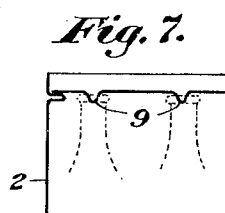
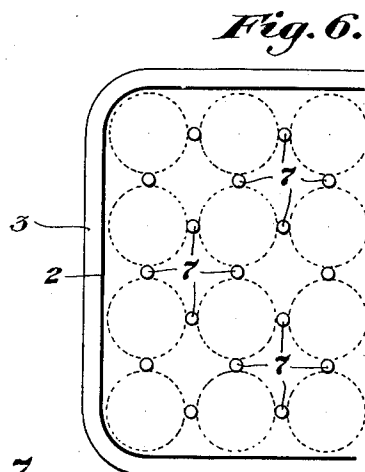
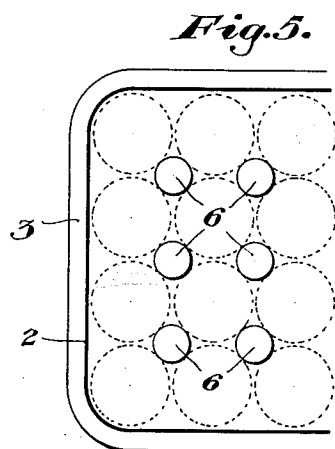
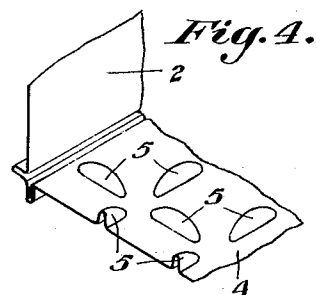
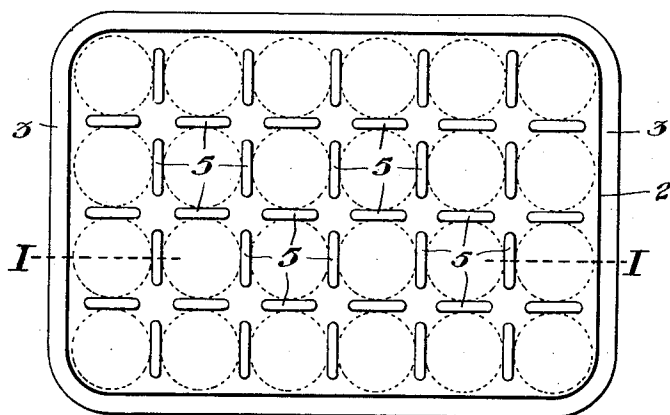
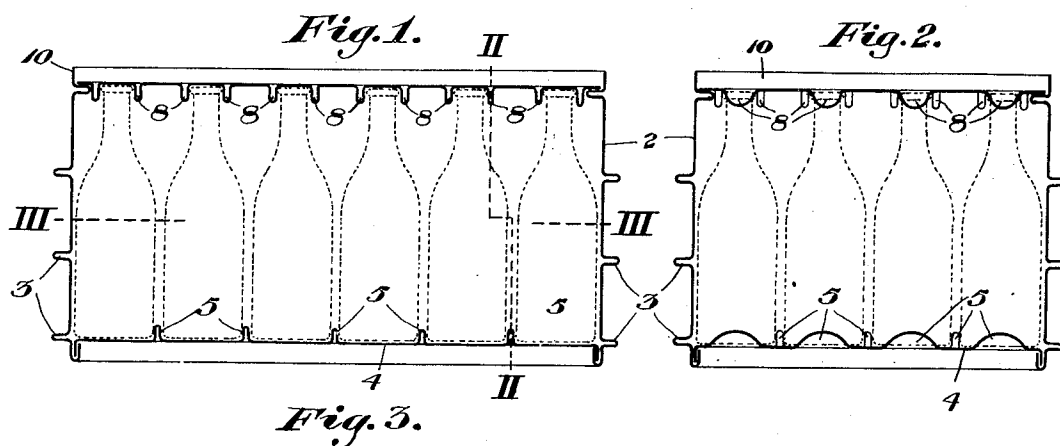


No. 820,445.

PATENTED MAY 15, 1906.

A. R. SPEER.
PACKING CASE.

APPLICATION FILED MAR. 28, 1905.



Witnesses:

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UNITED STATES PATENT OFFICE.

ARTHUR R. SPEER, OF PITTSBURG, PENNSYLVANIA.

PACKING-CASE.

No. 820,445.

Specification of Letters Patent.

Patented May 15, 1906.

Application filed March 28, 1905. Serial No. 252,446.

To all whom it may concern:

Be it known that I, ARTHUR R. SPEER, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Packing-Cases, of which the following is a specification, reference being had therein to the accompanying drawings, forming part of the specification, in which—

Figure 1 is a vertical longitudinal section through my improved bottle-case on the line I I of Fig. 3. Fig. 2 is a similar cross-sectional view on the line II II of Fig. 1. Fig. 3 is a horizontal sectional view on the line III III of Fig. 1, showing the retaining devices incorporated with the bottom of the case. Fig. 4 is a perspective view of a portion of the case, showing the bottom construction. Figs. 5 and 6 are partial similar views showing modified constructions. Fig. 7 is a sectional detail view showing a modified arrangement of the securing projections for the top or neck of the bottle.

My invention refers to improvements in packing boxes and cases for bottles; and it has for its object to provide a case in which the bottles may be compactly packed for shipment or storage, whereby each bottle is securely held within the case independent of the others. The entire case is preferably made of thin sheet metal consisting of a bottom, sides, and ends connected together and constructed in any suitable or preferred manner so as to provide strength, the corners being preferably rounded, as clearly shown in Figs. 3, 5, and 6.

The particular object of the invention is to provide a case in which the tops and bottoms of the bottles may be engaged by surrounding retaining abutments or ridges adapted to engage the peripheral edges of the base and top of the bottles so as to securely hold them against lateral movement or displacement and also to provide a construction having the necessary cheapness, strength, and lightness adapted for the purpose of storing or shipping bottles compactly and with safe protection.

Referring now to the drawings, 2 represents the sides and ends of the case, which may be made of one continuous sheet of metal bent into rectangular form and provided, if desired, with reinforced surrounding ribs 3, although these parts may be made plain, if preferred.

4 is the bottom, incorporated with the sides and ends in any suitable manner, as by the construction shown in Figs. 1 and 2, the bottom having a series of upwardly-projecting ribs or abutments 5 formed by pressing the metal in a suitable die, which abutments or ridges are so arranged as to engage the bottoms of the bottles when set into the case, as indicated in the dotted lines in the drawings. It is obvious that various forms may be given to these ridges and that they may be conveniently made, as shown in the principal figures of the drawings, constituting short upwardly-extending arched ridges tapering down toward each end, adapted to embrace the opposite sides of the bottles lengthwise and crosswise of the case, each ridge being thus located between any two adjacent bottles. The guiding-abutments may, however, be made in the form of circular projections, adapted to project upwardly between four adjacent bottles, as shown in Fig. 5, in which case the abutments are of sufficient diameter to fully occupy the intervening space and engage the edges of four of the bottles at each equidistant point. The projections may also be made of much less size, as shown at 7 in Fig. 6, adapted to merely enter upwardly between the adjacent edges of the bottles, as already described and shown in Fig. 3, the abutments performing, essentially, the same separating function.

It is obvious that other forms or arrangements of the bottoms may be provided, and in each case they are formed, preferably, by forcing the metal upwardly through the bottom, so as to provide sufficient height to insure good engagement with the bottles.

The top of the case is provided in the same manner with downwardly-projecting lugs, abutments, or ridges 8, as clearly shown in Figs. 1 and 2, adapted to embrace the upper ends or necks of the bottles, and these portions are so located as to correspond with the diminished diameter of the neck of each bottle and are therefore located out of alignment with the abutments or ridges of the bottom.

In Fig. 7 I have shown a modified construction wherein a single projection 9 is provided for each bottle adapted to extend downwardly, engaging the neck-opening in the same manner as set forth in my companion application filed herewith, bearing the Serial No. 252,445. The lid may be of any suitable construction or form and may be secured to the case in any suitable manner, as by bend-

ing over the top flanges 10 of the sides and ends as described in the above-referred to application.

When filled with bottles and the lid is located in position as just described, the bottles will be securely held against movement in any direction and independent of contact with each other. The case may be stored, shipped, or handled without danger of breakage, while the lid may be readily removed by merely bending up the flanges 10 or otherwise, according to the securing means employed, and, if desired, the case may be used several times.

The advantages of my invention will be appreciated by all users of bottle packing or shipping cases, and it insures safe, economical handling, while utilizing the greatest proportion of the interior space, and also facilitates the filling operation, while being easily cleaned and kept in order.

Changes and variations may be made by the skilled mechanic in the various details of construction or other features of the invention—as, for instance, it may be made of other material than metal and provided with separately-attached or otherwise constructed ridges or abutments; but all such changes are to be considered as within the scope of the following claims.

What I claim is—

1. A bottle-case composed of sheet metal and provided with upwardly-pressed holding projections in its bottom portion arranged to intervene between adjacent bottles and to provide limiting lateral bearings therefor at various points surrounding the bottle-base, and corresponding downwardly-pressed holding portions in the top portion of the case, substantially as set forth.

2. A bottle-case provided on its bottom with a plurality of integral longitudinally and transversely arranged upwardly-projecting portions adapted to embrace the base of the

bottle, and provided with a lid having corresponding neck-embracing projections, substantially as set forth.

3. A bottle-case composed of sheet metal and provided with upwardly-pressed holding projections in its bottom portion arranged to intervene between the bottles lengthwise and crosswise of the case, and corresponding downwardly-pressed holding portions in its top portion, substantially as set forth.

4. A sheet-metal bottle-case having series of inwardly-pressed projecting ridges adapted to intervene between adjacent bottles lengthwise and crosswise of the case and to hold them against movement, with a top having similarly-arranged projections, substantially as set forth.

5. A bottle-case composed of sheet metal and provided in its bottom with a plurality of upwardly-pressed projections arranged to intervene between the bottles both longitudinally and transversely of the case, substantially as set forth.

6. A bottle-case composed of sheet metal and provided in its bottom with a plurality of upwardly-pressed projections arranged to intervene between the bottles, said projections being arranged in rows at right angles to each other, substantially as set forth.

7. A bottle-case composed of sheet metal and provided in its bottom with a plurality of upwardly-pressed projections arranged to intervene between the bottles, said projections being arranged in rows at right angles to each other, with a top having a plurality of downwardly-pressed holding projections, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ARTHUR R. SPEER.

Witnesses:

CHAS. S. LEPLEY,
C. M. CLARKE.