Dec. 4, 1934. O. U. B. J. BRUNAA 1,983,436

PACKING BOX FOR BUTTER AND OTHER GOODS

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Fig. 1.

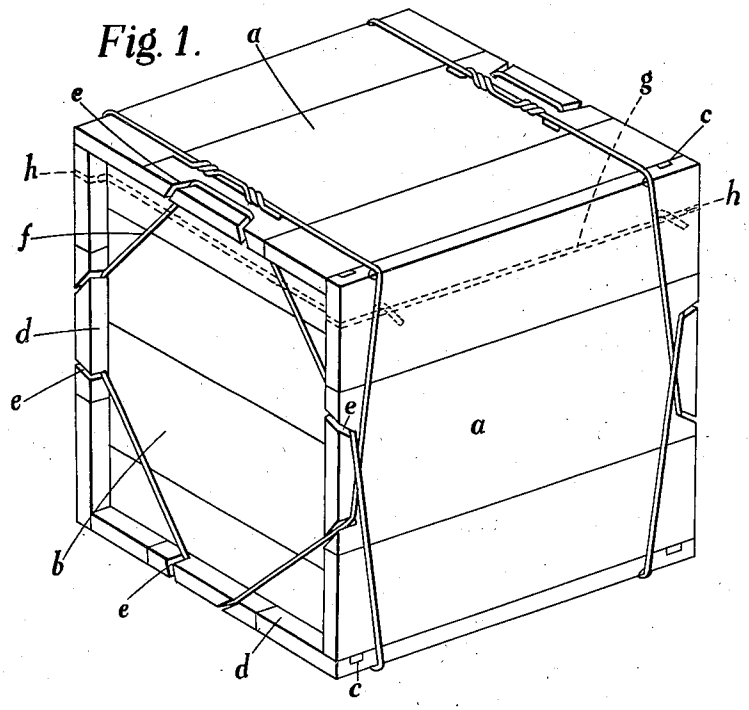
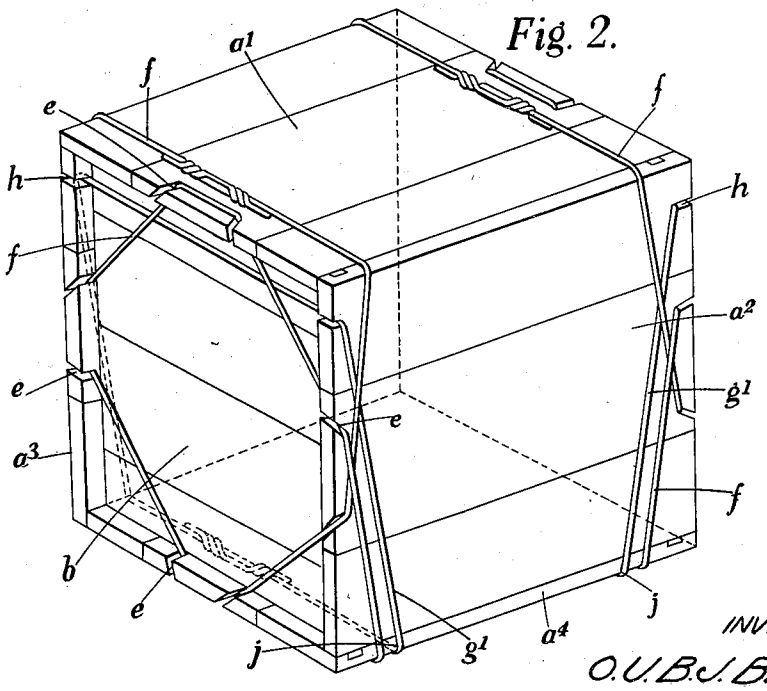


Fig. 2.



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PACKING BOX FOR BUTTER AND OTHER GOODS

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6 Claims. (Cl. 217—12)

This invention relates to an improved packing case. It is more especially intended for packing butter, but is in no way confined to that particular application.

It has been a usual practice in packing butter to use casks consisting of end pieces and bent staves, firmly held together and against the ends by means of surrounding willow bands. This type of container may be manufactured without the use of nails or tacks, which get in contact with the contents, and it may be suitably produced in beechwood, which is generally considered to be best for butter packing, as it does not affect the taste or aroma of the butter.

Containers of this description are suitable for holding butter in bulk, but their shape does not make them practicable for the despatch of blocks, wrapped in grease-proof paper for direct retain sale. For this reason some use has been made of rectangular or flat sided cases containing a number of such packages, these cases, however, being made of deal, owing to beechwood not being suitable for nailing or like methods of attachment. These cases have not proved altogether satisfactory, as there is a tendency for the wood to affect the tast of the butter.

An object of the present invention is to provide in a simple and improved manner for the production of flat sided cases even of beechwood, without nailing together the separate sides of which the case is built up.

According to the invention a flat sided packing case or box is formed of two end pieces against which the flat sides are held by ties, a tie in its passage from one side wall to another lying against the external surface of an end piece, so that it also serves to hold the latter in or from another aspect the end piece lies in grooves or against interior abutments otherwise formed and is held in by the same ties which draw the sides together and hold them against the end piece. Each such tie preferably surrounds the whole of the sides except at one or more corners where it passes through slits or notches in the overhanging ends of the sides and crosses the end piece. The same tie thus crosses one or more of the corners externally and lies against the end piece at the one or more remaining corners. In the usual two-ended and four sided rectangular case two such ties at each end give complete security, one tie crossing the end piece at two adjacent corners, and the other tie at the remaining two corners. Each tie thus traverses one side completely, which is convenient for the purpose of straining and uniting the ends of the tie.

A further feature of the invention resides in the employment of one or more supplementary ties which enable the ties as described above to be cut and the top of the case to be removed without the remainder of the case coming apart.

The invention is illustrated in its preferred form by the accompanying drawing, wherein:

Figure 1 is a perspective view, and

Figure 2 is a similar view with an alternative arrangement of supplemental tie.

The case illustrated, which is substantially cubical in shape, consists of four side walls *a* and two end pieces *b*. Each wall is made up of a number of boards made of beechwood, which may if desired themselves be spiked together at their adjoining edges. This spiked connection, which is similar to that used in the construction of the ends of casks, is not illustrated.

The end pieces *b* lie a short distance inside the ends of the sides *a*, the latter being preferably provided with internal grooves *c* to receive the edges of the ends. The protruding edges *d* of the side walls are furnished with nicks or slits *e*, which engage the wire ties *f*.

Close to each end of the sides *a* two slits *e* are provided, and for each end piece *b* two wires *f* are fitted. Each such wire is passed through two slits *e* in one side wall, through the two adjacent slits in each of the adjoining sides and externally round the edges of the opposite side, against the outer surface of which the ends of the bands are connected together by twisting. The twist or other connection can be performed by means of a known form of tool, that also serves to tension the wire, but which does not concern the present invention. Tinned or galvanized steel wires make the most suitable ties.

As shown on the drawing, the slits *e* are carried in as far as the plane of the end pieces and lie at the same angle as that assumed by the wire *f* where it is carried across the end piece. This is to facilitate tensioning, reducing the liability of the wood to crack. The slits *e* may so slant from the edge inward that the tightened bands cannot slip out of them: or the slits may be otherwise formed for this purpose, for example like bayonet slots with a nick at the side into which the bands are drawn when tensioned.

The case is shown with a top and bottom side *a*, the case being built up in this position in a packing frame and once more placed in this position when it is to be opened by cutting the ties. On opening a case provided with the four ties only the end pieces *b* and three of the sides *a* can be removed while retaining the bottom section as

foundation for the pile of individual packages forming the contents. When these bands are cut there is nothing to hold the component sides and ends of the case together.

It may, however, be desirable in some cases to remove only the top without further dismantling the case. This is attained by placing a supplementary tie *g* round the case across the ties *f*, the former being shown dotted at Figure 1. This supplementary wire may be placed round the end pieces and the two vertical sides, the latter being provided with appropriate slits *h*, through which the tie *g* is passed. It is advisable to place this tie near the top of the case and it is put in position after the ties *f*, so that it lies outside them. When the case is opened the ties *f* are cut along the upper run where they cross the top of the case, the free ends being bent back across the wire *g*, as indicated by the short dotted portions shown, care being taken not to slacken the ties *f*. The top of the case may now be removed, while the remaining sections of the case will still be held together by the ties.

An alternative arrangement of supplementary tie is shown at Figure 2, in which ties g^1 pass through the slits *h* formed in the projecting ends of the vertical sides a^2 and a^3 at the opposite ends of the case and round nicks formed at *j* at the bottom edges, which prevent any possibility of slipping. The ends of the wires g^1 are connected outside the bottom side a^4 of the case and a portion runs straight across from one slit *h* to the other against the end piece *b* of the case. These ties g^1 are preferably put on the case before the ties *f*, so that the latter can be cut and removed without disturbing the ties g^1. It will be clear that with this form all the sides of the case except the top a^1 can be assembled and held together before the case is filled and that the ties *f* can be cut and the top a^1 removed without dismantling the case.

In either form the supplementary wire can be removed when the case is empty and the component side and end pieces packed flat for return.

The invention is not limited to the constructions shown, which may be altered in many ways without departing from the underlying ideas and scope of the invention. This applies to both the shape of the case and the fixing of the ties. Although the invention was primarily designed to solve the problem of providing a butter container of packing case shape, made of beechwood, it is equally applicable for other goods and other materials.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent.

1. A packing box including end walls and a plurality of side walls terminally projecting beyond the end walls, the projecting portions of each side wall being formed with spaced notches, and duplicate tie wires at each end of the box, each tie wire passing through both notches of one side, a single notch of two of the sides, and over the outer surface of the remaining side, the duplicate wires at each end being relatively reversed with respect to the sides at that end in their application, whereby each of said duplicate wires overlies opposing sides, engages two notches of opposing sides, and different notches of the remaining sides.

2. A packing box including end walls and a plurality of side walls terminally projecting beyond the end walls, the projecting portions of each side wall being formed with spaced notches of a depth substantially equaling the extent of the projection of the side walls, and duplicate tie wires at each end of the box, each tire wire passing through both notches of one side, a single notch of two of the sides, and over the outer surface of the remaining side, the duplicate wires at each end being relatively reversed with respect to the sides at that end in their application, whereby each of said duplicate wires overlies opposing sides, engages two notches of opposing sides, and different notches of the remaining sides.

3. A construction as described in claim 1, wherein the notches are so relatively arranged that with the tie wires in place said tie wires present diagonal portions overlying and in contact with each end wall adjacent the respective corners of that wall.

4. A construction as described in claim 1, including an auxiliary tie wire encircling two opposed sides and end walls and overlying one of the first mentioned tie wires to serve as an anchor for such first mentioned tie wires after dividing that portion which overlies one of the side walls, whereby such side wall is freed without affecting the holding function of the tie wires with respect to the remaining sides.

5. A construction as defined in claim 1, including an auxiliary tie wire seated in notches formed in the projecting portions of opposing side walls and extending between said notches in contact with an end wall, said auxiliary tie wire overlying the side walls below the notches and overlying a remaining side wall.

6. A packing box including end walls and a plurality of side walls terminally projecting beyond the end walls, the projecting portions of each side wall being formed with spaced notches of a depth substantially equaling the extent of the projection of the side walls and being inclined to the surfaces of the side walls in which they are formed to facilitate the tightening of the wires, and duplicate tie wires at each end of the box, each tie wire passing through both notches of one side, a single notch of two of the sides, and over the outer surface of the remaining side, the duplicate wires at each end being relatively reversed with respect to the sides at that end in their application, whereby each of said duplicate wires overlies opposing sides, engages two notches of opposing sides, and different notches of the remaining sides.

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