

A. A. BROWN.
PACKING CASE, BOX, OR CARTON.
APPLICATION FILED DEC. 11, 1916.

1,281,501.

Patented Oct. 15, 1918.
3 SHEETS - SHEET 1.

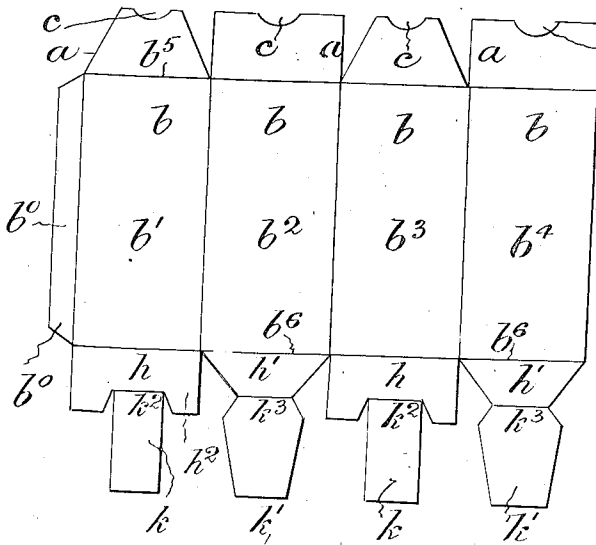


Fig 1

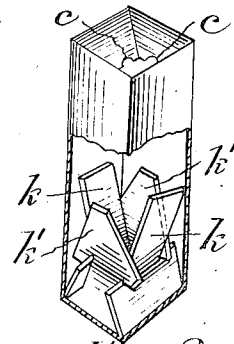


Fig 2

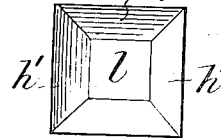


Fig 3

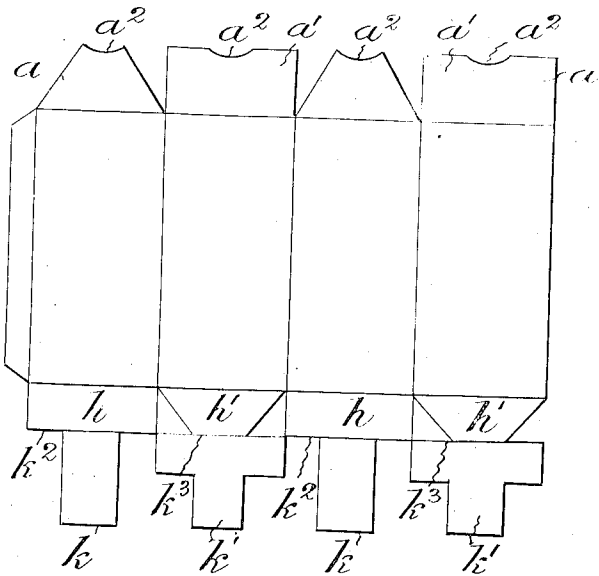


Fig 4

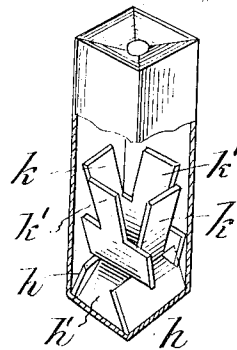


Fig 5

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3 SHEETS—SHEET 2.

Fig. 6.

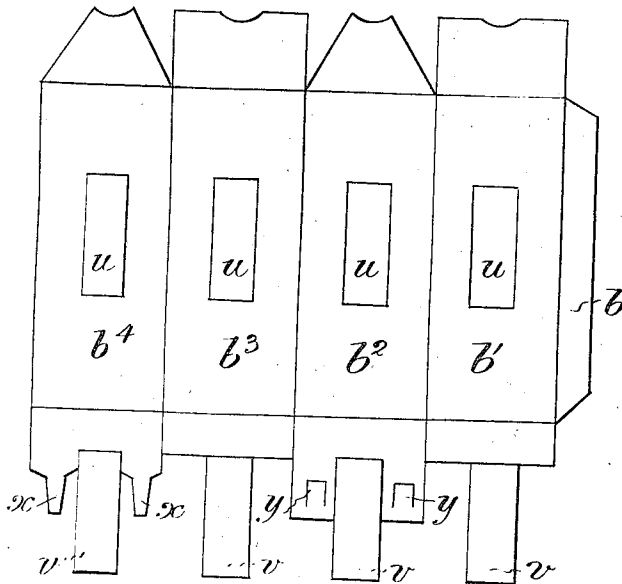
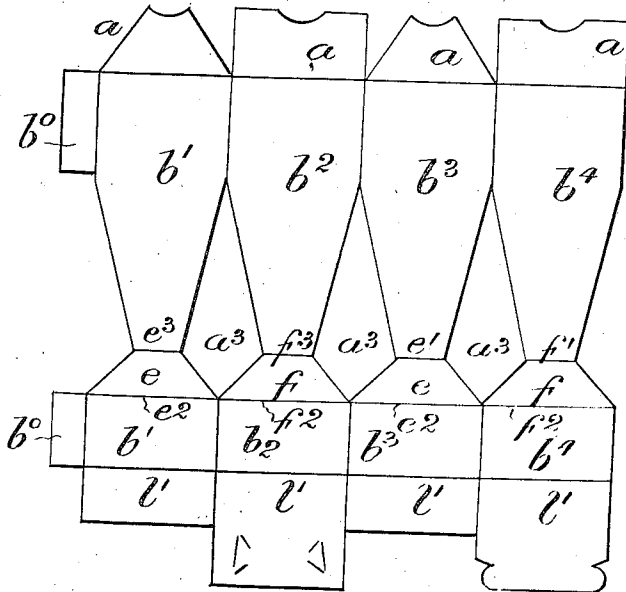


Fig. 9.

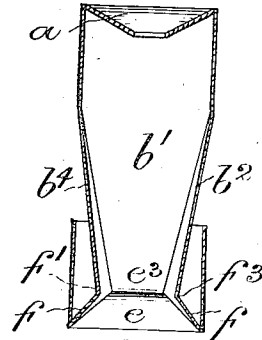


Fig. 8.

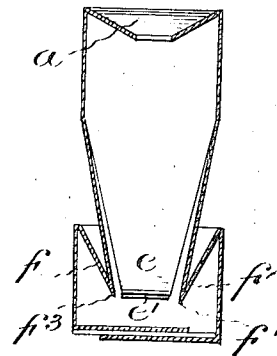


Fig. 7.

Fig. 10.

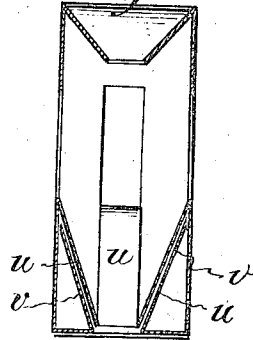


Fig. 11.

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 3 SHEETS—SHEET 3.

Fig. 12

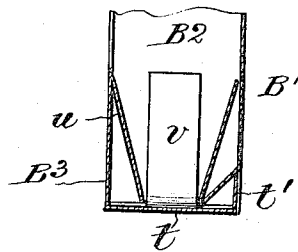
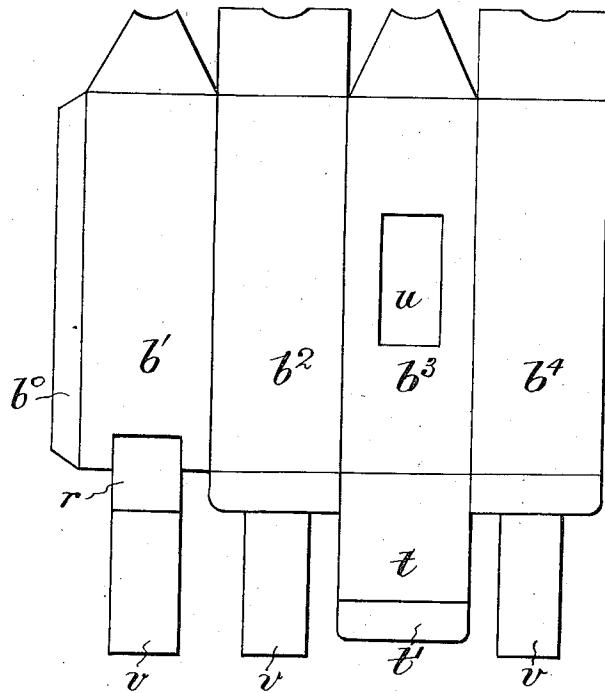


Fig. 13

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UNITED STATES PATENT OFFICE.

ALEXANDER AITCHISON BROWN, OF RUTHERGLEN, SCOTLAND.

PACKING CASE, BOX, OR CARTON.

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Specification of Letters Patent.

Patented Oct. 15, 1918.

Application filed December 11, 1916. Serial No. 136,292.

To all whom it may concern:

Be it known that I, ALEXANDER AITCHISON BROWN, of Luzern, Buchanan Drive, Rutherglen, Scotland, have invented certain
5 new and useful Improvements in or Relating to Packing Cases, Boxes, or Cartons, of which the following is a specification.

This invention relates to improvements in cases, boxes, or cartons, for the temporary
10 storage of articles, and more particularly to that type of box wherein an article, such as an electric incandescent lamp is secured, preferably with its contact portion exposed, between locking abutments at the top of
15 the box and a support or seat at the bottom of the box. Such boxes are adapted for testing the lamp without necessitating the removal of the lamp, or the undoing of the box. The object of the present
20 invention is to improve and simplify the construction and extend the utility of such boxes.

Heretofore the bottom supports of the known boxes have been of two distinct types,
25 namely, flat or V-shaped supports formed of flaps integral with the sides of the box and adapted to act with the pip or sealed end of the lamp or globe, or cup-shaped supports adapted to resiliently engage the bulb portion or sides of the lamp without engaging
30 the pip or sealed end thereof, and such cup-shaped supports have been heretofore formed either as wholly separate from the box or partly from tongues cut from the
35 sides of the box and partly by a separate lower end piece or diaphragm supported by said tongues.

According to the present invention, the bottom comprises a cup-shaped seat formed
40 wholly of parts integral with the sides of the box; this being preferably effected by bending up flaps with tongue extensions on each side of the box in such a manner as to create a V-shaped projection in the internal
45 surface of each of the sides of the box, the upper ends of the tongue extensions resting against the sides of the box and tapering downward toward a permanent central opening. The cup-shaped support may also
50 be formed from tongues cut from the sides of the box; or partly from such tongues and partly from flaps projecting from the end of the box; or by both in combination, one set overlying the other; or the cup-shaped support may be formed by suitably curving the
55 sides of the box to form same. The inven-

tion also consists in the provision of means for locking the flaps or upstanding tongues forming the cup-shaped seat against movement toward the adjacent end of the box 60 and against movement toward the sides of the box.

In order that my invention may be properly understood and readily carried into effect, I have hereunto appended three sheets 65 of drawings, of which—

Figure 1 is a plan view of a box blank.

Fig. 2 is a perspective view of a box built up from said blank with a portion of its walls broken away to show the locked in- 70 ternal cup-shaped seat.

Fig. 3 is an inverted plan of the bottom of the box showing the permanent central opening.

Fig. 4 is a plan view of a box blank showing a modification in design of the blank 75 shown in Fig. 1.

Fig. 5 is a perspective view of a box built up from said blank with a portion of its walls broken away to show the internal cup- 80 shaped seat locked only against movement downward toward the end of the box.

Fig. 6 is a plan view of a blank designed for a further alternative form of box.

Fig. 7 is a vertical section of a box built 85 up from said blank with closing bottom flaps.

Fig. 8 is a vertical section of a box built up from the blank without closing bottom 90 flaps.

Fig. 9 is a plan view of a blank showing a bottom support formed of tongues cut from the sides of the box and upwardly bent flaps or tongues from the end of the box.

Fig. 10 is a vertical section of a box 95 formed from said blank.

Fig. 11 is an inverted plan of the bottom of said box.

Fig. 12 is a plan view of a box blank showing the bottom closing flap and the combination of bottom and side tongues to form the 100 cup seat, and

Fig. 13 is a part vertical section of the box built up therefrom.

Referring to Figs. 1 to 3 of the drawings, 105 the blank *b* is divided into four panels *b*¹, *b*², *b*³ and *b*⁴ adapted to form the walls of the box on being bent along the scored, or creased lines. The panel *b*¹ is formed with a flap *b*⁰ which is attached in the usual manner to the panel or side *b*⁴ in building up the 110 box. The top and bottom edges of the box

are determined by the horizontal lines b^5 and b^6 . The tops flaps a being preferably cut as shown with their free edges each provided with an arcuate notch C , are designed to lock the lamp down by its shoulder within the upstanding group of tongues forming the resilient bottom support. The lower portion of the blank is formed with depending flaps h and h^1 provided with extensions or tongues k and k^1 hinged to fold on the lines k^2 and k^3 . These flaps with tongue extensions are of an alternating design preferably as shown, the flaps h being first turned inwardly into the box and subsequently the flaps h^1 , the projecting portion of the tongues k^1 below the lines or hinges k^3 taking into recesses formed between the tongues k and projecting portions h^2 of the flaps h and thereby lock the box against a rhomboidal or collapsing movement. The flaps h and h^1 are also locked against movement toward the sides of the box. The bottom support for the lamp is formed of the group of tongues k, k, k^1, k^1 , upstanding from the bottom flaps, interlocked as illustrated in Fig. 2, in such manner as to form a permanent central opening l as shown in Fig. 3, through which the pip of the lamp may freely project.

Referring to Figs. 4 and 5, in this construction the cup-shaped seat differs from that shown in Figs. 1 to 3 in respect of the flaps not being locked against movement toward the sides of the box and consequently the lamp may be withdrawn through the bottom end on the flaps being pressed back. The flaps h and h^1 form the inclined bottom of the box while the tongues k and k^1 hinged on the lines k^2, k^3 are of different form, the flaps h^1 being formed with cross extensions which engage the lower edges of the flaps h at the juncture of the tongues k therewith. It will be seen that when the flaps h, h^1 are turned inwardly into the box and the tongues k, k^1 are bent backward against the sides of the box as illustrated in Fig. 5, a rhomboidal or collapsing movement is checked by the upstanding edges of the cross extensions of the tongues k^1 .

Referring to Figs. 6, 7 and 8, the panels b^1, b^2, b^3, b^4 are arranged to incline inwardly so as to form the tapered resilient support. This is effected by cutting diamond or other suitably shaped openings a^3 between each pair of sides and by folding the portions e and f of the sides inwardly on the lines e^1, f^1 and e^3, f^3 , thereby forming a box as shown

in Fig. 7. Closing flaps l' may be provided on the ends of the panels. With the same form of blank a slightly different construction of box can be made if the lower portions of the sides b^1, b^2, b^3 and b^4 as represented in Fig. 8 are superimposed on the portions e and f so that the lines e^2, f^2 form the bottom of the box, the portions e and f inclining upwardly as shown. Flaps b^0 forming extensions of panels b^1, b^2 , are used to attach the latter to panels b^3, b^4 in the usual way.

Figs. 9, 10, 11 show a box wherein the bottom tapered support is formed by a combination of tongues v extending from the bottom flaps and tongues u cut from the sides of the panels b^1, b^2, b^3, b^4 . The bottom flaps are designed to lie in a horizontal plane with a permanent central bottom opening and are secured together by means of locking tongues x engaging in slots y as shown in Fig. 11.

Referring to Fig. 12 which shows a modified form of blank and to Fig. 13 which shows a vertical section of the bottom of the box made from said blank, in this construction the end is completely closed by the flap t , an extension t^1 of which takes within the opposite wall of the box and the portion r of the opposite tongue v , this portion r being suitably hinged up that wall for the purpose and bent downwardly and upwardly and the tongue u which is substituted in place of a tongue v bent downwardly to complete the cup as illustrated in Fig. 13.

Claim:—

In a box for shipping fragile articles and especially adapted for storing electric incandescent lamps, which is made from a blank having sides and end flaps, in combination, a bottom providing a cup-shaped seat integral with the sides, flaps forming said bottom and locked against movement toward the sides of the box, and groups of tongues upstanding from said flaps adapted to be interlocked in such a manner as to form a permanent central opening permitting the pip of the lamp to project through said opening for allowing a testing of the lamp without necessitating its removal from the box or the undoing of said box, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ALEXANDER AITCHISON BROWN.

Witnesses:

O. H. LIDDLE,

JOHN TRAIN LIDDLE.