Oct. 30, 1934. M. J. PARNIN 1,978,719

BOX PARTITION

Filed June 5, 1933

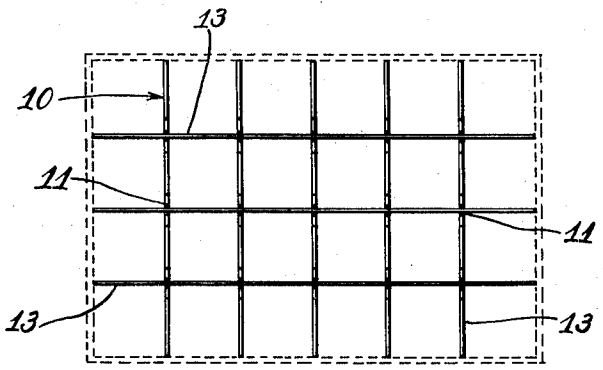


Fig. 1.

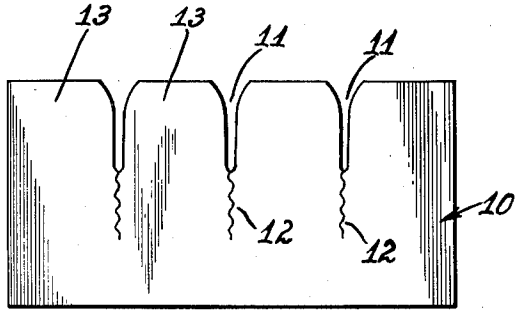
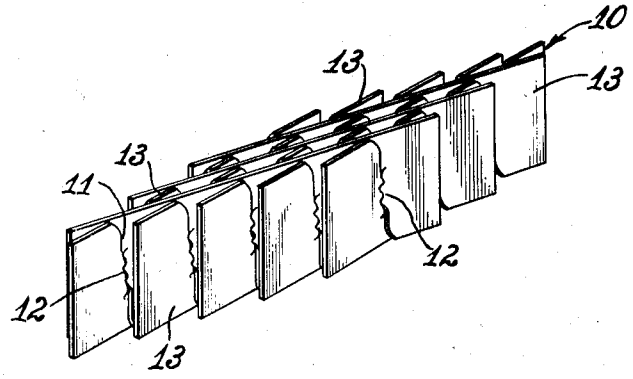


Fig. 2.

Fig. 3.



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UNITED STATES PATENT OFFICE

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BOX PARTITION

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8 Claims. (Cl. 217—32)

This invention relates to partitions of the folding or collapsible type adapted to be so set up and placed in a box as to form substantially rectangular cells or pockets for receiving fragile articles such as bottles.

One of the objects of this invention is to form a partition comprised of separate crossed strips which are adapted to be frictionally held in inter-engaged or assembled relation, and be capable of being collapsed in either direction from right angular relative positions.

Another object of this invention is to provide a partition of the character described, the strips of which will remain inter-engaged through all ordinary handling, and which when converted from flat or collapsed form to cell form, will present rectangular cells for the reception of fragile articles.

A further object of this invention is to provide a partition comprised of a plurality of strips which are so formed that where they engage each other they will be deformed and so interlock with each other that they will remain in assembled relation through all ordinary handling, without the use of separate interlocking portions, and yet will enable the partition to present rectangular cells for receiving articles and be capable of being folded in either direction from relative right angular positions.

To these and other ends the invention resides in certain improvements and combinations of parts, all as will be hereinafter more fully described, the novel features being pointed out at the end of the specification.

In the drawing:

Fig. 1 is a top plan or edge view of a plurality of assembled or interlocked strips constructed according to one embodiment of the invention, the assembled strips being opened as when in a box to provide rectangular receiving cells;

Fig. 2 is a plan view of one of the strips of which the partition is formed; and

Fig. 3 is a perspective view of a partially collapsed partition embodying the present invention.

Similar reference numerals throughout the several views indicate the same parts.

The present invention provides a partition for bottle boxes and the like which partition is so constructed that once it has been placed in assembled relation the separate strips thereof cannot be disengaged without the exertion of a considerable amount of force, this result is produced by forming sinuous slits in the strips whereby when the strips are engaged with each other in assembling the partition the portions of the strips adjacent the sinuous slits are deformed, and so interlocked with the portions of the engaging strips disposed at right angles thereto that the partition can be subjected to a great deal of rough treatment without becoming disengaged.

Referring more particularly to the drawing, the partition is in the present instance formed from a plurality of inter-engaging strips of fibre board such as shown at 10. One of the edges of each strip 10 is provided with a plurality of notches 11, 11 terminating in sinuous slits 12, 12 which, in the present instance, extend substantially beyond the mid-portion of the strip, leaving tongues 13, 13. The number of notches in each strip depends solely upon the number of cells which the partition is desired to contain.

In the handling of partitions of this type it has been found to be quite desirable to have a partition which is so constructed that it will at all times remain in assembled relation despite the fact that at times it may be subjected to forces tending to separate the strips from each other. It is also desirable to provide partitions which when assembled present aligned rectangular cells for the reception of the articles to be placed therewithin, and which are adapted to be folded in either direction from their relative right angular positions.

The portions of the strips 10 adjacent the sinuous slits 12, 12 tend to be deformed when said strips are crossed with each other in assembled relation so that they engage and interlock with similar deformable portions on the oppositely disposed strips. Due to this deformation of the portions adjacent the slits there will be no tendency for the tongues 13 to be forced out of the plane of the strip. It has been found, where a straight slit is provided in strips of this type, rather than the sinuous slits 12, 12, that the portions of the board adjacent such straight slits are not readily deformable when the strips are inter-engaged with each other, and that while the strips are frictionally held together to a certain extent they do not form true rectangular cells but rather form cells of more or less uneven shape, due to the fact that the tongues on the strips are forced out of the plane of their respective strips. A further undesirable feature of a partition in which the tongues are so forced out of alignment is that it will collapse only in one direction, and thereby necessarily hinders handling to a certain extent.

In assembling the partition of the present invention the strips are preferably first loosely crossed with each other, and are then forced to-

gether into complete assembled condition as shown in Fig. 3, whereby the portions of the strips adjacent the sinuous slits are deformed and the strips are securely locked together.

In the preferred embodiment of the invention in which the sinuous slits extend beyond the mid-portion of the strips, the strips are held in engagement with each other solely by means of the frictionally interlocking contact between the deformed portions adjacent the sinuous slits, as shown in Fig. 3.

If desired, however, the sinuous slits can be formed to extend only to the mid-portions of the strips, in which case the said deformed portions would engage uncut portions of the strips; or if desired, the strips extending in one direction may be provided with sinuous slits extending beyond their mid-portions and the strips extending in the opposite direction may be provided with slits which terminate short of their mid-portions in proportion to the amount that the other slits extend beyond.

It is apparent therefore that there has been provided a partition for boxes which is adapted to be easily and efficiently assembled; which when once assembled will remain in such condition at all times and present rectangular cells for receiving articles, and yet be capable of being readily collapsed in either direction.

While the present description sets forth a preferred embodiment of the invention, certain changes may be made in the construction without departing from the spirit of the invention, and it is therefore desired that the present embodiment be considered in all respects as illustrative and not restrictive, reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

I claim:

1. Box partitioning comprising two sets of crossed plane strips having notches formed along one edge surface thereof and terminating in sinuous slits extending at least to the mid-portions of said strips, portions of said strips adjacent said sinuous slits being capable of deformation whereby, when said strips are in crossed relation, deformed portions on one set of strips will engage deformed portions on the other set of strips and hold said strips in assembled relation.

2. A box partition of the character described, comprising a plurality of flat plane strips adapted to be crossed with each other to form a plurality of rectangular cells, said strips each being formed with notches along one edge thereof, said notches terminating in sinuous slits extending substantially beyond the mid-portions of said strips, said sinuous slits being formed without the removal of material, the portions of said strips adjacent said sinuous slits being capable of deformation whereby when said strips are crossed with each other said deformable portions will engage each other and serve to frictionally hold said strips in crossed relation.

3. Box partitioning comprising two sets of interlocking plane strips, each set of strips having formed along one edge thereof a plurality of notches terminating in sinuous slits which are formed without the removal of material, portions of said strips adjacent said sinuous slits being capable of deformation when said sets of strips are interlocked with each other, deformed portions on one set of strips engaging with similarly deformed portions on the other set, whereby said strips will be securely held in interlocking relation with each other.

4. A box partition comprising a plurality of plane strips, said strips each having formed along one edge thereof a plurality of notches terminating in sinuous slits which are formed without the removal of material, said strips adapted to be crossed with each other to form a plurality of rectangular cells, portions of said strips adjacent said sinuous slits being deformed when said strips are crossed with each other, the deformed portions on one strip interlocking with the similarly deformed portions on an engaging strip, whereby said strips will be frictionally held in crossed relation with each other.

5. A partition element, adapted to be interlocked with other similar partition elements, comprising a plane strip, a plurality of notches formed along one edge of said strip and terminating in sinuous slits, said sinuous slits being formed without the removal of material, portions of said partition element adjacent the sinuous slits being capable of deformation when similar partition elements are interlocked therewith, the deformed portions of said partition element being disposed out of the plane of said partition element and engaging similar deformed portions on said other interlocking partition elements, whereby all of said partition elements are securely held in interlocking relation with each other.

6. A box partition comprising two sets of plane strips, adapted to be interlocked with each other, means for holding said sets of strips in interlocking engagement, said means comprising sinuous slits formed in said strips without the removal of material, portions of said strips adjacent said sinuous slits being deformed and forced out of the plane of their respective strips when one set of strips is interlocked with the other set, said deformed portions on one set of strips interlocking with deformed portions on the other set whereby said strips are securely held in interlocking relation with each other.

7. In a box partition of the character described, crossed sets of plane strips, said strips being formed with notches along one edge thereof, said notches terminating in sinuous slits extending substantially beyond the mid-portions of said strips, said sinuous slits being of such a character that the material of the strips adjacent thereto is deformed when the strips are in assembled relation, whereby said deformed portions on one set of strips will engage deformed portions on the other set of strips and hold said strips in assembled relation.

8. In a box partition of the character described, crossed sets of plane strips, said strips being formed with notches along one edge thereof, said notches terminating in sinuous slits, said sinuous slits being of such a character that the material of the strips adjacent thereto is deformed when the strips are in assembled relation, whereby said deformed portions on one set of strips will engage deformed portions on the other set of strips and hold said strips in assembled relation.

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