall comprising a metallic ribbon skeleton having outer and inner coverings and being itself bendable with them into shape to constitute the top, bottom and sides of the bag and being supported by them in said shape against interior and exterior pressure, and having one of its longitudinal edges overlapping its other longitudinal edge; with means for fastening together the overlapping parts of the wall.

5. A bag, the main stress bearing portions of which comprise composite sheet material having a skeleton of metallic ribbons, so thin as to be capable of undergoing flexure easily and repeatedly and practically withinout injury and at the same time amply rigid to maintain the shape of the bag, embedded between a body sheet and a facing sheet of organic material.

6. A composite material suitable for bags and the like comprising a skeleton of metallic ribbons, so thin as to be capable of undergoing flexure easily and repeatedly and practically without injury and at the same time amply rigid to maintain the shape of the bag, combined with a body sheet and a facing, between which the said skeleton is embedded.

7. A bag comprising a skeleton frame of thin metallic ribbons, having members encircling the bag which are of ample rigidity to, of themselves, determine the shape of the bag and having a longitudinal member connecting with said encircling members, combined with a body sheet and a facing, between which the said frame is embedded; there being a handle attached to the longitudinal member.

Signed at Boston, Massachusetts, this eighteenth day of March 1924.

DANIEL D. FROTHINGHAM.