Jan. 19, 1932. G. A. LEWIS 1,842,034

SAFETY SHIPPING DEVICE

Filed March 25, 1930

Fig. 1.

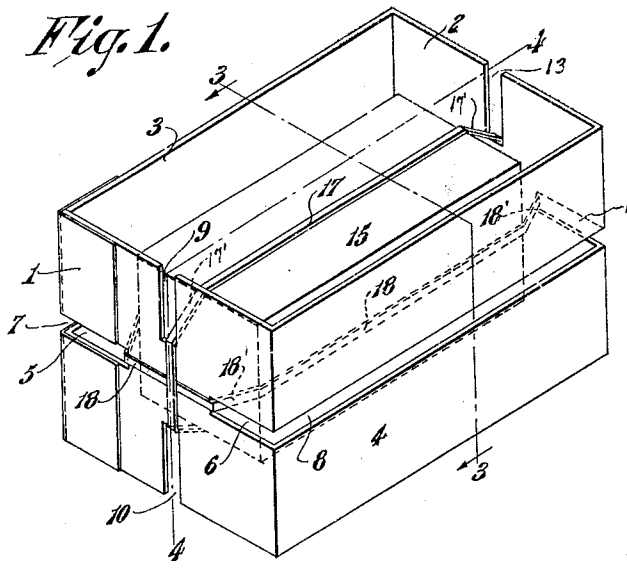


Fig. 2.

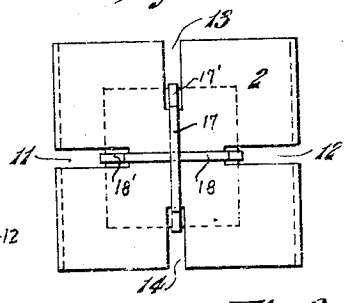


Fig. 3.

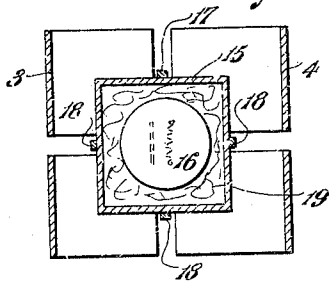


Fig. 4.

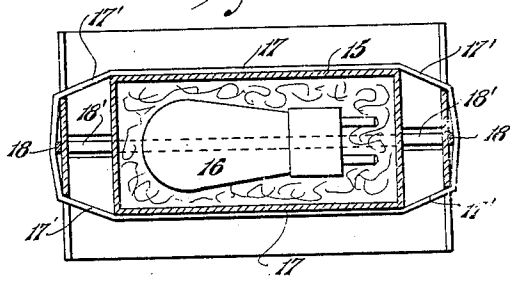
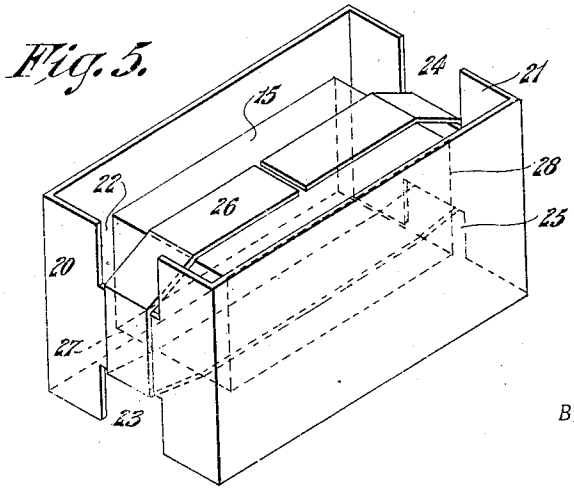


Fig. 5.



INVENTOR,
George A. Lewis,

BY

Harry W. Bowen.
ATTORNEY.

Patented Jan. 19, 1932

1,842,034

UNITED STATES PATENT OFFICE

GEORGE A. LEWIS, OF GREENFIELD, MASSACHUSETTS

SAFETY SHIPPING DEVICE

Application filed March 25, 1930. Serial No. 438,740.

An object of the present invention is to provide efficient means for suspending a carton in which a fragile article, as a vacuum tube, is placed. This carton is located within a larger member of box-like construction in such a manner that it is freely supported in order to have a free movement in all directions; that is to say, longitudinally, transversely and it may rotate slightly in any position in which the larger box-like construction may be placed.

Broadly, my invention comprises an outer casing formed with sides and end members that are slitted, preferably at right angles to each other, for receiving elastic bands. These bands are placed along the four sides of the carton in which the fragile article is placed.

The carton in which this article is placed is shorter in length than the outer supporting member whereby it provides a support with the elastic bands for automatically centering the carton within the outer member. This means of supporting a fragile article permits it to be handled or safely transported without breaking.

Referring to the drawings:

Fig. 1 is a perspective view showing the article receiving carton assembled within the outer supporting member, the elastic bands in the slits and engaging the sides of the carton.

Fig. 2 is an end view of Fig. 1 looking from the right of Fig. 1.

Fig. 3 is a transverse sectional view on the line 3—3 thru the outer and inner members illustrating a vacuum tube within the carton and the supporting rubber or elastic bands.

Fig. 4 is a longitudinal sectional view on the line 4—4 of Fig. 1.

Fig. 5 is a modification for supporting the carton in which a strip of gummed paper or other adhesive material is employed.

Referring to the drawings in detail:

1 and 2 indicate the end members of the outer supporting casing, 3 and 4 the side members. These preferably consist of pasteboard or other suitable material that is formed into a rectangular shaped member; as shown, the top and bottom portions are omitted. The end portion 1 is formed with the horizontal slits 5 and 6 which communicate or open into the longitudinal slits 7 and 8 in the sides 3 and 4. 9 and 10 are the vertical slits in the end member 1 which extend inward from the upper edges. The end member 2 is formed with the horizontal slits 11 and 12 and the vertical slits 13 and 14, as shown. 15 designates the pasteboard carton in which the vacuum tube, indicated at 16 in Fig. 3, is placed.

For the purpose of freely and elastically suspending the tube receiving carton 15, the two rubber bands 17 and 18 are placed in the horizontal and vertical slits 6, 7, 9, 10, 11, 12 and 13, as shown.

It will be observed that as the length of the carton 15 is less in length than the outer enclosing casing member, the ends of the bands 17 and 18 extend or bend downward to the bottoms or ends of the horizontal and vertical slits, thereby producing the inclined supporting members 17′ and 18′. These downwardly extending portions serve to space carton 15 from the ends 1 and 2, and, also serve to centrally locate the carton 15 within the outer supporting member. By reason of the elastic bands, the carton 15 may have a slight rotary movement about its longitudinal axis. It may also have free vertical and horizontal movement, when the outer enclosing member is placed in vertical or horizontal positions, as for shipment. If desired, the carton 15 may be filled with excelsior 19, or other cushioning material, as shown in Fig. 3.

Referring to Fig. 5, which is a modification, the end members 20 and 21 of the outer supporting members are formed with vertical slits 22, 23, 24 and 25. Located in these vertical slits is a strip of adhesive paper or other material 26 that is attached to the carton 15, and the portion 27 located between the vertical slits. This construction, while not elastic, serves to automatically center the carton in the supporting casing. It also permits free swinging movement longitudinally and some movement transversely.

From this description it will be seen that I have provided a simple and inexpensive construction for elastically supporting a car-

ton member in which a fragile article is placed. This construction permits the carton to be readily inserted and removed by reason of the open top and bottom.

It is to be understood that I do not limit myself to the use of elastic means for supporting a carton, as I may employ tapes, strings, ropes, springs, or whatever is best suited for suspending a carton, or other package, or whatever is best suited for the purpose. The supported article need not be a carton, but may be any article that is not placed in a carton and suspended by the outer member.

What I claim is:

1. As an article of manufacture, an outer supporting member having its top and bottom portion open and formed with continuous slitted side and end portions for receiving elastic bands, the bands being designed for engaging and elastically supporting a carton member located within the outer supporting member.

2. A device for suspending a carton in which a fragile article is placed comprising a supporting member for receiving the carton, the supporting member having continuous slits formed in its ends and side portions for receiving a plurality of elastic bands, said bands engaging the four sides of the carton for freely suspending the same within the outer member.

3. In combination, a member having side and end portions that are formed with slits, the slits on the sides being continuous and communicating with the slits on the end, a member located within the said member, flexible elements located within the said slits and engaging the said member located within the first mentioned member for freely suspending the same.

4. In combination, a member formed with side and end members and having an open top and bottom, the end members having openings, the side members having continuous openings connecting with the openings in the end members, a carton located within the said member, and flexible means in the openings and engaging the carton.

5. A device for freely suspending a carton in which a fragile article is placed comprising, in combination, a supporting member for receiving the carton which is formed with side and end members only, the end members being formed with vertical slits extending from the center of the top and bottom edges to a point near the center of said end member and horizontal slits extending from the center of the intersections of the end and side members to a point near the center of the end member, the side members being formed with continuous longitudinal slits which connect with the horizontal slits in the end members, a carton relatively smaller than said supporting member, an elastic member located in the vertical slits in the end members and engaging the outer surface of said end members between the ends of said slits and itself engaging the outer top and bottom surfaces of said carton, and an elastic member located in the horizontal slits in said end member and engaging the outer surface of said end member between said slits and itself engaging the outer side surfaces of said carton.

6. As an article of manufacture, a shipping crate formed with end and side members only, said end members being formed with vertical slots extending from the top and bottom edges of said end member to a point near the center of said end member, said slots being designed to receive supporting means for freely suspending a carton therein, horizontal slots extending from the intersection of the end and side members to a point near the center of said end members, and said side members being formed with continuous longitudinal slots which connect at the intersections of the side and end members with said horizontal slots in said end members.

GEORGE A. LEWIS.