Sept. 26, 1967 D. WEINSTEIN 3,343,671

CONTAINERS FOR FRAGILE ARTICLES

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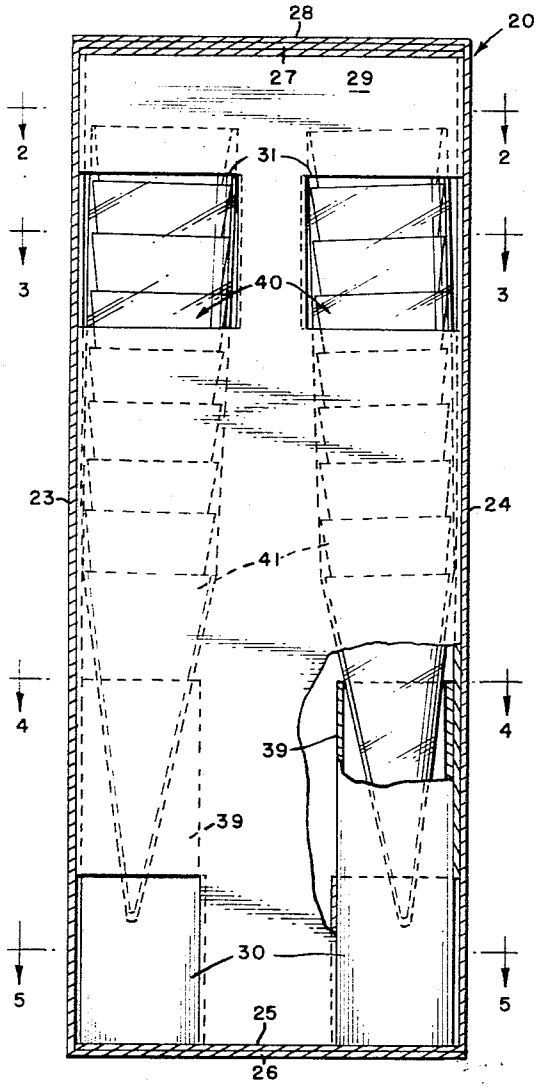


FIG. 1.

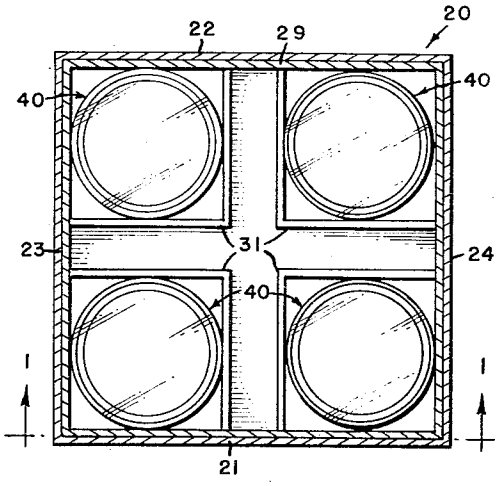
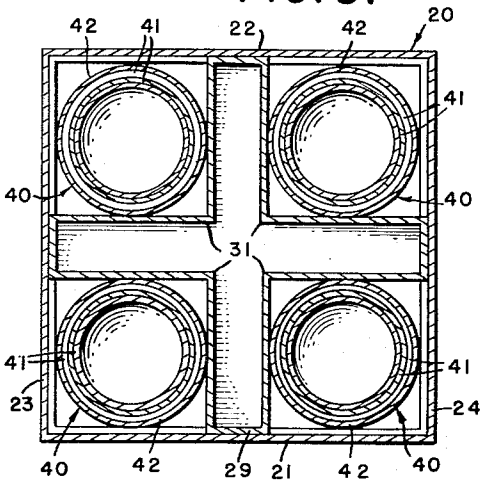


FIG. 2.

FIG. 3.



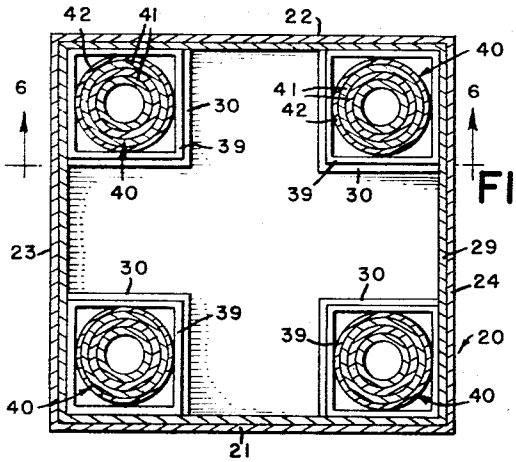


FIG. 4.

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FIG. 5.

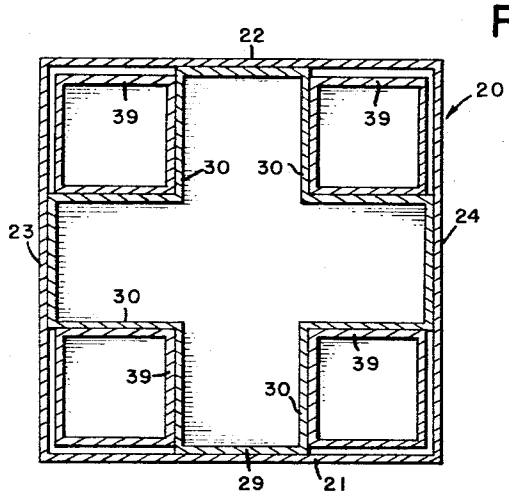
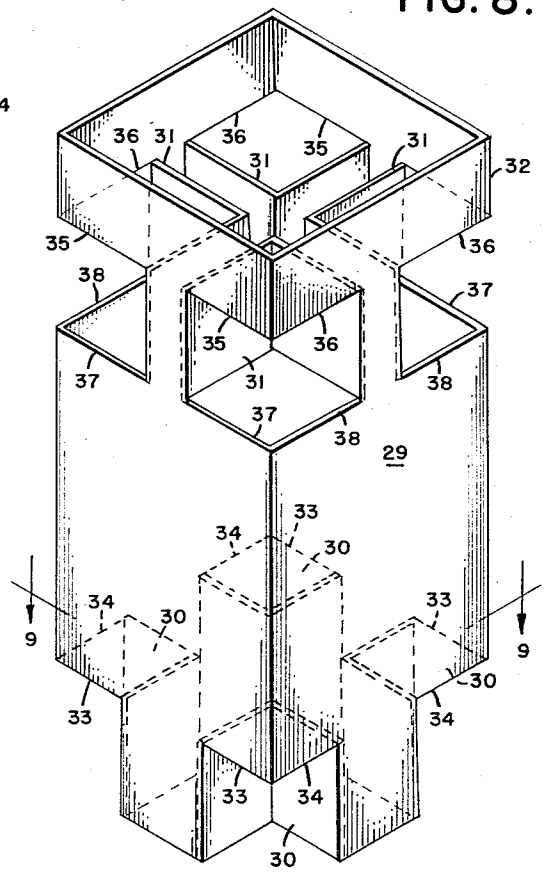


FIG. 8.



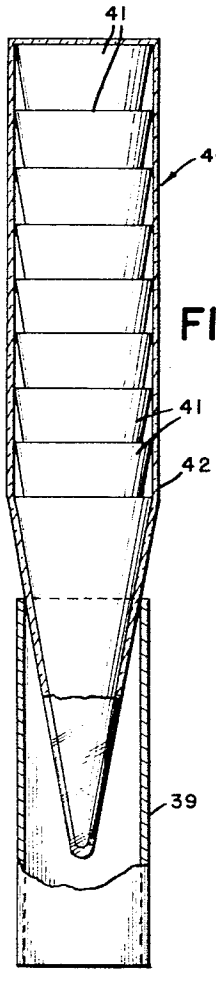


FIG. 7.

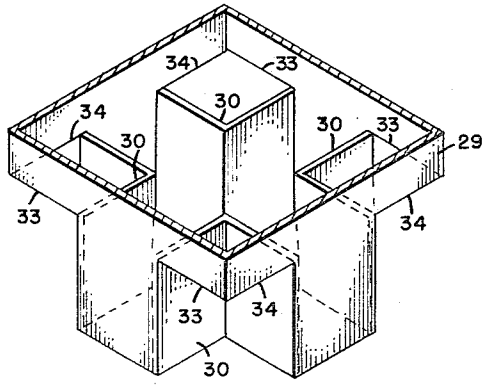


FIG. 9.

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FIG. 10.

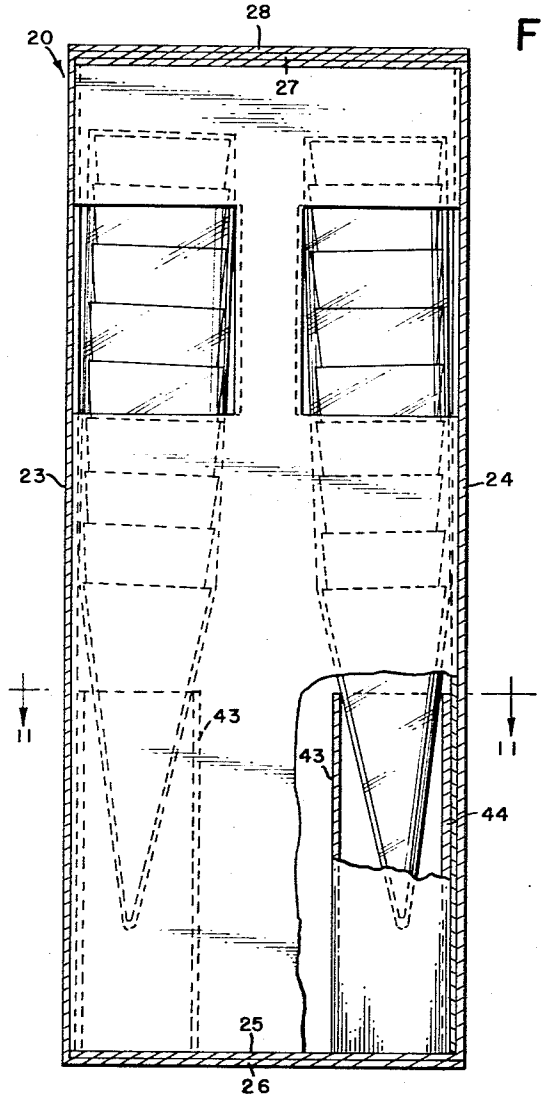


FIG. 12.

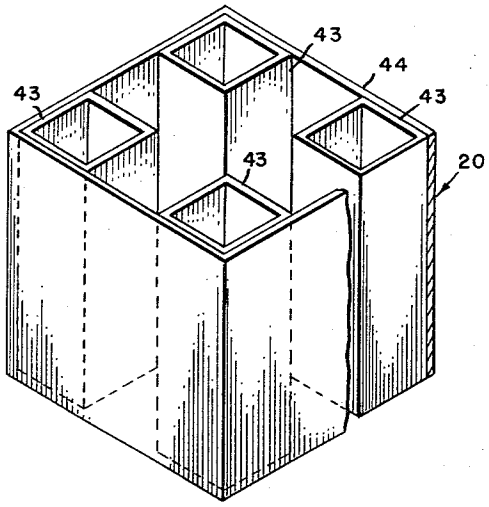
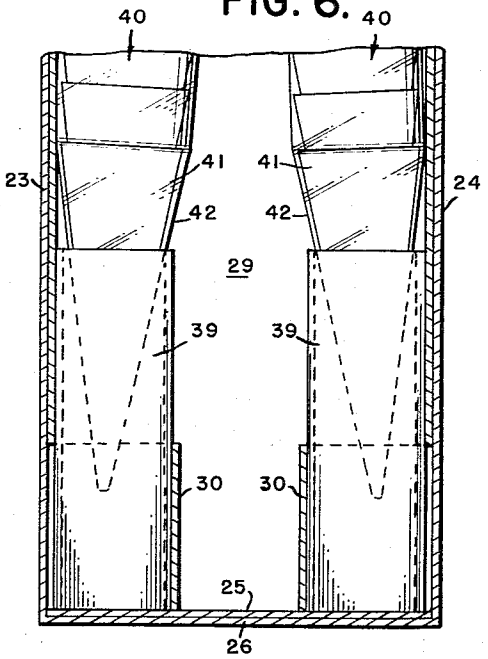


FIG. 6.



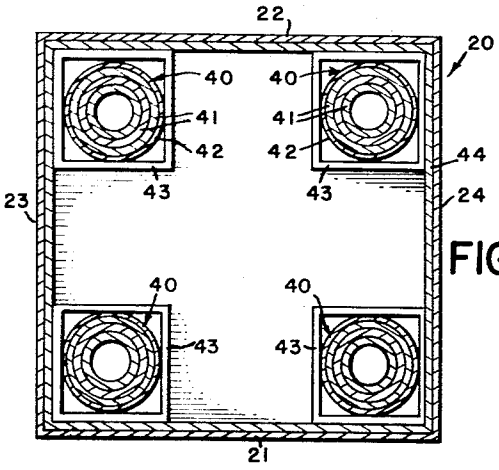


FIG. 11.

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FIG. 13.

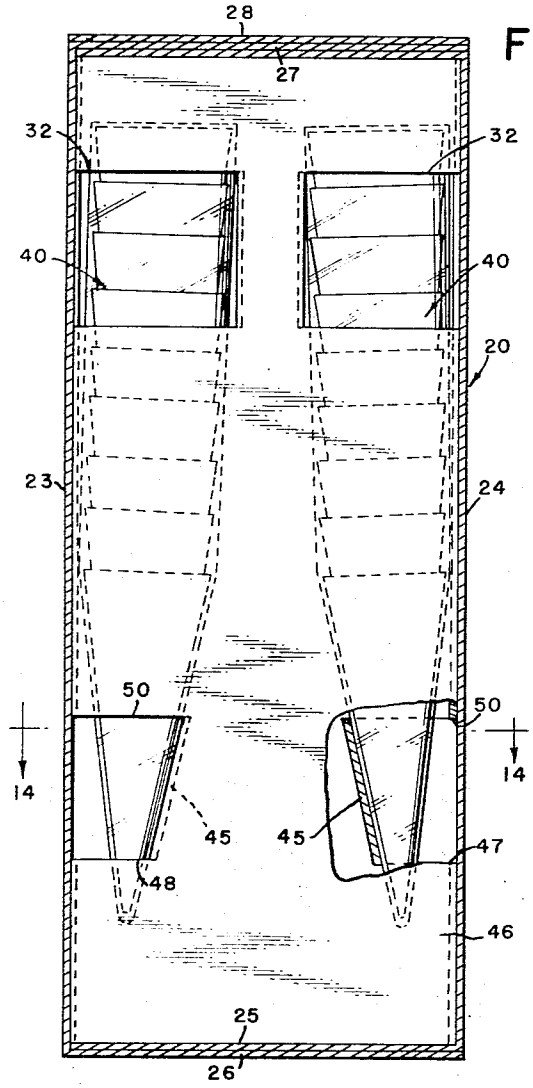


FIG. 16.

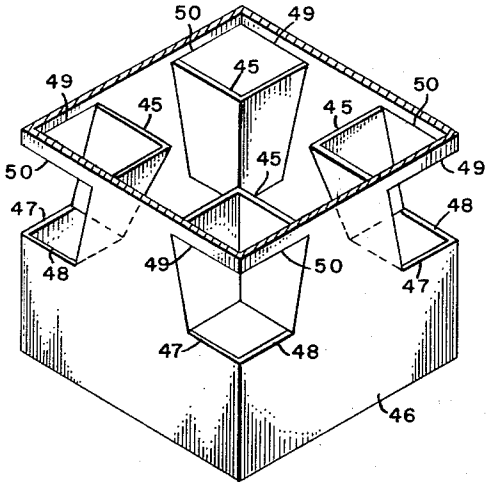
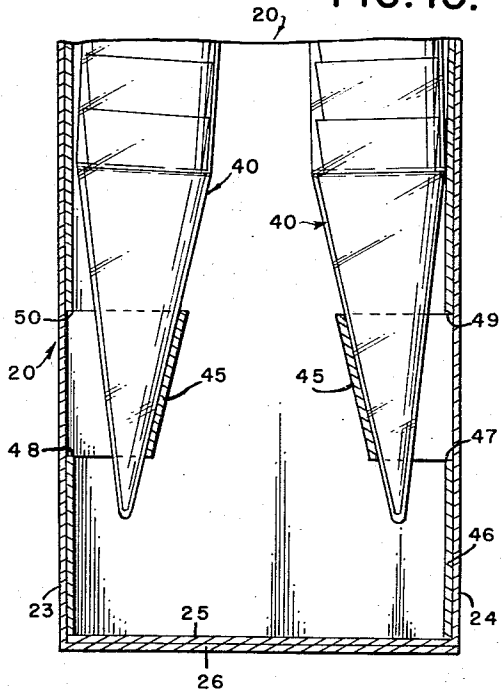


FIG. 15.



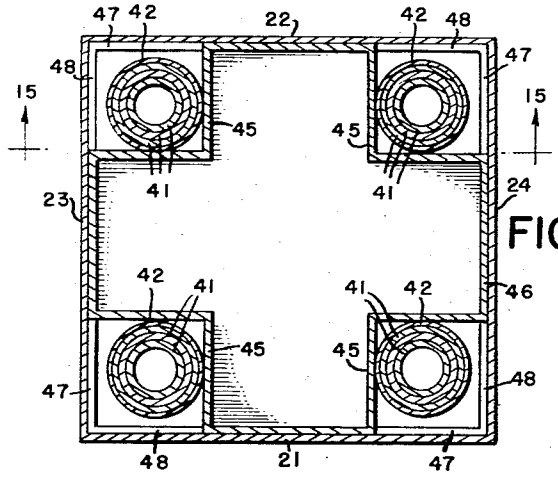


FIG. 14.

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United States Patent Office 3,343,671 Patented Sept. 26, 1967

3,343,671

CONTAINERS FOR FRAGILE ARTICLES

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Filed Sept. 9, 1965, Ser. No. 486,122
8 Claims. (Cl. 206—65)

This invention relates to packaging and it is more particularly concerned with the packaging of fragile articles.

An object of the invention is the provision of novel means for packaging ice cream cones in boxes.

Another object is the provision of a box structure in which ice cream cones may be placed and supported in such a way as to resist impact forces during transportation.

A further object is the provision of a box structure in which a group of nested ice cream cones may be protectively supported and from which individual cones may be readily withdrawn for use as needed while leaving the remaining part of the group protectively supported until needed.

A still further object is the provision of alternative embodiments of the invention that are adaptable to different types of packages.

These and still further objects, advantages and features of the invention will appear more fully from the following description considered together with the accompanying drawing.

In the drawing:

FIG. 1 is a vertical sectional view of one embodiment of the invention along the line 1—1 of FIG. 2, partly broken away.

FIG. 2 is a cross-sectional view along the line 2—2 of FIG. 1.

FIG. 3 is a cross-sectional view along the line 3—3 of FIG. 1.

FIG. 4 is a cross-sectional view along the line 4—4 of FIG. 1.

FIG. 5 is a cross-sectional view along the line 5—5 of FIG. 1.

FIG. 6 is a vertical sectional view of a portion of the embodiment along the line 6—6 of FIG. 4.

FIG. 7 is a vertical sectional view of one of the several nested stacks of cones supported on a bottom sleeve member, apart from the box structure as a whole.

FIG. 8 is a perspective view of the liner member, apart from the container and cones.

FIG. 9 is a perspective view of the lower part of FIG. 8, along the line 9—9 of FIG. 8.

FIG. 10 is a vertical sectional view, similar to FIG. 1, of a modified embodiment of the invention.

FIG. 11 is a cross-sectional view along the line 11—11 of FIG. 10.

FIG. 12 is a perspective view of the portion of the embodiment of FIG. 10 below the line 11—11, apart from the contents thereof.

FIG. 13 is a vertical sectional view, similar to FIG. 1, of a further modified embodiment of the invention.

FIG. 14 is a cross-sectional view along the line 14—14 of FIG. 13.

FIG. 15 is a vertical sectional view along the line 15—15 of FIG. 14.

FIG. 16 is a perspective view of the lower portion of the liner member of the embodiment of FIG. 13, apart from the box and contents thereof.

Referring with more particularity to the drawing, in which like numerals designate like parts throughout the various views thereof, the embodiment illustrated in FIGS. 1 to 9 comprises a conventional cardboard box 20 having, typically, a front panel 21, a back panel 22, side panels 23 and 24, closure flaps 25 and 26 at the bottom, and closure flaps 27 and 28 at the top.

The interior of the box 20 is provided with a liner 29 of a stiff material, such as of corrugated paperboard. This liner conforms, generally, to the interior surface of the panels, as shown, except for inturned sections forming loops 30 at the bottom and inturned sections forming loops 31 below a marginal portion 32 at the top. The loops 30 are formed by cutting along line 33 and 34 at the corners of the liner at a desired distance above the bottom of the liner, depending upon the length of the loop to be formed. After the cuts are made, the corner portions of the liner between the cut lines and the bottom are simply pushed inward.

The loops 31 are similarly formed, each by a pair of vertically spaced cut lines 35, 36 and 37, 38, respectively, below the marginal portion 32.

The lower loops 30 are each adapted to receive snugly a tubular support member 39 of square or other desired cross-section. The member 39 is open at the top to receive the lower end of a stack 40 of ice cream cones 41. The upper end of the stack extends through one of the corresponding upper loops 31 to a position within the marginal portion 32. The stack 40 is preferably wrapped in a plastic sheet 42 before being thus disposed.

By these means, the cones are securely held and supported on the inside of the box. Also, each stack of the group is separate from the other stacks, thereby avoiding damage thereto, that is, in ordinary packages, occasioned by the jostling about of the stacks loosely disposed therein.

The modification of FIGS. 10 to 12 comprises eliminating the loop 30 at the bottom and securing tubular members 43 corresponding to the tubular members 39, directly to the corners of the linear 44 by means of glue or any other suitable conventional means.

The modification of FIGS. 13 to 16 comprises eliminating the tubular members 39 and providing instead, inturned sections forming loops 45, similar to the loops 30, except of a smaller size than the upper loops 32 and in a position above the bottom of the liner 46. The relationship between the size of the loop 45 and its height above the bottom of the liner, will depend upon the size of the cones being packaged to achieve the objective of a securely held stack of the cones as shown in FIG. 13. By making the lower cut lines 47 and 48 shorter than the upper corresponding cut lines 49 and 50, the loops 45 have an inverted trapezoidal configuration which can be made to fit the surface of the adjacent cone.

Having thus described my invention, I claim:

1. A container comprising panels forming an enclosure, a tubular liner on the interior of the container, said liner having portions thereof inwardly offset forming loops adapted to hold articles to be packaged, said loops being disposed in the vicinity of one end of the container and tubular members aligned with said loops, respectively, said tubular members being secured to the liner at the other end of the container

2. A container as defined by claim 1 in which the tubular members are secured to the liner by means of embracing loops integral with the liner.

3. A container as defined by claim 1 in which the loops at one end of the container are of a size smaller than the corresponding loops at the opposite end.

4. The combination as defined by claim 1 in which the articles are fragile ice cream cones.

5. The combination as defined by claim 1 in which the interior surface of the corner portions are of a shape adapted to conform to the shape of the article to be supported thereby.

6. The combination as defined by claim 4 in which

the sides of the loops slope to correspond to the slope of the side walls of the ice cream cones.

7. The combination as defined by claim 1 in which the sides of the loops are trapezoidal in longitudinal section.

8. The combination of a container comprising side panels forming an enclosure, a liner on the interior of the container conforming generally to the interior surface of the panels, said liner having portions thereof inwardly offset forming loops, articles supported on the interior side of said portions, which some of the loops being at one end of the box and of a relatively larger size, and others being at the opposite end of a relatively smaller size, said loops being adapted to support stacks of ice cream cones, the larger size loops being adapted to support on their inner sides a relatively wider part of the stack and the smaller loops being adapted to support a relatively narrower part of the stack.

References Cited

UNITED STATES PATENTS

1,985,075	12/1934	Bird	229—89
2,325,214	7/1943	Amberg	211—305
2,692,077	10/1954	Kuhlman	229—14
3,255,879	6/1966	Paige	229—39

FOREIGN PATENTS

560,830	4/1944	Great Britain.
360,646	4/1962	Switzerland.

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WILLIAM T. DIXSON, JR., *Examiner.*