

J. SURMANN.
 COLLAPSIBLE PACKING.
 APPLICATION FILED SEPT. 27, 1912.

1,121,947.

Patented Dec. 22, 1914.

Fig. 1

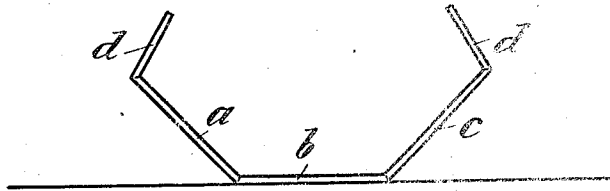


Fig. 2

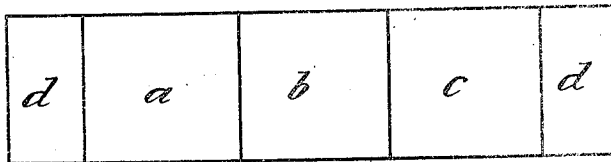


Fig. 3

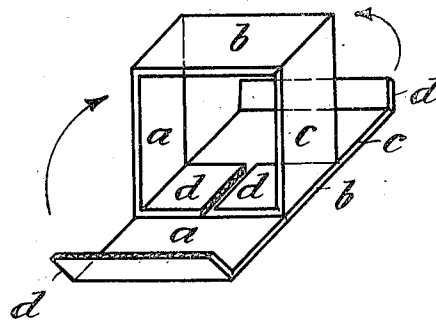


Fig. 4

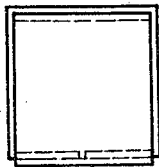
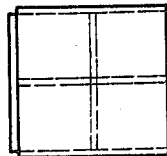


Fig. 5



Witnesses:

Charles R.rompton
John A. Percival

J. Surmann.
Inventor

by C. C. Brown
Attorney

UNITED STATES PATENT OFFICE.

JOHANNES SURMANN, OF HOLZHAFEN, BREMEN, GERMANY.

COLLAPSIBLE PACKING.

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To all whom it may concern:

Be it known that I, JOHANNES SURMANN, a subject of the German Emperor, residing at Holzhafen, Bremen, Germany, have invented certain new and useful Improvements in Collapsible Packings, of which the following is a specification.

This invention has for its object to provide a collapsible packing wherein two strips of suitable material, for instance corrugated cardboard are arranged crosswise and are bent up to form a box. In existing boxes made in this manner each of the two strips has been provided with flaps at its ends and sides which have had to be inserted in corresponding slits in the other strip, or two strips have been held together by insertion in an outer shell. Now the present invention renders the use of flaps and slits and also of an outer shell unnecessary, thereby simplifying the apparatus used in the manufacture of the strips, and also effecting a saving in the amount of material required owing to the absence of flaps and the like. It also renders the process of construction more simple because no separate means of fastening the assembled strips in order to erect the packing are needed.

According to one modification of this invention the improved packing comprises two strips each being adapted to be bent transversely to form five panels, of which the two end panels, are half panels, while the remaining intermediate three panels are of full size. One of the two blanks is bent into the form of a rectangular frame with the two half panels turned inward toward each other so that their edges abut together or nearly so. This frame (hereinafter called the "inner frame") is placed with its half panels resting upon the middle panel of the other strip; the two adjacent panels of which are then bent up so as to form an "outer frame" against the two open sides of the inner frame. Then the two half panels of the outer frame are slipped inside the inner frame where they lie underneath the middle panel of the latter, with their edges abutting together. The two frames thus assembled constitute together the improved packing in its erected state. No fastenings are needed, the two frames being held together by the friction of the panels against one another.

In the accompanying drawings Figure 1 is a side view of one of the component strips

of the packing; the said strip, for instance a piece of corrugated cardboard, being shown in half open position; Fig. 2 is a plan of the strip fully opened out; Fig. 3 is a perspective view showing the two strips bent up and placed one inside the other in such a manner that they can be connected together firmly and yet in a readily detachable manner without the use of fasteners or paste; Fig. 4 is a side elevation, and Fig. 5 is a plan of the erected packing.

For the purpose of describing the invention, the improved packing shown in Figs. 1 to 5 is assumed to have the form of a cube, but it may however have any other desired prismatic form.

The improved packing comprises two separate strips which are exactly similar to each other so that only one type of strip of determined dimensions has to be made, two such strips being sufficient to form the complete packing. This is an advantage compared with other boxes which require for their manufacture a number of differently shaped pieces. A further advantage of the improved packing consists in that the pieces required for its manufacture are of extremely simple shape when opened out flat as shown in Fig. 2, so that there is no waste in cutting the material. The two strips can be assembled together without the use of fasteners or paste by merely bending the strips along the lines indicated by the scores. Each strip when so bent constitutes one frame for the construction of the packing. As shown, each such frame is composed of three full sized panels *a*, *b*, *c*, and two half panels *d*, *d*. These two half panels *d*, *d* are joined respectively to the panels *a* and *c* (Fig. 2).

For the purpose of erecting the box, two frames are placed crosswise one inside the other in such a manner that the two half panels *d*, *d*, of the inner frame are covered by the middle panel *b* of the outer frame, (Fig. 3), the said two half panels *d*, *d* being bent inward toward each other with their inner edges abutting or nearly so.

It is to be noted that it is preferred to have the corrugations of the corrugated cardboard (when such is used) running in the direction of the length of the strips so that the edges showing the cross-sections of the corrugations come inside the erected packing. This arrangement has the advantage of preventing warm outside air

from entering the corrugations, because any openings that may occur between the frames at the edges of the box, can be closed by a label or labels pasted on the box. The improved box therefore cannot be opened without damaging a label or leaving other visible traces of having been opened.

Having now described my invention what I claim as new and desire to secure by Letters Patent is:—

10 A collapsible packing composed of two similar strips arranged crosswise to each other, wherein each strip comprises five connected panels situated in line with each
15 other, the two end panels being half panels,

and the remaining three panels being of full size, said strips being bent up to form inner and outer shells the abutting half panels of either shell being covered by the middle full size panel of the other, and a packing being held together solely by friction between the two co-acting strips and the packed goods. 20

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHANNES SURMANN.

Witnesses:

WILHELM STRASS,
JOHANN RICHTER.