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A. D. PEISTER

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SHIPPING BOX BRACE

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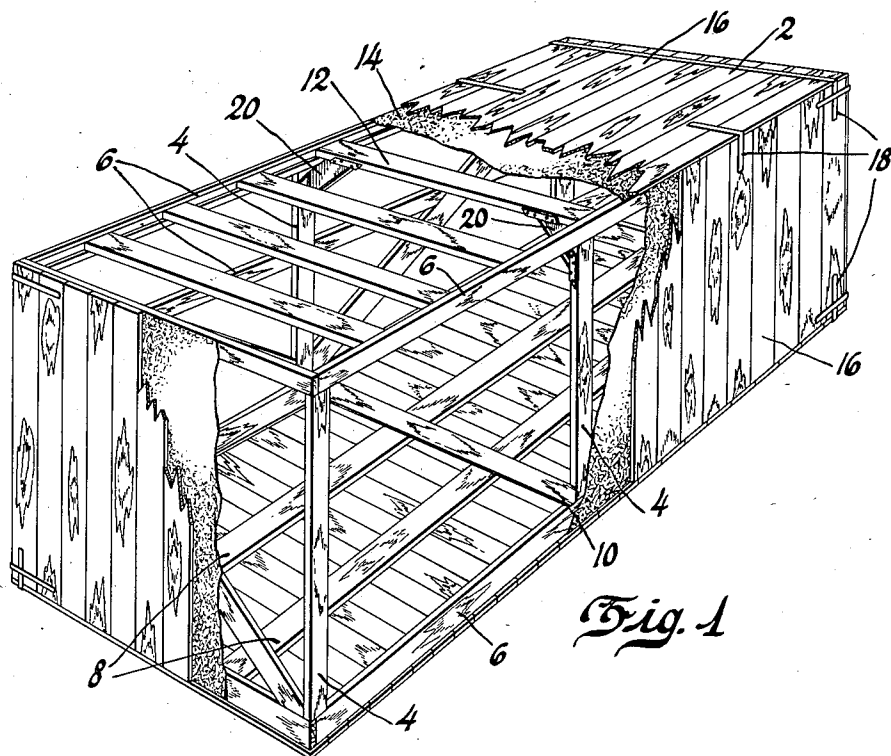


Fig. 1

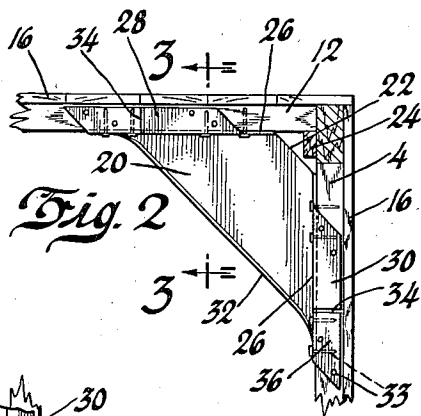


Fig. 2

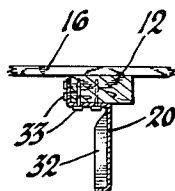


Fig. 3

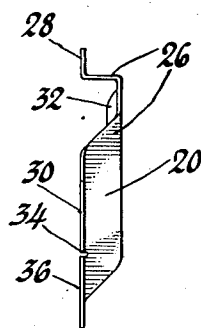


Fig. 4

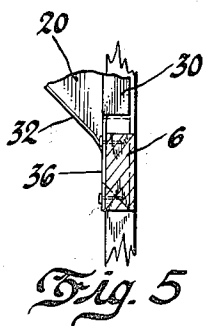


Fig. 5

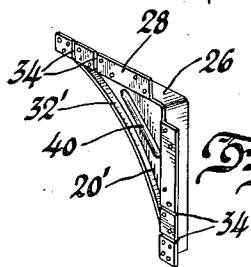


Fig. 6

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UNITED STATES PATENT OFFICE

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SHIPPING BOX BRACE

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4 Claims. (Cl. 20—92)

This invention relates to braces for shipping cases and has particular reference to shipping cases used for packing or enclosing automobile bodies for overseas shipments.

5 The introduction of the steel or turret top in modern automotive practice presented certain difficulties in connection with the shipping cases heretofore used. In the shipping cases used prior to the introduction of the turret top there was a certain amount of resiliency in the top of the case and when pressure from above was applied there was a limited amount of bending to the shipping case. However, where the top was of a fabric or flexible material it also yielded and when the pressure was removed the top resprung into place. Where a turret top is used and a sudden pressure is applied to the shipping case, the slight amount of yielding will cause the case to push in the top and form a dent. The top will not respring into place when the pressure has been removed, and it was therefore necessary to devise some sort of a case which will prevent damage to the metal tops. One way of accomplishing this was to increase the height of the shipping case but this increased the room or space taken by the shipping case and necessarily increased the shipping charges for the reason that size is important in overseas shipments.

In the course of investigations which were made to improve the shipping facilities it was found that by the use of a bracket such as is disclosed in the present invention the 2 x 4's or 4 x 4's extending across the top of the case could be so reinforced from the sides of the box that there would be very little yield to the top when the usual pressures encountered are applied. Accordingly, after some tests and experiment it was found that a bracket which could be attached to the top and sides of the case, and extend inwardly of the case the maximum distance allowed by the available space when the automobile body was in the case, would so reinforce the shipping case top that the bending of the case top would be so slight that it would not injure the metal top of the automobile body. As a result of the invention it was therefore not necessary to increase the size of the shipping case and therefore obviated the increase in the shipping costs.

The bracket of the invention is preferably made of a single sheet of metal and is of general triangular configuration. At two sides of the triangle it has flattened portions which abut against the upright and transverse 2x4's or 4x4's of the shipping case, and lateral flanges at the edges of the flattened portions abut against the

adjacent side of the upright and transverse members. Where the parts abut against the 2x4 they are suitably fastened in place as by nails. A third flange at the third side of the triangle reinforces and strengthens the construction. Preferably, the apex of the triangle is cut away to facilitate installation.

On the drawing:

Figure 1 is a perspective view of a shipping case with parts broken away showing the installation of the bracket of the invention.

Figure 2 is an enlarged sectional detail of the shipping case with the bracket installed.

Figure 3 is a section on the line 3—3 of Figure 2.

Figure 4 is an edge view of the bracket.

Figure 5 is a view of the structure of Figures 1 and 2 but with the bracket applied where there is no vertical member but there is a horizontal member.

Figure 6 is a perspective view of a modified form of brace.

Referring to the drawing, the numeral 2 indicates a shipping case as a whole. The shipping case comprises the vertical or upright frame members 4 and the horizontal members 6. The bottom has the usual longitudinal members 8 and the transverse horizontal members 10, while the top has the transverse horizontal members 12. The usual paper or other suitable enclosure 14 is placed over the frame members and the usual boards 16 are nailed to the frame. Suitable metal straps 18 are used to strengthen the construction.

The brace of the invention is indicated as a whole at 20, and, as best shown in Figure 2, is generally of triangular shape. The apex of the triangle is cut away as indicated at 22 to facilitate installation for the reason that there usually is a horizontal member 24 which would be in the way if the triangle were complete.

At two edges of the triangle the braces are provided with the flat bent-away portions 26 which are adapted to abut against the inside of the bracing members such as 4 and 12. The lateral flat portions 26 are at right angles to each other. At the end of the flat portions 26 the strengthening flanges 28 and 30 are formed. These flanges extend at right angles to the flattened portions 26 and are adapted to abut against the sides of the frame members 4 and 12. The flattened portions 26 and flanges 28 and 30 may be provided with suitable openings, and nails or other fastening means 33 driven into the wood to hold the brace in place.

An additional strengthening flange 32 is provided at the third edge of the triangle and extends from one flattened portion 26 to the other.

Each flange 28 and 30 is provided with saw cuts 34 to enable the application of the brace to positions where, for example, no vertical upright 4 coincides with the transverse top brace 12. As best shown in Figure 5 in such instances there usually is a horizontal brace 6, and by straightening the end portion 36 of the flange 30, for example, the portion 36 may be nailed to the horizontal member 6 as shown.

In Figure 6 there is shown a modified form of brace in which the apex is not cut away and instead of a single cut 34 a plurality of saw cuts 34 is provided. Additionally, the brace 20' has the reinforcing rib 40 as shown. The flange 32' is formed on an arc instead of being straight as shown in Figure 2. This will give some additional room at the edge of the brace.

By referring to Figure 1, where the braces are applied at the middle it will be apparent that the transverse member 12 of the top is reinforced and strengthened for a considerable distance away from the sides of the case. This reinforcing by the brackets 20 has been found to be ample to protect the metal top from damage from pressure due to excessive loads on the top of the box.

I claim:

1. In a bracket for a shipping container, edge portions at right angles to each other and adapted to abut against the insides of the container, strengthening flanges on the edge portions, said flanges having saw cuts therein, and an addi-

tional strengthening flange extending between the edge portions.

2. In a triangular bracket for a shipping container, flat edge portions at right angles to each other on two sides of the triangle, the apex of the triangle being cut away to facilitate installation of the bracket, strengthening flanges on the flat edge portions having cuts therein to enable the bending of a portion of the flange into the same plane or in a plane parallel to the flat edge portion, and an edge strengthening flange on the third side of the triangle.

3. In a bracket for a shipping container, said bracket comprising a flat sheet of a single thickness of metal, edge portions bent from the sheet at right angles to each other and adapted to abut against the insides of the container, flat strengthening flanges on the edge portions bent at right angles thereto, and an additional strengthening flange extending between the edge portions at the edge of the sheet.

4. In a triangular bracket for a shipping container, said bracket comprising a flat sheet of a single thickness of metal, flat edge portions bent from the sheet at right angles to each other on two sides of the triangle, the apex of the triangle being cut away to facilitate installation of the bracket, flat strengthening flanges on the flat edge portions bent at right angles thereto, and an edge strengthening flange on the third side of the triangle at the edge of the sheet.

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