

July 31, 1951

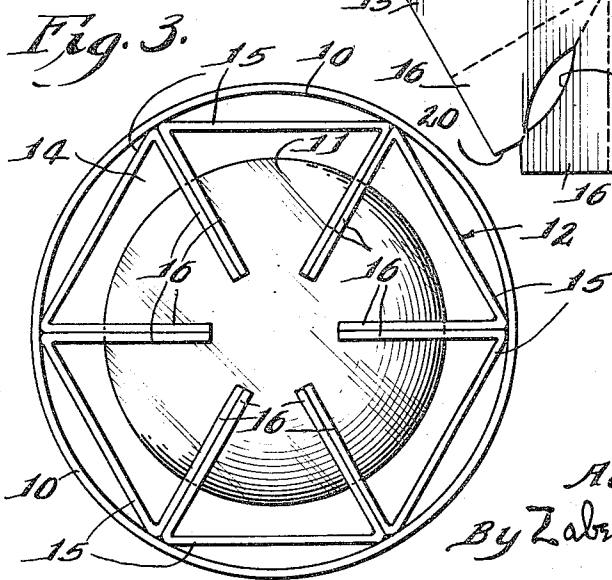
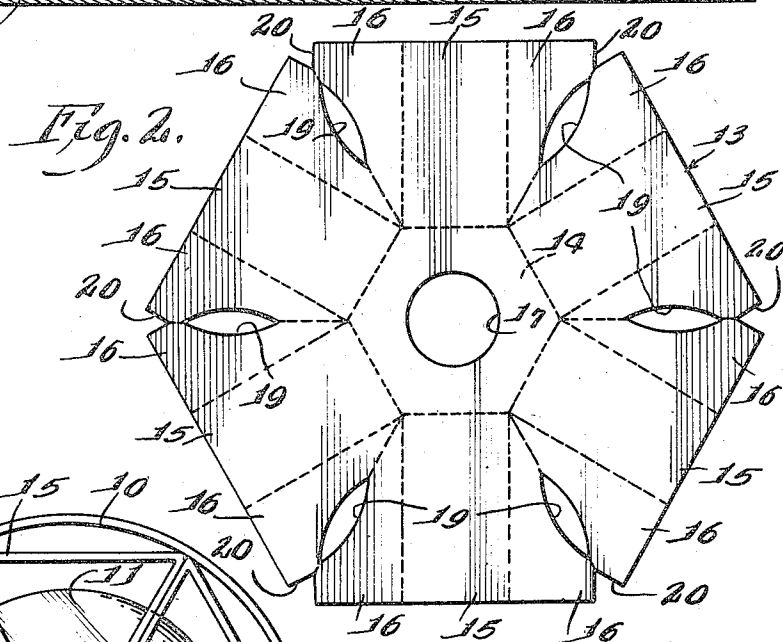
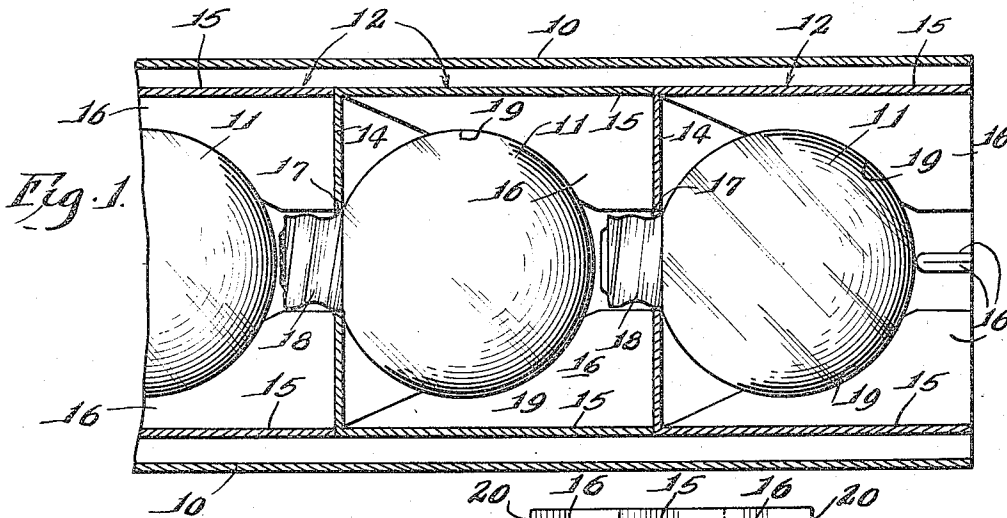
A. P. D. BELANGER

2,562,655

MEANS FOR PACKAGING ARTICLES FOR HANDLING

Filed Sept. 13, 1947

2 Sheets-Sheet 1



Inventor:
Albert P. D. Belanger;
By Zabr and Dritzbaugh,
Attorneys.

July 31, 1951

A. P. D. BELANGER

2,562,655

MEANS FOR PACKAGING ARTICLES FOR HANDLING

Filed Sept. 13, 1947

2 Sheets-Sheet 2

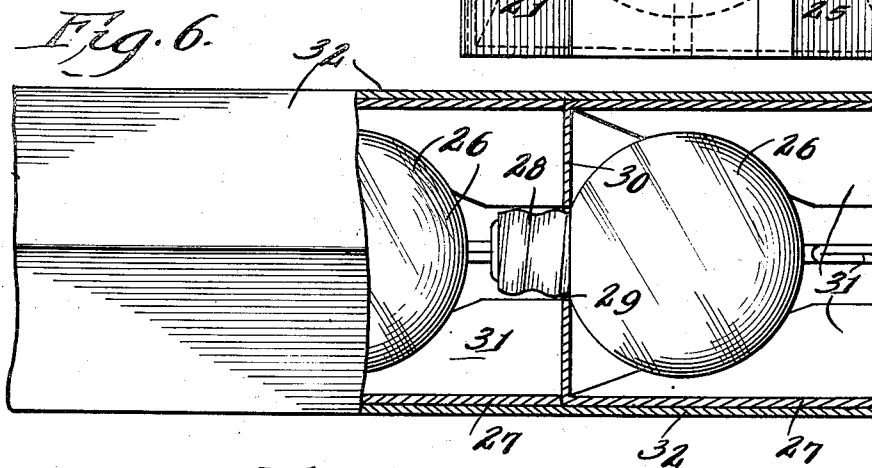
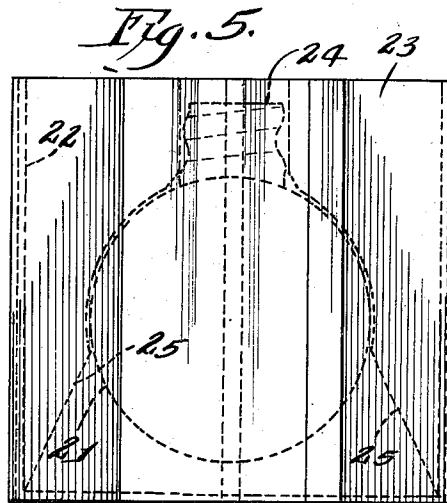
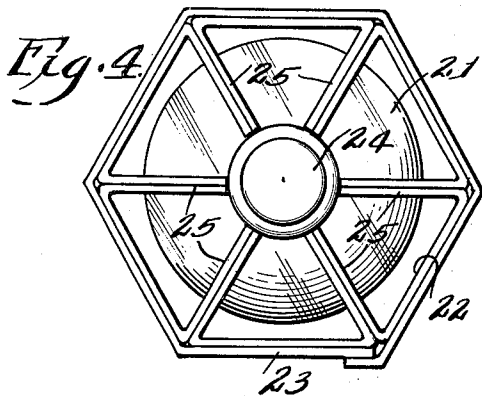
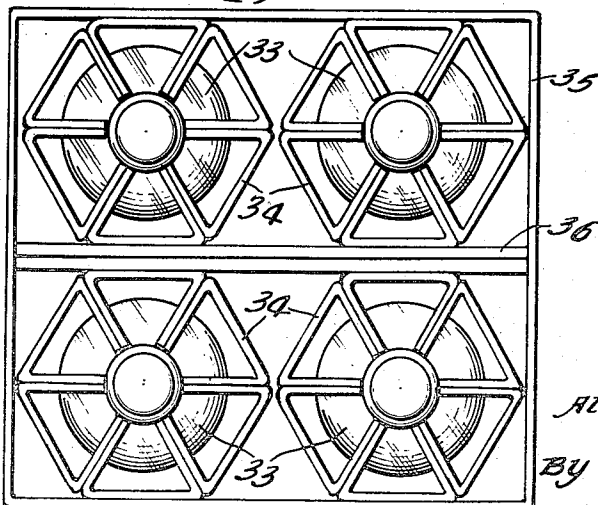


Fig. 7.



Inventor:-
Albert P. D. Belanger,
By Zehn and Gutzbaugh,
Attorneys

UNITED STATES PATENT OFFICE

2,562,655

MEANS FOR PACKAGING ARTICLES FOR HANDLING

Albert P. D. Belanger, Alton, Ill., assignor to Alton Box Board Company, Alton, Ill., a corporation of Delaware

Application September 13, 1947, Serial No. 773,775

10 Claims. (Cl. 229—14)

1

This invention relates to means for packaging articles for handling, and it has for its object the provision of a new and improved form and arrangement of parts whereby articles may be packed to advantage so as to be protected during shipment or other handling. It is one of the objects of the invention to provide improved packaging means comprising holders folded into shape from paper or other sheet material so as to be capable of being easily produced ready for use and arranged so as to provide effective cushioning for such articles being handled.

It is another object of the invention to improve devices of this type in sundry details hereinafter pointed out. The preferred means by which my several objects have been attained are illustrated in the accompanying drawings, in which

Fig. 1 is a central vertical sectional view through the preferred form of my improved device, with parts broken away at the left;

Fig. 2 is a face view of the blank from which the holders of my improved construction are made;

Fig. 3 is an end view of the device as seen from the right in Fig. 1;

Fig. 4 is a view of a single electric light bulb mounted in a cup-shaped holder which in turn is mounted in a sleeve adapted to hold the parts in holding position;

Fig. 5 is a side face view of the structure shown in Fig. 4;

Fig. 6 is a central vertical sectional view similar to Fig. 1 but showing a different form of outside container; and

Fig. 7 is a view showing a plurality of bulbs and holders packed in a carton.

This application is being filed as a continuation in part of my application Serial No. 521,224, filed February 5, 1944, now Patent No. 2,432,501.

In the drawings, I have shown packaging means adapted for use for packing electric light bulbs, or other articles, so as to provide a cushioning effect for protecting the articles from damage during handling. In the arrangement illustrated in Figs. 1, 2 and 3, a cylindrical tubular member 10 is employed, preferably formed of paper, and of such length as to be capable of receiving a plurality of light bulbs 11 packed snugly therein, each of said bulbs being held in position in the tubular member by means of a holder 12 in the form of a cup folded into shape from a piece of heavy stiff paper or other suitable sheet material.

Each of the holders 12 as shown in Fig. 2 is

2

formed from a blank 13 cut out by suitable dies from the selected sheet material and comprising an end panel 14 with side wall panels 15 extending outwardly therefrom. For forming the cup, the side wall panels 15 are folded at right angles with respect to the end panel 14, with the sheet material intervening between the side wall panels folded inwardly into the form of triangular tabs 16. In the form of holder as shown, the end wall panel 14 is provided with a central opening 17 therethrough for the reception of the shank portion 18 of the bulb 11. Portions of the sheet material are also cut out at 19 between adjacent tabs 16 so as to provide notches in the inner edges of the tabs adapted to fit the faces of the bulbs 11, as best shown in Fig. 1. Corner portions are cut out also at 20 serving to shorten slightly the inwardly-projecting tabs so as to provide a pocket for the shank portions 18 of the bulbs 11.

With the blank 13 cut out and creased or otherwise weakened at the lines of fold, the shank portion 18 of a bulb 11 is inserted through the opening 17 and the side wall panels 15 are folded into position opposite to the body of the bulb, with the triangular tabs folded inwardly into engagement with the side portions of the bulb. The cup so formed and provided with its bulb is then pushed into position in the tubular member 10 which maintains the holder in its operative cupped form, after which additional cups are formed about other bulbs and pushed into position, the shank 18 of the bulb of one cup fitting snugly between the inner ends of the tabs 16 of the adjacent cup. The arrangement is such that the loaded cups brace and reinforce the tubular member 10 and that such tubular member is effective for holding the several parts of the cups in their operative holding positions.

With the parts formed from stiff tough paper or other suitable sheet material so as to conform to the shape of the articles being packed, a very strong but resilient support is provided for the articles so as to enable them to be handled advantageously even though the articles themselves are fairly fragile.

In the arrangement shown in Figs. 4 and 5, an electric light bulb 21 is mounted in a cup-shaped holder 22 similar to the holder 12, such holder 22 in turn being mounted in a hexagonal sleeve 23 which reinforces the construction of the holder and maintains the parts in their operative folded positions. In the arrangement shown in Fig. 5, the shank 24 of the bulb 21 is positioned in the pocket formed by the inwardly-extending tabs 25 of the cup, with the bulb held

3

firmly in position by such tabs, and with the transverse panel of the cup completely closing the end of the sleeve adjacent to the free end of the light bulb 21. The arrangement is such that the bulb and holder inside of the sleeve 23 can be carried to advantage and with comparative safety even though the sleeve is packed loosely with other articles.

In the arrangement shown in Fig. 6, a plurality of bulbs 26 are mounted in cup-like holders 27 similar to the holders 12, with the shanks 28 of the bulbs extending through openings 29 in the transverse panels 30 of the holders so as to cause the shank portion of one bulb to be positioned between the inwardly-directed tabs 31 of the adjacent holder, the several holders being held in position with respect to each other by a hexagonal tubular member 32 corresponding to the tubular member 10 as shown in Fig. 1. With the tubular member 32 formed with flat faces rather than in circular form, such tubular member can be handled with greater ease and safety, since it is much less likely to roll and fall.

In the arrangement shown in Fig. 7, a plurality of bulbs 33 are mounted in holders 34 each in the form of a cup of the type above described in connection with Fig. 1. The several cups are held rigidly in position by a box or carton 35 formed of paper or other suitable sheet material, with a cushioning wall 36 intervening between adjacent layers of the cups.

By the use of my invention, I am enabled to pack radio tubes or the like very securely and satisfactorily, the packing operation being effected readily and easily by the use of blanks stamped complete from sheet material. By my construction, ample protection is afforded for the articles by reason of the reinforcement and bracing effected by the cooperative action of the several parts produced by the stamping and folding operations.

While I prefer to employ the form and arrangement of parts as shown by my drawing and as above described, the invention is not to be limited to such form except as the same may be specifically claimed, it being understood that changes might well be made in the arrangement without departing from the spirit of the invention.

I claim:

1. Packaging means comprising a holder formed from a blank of tough stiff sheet material folded into the shape of a cup having a transverse panel, a plurality of side wall panels in angular relationship to each other, and inwardly extending triangularly shaped tabs at the corners of the holder comprising the sheet material intervening between the side wall panels, said triangularly shaped tabs being directed toward the axis of said cup but terminating short of the same and having notches in their inner edges adapted by engagement with the articles being packed to hold the articles firmly cushioned in position, and means for holding the cup in its operative folded form.

2. Packaging means comprising a plurality of holders each formed from a blank of tough stiff sheet material folded into the shape of a cup having a transverse panel, a plurality of side wall panels in angular relationship to each other, and inwardly extending triangularly shaped tabs at the corners of the holder comprising the sheet material intervening between the side wall panels and arranged for holding an article to be packed in substantially centered position in the cup so as to provide a cushioning effect therefor, and

4

means for holding the several cups in their operative folded form and in snug engagement with each other.

3. Packaging means comprising a plurality of holders each formed from a blank of tough stiff sheet material folded into the shape of a cup having a transverse panel, a plurality of side wall panels in angular relationship to each other, and inwardly extending triangularly shaped tabs at the corners of the holder comprising the sheet material intervening between the side wall panels and arranged for holding an article to be packed in substantially centered position in the cup so as to provide a cushioning effect therefor, the transverse panel of each of said cups having an opening in substantially centered position therein for permitting a portion of said article to extend therethrough beyond the transverse panel, and means for holding the several cups in their operative folded form and for holding the several cups in snug engagement with each other with the extended portion of the article in one cup fitting between the triangular tabs of the adjacent cup.

4. Packaging means comprising a plurality of holders each formed from a blank of tough stiff sheet material folded into the shape of a cup having a transverse panel, a plurality of side wall panels in angular relationship to each other, and inwardly extending triangularly shaped tabs at the corners of the holder comprising the sheet material intervening between the side wall panels and arranged for holding an article to be packed in substantially centered position in the cup so as to provide a cushioning effect therefor, the transverse panel of each of said cups having an opening in substantially centered position therein for permitting a portion of said article to extend therethrough beyond the transverse panel, and said inwardly extending triangular tabs being notched so as to have holding engagement with the side portions of said article, and means for holding the several cups in their operative folded form and for holding the several cups in snug engagement with each other with the extended portion of the article in one cup fitting between the triangular tabs of the adjacent cup.

5. Packaging means comprising a tubular member, and a plurality of holders adapted to be fitted snugly in said tubular member, each of said holders being formed from a blank of tough stiff sheet material folded into the shape of a cup having a transverse panel, a plurality of side wall panels in angular relationship to each other, and inwardly extending triangularly shaped tabs at the corners of the holder comprising the sheet material intervening between the side wall panels and arranged for holding an article to be packed in substantially centered position in the cup so as to provide a cushioning effect therefor, the opposing walls of said tubular member being spaced from each other by said transverse panel.

6. Packaging means comprising a tubular member, and a plurality of holders adapted to be fitted snugly in said tubular member for supporting articles to be packed, each of said holders being formed from a blank of tough stiff sheet material folded into the shape of a cup having a transverse panel, a plurality of side wall panels in angular relationship to each other, and inwardly extending triangularly shaped tabs at the corners of the holder comprising the sheet material intervening between the side wall panels, each of said tab members being shaped along its

5

inner edge to conform to the shape of the article to be packed, and the transverse panel of each of said holders having an opening in substantially centered position therein through which a portion of the article being packed extends into position between the inwardly extending tabs of the adjacent holder, the opposing walls of said tubular member being spaced from each other by said transverse panel.

7. Packaging means as called for by claim 5 in which the tubular member and the holders are hexagonal in form so as to interfit for holding the holders frictionally in position in the tubular member.

8. Packaging means as called for by claim 1 for packing an electric light bulb or the like with its shank portion extending through an opening in the transverse panel of the holder, in which the holder is hexagonal in form and in which the means for holding the holder in its operative folded form comprises a hexagonal sleeve extending at the ends beyond the article in the holder.

9. Packaging means as called for by claim 1 for packing an electric light bulb or the like with its shank portion extending into position between the inwardly extending tabs of the holder, in which the means for holding the holder in its operative folded form comprises a hexagonal sleeve extending at the ends beyond the article in the holder and in which the transverse panel of the holder closes the end of said sleeve adjacent to the free end of the light bulb.

6

10. Packaging means as called for by claim 2 for packing articles such as electric light bulbs or the like, in which the shank portion of each of the articles being packed extends into position between the inwardly extending tabs of the holder for said articles, and in which the means for holding the several cups in their operative folded condition is in the form of a carton adapted to receive a layer of holders arranged side by side therein so as to be held by the carton in their operative folded form.

ALBERT P. D. BELANGER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
992,683	Myers	May 16, 1911
1,020,878	Bendelari	Mar. 19, 1912
1,059,359	Hahn	Apr. 22, 1913
1,467,690	Schwarz	Sept. 11, 1923
1,935,669	Rogers	Nov. 21, 1933
2,163,060	Ray	June 20, 1939
2,314,631	Ray	Mar. 23, 1943

FOREIGN PATENTS

Number	Country	Date
5,292	Great Britain	Mar. 2, 1911
113,829	Austria	Sept. 6, 1939