

May 16, 1961

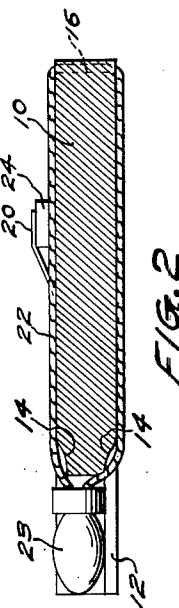
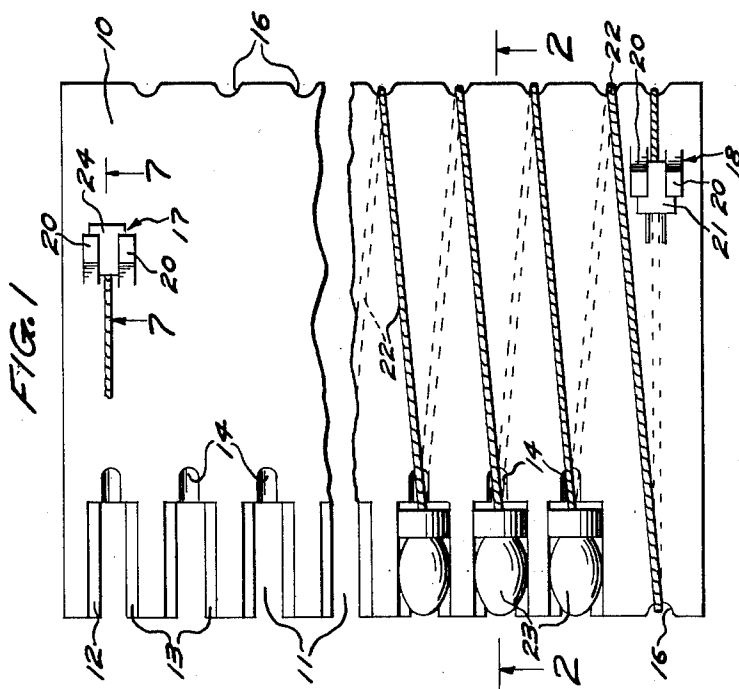
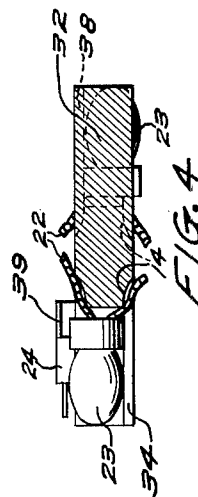
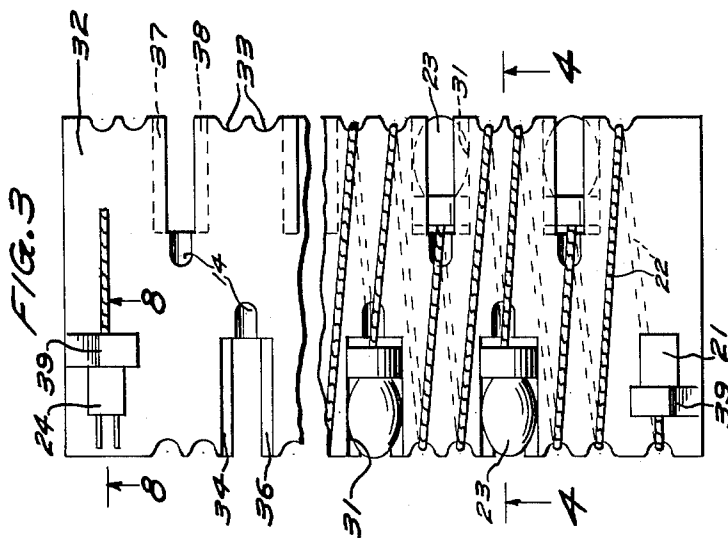
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2,984,347

PACKAGING AND STORAGE DEVICES FOR CORDS STRUNG
WITH A SUCCESSION OF SPACED OBJECTS

Filed Oct. 1, 1958

2 Sheets-Sheet 1



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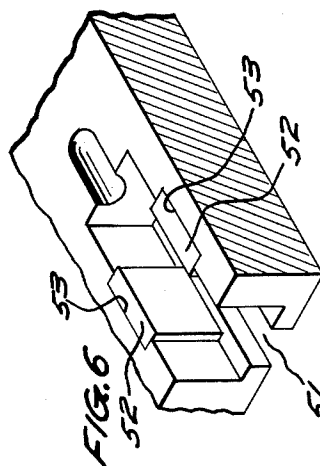
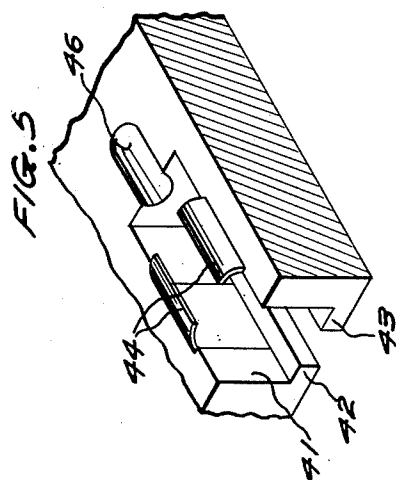
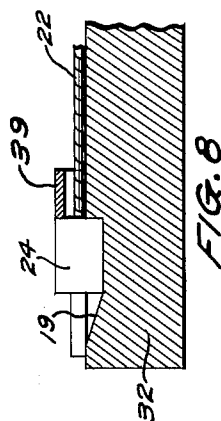
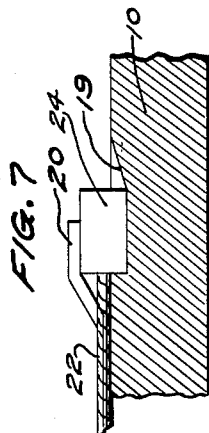
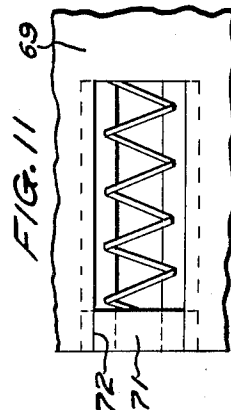
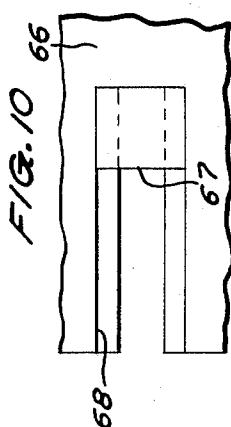
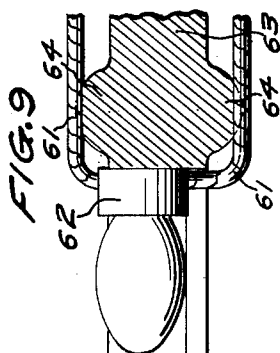
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2 Sheets-Sheet 2



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PACKAGING AND STORAGE DEVICES FOR CORDS STRUNG WITH A SUCCESSION OF SPACED OBJECTS

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This invention relates to packaging and storage devices for cords strung with a succession of spaced objects, and more particularly to a storage board having a plurality of sockets for receiving Christmas tree lights strung on a cord.

In the packaging or storage of cords or other strand materials strung with a number of parts or objects in a spaced and orderly succession, the problem of entanglement of the objects and the cords is always present. One of the most common situations exists in the packaging by the manufacturer and storage by the user of Christmas tree lights. Other types of lines or cords such as fish lines, knotted depth lines, etc. also have periodically spaced elements and are subject to entanglement.

An object of this invention is to provide a simple and economical packaging or storage device for strand material having periodically spaced objects thereon or attached thereto.

Another object of the invention resides in a storage device having facilities for receiving and holding objects that are periodically connected to or formed on a strand of material.

A further object of the invention resides in a board onto which is wound strand material strung with a succession of parts wherein entanglement of the cord and parts is precluded.

An additional object of the invention resides in a storage device for a string of Christmas tree lights wherein facilities are provided to accommodate the cord, the light bulbs, the sockets and the plugs whereafter the string may be subsequently utilized without encountering any entanglements.

With these and other objects in view, the present invention contemplates a storage device for a string of Christmas tree lights or other periodically strung articles wherein an elongated board is provided with a series of spaced notches or sockets along one or both sides to accommodate the light sockets while the string is wound around the board. Clamps or other suitable facilities can be provided on the board to receive and hold the electrical terminal plugs. Between the light socket receiving notches, further notches or indentations are provided to hold the cords from entanglement.

Other objects and advantages of the present invention will be apparent from the following detailed description when considered in conjunction with the accompanying drawings, wherein

Fig. 1 is a top plan view of a board for storing a string of Christmas tree lights, embodying the principles of the invention;

Fig. 2 is a sectional view taken along line 2—2 of Fig. 1 particularly illustrating a socket for receiving a light bulb;

Fig. 3 is a top plan view of an alternative embodiment of the invention wherein sockets are formed along opposite edges of a packaging board;

Fig. 4 is a sectional view taken along line 4—4 of Fig.

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3 depicting the arrangement of light bulb receiving sockets;

Fig. 5 is a perspective view of the light bulb receiving socket having clamping or holding elements;

Fig. 6 is a perspective view of a light bulb receiving socket having holding pads inserted therein;

Fig. 7 is a sectional view taken along line 7—7 of Fig. 1 showing a holding arrangement for a plug on an electric cord;

Fig. 8 is a sectional view taken along line 8—8 of Fig. 3 showing an alternative embodiment of an arrangement for holding plugs attached to the ends of an electric cord;

Fig. 9 is a sectional view of a modified light bulb receiving socket having electric cord guiding embossments associated therewith;

Fig. 10 is a top view of a light bulb receiving socket having a resilient seating insert mounted therein, and

Fig. 11 is a top plan view of a light bulb receiving socket having a spring-loaded seating pad mounted therein.

Referring first to Figs. 1 and 2, there is shown an elongated board 10 that is made of wood, plastic or other suitable material that can be easily fabricated. The left-hand edge of the board is slotted to provide sockets or slots 11 having ledges 12 and 13 projecting from the opposite walls thereof. The board 10 is provided with additional inclined slots or grooves 14 that run to the base of the sockets 11. The righthand edge of the board 10 is provided with a series of periodically spaced notches or recesses 16.

Attention is directed to Figs. 1, 2 and 7 wherein there are disclosed facilities 17 and 18 for holding plugs attached to the ends of an electric cord. These facilities include a tapered recess or depression 19 formed in the upper surface of the board and a pair of spaced fingers or brackets 20 that may be constructed of the material comprising the board or may be formed of other resilient spring material and separably attached to the upper surface of the board.

In use of the board shown in Figs. 1, 2 and 7, a plug 21 on the end of a string 22 of Christmas tree lights 23 is inserted in the lower recess 19 and the cord passed between the fingers 20 and around notches 16 so that the lights 23 fit within the sockets 11. The ledges 12 and 13 engage and hold the lights within the sockets. A plug 24 on the other end of the string 22 is eventually fitted within the plug holding facilities 17.

In Figs. 3 and 4 there is shown an alternative embodiment of the invention wherein sockets 31 similar to sockets 11 are formed on opposite edges of a board 32. In this instance, a series of notches 33 are formed between the sockets 31 and on opposite edges of the board 32. This construction permits the use of a much narrower board than the board shown in Figs. 1 and 2. It will be noted that the sockets 31 on the lefthand edge of the board have ledges 34 and 36 formed on the underside of the board; whereas, the sockets in the righthand edge of the board have ledges 37 and 38 formed along the upper surface of the board. In this instance the plug holding facilities are modified in that a pair of single L-shaped clips 39 (see Fig. 8) are attached to the board so that the plugs 24 and 21 may be fitted within suitable recesses and the cord slipped under the clips 39.

Referring now to Fig. 5, there is shown a modified form of socket 41 again having a pair of ledges 42 and 43 for supporting the lights 23. However, in this instance additional spring metal or other resilient material clips 44 are provided to restrain the movement of the lights from within the sockets 41. Again the lower portion of the socket 41 terminates in a tapered groove 46 to accommodate the light cord.

A further modification of the invention is shown in Fig. 6 wherein a light receiving socket 51 is modified by the addition of inserts 52 composed of material such as foam rubber, soft cardboard, fabric or suitable material that will hold the lights in place. The inserts 52 may be attached to the walls of the sockets 51 or may be fitted within suitable slots 53 formed in the board.

In situations where a cord 61 (see Fig. 9) extends from a light fixture 62 in lateral fashion, a packaging board 63 may be modified by the addition of embossments 64 to the upper and lower surfaces thereof. The provision of the embossments 64 relieves undue stress concentrations from the juncture of the cord 61 with the light fixture 62 when a string of lights is wrapped on the board.

In order to compensate for non-uniformly spaced lights, a packaging board 66 (see Fig. 10) may be modified by the addition of sponge rubber or other compressible material pads 67 positioned at the bottom of sockets 68 formed in the board. In Fig. 11 there is shown an additional arrangement for compensating for the variations in the positions of the lights on the string. In this instance a board 69 is modified by the addition of spring-biased pads 71 positioned within each slot 72 formed in the board. It will be readily appreciated that with the embodiments shown in Figs. 10 and 11 the compressible members will provide a compensation for variation in the spacings of the lights or other objects on the string.

It is to be understood that the above-described arrangements of devices and construction of elemental parts are simply illustrative of an application of the principles of the invention and many other modifications may be made without departing from the invention.

What is claimed is:

1. A packing device comprising a flat rigid board having a plurality of evenly spaced slots formed along one edge, each of said slots terminating at a predetermined distance from the center of the width of said board, and a plurality of shallow recesses formed along the opposite edge at points opposite to the unslotted portions of the first edge.

2. In a packaging device for a strand having a series of periodically spaced objects attached thereto, an elongated flat board having a series of indentations formed along one long edge for receiving the strand wound around the board, said board having a series of slots formed along the opposite long edge to extend through the top and bottom surfaces of the board for receiving the objects secured to the strand wound around the board.

3. A packaging device comprising an elongated rectangular board having a plurality of evenly spaced slots formed along a first long edge and a plurality of evenly spaced recesses formed along the opposite long edge at points that are opposite to the unslotted portions of the first edge, and a pair of oppositely disposed ledges projecting along one surface of the board into each slot from opposite directions so that the outer surface of each ledge is contiguous with the surface of the board.

4. A packaging device comprising an elongated rectangular board having a plurality of evenly spaced slots formed in a first long edge, and a pair of oppositely disposed ledges projecting into each slot so that the outer surface of each ledge is contiguous with the surface of the board.

5. A packaging device comprising an elongated rectangular board having a plurality of evenly spaced slots formed along a first long edge and a plurality of evenly spaced recesses formed along the opposite edge, said board having tapering grooves running from the top and bottom surfaces into the slots, and a pair of ledges extending from said board into each of the slots.

6. A packaging device comprising an elongated board having a plurality of first slots formed in a first long edge, a first pair of ledges projecting into said first slots as continuations of the bottom surface of the board, said board

having a plurality of second slots formed in the edge opposite said first edge, and a second pair of ledges projecting into each second slot as continuations of the top surface of the board.

7. A packaging device comprising a rectangular board having a plurality of evenly spaced slots formed in one long edge thereof, a pair of oppositely disposed ledges projecting into each slot, and a pair of resilient inserts mounted above each pair of ledges in each pair of walls of each slot.

8. In a packaging device for a strand having a series of periodically spaced objects, a flat rectangular board having a series of sockets formed in one edge equal in number to the number of objects, a pair of soft resilient pads mounted in each of said sockets for supporting each object, said board having grooves formed therein running from each socket to the top and bottom surfaces of the board to accommodate the strand running from each object, and guide means formed on the opposite edge of the board for receiving and retaining the strand wound around the board.

9. A packaging device comprising a board having a plurality of evenly spaced slots formed in one long edge thereof, and pads of resilient material mounted at the bottom of each slot.

10. In a packaging device onto which is to be wound a strand having periodically spaced objects, a flat rectangular board having a series of sockets formed in a first long edge thereof for receiving the objects as the strand is wound around the board, and a resilient support member mounted in each socket adapted to be depressed upon insertion of an object in a socket, said board having a series of indentations formed in the second long edge of the board for retaining the strand wound around the board.

11. A packaging device comprising a rectangular board having a plurality of evenly spaced slots formed in one long edge thereof, a spring fitted within and secured to the bottom of each slot, and a pad secured to each spring.

12. A packaging device comprising a rectangular board having a plurality of evenly spaced first slots formed along a first edge of the board, first ledges projecting in opposed fashion into each first slot as continuations of the bottom surface of the board, said board having a plurality of second slots formed along an edge opposite to the first edge and positioned between the first slots, second ledges projecting in opposed fashion into each second slot as continuations of the top surface of the board, a pair of resilient inserts secured to opposite walls of each slot, and resilient means secured to the bottom of each slot.

13. A packaging device for a strand having evenly spaced objects attached thereto and terminal objects secured to both ends of the strand, which comprises a board having a series of sockets formed in one edge equal in number to the number of evenly spaced objects, said sockets being of sufficient size to receive the evenly spaced objects as the strand is wrapped around the board, said board having a series of recesses formed along the opposite edge to receive the strand wrapped around the board, means at one end of the board for receiving and holding a first of the terminal objects, and means at the opposite end of the board for receiving the second of said terminal objects.

14. A packaging device comprising a rectangular board having a plurality of evenly spaced slots formed along one long edge thereof and shallow recesses formed along the opposite edge at points between each pair of slots, said board having a pair of depressions formed in the top surface thereof in the vicinity of the ends, a first pair of brackets secured to the top of board to overlay one depression and pointing toward the slotted edge, and a second pair of brackets secured to the top surface to overlay the other depression and pointing toward the recessed edge.

15. A packaging device comprising a rectangular board

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having evenly spaced slots formed along one long edge and evenly spaced shallow recesses formed along the other long edge, said board having a pair of depressions in the vicinity of each short edge, a first L-shaped bracket attached to the top surface of the board to overlay a first of said depressions and to extend toward a first short edge, and a second L-shaped bracket attached to the top surface of the board to overlay the other of said depressions and to extend toward a second short edge.

16. A packaging device comprising a rectangular board having a plurality of evenly spaced slots formed along one edge and a plurality of evenly spaced recesses formed along the opposite edge, and a pair of curved clips secured to the walls of each slot and extending toward each other.

17. A storage device for Christmas tree bulbs uniformly strung along a wire which comprises a flat rectangular board having a series of indentations formed along one long edge thereof which are shaped to receive the wire as it is wound around the board, said board hav-

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ing a series of slots formed along the opposite long edge which are shaped to accommodate and receive the Christmas tree bulbs as the wire is wound about the board, and a pair of ledges projecting into each slot for retaining each bulb within each slot.

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