May 17, 1932. E. C. HADLEY 1,858,856

ARTICLE SPACER FOR PACKING BOXES

Filed May 4, 1929

FIG. 1

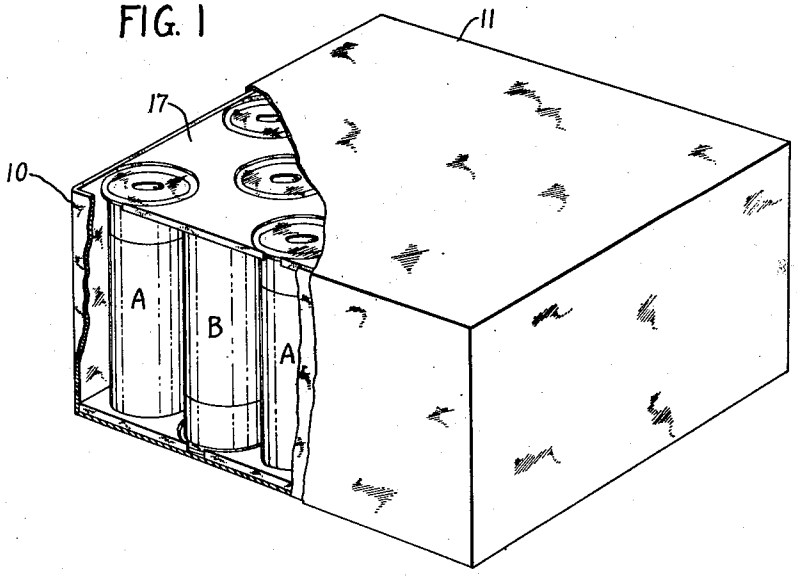


FIG. 2

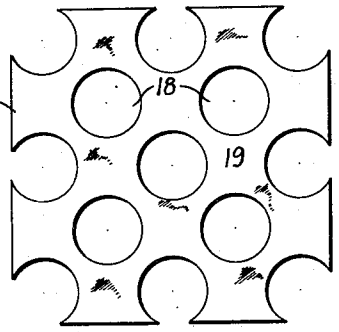


FIG. 3

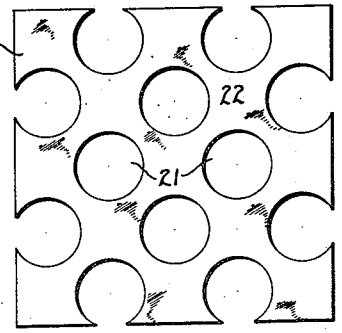
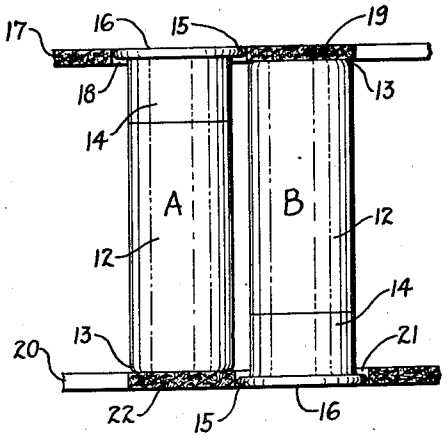


FIG. 4



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ARTICLE SPACER FOR PACKING BOXES

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This invention relates to containers, such as cartons, boxes, crates and the like, and has for an object the provision of improved devices of simple construction for separating articles packed in such containers and for protecting them from possible injuries due to jostling in handling and transportation.

For the purpose of illustration, I have shown an embodiment of my invention as applied to a carton for packing shot shell cartridges.

A manner of packing such cartridges commonly in use comprises the provision of a rectangular box container or carton, into which cartridges are placed in vertically upstanding positions. It is the usual practice to arrange the cartridges alternately inverted, that is, alternate cartridges are positioned with the base uppermost and intermediate cartridges with the base down, allowing the rim portion of each cartridge to overlie the crimp ends of adjacent cartridges in intimate contact therewith.

In the manufacture of shot shell cartridges a recent improvement lies in the application of a waterproof coating of a suitable substance, such as a lacquer, to the exterior of the paper tube shell body. A shot shell thus finished is attractive in appearance and of more importance is well protected against the damages of moisture invasion. It is obviously highly desirable to preserve this exterior coating, keeping the same free from bruises and abrasions which would tend to depreciate the appearance and waterproof qualities of the coating.

Handling and transportation of the cartons in which the cartridges are packed is necessarily attended by a certain amount of jostling of the cartridges. The crimp ends of the shell bodies are thereby subjected to a slight chafing by the contact therewith of the metal rims of adjacent cartridges. With the cartridges coated as heretofore described this chafing is apt to result in small abrasions of the coating at the crimp ends and thereby cause depreciation of the water resisting abilities of the coating. The present invention contemplates the provision of novel devices for holding the cartridges in spaced relation to each other, preventing the contact of adjacent cartridges with each other and thus eliminating possible injury from chafing.

In the drawings forming a part of this specification:

Fig. 1 is a perspective view of a covered carton packed with shot shell cartridges, a portion of the cover and wall of the carton being cut away to illustrate the manner of using the present invention.

Figs. 2 and 3 are plan views of the improved spacing devices of the present invention.

Fig. 4 is a sectional fragmentary view in elevation of a portion of the structure of the present invention.

Referring to Fig. 1 of the drawings, 10 represents a rectangular carton container for packing a number of shot shell cartridges in vertical upright positions. Each cartridge (Fig. 4) comprises the usual paper body portion 12, crimp end 13 and metal base 14 having a rim 15 and head 16. Alternate cartridges are arranged base uppermost, and, for the sake of simplifying the description, will be designated as A cartridges. Intermediate cartridges are arranged base down and will be designated as B cartridges. A cover 11 is adapted to fit over the carton 10 in snug engagement therewith, as shown, the whole making a compact package.

By the present invention, a spacing device 17 is positioned in the top portion of the carton 10 and another spacing device 20 is positioned in the bottom portion of the carton. These spacing devices serve to separate adjacent cartridges and, when the cover is put on, contact between adjacent cartridges is prevented, as will presently be explained.

The upper spacer consists of a flat member 17 of a thickness preferably slightly greater than that of the rim 15 of the cartridge. Circular perforations or apertures 18 are provided in the spacer 17 each of a diameter just sufficient to accommodate the rim 15 and head 16 of a cartridge. Between the perforations are left solid portions 19 each of the breadth between perforations substantially equal to the diameter of the crimp end of

the cartridge. The lower spacer consists of a flat member 20 of a construction similar to the upper spacer except that the perforations are formed in staggered relation to those of the upper spacer, whereby, when the spacers are super-imposed, the perforations in each spacer come opposite the solid portions of the other spacer.

In packing, the spacer 20 is first placed in the bottom of the carton 10; the cartridges are then set in place, the cartridges designated B being placed with their rim and head portions accommodated in the perforations 21, and the cartridges designated A being positioned base uppermost with their crimp ends resting on the solid portions 22 of the spacer 20. The spacer 17 is then positioned at the top of the carton with the rims and heads of the A cartridges accommodated in apertures 18 and the solid portions 19 of the spacer bearing on the crimp ends of the B cartridges. The cover 11 is then put on and the cartridges are now neatly packed in spaced relation to each other.

As best seen in Fig. 4, each cartridge is separated laterally from adjacent cartridges due to the engagement of the cartridge rim with the side wall of the aperture in which it is received. Also, the cartridges are set off vertically from each other by the thickness of one of the spacers. When the cover is placed over the carton, with its top bearing against the heads of the A cartridges and the spacer 17, the cartridges are held in their assigned separated positions and contact with each other is absolutely prevented.

It is obvious that the principles taught by the invention herein set forth are applicable to the packing of countless articles other than shot shell cartridges; and it is further obvious that the manner of packing articles, herein taught, may be used with many containers other than cartons, such for example as boxes, crates and packages of various shapes and forms, it being necessary only to shape the spacing devices and their perforations to suit the particular articles and container.

It is to be understood, therefore, that the present invention is not limited to the particular construction and association of the embodiment herein illustrated, as many changes might be made without departing from the spirit and scope of the following claim.

What I claim is:

A package including a container; shot shells arranged therein; each of said shells having a metallic rim end and a waterproofed fibrous end; said shells being arranged side by side and alternate shells being reversed end for end; means for separating the shells and preventing contact therebetween comprising members having a plurality of apertures extending transversely through them, with solid portions therebetween; said members being placed adjacent the shell ends with the fibrous ends of the shells bearing against the solid portions and the rims received in the apertures of said members, said apertures being sized to fit said rims.

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