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BEVERAGE CASE REPAIR MEANS

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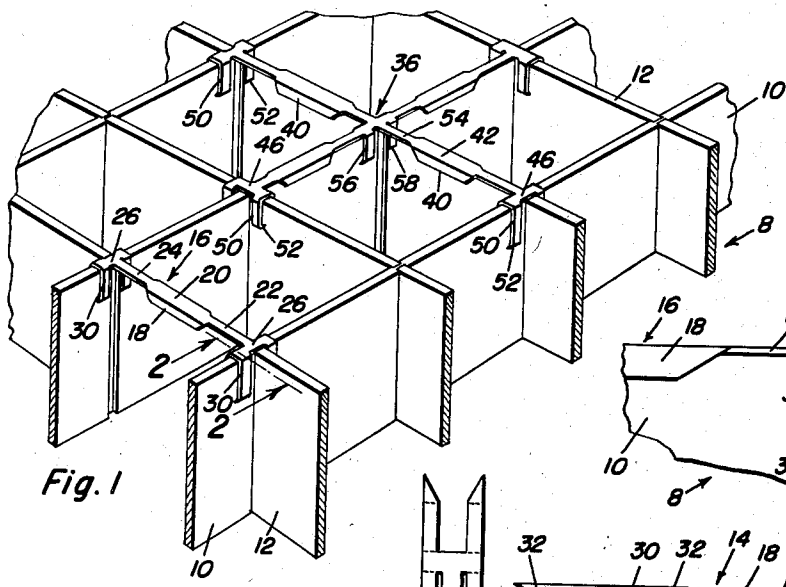


Fig. 1

Fig. 2

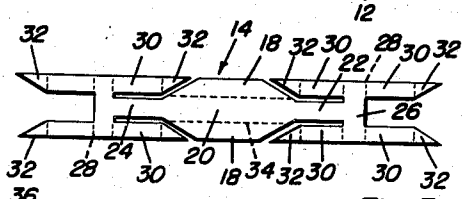


Fig. 3

Fig. 5

Fig. 4

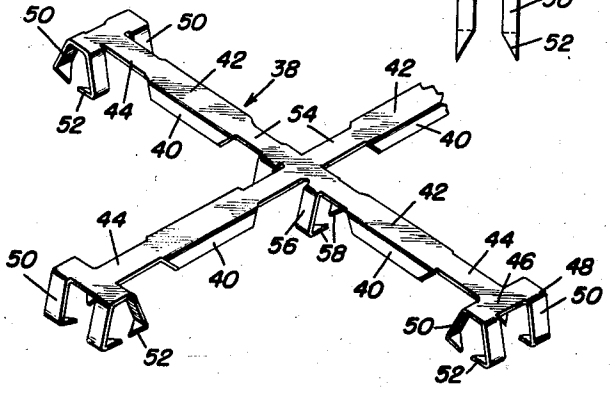


Fig. 6

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BEVERAGE CASE REPAIR MEANS

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The present invention relates, generally speaking, to a novel method and means of mending and repairing any wooden cellular-type box, case, crate or shell used, for example, in systematically storing and handling beverage bottles and has more particular reference to the structural means in that this is such in construction that it is susceptible of quick and easy utilization and does not require the use of nails, screws or equivalent headed fasteners.

More particularly stated, the concept has to do with novelly constructed sheet metal or equivalent blanks which are expeditiously stamped out in ready-to-use flat form and which are such in construction and design that they may be readily bent and fashioned into nailless devices herein broadly treated as brackets, the latter serving to brace and otherwise render the case-part firm against stress, strain and pressure.

Stated otherwise, the invention appertains to simple, practical and economical repairing and reinforcing brackets which function not only to maintain the usual partitions, but the side and end walls as well, which are capable of being applied in intended position with the use of a simple pair of pliers and which have body portions or stays which may be arranged to serve as partition replacement members in a manner to satisfactorily restore missing partitions and bottle-spacing cells.

In carrying out the invention and interpreting one phase thereof generically, it has to do with a new article of manufacture; namely, a flat blank of bendable sheet material, zinc or sheet metal, for example, having a relatively wide body portion stamped and shaped so that the lengthwise edge portions may be bent laterally to provide spaced parallel flanges and an intervening web, said blank having at least one attenuated coplanar extension at one end and an H-shaped member at the outer end of said extension, the long limbs of said member having their respective terminal ends cut to provide bendable anchoring prongs, said limbs being susceptible of being bent upon themselves midway between their terminal ends to provide hold-down and partition straddling and embracing fingers.

Aside from the blank, novelty is predicated on the aforementioned repair brackets comprising a sheet material structure characterized by at least one body portion channel-shaped in cross-section and embodying spaced parallel flanges and an intervening connecting web, a relatively narrow coplanar extension projecting from one end of said body portion and having a self-adapting clamp at its outer end, said clamp embodying pairs of partition straddling and embracing fingers lateral to said extension, the respective pairs of hold-down fingers being spaced from each other and the fingers of each pair having pointed anchoring prongs directed inwardly toward each other.

Other objects, features and advantages will become more readily apparent from the following description and the accompanying sheet of illustrative drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the views:

Figure 1 is a perspective view showing the fragmentary portion of a cellular case or crate and illustrating the two similar but distinguishably different repair and reinforcing brackets and the manner in which they are constructed and used;

Figure 2 is an enlarged view in section and elevation taken approximately on the plane of the line 2—2 of Figure 1 looking in the direction of the arrows;

Figure 3 is a plan view of the sheet metal blank or stamping used in forming the single-type repair bracket depicted in Figure 4;

Figure 4 is, therefore, a perspective view of the single-type bracket formed from the blank depicted in Figure 3;

Figure 5 is a plan view of the multipurpose cruciform blank; and

Figure 6 is a perspective view of the multipurpose cruciform repair reinforcing bracket which is, obviously, fashioned from the blank depicted in Figure 5.

In Figures 1 and 2 the beverage bottle case is denoted generally by the numeral **8**. This is sufficiently illustrated in Figure 1 to show that it is a common wooden case with cells defined by longitudinal partitions or dividers **10** and complemental transverse partitions **12**. These are connected together in any suitable manner and, of course, the case also includes side and end walls which are not shown and which are also capable of being strengthened and repaired by the use of the invention under consideration. As is already evident, there is a single-type stamping or blank denoted by the numeral **14** in Figure 3 which is used in constructing the corresponding single-type or simplified bracket **16** depicted in Figure 4. This blank is struck out from any suitable alloy, metal or appropirate sheet material and ordinary sheet metal of zinc may well serve the needed end. It will simplify the description, it is believed, by referring first to the finished product in Figure 4 wherein it will be noted that the so-called horizontal bridging and spanning component of the over-all bracket is characterized centrally by what is herein defined as a body portion which is channel-shaped in cross-section. The body portion is relatively wide as seen in Figure 3 and is comprehended as embodying a pair of spaced parallel lengthwise flanges **18** and an intervening connecting web **20**. There is a relatively narrow coplanar extension **22** at the right and a similar coplanar extension **24** at the left. These are in alignment with the body portion and each other. These extensions may be said to be provided at their respective outer ends with substantially H-shaped members, each including a central junctional portion **26** and a pair of spaced parallel limbs. The limbs are bent intermediate their ends on the fold lines **28** and when bent laterally down, as seen in Figure 4, they define pairs of hold-down fingers, all of which are denoted by the numerals **30**. In other words there are two pairs of fingers which are spaced apart by the connecting portion **26** so that they may rest upon and bridge over the necessary partition edges and so that the paired and spaced pairs of fingers may straddle the part as shown in Figure 1 for retention purposes. The free ends of the fingers are provided with sharpened or inwardly bent anchoring prongs all of which are denoted here by the numerals **32**. One manner in which this simple-type bracket is utilized is shown at the left in Figure 1 wherein the H-shaped finger-equipped portions provide partition-straddling and retaining clamps. In the illustration depicted, the horizontal body portion with its extensions **22** and **24** constitutes a bridge which spans over the space and thus provides a partition replacement and defines a cell. That is to say, it restores what would otherwise be a missing cell.

Inasmuch as this particular bracket in Figure 4 is fashioned from the blank seen in Figure 3, it seems both effective and proper to utilize the same reference numerals in both Figures 3 and 4, making it easier to realize the sequence of events in bending and shaping and also the cutting and production of the blank in Figure 3. It is to be added, however, that in Figure 3, the numeral **34** designates the fold line for bending the body portion into the aforementioned channel-shaped body portion.

With reference now to Figures 5 and 6, the cruciform flat sheet material blank is denoted by the numeral **36** and the finished multipurpose bracket which is fashioned therefrom is denoted by the numeral **38**. The same principle of construction and mode of bending and fashioning into the finished product, already described, applies to these figures, as is evident.

With reference in particular to Figure 6, the ready-to use or finished bracket is obviously characterized by four duplicate arms circumferentially spaced and radiating from a common center. Each arm is the same in construction and a description of one will suffice for all. To this end the intermediate portion of the arm is characterized by the aforementioned channel-shaped body portion having spaced parallel longitudinal flanges **40** and a connecting web **42**. This is the so-called relatively wide portion comparable to that depicted in Figures 3 and 4. At the outer end thereof is a coplanar narrower attenuation or extension **44** which has an H-shaped formation as depicted in Figure 5 which is bent into a dual partition-straddling clamp. This H-shaped portion has spaced parallel limbs and a connecting member **46** therebetween. The limbs are bent upon themselves on the fold line **48** to define two pairs of hold-down fingers, all of the fingers in this form of the invention are denoted by the numerals **50** for simplification in numbering. The fingers are paired to do the straddling job seen in Figure 1 and they are lateral to the plane of the arm and extension **44** and have inturned or toed-in pointed anchoring prongs **52**. At the hub portion of the blank as well as the finished product there are similar extensions **54** and here again these are of the H-shaped formation depicted in Figure 5 to provide additional clamping means made up of the pairs of fingers **56** and their inturned or toed-in pointed prongs **58**. The reader may readily compare the blank **36** with the product **38** in Figures 5 and 6, respectively, and discover the relationship between the components thereof. Here again it is thought effective and proper to utilize the same numerals in these two figures since they are corresponding parts.

As has already been touched upon, the brackets constitute reliable and easy-to-use repair means capable of application without nails or equivalent fasteners by simply placing the clamping fingers in position and forcing the prongs into the surfaces of the partitions with the use of pliers. So one purpose of the invention is to reinforce an existing partition, side or end of a bottle case or box and another purpose is a nailless replacement or repair to a broken side, end or partition of a case or box. It is repeated that with the use of this invention one may restore the requisite storing and carrying facilities to an otherwise unusable case, means being provided to bridge and span the space required to restore a missing cell. The construction is such that one bracket may be used over another to enable a series of reinforcements or repairs to be used together as extensions or at right angles to each other for the repair or reinforcement of adjoining sections or parts of the crate or case.

The following claims, as will be obvious, are directed to both the blanks of Figures 3 and 5 and to the finished brackets of Figures 4 and 6 and are to be construed accordingly.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. As a new article of manufacture, a thin flat cruciform blank of bendable sheet material embodying complemental radial arms and each arm having a relatively wide portion and a relatively narrow coplanar extension at the outer end thereof, an H-shaped member at the outer end of said extension, the long limbs of said member having their respective outer ends cut to provide bendable anchoring prongs, said limbs being susceptible of being bent upon themselves midway between said outer ends to provide partition straddling and embracing fingers.

2. A beverage case repair bracket comprising a sheet material structure characterized by at least one body portion channel-shaped in cross section and embodying spaced parallel flanges and an intervening web connecting said flanges, a relatively narrow coplanar extension projecting from one end of said body portion and having a clamp at its outer end embodying pairs of partition straddling and embracing fingers lateral to said extension, the respective pairs of fingers being spaced from each other and the fingers of each pair having pointed anchoring prongs directed inwardly toward each other, and a corresponding coplanar narrow extension at the other end of said body portion lined up with and complemental to said first named extension and also having a self-adapting clamp at its outer end embodying pairs of partition straddling and embracing fingers lateral to said extension, the respective pairs of fingers being spaced from each other and the fingers of each pair having pointed anchoring prongs directed inwardly toward each other.

3. A beverage case repair bracket comprising a bendable sheet material structure cruciform in plan and embodying a plurality of arms radiating from a common hub-like center, each arm embodying a median body portion channel-shaped in cross-section and embodying spaced parallel flanges and an intervening web connecting said flanges, a relatively narrow coplanar extension projecting from one end of said body portion and having a right angularly disposed self-adapting clamp at its its outer end, said clamp embodying pairs of partition straddling and embracing fingers lateral to said extension, and respective pairs of fingers being spaced from each other and located to the right and left of the lengthwise edges of said extension and the fingers of each pair having pointed anchoring prongs directed inwardly toward each other.

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