

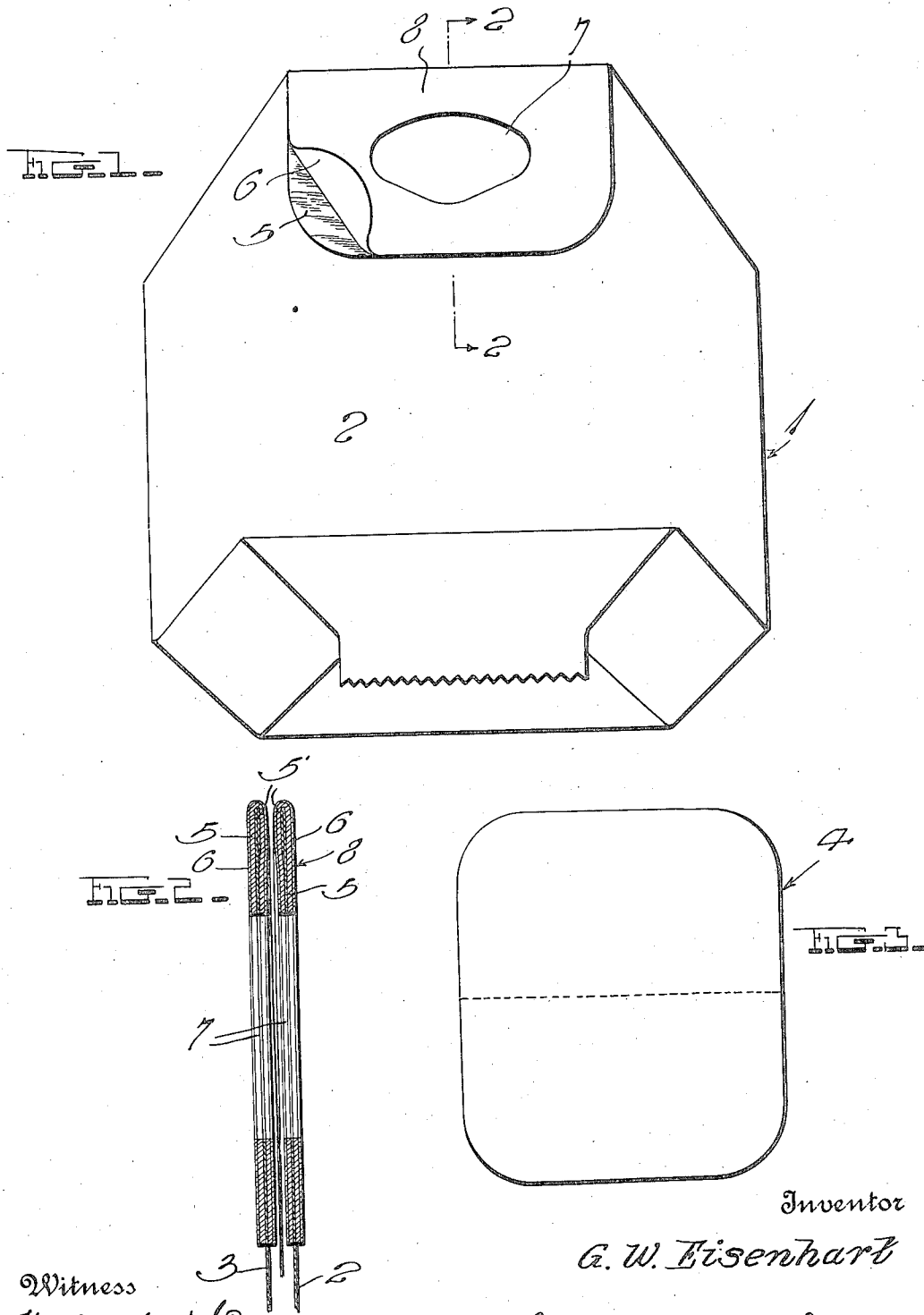
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HANDLE CONSTRUCTION FOR PAPER BAGS

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HANDLE CONSTRUCTION FOR PAPER BAGS.

Application filed August 18, 1921. Serial No. 493,328.

To all whom it may concern:

Be it known that I, GEORGE W. EISENHART, a citizen of the United States, residing at Binghamton, in the county of Broome and State of New York, have invented certain new and useful Improvements in Handle Constructions for Paper Bags; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates generally to paper bags commonly known as shopping bags, but particularly to an improved reinforced handle construction for such bags.

The improvements are directed to the particular type of paper shopping bag which comprises a bag body having the upper end portions of its opposing sides provided with cardboard reinforcing sheets, which together with the opposing sides of the bag body are provided with aligned openings forming handle bars at the upper edges of the sides. In making such bags, it has heretofore been the custom to make the openings of substantially semi-circular shape, at least with their upper edges substantially straight and disposed at abrupt angles to their side edges forming comparatively sharp corners at the end portions of the handle bars. By reason of sharp corners at these points, the handle bars are not as strong as they might be and they very easily tear off when they are carelessly deflected out of the plane of the sides and reinforcing sheets of the bag body.

The present invention aims to remedy the above mentioned defects in two ways. First, the openings which are cut through the reinforcing sheets and sides of the bag body instead of being substantially semi-circular and having their upper edges in the form of substantially straight lines disposed at abrupt angles to their side edges and forming sharp corners, have their upper edges curved and joining their side edges upon curved lines to make the upper portions of the openings devoid of sharp corners and to widen the end portions of the handle bars. Second, the grain of the cardboard reinforcing sheets extends transversely of the sides of the bag body parallel to the upper edges of the latter. It is well known that paper and cardboard tears the easiest in the direction in which its grain extends. Hence, since the handle bars have

a tendency to tear or be sheared off in a direction longitudinal of the bag body, by placing the cardboard sheets so that their grain extends transversely of the bag body, the handle bars will not be so easily torn or sheared off.

The accompanying drawings illustrate the invention in its preferred form and in these drawings:

Figure 1 is a front elevation of the bag body;

Figure 2 is a transverse sectional view taken on the plane indicated by the line 2—2 of Fig. 1; and

Figure 3 is a plan view of one of the cardboard reinforcing sheets before it is folded and applied to one side of the bag body.

Referring more particularly to the drawings in which similar reference characters are used to designate corresponding parts throughout the several views, the numeral 1 designates as a whole, a bag body. This bag body 1 is made of a tough but a cheap grade of paper and is preferably constructed in any suitable manner so that it can be folded flat. It has two opposing sides 2 and 3, the upper end portions of which are preferably folded inwardly and downwardly upon themselves to make their upper edges of double thicknesses.

The handle construction for the bag body is made from a pair of substantially rectangular cardboard sheets 4. These are folded upon themselves midway of their ends and applied to the opposing sides 2 and 3 of the bag body. One-half of the sheets are disposed upon the outer surfaces of the upper end portions of the sides 2 and 3 while the other half of the sheets are disposed upon the inner surfaces of the upper end portions of the sides 2 and 3. They are then glued or otherwise secured to the sides.

In folding the sheets 4 and applying them to the sides 2 and 3 of the bag body, care should be taken so as to fold the sheets in a direction parallel to the direction in which the grain of the cardboard extends so that when they are applied to the sides of the bag body, the grain of the cardboard will extend transversely of the sides and substantially parallel to the upper edges of the same.

If desired, the outer surfaces of the card-

board sheets 4 may be covered with a thin sheet of craft or bond paper 6 which gives them a smooth or finished appearance.

After the cardboard reinforcing sheets 5 are applied to the opposite sides of the bag body and the bag body is in its folded, flat or collapsed position, the bag is placed in a punch or press and the sides 2 and 3 and sheets carried thereby are punched so as to provide alined openings 7. These openings or hand holes 7 form handle bars 8 at the upper edges of the sides 2 and 3.

The upper edges of the openings 7 are curved and such curved edges join the side edges of the openings upon curved lines so that the upper portions of the openings 7 are devoid of sharp corners and so that the ends of the handle bars 8 are widened.

By reason of the fact that the openings 7 have no sharp corners at their upper portions and that the end portions of the handle bars 8 are widened, the handle bars 8 are of comparatively strong construction and to a great extent the danger of tearing or shearing the handle bars off has been eliminated. The cardboard reinforcing sheets having their grain extending transversely of the sides of the bag body substantially parallel to the upper edges of the same, to a great extent prevents the danger of the handle bars 8 from being easily torn off, as the grain of the cardboard sheets extends at right angles to the direction in which the handle bars 8 are liable to be torn or sheared off. It is well known that it is more difficult to tear a sheet of cardboard in a direction transverse of its grain than in the direction of its grain.

From the foregoing description, taken in connection with the accompanying drawings, the construction and advantages of the invention will be readily understood without more extended explanation.

As various changes in form, proportion,

and in the minor details of construction may be resorted to without departing from the spirit and principle of the invention, it is to be understood that such may be done within the meaning and scope of the appended claim.

What is claimed is:

In a handle construction, the combination of a paper bag having its material at its upper end folded inwardly and downwardly upon itself forming a narrow strip of double thickness of material extending entirely around its mouth, substantially rectangular sheets of heavy cardboard folded upon themselves midway of their ends into inverted U-shape and arranged in straddling relation around the upper edges of the opposite side walls of the bag, the inner and outer portions of said folded sheets being disposed respectively alongside of the inner and outer surfaces of the opposite side walls of the bag and being glued thereto, the opposite side walls of the bag and the inner and outer portions of said folded sheets being provided below the adjacent portions of the aforesaid strip with alined openings forming hand holes and handle bars above said hand holes at the upper ends of said side walls, the grain of the cardboard of said sheets extending transversely of the bag and parallel to the upper edges of its opposite side walls and therefore longitudinally of said handle bars so as to tend to prevent the latter from tearing transversely, the upper edges of said openings being curved and joining their end edges on curved lines so as to increase the width of said handle bars from their middle portions to their ends and so as to avoid sharp corners at the ends of said handle bars, whereby to tend to prevent the latter from tearing transversely.

In testimony whereof I have hereunto set my hand.

GEORGE W. EISENHART.