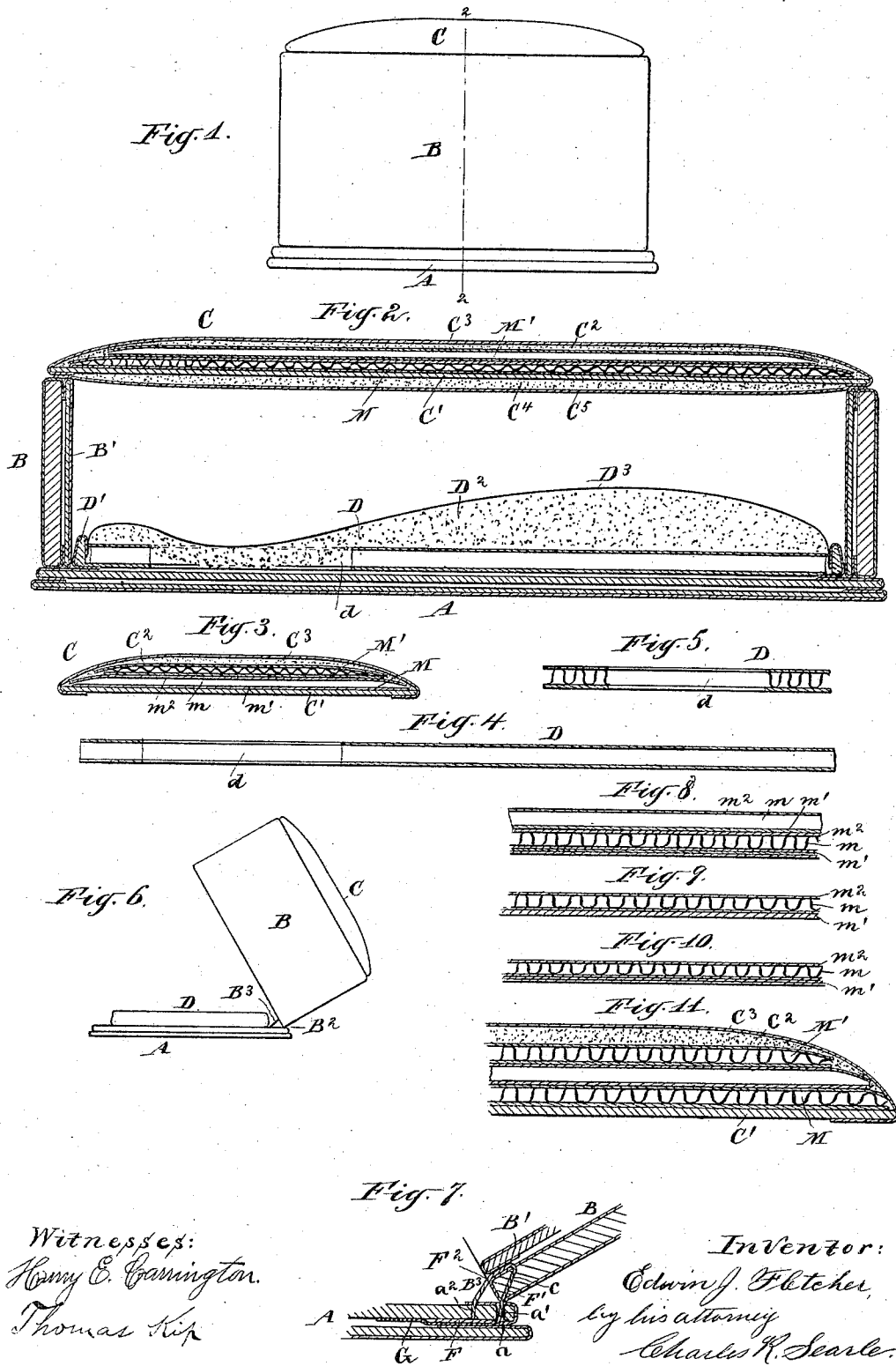


(No Model.)

E. J. FLETCHER.
CASE OR BOX FOR SILVERWARE, &c.

No. 579,320.

Patented Mar. 23, 1897.



UNITED STATES PATENT OFFICE.

EDWIN JOHN FLETCHER, OF NEW YORK, N. Y., ASSIGNOR TO THE WHITING MANUFACTURING COMPANY, OF SAME PLACE.

CASE OR BOX FOR SILVERWARE, &c.

SPECIFICATION forming part of Letters Patent No. 579,320, dated March 23, 1897.

Application filed December 30, 1896. Serial No. 617,459. (No model.)

To all whom it may concern:

Be it known that I, EDWIN JOHN FLETCHER, a citizen of the United States, residing in New York city, in the county and State of New York, have invented a certain new and useful Improvement in Cases or Boxes for Silverware and other Articles, of which the following is a specification.

In the preferred forms of tops for cases of this class the lower face is practically plane, while the upper exposed surface is plane or only slightly convex along the central portion and curves gradually downward to a thin edge at junction of the two faces. It has been the practice to make the foundation-pieces for the tops of wood of the required thickness, cut and molded to the form described above. There are objections to cases thus manufactured, the most important being the weight of the top, which when the case is empty and open overbalance the body and cause the case to topple over. Others are the change of form due to warping and the expense of production. I employ for this purpose a material consisting of plaited or fluted paper in sheets cemented to and between plane sheets, analogous to the "corrugated" paper commonly used to incase bottles and other fragile goods in transit. From this material I cut the foundation-pieces for the tops and also for the beds. In the most complete form of the invention I use two or more such pieces, superposed one upon the other, with their corrugations crossing or lying alternately longitudinally and transversely. A layer of wadding placed upon the pieces within the covering-sheet serves to soften the angles and smoothly round the upper face. The material is extremely light for a given thickness and may be flattened or crushed along the margins to produce the smoothly-rounded curve desired on the upper face of the top, while maintaining the plane central area and lower face. The foundation-pieces for the beds are of the same material and are usually provided with openings to receive the bowls of the spoons or other swelled portions of the article to be inclosed in the case. Such openings may be cut by dies in the operation of stamping the bed from the sheet.

The invention consists in adapting the material to the above uses, and also includes a form of hinge and stop designed to serve with this box.

By the use of my invention the objections noted above are avoided, the case is lighter than usual, it is balanced, the material will not warp or change shape and may be easily worked, and the labor and expense of manufacture is materially lessened.

The accompanying drawings form a part of this specification and represent the manner in which I have carried out the invention.

Figure 1 is an end view of a case. Fig. 2 is a longitudinal vertical section on the line 2 2 in Fig. 1. Fig. 3 is a cross-section of a completed top alone. Figs. 4 and 5 are respectively longitudinal and transverse sections through the bed. Fig. 6 is an end view of a case in the open condition. Fig. 7 is a vertical section of a portion, showing the hinge and immediately adjacent parts. Figs. 8, 9, and 10 are sections showing modified forms and constructions of the corrugated paper. Fig. 11 is a section through a top, showing a modification intended for use on large cases.

Similar letters of reference indicate the same parts in all the figures.

A is the base, of thin wood, pasteboard, or like stiff material in one or more independent thicknesses, having the exposed portions covered with ornamental paper or other envelop. It is rectangular in outline, with rounded corners, and projects a little on all sides beyond the body B, which it supports. The latter is a rectangular hoop or frame with plane faces and bent corners, also covered with the same ornamental paper, and may receive a lining-piece B', concealing and ornamenting the inner faces. The body is joined to the base by hinges B² and stops B³, to be described, arranged to allow the body and its top C to be turned back to a position at which the center of gravity will lie in a line beyond the hinges to maintain the box in the open condition.

D is the bed inclosed within the bed-frame D', covered with ornamental paper, and carries a pad D² of cotton and a rich covering D³ of silk or other fabric. The exterior of the

bed-frame D' matches so closely to the body that the friction between the surfaces is sufficient to hold the case in the closed condition.

The top C has the same general outline as the body B. It is practically uniform in thickness along the central portion and curving in each direction therefrom to the edges, which are thinner. It is glued or otherwise secured to the upper edge of the body.

10 The material forming the foundation for the top is peculiar. It consists of several thicknesses of paper, superposed and cemented together to form a floor m' , on which is laid a sheet m , "gathered" or "box-plaited" into

15 corrugations or convolutions, secured to the floor m' by glue applied on the lower swells. The upper face is similarly cemented and receives a deck m^2 like the floor m' , but preferably thinner. The material so formed is

20 analogous to the corrugated paper quite generally used to inclose and protect glass and other fragile ware in transportation. When made as above described, it produces in effect a light board of considerable thickness and

25 quite stiff and unyielding to bending strains. As the floor m' is heavier and stronger than the deck m^2 , the latter will crush under sufficient pressure, while the former retains its plane. This quality is important in the man-

30 ufacture of the tops. Having cut the blank to the proper size and form, the margins are crushed under a roller or polished tool, so that the edge of the deck lies nearly in contact with the edge of the floor m' on all sides and produces the curved margin sought. When

35 covered with the ornamental paper, it will retain its shape, having a plane under surface, a plane middle upper surface, and a smooth curve from the latter to the edge. If

40 greater thickness be required, two or more layers are superposed, with the corrugations of one crossing those of the other at a right angle.

The completed top C as I have shown it is

45 constructed as follows: C' is a rectangular tablet of book-board, having rounded corners, and in length and width matching the body B. M is a piece of the corrugated paper described, somewhat shorter and narrower

50 than the tablet C' and cemented to the upper face of the latter with its corrugations running longitudinally. M' is a similar piece, shorter and narrower than M, and applied thereon with its corrugations extending trans-

55 versely. The margins of the pieces M and M' are previously crushed, as above. Then a sheet C² of cotton-batting is applied and the whole inclosed by a sheet C³ of the ornamental paper, drawn tightly over the edges of the tablet C' and cemented to its lower face. The

60 result is a smooth cushion-shaped surface curving gradually to the edge, elastic enough to resume its shape when lightly pressed, and having a plane under face. In the finished

65 case this lower face appears to be padded, the effect being produced by applying one or more strips C⁴ of cotton-batting upon the lin-

ing-piece C⁵, glued to the upper edge of the body B before the top C is cemented in place, as set forth in a United States Patent to me 70 dated July 7, 1896, No. 563,581.

The bed D is a piece of the same material, having an opening d , produced by a suitable die, to receive the bowl of a spoon or other 75 swelled or prominent portion of the article to be incased and allow it to sink therein. The bed is glued to the base, and if greater thickness be desired two or more pieces may be placed one upon the other, with the corru-

80 gations either parallel or at right angles.

The improved case shows an apparently massive and rich top, which at the same time is inexpensive and light. The latter feature is important in that it allows the case to stand 85 open, as in Fig. 6, without falling backward on the removal of the inclosed spoon or other article, (not shown,) a fault which has been previously overcome only by the uneconomical expedient of correspondingly weighting 90 the base.

The hinge-joint between the body and base is important and is shown in Fig. 7. A small hole c , extending from the under edge of the body B angularly upward to a point on the inner face, is produced by the insertion and 95 withdrawal of a needle or fine awl. A similar hole a is provided in the base on the line of the joint and preferably strengthened by an eyelet a' . Another hole a^2 , a little forward of the latter, is also produced and may 100 be similarly reinforced. A needle threaded with fine but strong silk cord F is passed upward through the hole a and through the angular passage c in the body. It is then pushed through the hole a^2 in the base and cut off, 105 leaving the ends free. The ends are secured to the under side of the base by glue and also by a small piece of strong fabric G, cemented over them. One portion F' of the cord serves as the hinge B², while the other, F², held be- 110 tween the body and its lining-piece B', serves as a stop B³ to prevent the body turning too far backward and sustains it in the open condition. Care must be taken to allow only sufficient slack for this purpose, and also that 115 the lower edge of the body be drawn into close contact with the base before the ends are secured. There may be as many hinges and stops as are deemed necessary.

It will be noticed that the flexion takes 120 place at the lower rear angle of the body, and the hinge is therefore practically concealed. The stop B³ may extend from the hole a^2 parallel with the angle assumed by the body when the case is open, so that the strain will be 125 taken in a direct line. The eyelet prevents cutting the material of the base, and the whole is particularly efficient in this situation where a light, strong, and easily-applied but inexpensive hinge is required. 130

Modifications may be made in the forms and proportions within wide limits without departing from the spirit of the invention or sacrificing its advantages.

Fig. 8 shows a form in which the book-board C' is dispensed with, the rigidity being attained by the plurality of thin sheets making up the floor m' , the thin deck m^2 serving as a floor for the second sheet of corrugated paper.

Fig. 9 shows the floor-sheet m' and deck m^2 of the same thickness, reinforced by the book-board C'. Fig. 10 shows a thin deck with a greater number of sheets in the floor. Fig. 11 shows a portion of a very thick top made up of several layers arranged with their corrugations crossing, mounted on a sheet of heavy book-board. This construction is intended to serve in extraordinarily large cases or "trunks" containing large pieces or a number of smaller ones making a set.

Although I have described the box as intended for use with silverware it will be understood that it may be used to inclose other articles in kindred or other lines.

The several layers of corrugated paper may be applied without cement between, depending on the covering-sheet C³ alone to hold all in place.

Instead of the cotton-batting C², pieces of fabric or soft felt may be used. It is essential only that it be soft and yielding enough to smoothly round the surfaces and prevent the angular edges of the layers of corrugated paper showing through the covering.

I have shown the ends of the cord forming the hinge B² and stop B³ concealed and held between the two layers constituting the base, but they may be continued through and covered by the ornamental paper, as will also be the case when but one layer is employed.

Instead of the silk cord other strong and flexible material may be substituted, such as twisted wire or strips of rawhide.

I claim—

1. In a case or box, the top composed of corrugated paper having its margins crushed or flattened, and held in shape by a covering-sheet stretched tightly thereover and cemented, all substantially as and for the purposes herein specified.

2. In a case or box, the top composed of corrugated paper having its margins crushed or flattened, in combination with a reinforcing-tablet of strong material applied on its under face, and a covering-sheet stretched tightly on the upper face of said corrugated paper, extending over said margins and cemented to the under face of said reinforcing-tablet, all substantially as herein specified.

3. In a case or box, the piece M of corrugated paper consisting of the floor m' , the corrugated sheet m cemented thereto and the deck m^2 cemented to the upper face of said corrugated sheet, the said floor being heavier than said deck to maintain its form when said deck and corrugated sheet are crushed along the margins, in combination with a covering-sheet stretched on said deck and extend-

ing over the edges to hold the top in shape, all substantially as herein specified.

4. In a top for a case or box, the reinforcing-tablet C', two or more pieces M, M' of corrugated paper superposed one upon the other with the corrugations at right angles, each shorter and narrower than the next below, and having the margins crushed or flattened, in combination with a covering-sheet stretched over and inclosing the whole and cemented to the under face of said tablet, all substantially as herein specified.

5. In a top for a case or box, the reinforcing-tablet C', two or more pieces M, M' of corrugated paper superposed one upon the other with the corrugations at right angles, each shorter and narrower than the next below, and having the margins crushed or flattened, in combination with the padding C² and a covering-sheet stretched over and inclosing the whole and cemented to the under face of said tablet, all substantially as herein specified.

6. In a case or box, the bed D of corrugated paper having the opening d therein, in combination with the bed-frame D', padding D² and covering D³, all substantially as herein specified.

7. In a case or box, the base A, bed D of corrugated paper having the opening d therein, the bed-frame D', padding D² and covering D³, in combination with the body B hinged to the base and inclosing said bed-frame, the top C of corrugated paper m, m', m^2 , padding C² and covering-sheet C³, and the stops B³ to limit the motion of said body and top relatively to said base, all substantially as herein specified.

8. The hinge described consisting of a flexible cord extending through the base into and through the rear portion of the body diagonally from the lower rear angle of the edge to a point on the inner face, thence downward again through the base and having the ends fastened, in combination with said body and base and forming a hinge and stop therefor, all substantially as and for the purposes herein set forth.

9. The base A having the holes a and a^2 , the body B having the hole c reaching diagonally from the lower rear angle of the edge to the inner face, in combination with a flexible member extending through said holes as shown and having the ends fastened, the reinforce G securing said ends, the said cord being concealed in said base and body and by the covering material, all substantially as and for the purposes herein set forth.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

EDWIN JOHN FLETCHER.

Witnesses:

ROBT. CONNOR,
GEO. W. CASE, Jr.