

[54] **SPACER FOR CASED CYLINDRICAL OBJECTS**

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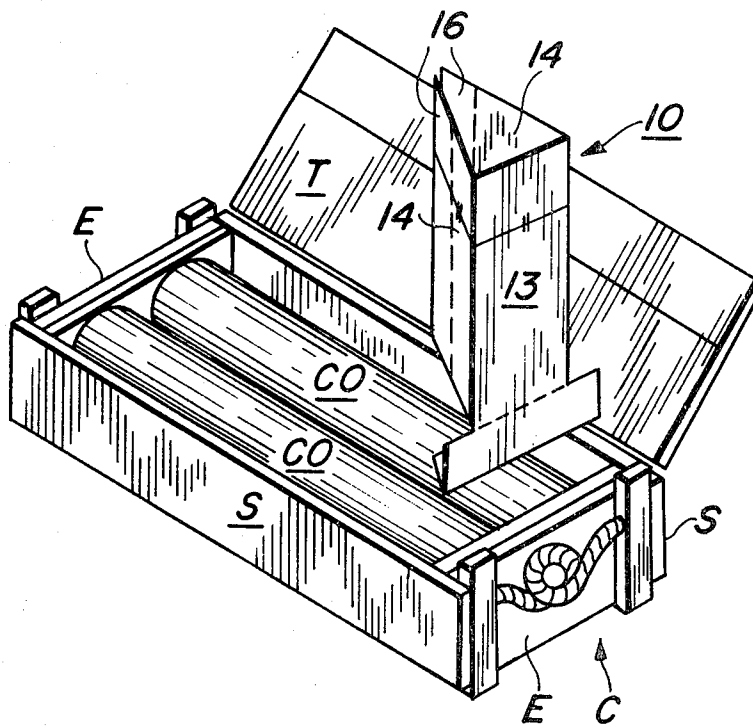
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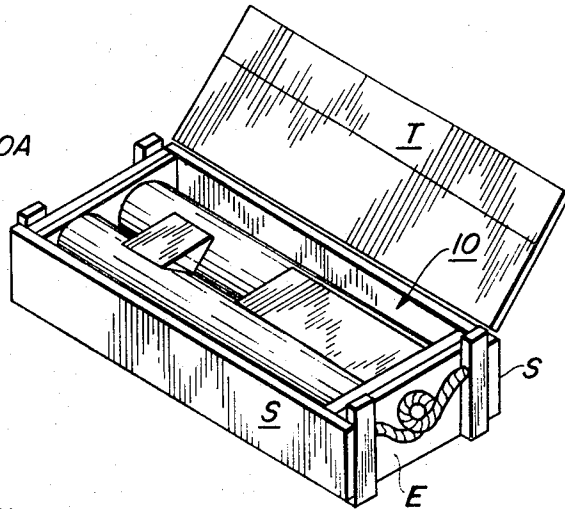
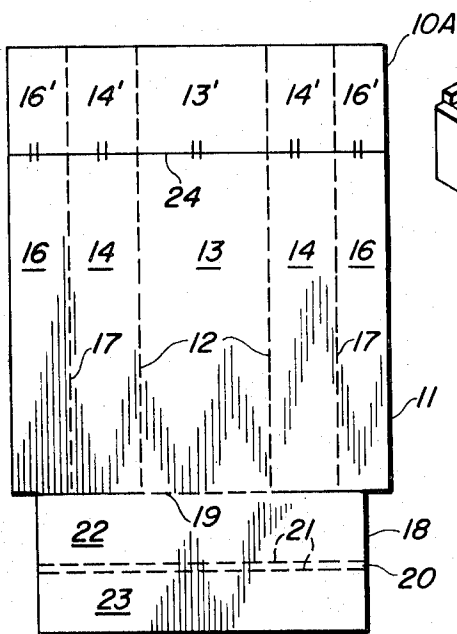
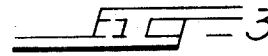
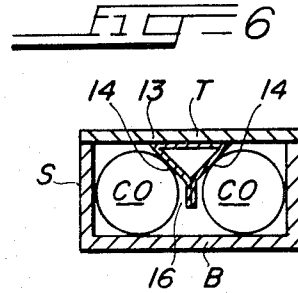
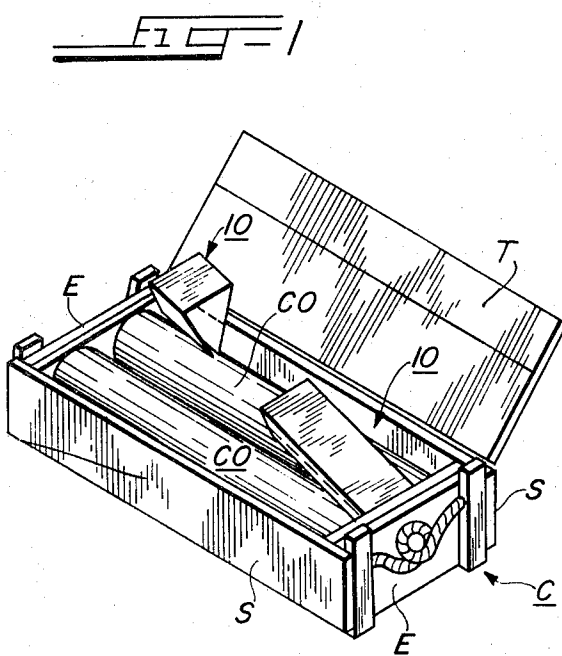
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[57] **ABSTRACT**

A spacer for properly positioning a pair of side-by-side cylindrical objects loaded into a case. The spacer is formed from a cut and scored blank consisting of a first panel having spaced longitudinally extending fold lines enabling the panel to be folded into a wedge-shaped structure adapted to be wedged against and between the cylindrical objects, and a second panel foldably connected to the first panel along a score extending transversely to the score lines in the first panel. The second panel has a fold line therein whereby the second panel is folded on itself and wedged between the ends of the cylindrical objects and the case. The first panel may include a separable portion also capable of being wedged against and between the cylindrical objects at another point thereon.

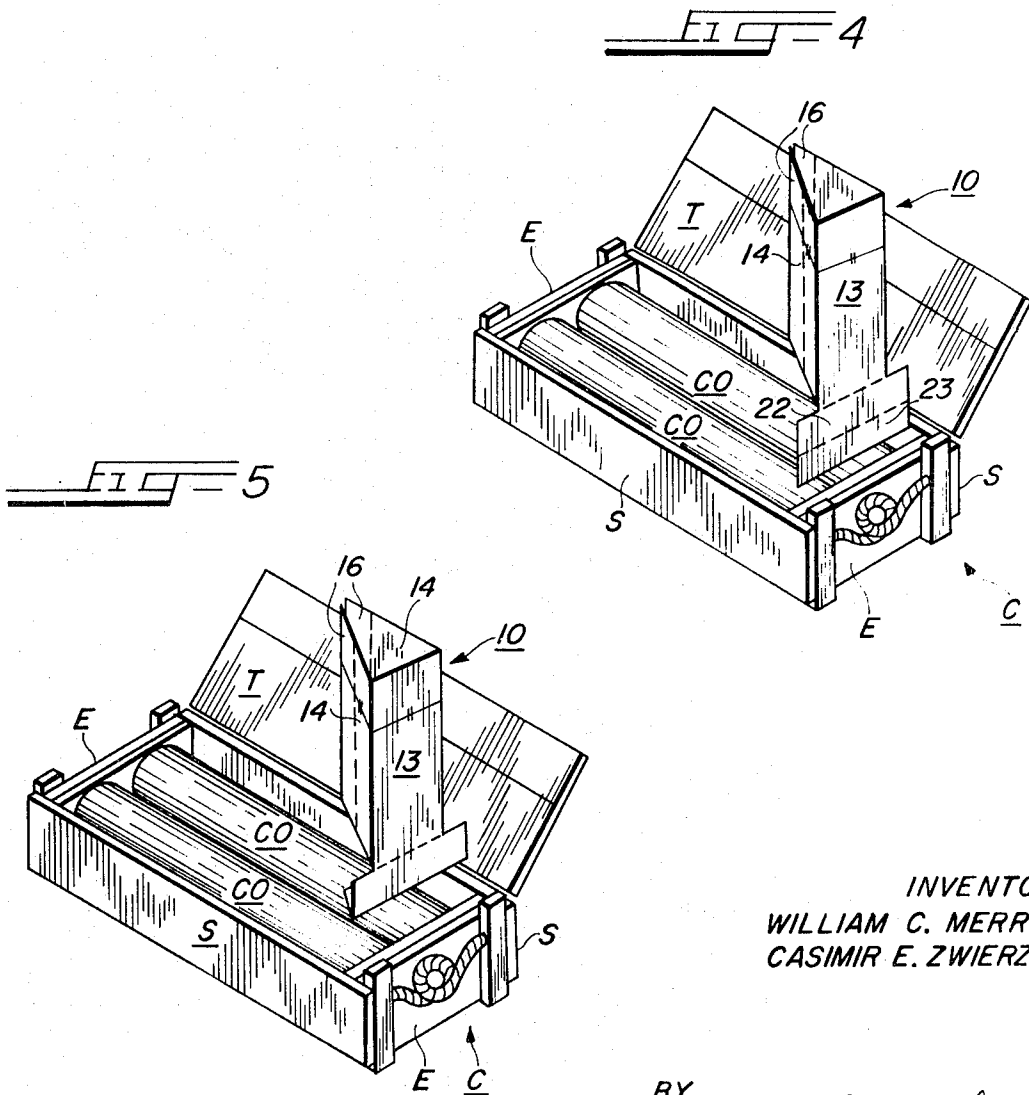
3 Claims, 6 Drawing Figures





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SPACER FOR CASED CYLINDRICAL OBJECTS

SUMMARY OF THE INVENTION

The invention relates to a spacer for maintaining cylindrical objects, such as enclosed artillery shells, in position within a packing case. The spacer affords pressure against the shells in lateral directions as well as longitudinally, to the end that the objects are maintained tightly in the packing case.

THE DRAWINGS

FIG. 1 is a perspective view showing a packing case loaded with a pair of cylindrical objects and having a spacer according to the present invention inserted therein;

FIG. 2 is a plan view of a cut and scored blank for forming the spacer seen in FIG. 1;

FIG. 3 is a perspective view similar to FIG. 1 showing the filler according to the present invention in position within the packing case; and

FIGS. 4 and 5 are similar perspective views showing the mode of folding the spacer to form wedge-shaped structures and placing the same within the packing case;

FIG. 6 is a vertical cross-sectional view taken through the loaded and closed packing case.

Referring now to the drawings, a spacer according to the present invention is referred to by the reference numeral 10 and is adapted to hold a pair of cylindrical objects CO within a packing case C comprised of opposed sides S, opposed ends E, and bottom B and a top T. Each cylindrical object CO may include a helically wound paper tube enclosing an artillery shell, not shown.

The spacer 10 is formed from a cut and scored blank 10A including a first panel 11 having laterally spaced longitudinal fold lines 12 therein defining a central panel 13. At least one-flanking panel element 14 is foldably connected to each side of the central panel 13 along the fold lines 12. Extensions 16 each of the flanking panel elements 14 are hingedly connected thereto along fold lines 17.

The cut and scored blank 10A includes a second panel 18 which is foldably connected along a fold line 19 to the central panel 13. Second panel 18 is provided with a pair of score lines 21 which divide the panel 18 into a pair of panel elements 22 and 23 with a rib 20 therebetween.

The first panel 11 may have panel extensions 13', 14' and 16' all detachably connected to the first panel 11 along a cut and nicked line 24.

Spacer element 10 is formed into a structure as seen in the

several figures by first folding the panel element 14 to define a wedge-shaped structure having a triangular cross section as seen in FIG. 6. The extensions 16 therefrom are insertable between the two side-by-side cylindrical objects CO to wedge them against sides S of case C.

The second panel element 18 is foldable about its score lines 21 into two-confronting wedging elements, element 22 being folded about the score line 19 with respect to the central panel element 13, and the two-folded panel elements 22 and 23 being inserted between ends of the cylindrical objects CO and the inner face of the end E of case C.

Preferably, blank 10A is formed with the severable extensions 13', 14' and 16', these being foldable to provide a second wedge-shaped structure seen in FIGS. 1 and 3, and to be wedged against the opposite ends of the cylindrical objects CO as seen more particularly in FIG. 3. Upon the closing of the top T the spacer 10 holds the cylindrical objects CO within the case C without the possibility of them shifting.

We claim:

1. A spacer for maintaining a pair of cylindrical objects in position within a packing case, said spacer being formed from a cut and scored sheet of paperboard and comprising:

a. a first panel having laterally spaced longitudinally extending fold lines defining:

i. a central panel element;

ii. at least one-flanking panel element at each side of central panel element and foldably connected thereto;

b. a second panel foldably connected to said central panel element along a fold line extending normal to said first-mentioned fold lines, and having a fold line parallel to said last-mentioned fold line and spaced therefrom;

c. said first panel being foldable along the fold lines thereof to define a wedge-shaped structure fitting between said cylindrical objects to prevent lateral movement of said objects within said case;

d. said second panel being foldable upon itself along the fold line thereof and fitting between the ends of said cylindrical objects and an end of said packing case to prevent endwise movement of said objects within said case.

2. A spacer according to claim 1 wherein said flanking panel elements have extensions therefrom movable into facing engagement and wedged between said cylindrical objects.

3. A spacer according to claim 1 wherein said second panel has spaced score lines to define a wedge-shaped structure wedged between the ends of said objects and the end of said case.

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