

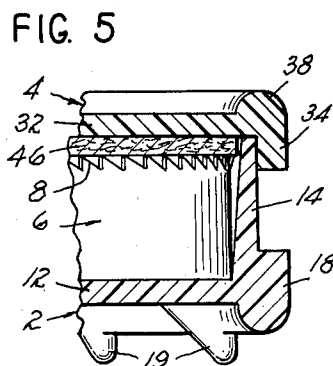
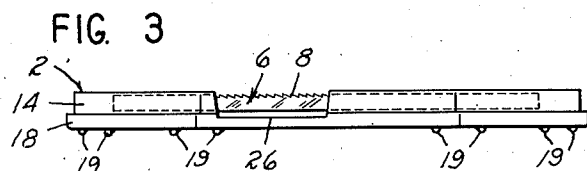
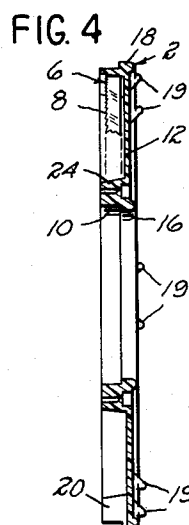
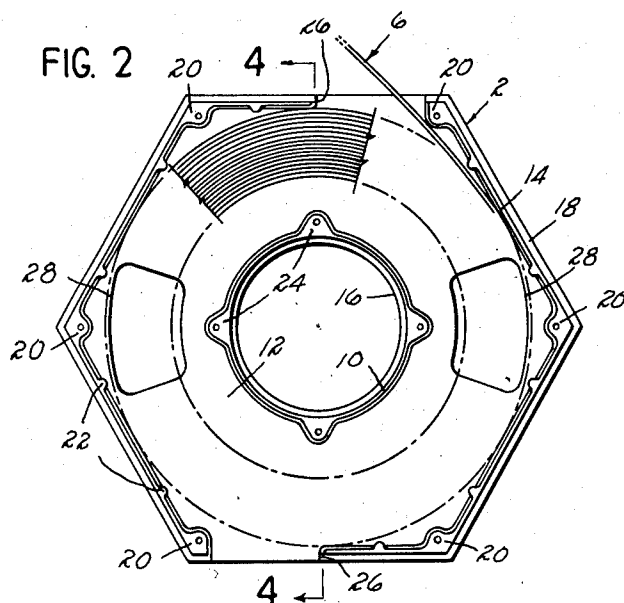
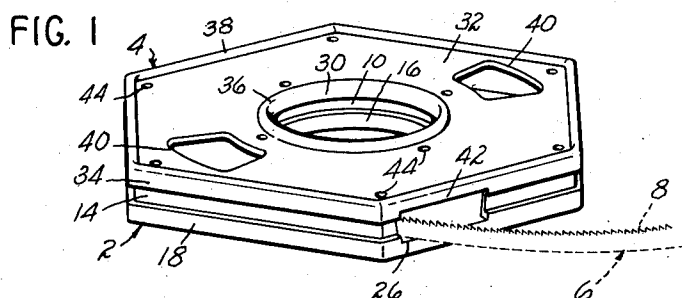
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W. J. CRAVEN

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CONTAINER FOR BAND SAWS AND THE LIKE

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INVENTOR.  
WILBUR J. CRAVEN

BY

*Lindsey, Prutzman & Hayes*  
ATTORNEYS

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**CONTAINER FOR BAND SAWS AND THE LIKE**  
**Wilbur J. Craven, East Hartford, Conn., assignor to The**  
**Capewell Manufacturing Company, Hartford, Conn., a**  
**corporation of Connecticut**

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The present invention relates to containers for coiled strip such as bandsaw blades and the like.

Generally, bandsaw blades for industrial use are transported and stored in coils of considerable length, and strips of the desired length for use are cut as needed. Since the bandsaw blade is provided with offset teeth along one edge, it is highly desirable that a container for the coil be prevented from contact with the teeth which would tend to wear and even distort the teeth.

It is an object of the present invention to provide a novel and rugged container for coiled bandsaw blades and the like wherein the side walls do not contact the offset teeth and wherein the bandsaw may be readily threaded outwardly and inwardly of the container.

Another object of the present invention is to provide a sturdy container having minimal frictional contact with the saw blade and having the stresses of the coiled blade distributed uniformly over the container walls.

A further object is to provide a molded plastic container having a low coefficient of friction and provided with a plurality of means for easily threading the coil blade inwardly and outwardly of the container, and further having means for stacking a plurality of containers.

Other objects will be in part obvious and in part pointed out more in detail hereinafter.

The invention according consists in the features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereafter set forth and the scope of the application which will be indicated in the appended claims.

In the drawings:

FIG. 1 is a perspective view of a container constructed in accordance with the present invention with a bandsaw blade shown in dotted line;

FIG. 2 is a plan view of the base member of the container with a coiled bandsaw blade shown therein;

FIG. 3 is a side view of the base member of FIG. 2;

FIG. 4 is a cross-sectional view taken along the line 4—4 of FIG. 2; and

FIG. 5 is an enlarged fragmentary section of the container with a bandsaw therein as assembled for shipping.

Referring to the attached drawing, a container embodying the present invention is generally comprised of inter-fitting base member 2 and top member 4 of equilateral hexagonal configuration which receive a coiled bandsaw blade 6 having teeth 8 along one edge thereof.

Base member 2 is integrally fabricated with an upstanding inner wall 10 defining a central well, a transverse bottom wall 12 and an upstanding peripheral wall 14. As best shown in FIG. 5, the inner surface of the peripheral wall 14 tapers upwardly outwardly from the bottom wall 12 at an angle sufficient to avoid interference and contact with the offset teeth 8 of the bandsaw blade 6. The lower portion of the base member 2 is reinforced by flanges 16 and 18 about the inner and peripheral walls respectively. Pairs of feet 19 are integrally formed with the bottom wall 12 on opposite sides of the several junctures of the sides to provide bearing surfaces for the container and to enable stable stacking of a plurality of containers, as will be more fully brought out hereinafter.

The junctures of the several side walls are reinforced by large bosses 20 which also provide means for receiving a threaded fastener or the like and each of

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the several small reinforcing bosses 22 are spaced along each of the several sides. A plurality of large bosses 24 are spaced about the inner wall 16 for reinforcement and for similarly receiving threaded fasteners or the like.

The saw blade 6 may be dispensed from the container through either of the threaded-out apertures 26 on non-adjacent sides of the peripheral wall 14. A pair of diametrically spaced apertures 28 in the transverse bottom wall 12 register with the coiled bandsaw received in the container to permit the user to engage the coiled saw blade for threadably rotating the saw blade inwardly and outwardly of the thread-out apertures 26.

The top member 4 is also integrally constructed and has a depending inner wall 30 which overlies and frictionally engages with the inner wall 10 of the base member, a transverse top wall 32 and a depending peripheral wall 34 which overlies and frictionally engages the outer surface of the peripheral wall 14 of the base member 2. The top member 4 is also provided with reinforcing and spacing flanges 36 and 38 about its inner and peripheral walls respectively. The pair of diametrically opposed apertures 40 in the top wall 32 are aligned and cooperate with the diametrically opposed apertures 28 in the base member 2, so that both edges of the coil may be gripped for easy rotation of the coil in the container. The top member peripheral wall 34 has a pair of cut-outs 42 or apertures registering with the apertures 26 in the peripheral wall of the base member to provide sufficient clearance for withdrawal of the saw blade from the container. Screws, rivets or similar fasteners 44 extend through the top wall 32 and engage in the large bosses 20 and 24 of the base member to lock the two members together.

Referring now to the assembled package, the bandsaw coil 6 is disposed in the base member 2 as best shown in FIG. 2, and the outer lap of the coil bears against the midpoints of each of the several equilateral sides, thus distributing the stress substantially uniformly over the entire container periphery. The free end of the bandsaw coil may be threaded outwardly or inwardly of either of the two thread-out apertures 26 through rotation of the coil by gripping both edges through the aligned apertures 40 and 28 in the top and bottom walls respectively. Quite obviously, the dual apertures in the side walls and in the transverse walls greatly facilitate withdrawal of the saw blade since the coil need be rotated a half revolution at most for passage through a threadout aperture.

The weight of the saw blade coil generally will maintain it seated upon the bottom wall 12, and accordingly the offset teeth 8 will be spaced inwardly from the inner surface of the peripheral wall 14. However, it is desirable to incorporate a resilient or deformable spacing member 46 between the saw teeth 8 and the top wall 32 so as to maintain the saw blade seated upon the bottom wall 12 and to prevent abrading contact between the saw teeth and the top wall 32. This spacing member 46 is a relatively soft material such as paperboard or felt which will engage the teeth 8 and so rotate with the coil. In this manner, contact between the fingers and sharp teeth during threading, or paying out, of the coil is obviated and the spacing member need not be removed prior to use. A plurality of containers may be vertically stacked, the feet on the base member butting against the upstanding portion of the peripheral flange on the top member to stabilize the several containers.

In the illustrated embodiment, the container is an equilateral hexagon in configuration, which configuration has been found highly satisfactory for the purposes of the present invention. In order to insure satisfactory distribution of the stresses from the coiled blade about the periphery of the container, it has been found necessary to utilize structures having at least five equilateral sides,

and preferably at least six equilateral sides, but ten sides is a practical upper limit for fabrication and side-stacking reasons, as well as for efficient construction of the thread-out apertures 26.

It is necessary that the containers have a low coefficient of friction for engagement with the saw blade so as to facilitate withdrawal and prevent binding. This characteristic is most desirably provided by fabricating the container from a material having a low coefficient of friction, although an antifriction coating such as tetrafluoroethylene may be applied over the inner surfaces of the container. Although stainless steel can be utilized for fabrication of the container, synthetic resins are preferable from the standpoint of cost and ease of manufacture. Although other resins such as nylon and tetrafluoroethylene may be employed, high density polyethylene has proven especially suitable for the purposes of the present invention because of its low cost, ease of molding, high strength and high degree of lubricity.

As will be apparent to persons skilled in the art, various modifications and adaptations of the structure above described will become readily apparent without departure from the spirit and scope of the invention, the scope of which is defined in the appended claims.

I claim:

1. A container for coiled bandsaw blades and the like having an untoothed planar portion and teeth along one edge thereof comprising interfitting base and top members having at least five equilateral sides, each of said members having an integrally formed transverse wall and peripheral wall, said peripheral wall being in overlapping interfitting engagement, the innermost peripheral wall having at least five equilateral sides and having its inner surface tapering outwardly from its transverse wall for non-interference with the teeth of a saw blade received in said container with the toothed edge of the saw blade being disposed in the direction of divergence of the taper of the innermost peripheral wall to limit the contact therebetween substantially to interrupted line contact between the untoothed edge of the saw blade and the tapered surface and having an aperture for withdrawing a saw blade from the container, the transverse walls of said members having aligned apertures to facilitate threadably rotating a bandsaw within said container outwardly and inwardly of the aperture in said peripheral wall, the untoothed portion of a bandsaw coil received in said container bearing against the midpoints of each of the several sides of the innermost peripheral wall of the container with the toothed portion spaced therefrom.

2. A container for coiled bandsaw blades and the like having an untoothed portion and teeth offset along one edge thereof comprising interfitting base and top members each having at least five equilateral sides, said base member being integrally formed with a transverse base wall and an upstanding peripheral wall having its inner surface tapering outwardly from the transverse wall for non-interference with the set teeth of a saw blade seated on the base wall with its toothed edge disposed away from the transverse base wall of the base member to limit the contact therebetween substantially to interrupted line contact between the untoothed edge of the saw blade and the peripheral wall, the inner surface of said peripheral wall having at least five equilateral sides and a plurality of spaced bosses for reinforcement thereof, said top member being integrally formed and having a transverse wall and a peripheral wall engaged with the outer surface of said base member peripheral wall, the peripheral walls of said base and top members each having a pair of cooperating apertures in non-adjacent sides for withdrawing a saw blade from the container, and said base and top walls each having a pair of cooperating spaced apertures for rotating a bandsaw coil within said container for threading outwardly and inwardly of the apertures in the peripheral walls, and means fastening said top wall to said bosses of the base member.

3. The container in accordance with claim 2 wherein said top and base members are molded from a semi-rigid synthetic plastic material having a low coefficient of friction.

4. A container for coiled bandsaw blades and the like having a planar portion and teeth offset along one edge thereof comprising interfitting base and top members each having at least five equilateral sides, said base member being integrally formed with an upstanding inner wall defining a well, a transverse bottom wall and an upstanding peripheral wall having at least five equilateral sides and an inner surface tapering upwardly outwardly for non-interference with the offset teeth of a coiled saw blade seated with its untoothed edge on the bottom wall, the inwardly facing surface of said inner wall having a plurality of spaced bosses for reinforcement thereof, said top member being integrally formed and having an inner wall overlapping the outwardly disposed surface of said base member inner wall, a transverse top wall and an outer peripheral wall overlapping the outer surface of said base member peripheral wall, said top member having an upstanding peripheral flange and said bottom member having depending means thereon adjacent its periphery for cooperation with the upstanding flange of a top member on a container disposed thereunder for stabilization in vertical stacking, said base member peripheral wall having an aperture therein for withdrawing a saw blade from the container, and said top and bottom walls having aligned apertures therein for threadably rotating a bandsaw coil in said container outwardly and inwardly of the aperture in the peripheral wall, and means engaged in said top wall and bosses for securing said top and bottom members in assembly, whereby the untoothed portion of a bandsaw coil received in said container bears against the midpoints of each of the several sides of the base member peripheral wall with substantially line contact and the offset teeth of said bandsaw are spaced from the adjacent peripheral wall.

5. A container for coiled bandsaw blades and the like having an untoothed planar portion and teeth offset along one edge thereof comprising interfitting base and top members each having at least six equilateral sides and integrally molded from a semi-rigid plastic material having a low coefficient of friction, said base member having an upstanding inner wall defining an annular well, a transverse bottom wall and an upstanding peripheral wall having an inner surface with at least six equilateral sides and tapering upwardly outwardly from the bottom wall for non-interference with the offset teeth of a coiled saw blade seated with its untoothed edge on the base wall, the opposing faces of said inner and outer walls being provided with a plurality of bosses spaced thereabout for reinforcement, said top member having a depending inner wall overlying and engaged with said base member inner wall in said annular well, a transverse top wall, and a depending peripheral wall overlying and engaged with the outer surface of said base member peripheral wall, the peripheral walls of said top and bottom members each having a pair of cooperating apertures therein in on-adjacent side walls for withdrawing a saw blade from the container, said top and bottom walls each having a pair of spaced aligned apertures therein to facilitate threadably rotating a bandsaw coil within said container outwardly and inwardly of the apertures in the peripheral walls, and means engaged in said top wall and the bosses of said bottom member to maintain said members in assembly, the untoothed portion of a bandsaw coil received in said container bearing against the midpoints of each of the several sides of the base member peripheral wall with substantially line contact and the offset teeth of said bandsaw are spaced from the adjacent peripheral wall.

6. A container in accordance with claim 5 wherein the top and bottom members are molded high density polyethylene and each have six equilateral sides.

7. A container for coiled saw blade strip material and

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the like comprising interfitting base and top members having at least five equilateral sides, one of said members having a transverse wall and a peripheral wall with the peripheral wall having its inner surface tapered outwardly from the transverse wall, and a coil of strip material having teeth along one edge thereof positioned inwardly of the peripheral wall with the teeth projecting in the direction of divergence of the taper of such peripheral wall to provide a clearance therebetween, and to limit the contact between the coil and the peripheral wall substantially to line contact between the untoothed edge of the coil and the tapered surface of the peripheral wall.

8. A device in accordance with claim 7 wherein the innermost layer of the tapered wall is formed of a semi-rigid synthetic plastic material to provide a surface having a low coefficient of friction.

9. A container for coiled saw blade strip material and the like having interfitting base and top members having at least five equilateral sides, one of said members having a transverse wall and a peripheral wall with the peripheral wall having its inner surface tapered outwardly from its

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transverse wall, a coil of strip material having teeth along one edge thereof positioned inwardly of the peripheral wall with the teeth projecting in the direction of divergence of the taper of such peripheral wall to provide a clearance therebetween, the transverse walls of said members having aligned apertures to facilitate the rotation of the coiled strip material within the container to pay out the end of the strip material, and an annular spacing member overlying the teeth and exposed through the aperture of the adjacent transverse wall to space the teeth therefrom and to provide a smooth surface to be grasped during the rotation of the coil for paying out the end thereof.

#### References Cited in the file of this patent

##### UNITED STATES PATENTS

|           |             |               |
|-----------|-------------|---------------|
| 2,302,850 | Funke       | Nov. 24, 1942 |
| 2,490,732 | Hess et al. | Dec. 6, 1949  |
| 2,501,201 | Wilcox      | Mar. 21, 1950 |
| 2,595,375 | Weirich     | May 6, 1952   |
| 2,796,170 | Davis       | June 18, 1957 |