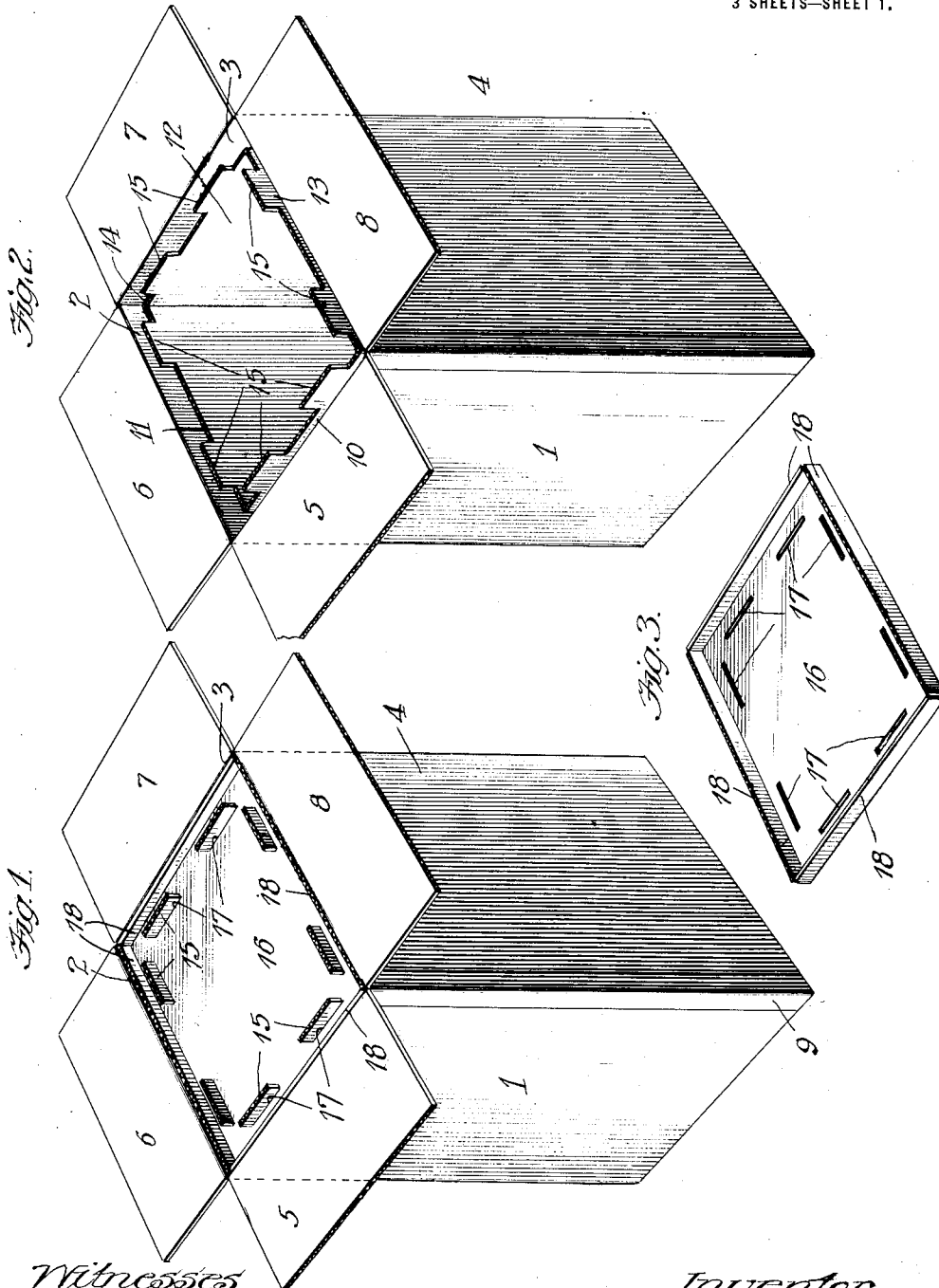


E. C. POTTER.
SHIPPING BOX.
APPLICATION FILED FEB. 21, 1916.

1,344,147.

Patented June 22, 1920.

3 SHEETS—SHEET 1.



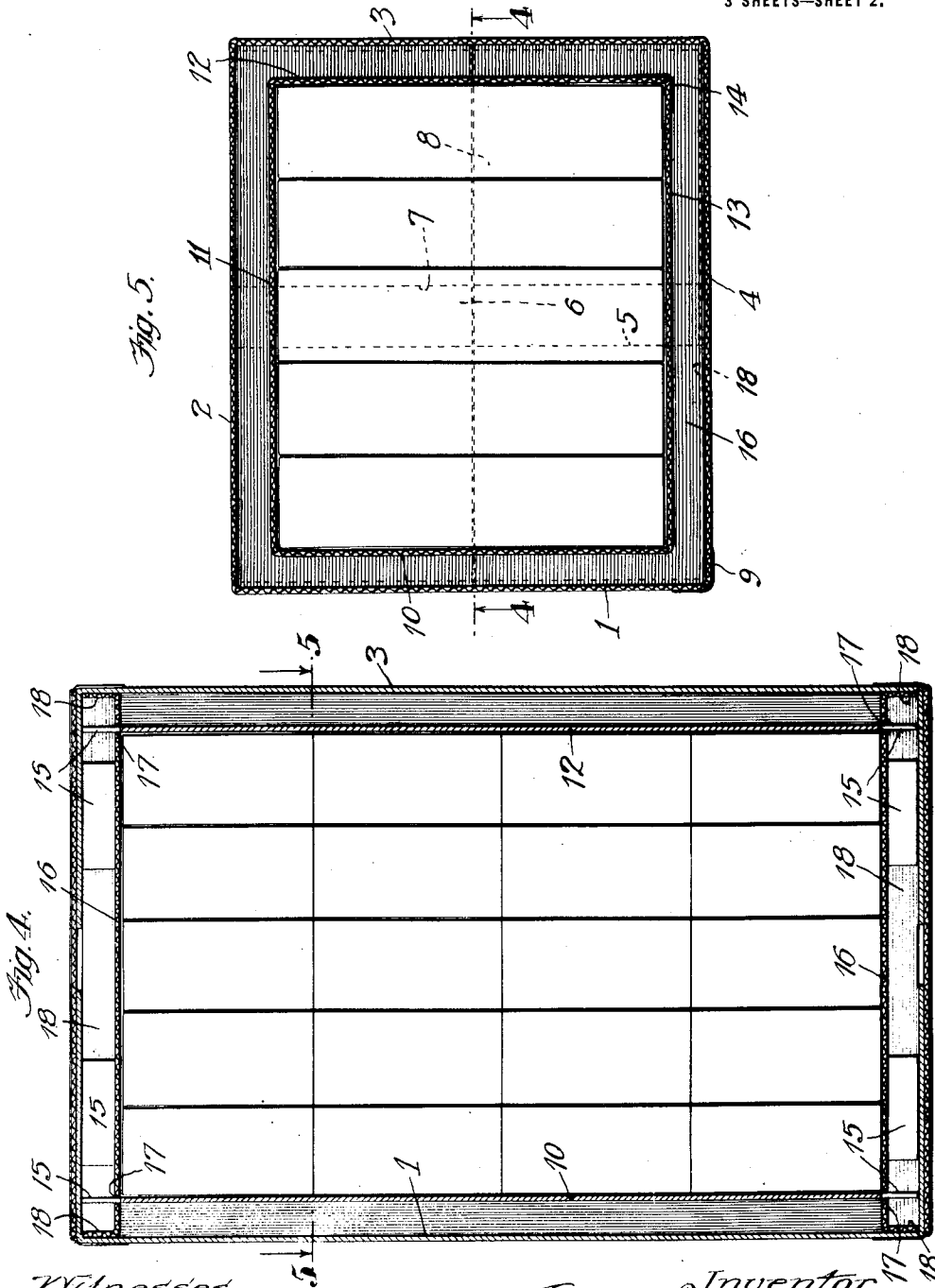
Witnesses
Martin H. Olsen.

Inventor
E. C. Potter

Robert Dobberman By Reiter, Hibben, Davis, Macaulay
Attys.

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3 SHEETS—SHEET 2.



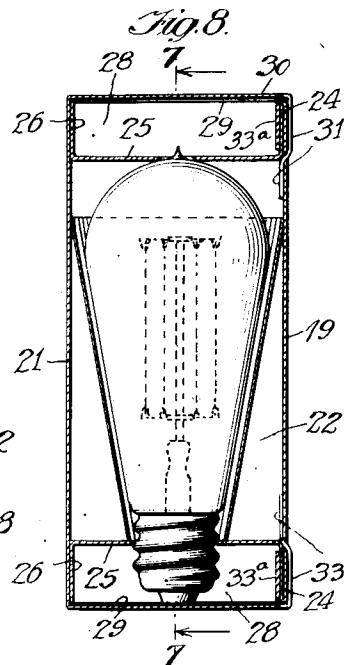
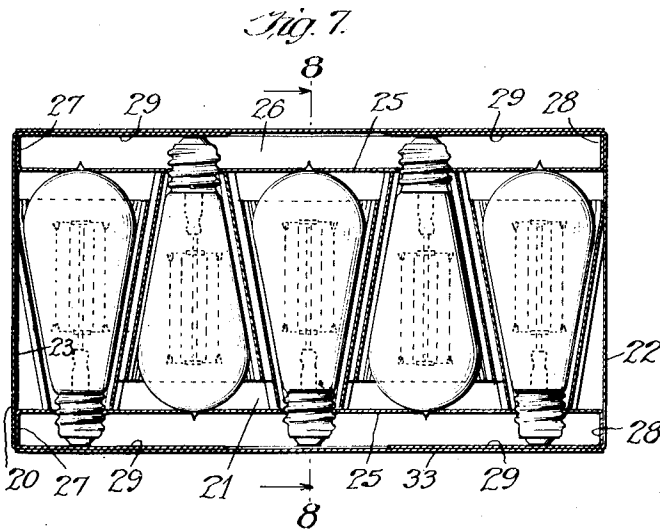
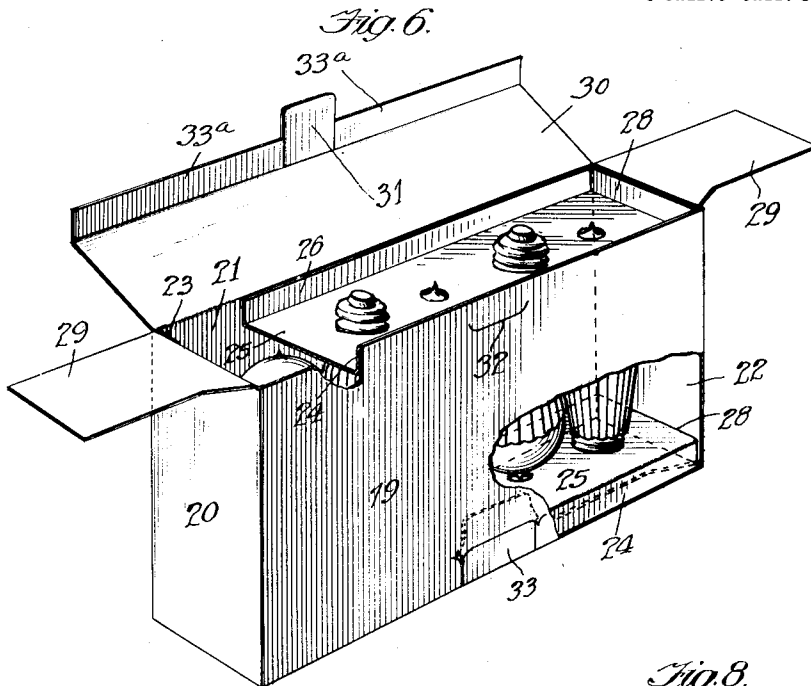
Witnesses
Martin H. Olsen.
Robert Dohrman

Inventor
Earl C. Potter
By Reuter, Hibben, Davis & Macaulay
His Attys.

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Witnesses
Martin H. Olsen.

Robert Hobberman

Inventor
Earl C. Potter

By Reiter, Hibben, Davis & Macaulay
His Attys.

UNITED STATES PATENT OFFICE.

EARL C. POTTER, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO SEFTON MANUFACTURING CORPORATION, OF MILLBROOK, NEW YORK, A CORPORATION OF NEW YORK.

SHIPPING-BOX.

1,344,147.

Specification of Letters Patent. Patented June 22, 1920.

Application filed February 21, 1916. Serial No. 79,601.

To all whom it may concern:

Be it known that I, EARL C. POTTER, a citizen of the United States, residing at Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Shipping-Boxes, of which the following is a specification.

My invention relates to shipping boxes made of relatively fragile material, such as the well-known article commercially termed corrugated paper board, and is designed to provide a box made of such material sufficiently strong, and affording sufficient protection to the inclosed fragile contents for which the package is designed, to enable the box to be shipped by freight with relatively small loss by breakage. The embodiment of my invention which will hereinafter be described is a box designed for shipment of incandescent electric lamps, although it is obvious that by suitable modification of the proportions of the box and the inside containers the package may be adapted for the shipment of other articles. In carrying out my invention I provide an outer shell of ordinary construction, within which is arranged and supported a shell and cover members so constructed and arranged as to inclose an inner chamber separated on all sides from the outer shell, whereby blows and shocks received by the package will be taken up mostly with local injury by the outer shell, or cushioned and distributed less directly to the inner shell as a whole. The inside containers or fillers are likewise designed to have a cushioning action and to so suspend the lamps that the lamps in adjacent containers will bear on separate cardboard partitions spaced apart a sufficient distance to avoid liability of the lamps bearing on each other through the partitions. My invention consists in the construction and arrangement of cooperating structural members by which I secure the above and incidental advantages and attain the object hereinbefore stated, the essential elements thereof being recited in the appended claims.

In the drawings, Figure 1 is a perspective view of my box, with the cover flaps of the outer shell opened out and the top cover of the inside shell removed; Fig. 2 is a similar view, but with the top cover mentioned removed; Fig. 3 is a perspective of

the top cover alone; Fig. 4 is a vertical section on the line 4—4 of Fig. 5; Fig. 5 is a horizontal section on the line 5—5 of Fig. 4; Fig. 6 is a perspective of one of the inside containers or fillers, broken away at certain points to show the disposition of the parts of the box and the inclosed lamps; Fig. 7 is a vertical longitudinal section taken centrally of the container; and Fig. 8 is a cross-section of the same on the line 8—8 of Fig. 7.

The same reference characters indicate the same parts in all the figures of the drawing.

The outer shell of my package, as before stated, is of ordinary construction, and comprises four side members, 1, 2, 3 and 4, and end flaps 5, 6, 7, and 8, preferably formed of one rectangular sheet of material creased and folded to form a four-sided shell, a hinge strip 9 being provided to unite the meeting edges of the sides 1 and 4, and the cover flaps being adapted to fold inwardly to form top and bottom walls closing the box.

The inner shell consists of the four sides 10, 11, 12 and 13 hinged together to form a four-sided shell, the meeting edges of the sides 10 and 13 being secured together by a hinging strip 14. The sides, as shown, are cut away to leave projecting tongues or tenons 15, both at top and bottom, the ends of the box being of the same construction. The ends or top and bottom cover members of the inner box consist of rectangular sheets of material 16 of such size as to fit snugly within the sides of the outer box and are formed with slots or mortises 17 to receive the tenons 15 before mentioned. The edges of the cover are provided with spacing flanges 18 which are of such heights as to contact the innermost cover flaps of the outer shell when the cover is firmly seated on the lower line of the cut away portions of the sides of the inner shell intermediate its tenons; and the tenons themselves are of such length as to also contact the sides, this construction providing an inner chamber or receptacle strongly supported at the edges of the top and bottom of the package, its most vulnerable points.

The containers or fillers in which the lamps are contained in small lots, in the present instance in lots of five, are preferably each formed of a single piece of mate-

rial, a suitable material for the purpose being thin but tough manila cardboard. This container (see Figs. 6, 7 and 8) comprises four sides 19, 20, 21 and 22, and flaps 5 forming top and bottom closures which are of similar, though not identical construction. The side 21, it may be here explained, is provided with a hinge flap 23 by which it is secured to the side 20, the other sides and flaps being formed by creased folding lines which permit the parts to be folded and arranged in the manner illustrated and herein explained. At the top of the front side wall 19 of the container is hinged the side flange 24 of a depressed or sunken partition 25, which is formed with side flanges 24 and 26, and end flanges 27, 28. The partition 25 is formed with a series of properly spaced holes of two sizes, the holes of one size being each adapted to receive the reduced end of the neck of an incandescent lamp, and the other and smaller holes being each adapted to receive the end of the glass bulb of the lamp. The end side walls 20 and 22 are provided with hinged supporting flaps 29 adapted to be folded inwardly above the partition 25, in which position their bases will afford considerable support to the sides of the cover flap 30, which flap is hinged to the rear side wall 21. At its front the cover is provided with a fastening tab 31 adapted to be inserted in a slit 32, cut to receive it in the front wall 19, and a pair of spacing and supporting flanges 32^a—32^b adapted to fold down adjacent the flanges 24 and rest upon the top of the partition 25.

The bottom closure of the container is formed in the same manner as the top, differing only in the arrangement of the holes to receive the lamps, which must be reversed in respect to the two sizes in order to provide for the arrangement of the lamps with the bases alternately up and down as illustrated; and in the provision of a locking flap or tab 33 which will resist disengagement hinged to the bottom cover 34 instead of the readily disengageable tab 31 used at the top of the container. It is, however, obvious that the bottom of the container may be permanently closed by pasting adjacent parts together, if desired.

The containers are designed to be placed upright in tiers in the package,—that is, with the closures of the containers and outer shell of the box all in parallel planes, as indicated in Figs. 4 and 5. The package having been closed, the cover flaps 5 and 7 of the outer shell are folded inwardly over

the tops of the tenons of the inner shell, and the flaps 6 and 8 next folded down, in which position their edges meet tightly. A strong sealing tab is then pasted along said edges and down upon the sides of the box, so that it is practically hermetically sealed. The result of this construction is that the inner shell and its containers are pneumatically cushioned to a considerable extent. It may further be noted that the joints around the flanged sides of the cover and the mortise joints are practically air tight, dividing the space between the outer and inner shells into three separate air tight compartments, the intermediate one of which extends entirely around the container chamber of the inner shell.

I claim:

1. A shipping box comprising an outer rectangular shell, an inner shell consisting of four side walls hinged together, spaced from the outer shell, a cover member arranged adjacent and parallel with one of the walls of the outer shell and adapted to fit snugly within the four surrounding walls of such outer shell, said cover member being arranged to interlock with the ends of the sides of the inner shell and form a closure for the same.

2. A shipping box comprising an outer rectangular shell, an inner shell having the free ends of its sides formed with tenons and spaced from the outer shell consisting of four side walls hinged together and a cover member arranged adjacent and parallel with one of the walls of the outer shell and adapted to fit snugly within the four surrounding walls of the same, said cover member being formed with mortise openings to receive said tenons and constituting a closure for said inner shell.

3. A shipping box comprising an outer rectangular shell, an inner shell spaced from the outer shell consisting of four side walls hinged together, a flanged cover member arranged adjacent and parallel with one of the walls of the outer shell and having its flanges arranged to bear against such wall, said cover member being adapted to fit snugly within the four surrounding walls of the outer shell and interlock with the ends of the sides of the inner shell to form a closure for the same.

EARL C. POTTER.

Witnesses:

LOUIS B. ERWIN,
ROBERT DOBBERMAN.