

Oct. 17, 1933.

E. F. LANG

1,931,458

PACKING STRIP

Filed April 8, 1932

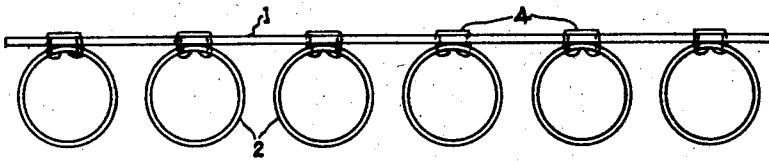


Fig. 1.

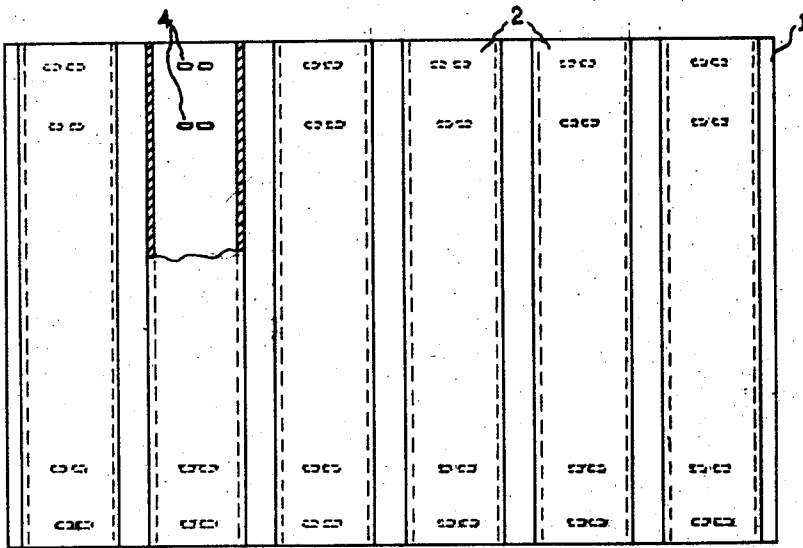


Fig. 2.

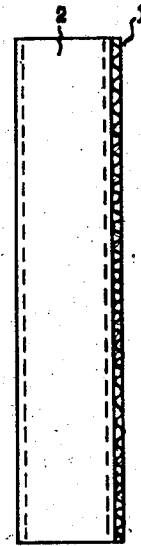


Fig. 3.

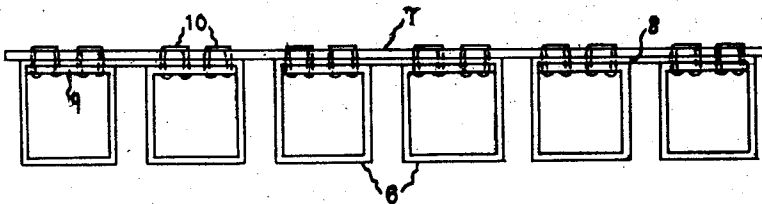


Fig. 5.

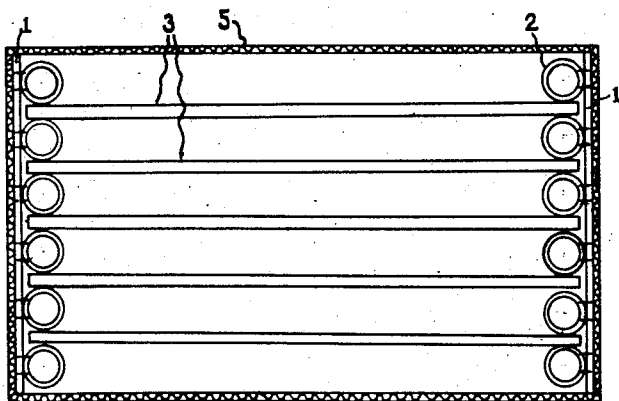


Fig. 4.

INVENTOR
Ernst F. Lang
BY J. S. Murray
ATTORNEY

UNITED STATES PATENT OFFICE

1,931,458

PACKING STRIP

Ernst F. Lang, Detroit, Mich., assignor of one-half to Andrew J. Maas, Wayne, Mich.

Application April 8, 1932. Serial No. 604,041

13 Claims. (Cl. 206—62)

This invention relates to packing units and particularly to units for packing flat articles for shipment.

5 An object of the invention is to provide a unit comprising a plurality of fibre board tubes attached in a spaced parallel relation to a fibre board sheet and serving as shock absorbing spacers for a shipment of windshields or other
10 approximately flat articles.

Another object is to position a pair of such units in the ends of a packing box for such engagement by windshields or the like as will maintain said windshields spaced apart and absorb
15 shocks and vibration during transportation.

A further object is to arrange within a container a packing unit consisting of a sheet carrying a plurality of spacer elements for articles packed in said container, said elements having
20 sufficient resilience to permit their being slightly compressed by said articles, thus holding the latter from movement in said container.

A still further object is to provide a packing unit comprising a plurality of spacer tubes and a sheet to which said tubes are attached, the tubes
25 being formed in pairs, each formed by bending a fibre board sheet, the tubes of each pair and those of adjacent pairs being correspondingly spaced.

30 These and various other objects the invention attains by the construction hereinafter described, and illustrated in the accompanying drawing, wherein:

Fig. 1 is a top plan view of the packing unit,
35 embodying one form of the invention.

Fig. 2 is a front elevational view of said unit, a portion thereof being broken away to show a provision for attaching the spacer tubes to the supporting sheet of the unit.

40 Fig. 3 is an end view of the unit.

Fig. 4 is a top plan view of a shipping container showing a number of articles positioned therein by a pair of the units shown in Figs. 1, 2 and 3.

Fig. 5 is a top plan view of an alternative form
45 of the unit.

In these views, the reference character 1 designates a fibre board sheet, which is preferably corrugated, as shown in Fig. 3. Attached to one face of said sheet is a plurality of cylindrical fibre
50 board spacer tubes 2 arranged in a parallel relation and predeterminedly spaced to provide for engagement between said tubes of certain articles to be shipped, as for example, the windshields 3 indicated in Fig. 4. The tubes 2 may be attached
55 in any desired permanent manner to the sheet 1,

as for example by staples 4 having their prongs driven through the sheet and contiguous walls of the tubes, and clinched within the latter.

In use of the described packing unit, a pair thereof may be positioned against the end walls of a shipping container 5, the extremities of windshields or similar articles to be shipped being engaged between said tubes, as clearly appears in Fig. 4.

The connection established by the staples 4
65 between the sheet 1 and tubes 2 allows a slight flexing of said tubes to and from each other, facilitating insertion of the windshields or the like, and each of said tubes is sufficiently resilient to permit its undergoing a considerable diametrical
70 compression to absorb such shocks and vibration as may be imposed upon the windshields in transit of the shipment. Preferably, the tubes 2 are spaced apart somewhat less than the width of the windshields, so that insertion of the latter
75 will slightly compress the tubes, causing them to tightly grip the windshields.

In the alternative construction illustrated in Fig. 5, a plurality of fibre board spacer tubes 6 are attached to a supporting sheet 7, also fibre
80 board. Preferably, the material forming both said tubes and sheet is corrugated. It is also preferred to form the tubes 6 in integral pairs by bending the end portions of sheets 8 at right angles, so that each of said end portions forms
85 a rectangular tube having a terminal ply 9 overlapping a central portion of the sheet 8, lying against the sheet 7.

As in the first described unit, a plurality of staples 10 or the like connect each pair of tubes
90 6 to the sheet 7, the prongs of the staples being clinched within said tubes. Said staples, as illustrated, serve the dual purpose of fastening the tubes to the sheet 7 and attaching to each other the overlapped plies of each sheet 8.

The described packing unit in either of its illustrated forms, very efficiently serves to safeguard windshields or the like from damage during shipment. It is a further advantage of the described units that they are manufactured from
100 easily available standard stock, and their production requires no costly or special machinery.

While it is apparent that the illustrated embodiment of my invention is well calculated to adequately fulfill the objects and advantages primarily stated, it is to be understood that the invention is susceptible to variation, modification and change within the spirit and scope of the subjoined claims.
110

What I claim is:

1. A packing unit comprising a fibre board supporting sheet and a plurality of tubes secured to one face of said sheet in a substantially parallel spaced relation, said tubes forming pairs, each formed of a single fibre board sheet having its mid portion seating against said supporting sheet and having its end portions rectangularly bent to tubular form.
2. A packing unit as set forth in claim 1, the tubes of each pair and the tubes of the several pairs being correspondingly spaced.
3. In a packing unit as set forth in claim 1, a common means for securing said tubes to the supporting sheet and for maintaining the closed form of said tubes.
4. A packing unit for shipping purposes comprising a fibre board sheet, a plurality of parallel cylindrical fibre board tubes tangentially engaging a face of said sheet, and spaced apart in a substantially equidistant relation, and means individually securing said tubes to said sheet, engaging the tubes solely at their portions contiguous with the sheet.
5. A packing unit comprising a fibre board supporting sheet and a plurality of tubes secured to one face of said sheet in a substantially parallel spaced relation, said tubes forming pairs, each formed of a single fibre board sheet having its mid portion seating against said supporting sheet.
6. A packing unit as set forth in claim 5, the tubes of each pair and the tubes of the several pairs being correspondingly spaced.
7. In a packing unit as set forth in claim 5, a common means for securing said tubes to the supporting sheet and for maintaining the closed form of said tubes.
8. A packing unit comprising a fibre board supporting sheet, a second fibre board sheet seated against said supporting sheet, and rectangular-

ly bent to form a plurality of spaced parallel, resiliently yieldable tubes, and a common means for securing said sheets together and for holding each of said tubes permanently in tubular form.

9. A packing unit for shipping purposes comprising a fibre board sheet and a row of spaced fibre board tubes, engaging one face of said sheet and spaced to form a plurality of article-receiving channels, and fasteners permanently securing said tubes to said sheet, the tubes being permanently retained in their tubular form.

10. A packing unit as set forth in claim 9, said fasteners being terminally upset within the tubes.

11. A packing unit comprising a fibre board supporting sheet, and a plurality of tubes secured to one face of said sheet in a substantially parallel spaced relation, each such tube being rectangularly formed of fibre board with a portion thereof seated against said supporting sheet and another portion overlapping said seated portion, and a plurality of fasteners securing each tube to the supporting sheet, said fasteners engaging both overlapping portions, and thereby maintaining the tubes closed.

12. A packing unit comprising a fibre board supporting sheet, and a plurality of spaced elongated, substantially parallel fibre board members secured to one face of said sheet, each of said members having projections spaced to accommodate an article to be packed, and the projections of the adjacent members being correspondingly spaced for the same purpose.

13. A packing unit comprising a supporting fibre board sheet, a plurality of flexible, spaced, substantially parallel tubes engaging one face of said sheet, and a plurality of fasteners, securing each tube to said sheet, having ends clinched interiorly of said tubes.

ERNST F. LANG.

45

120

50

125

55

130

60

135

65

140

70

145

75

150