

H. F. STOCK.
SHEET METAL BOTTLE CASE.
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Patented Dec. 29, 1908.

907,912.

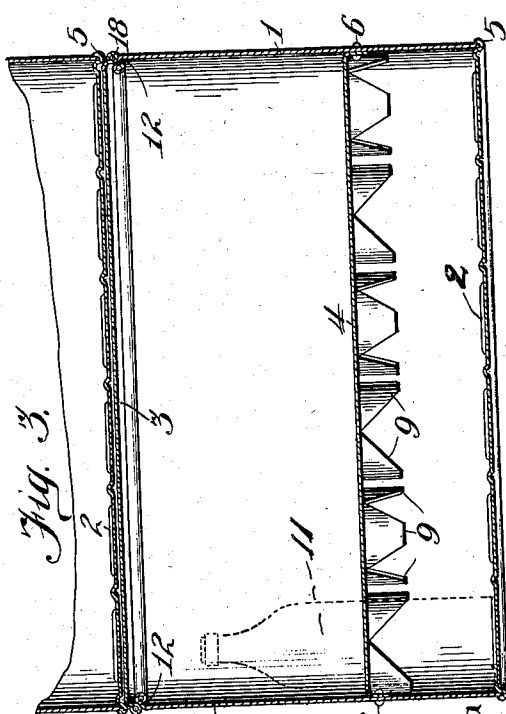


Fig. 3.

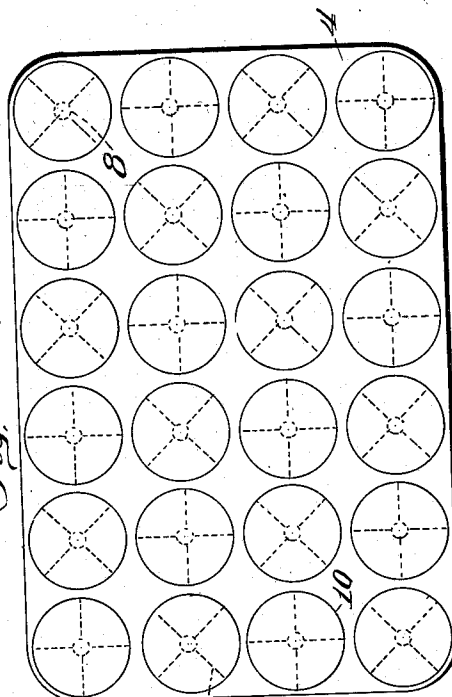


Fig. 4.

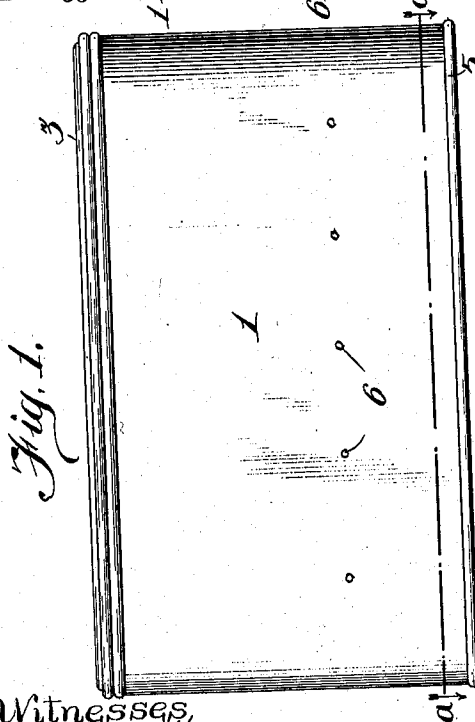


Fig. 1.

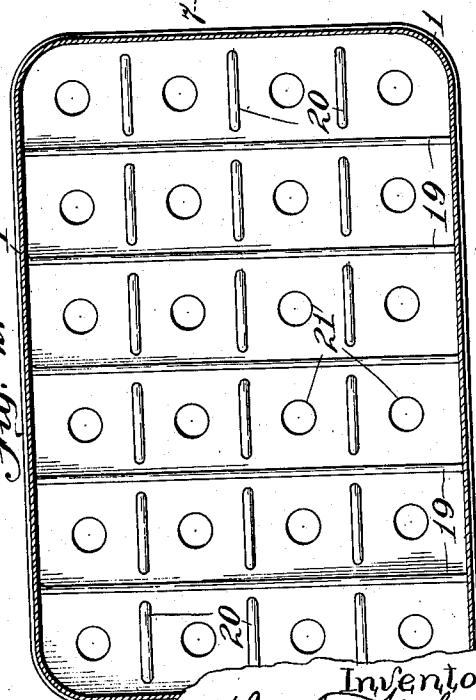


Fig. 2.

Witnesses,
Milton Senoir
Emilie Rose.

Inventor,
H. F. Stock,
By Alfred N. Craver,
Attorney.

UNITED STATES PATENT OFFICE.

HENRY F. STOCK, OF WAUKESHA, WISCONSIN.

SHEET-METAL BOTTLE-CASE.

No. 907,912.

Specification of Letters Patent.

Patented Dec. 29, 1908.

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To all whom it may concern:

Be it known that I, HENRY F. STOCK, a citizen of the United States, residing at Waukesha, in the county of Waukesha and State of Wisconsin, have invented certain new and useful Improvements in Sheet-Metal Bottle-Cases, of which the following is a specification.

My invention relates to improvements in bottle cases or crates and has special reference to improvements in that class of bottle cases which are employed in the distribution or delivery of bottled beverages.

The general object of the invention is to provide a bottle case that may be manufactured at low cost and that shall be light, strong and durable.

The special object of my invention is to provide metallic bottle cases of the kind hereinafter described which shall have a maximum bottle holding capacity in proportion to their size and strength.

My improved bottle case in its preferred form is constructed entirely of sheet metal and is characterized by a horizontally disposed sheet-metal diaphragm provided with a large number of integral bottle sockets or holders, each of which is provided with a plurality of sector shaped tongues.

Further my invention consists in certain details of construction, as hereinafter described, and pointed out in the appended claims.

My invention will be more readily understood by reference to the accompanying drawings, which form a part of this application and in which—

Figure 1 is an elevational view of the bottle case embodying my invention; Fig. 2 is a horizontal sectional view taken on lines, *a—**a* of Fig. 1; and looking in the direction of the arrows; Fig. 3 is a vertical sectional view of the case, showing the bottom of another case resting thereon. Fig. 4 is a plan view of the diaphragm, showing in dotted lines the appearance and arrangement of the tongue-forming incisions before the tongues have been struck down.

In the manufacture of this bottle case I prefer to form the sides and ends, 1, of two sections of sheet metal, the ends of which are joined in any suitable manner. The corners of the case are preferably rounded, as shown. The other principal members of the case are the bottom 2, the top or cover 3, and the horizontal intermediate plate or diaphragm, 4.

The bottom 2 is secured to the sides and ends 1 by a heavy rolled joint 5, which is depressed below the plane of the bottom. The details of construction of the bottom and the top of the case are hereinafter described.

The diaphragm plate, 4, is secured to the sides or ends, 1, at a suitable height from the bottom of the case, by means of rivets 6 or in any preferred manner.

The diaphragm is provided with integral bottle-holding devices which are formed, preferably, as follows: A set of incisions 7, arranged radially with respect to a central point or opening 8, are cut through the diaphragm. Preferably these incisions are four in number. The incisions 7 of the next adjacent set, are arranged at angles of 45 degrees with those of the first-named and all contiguous sets, and in like manner the whole number of sets of incisions are arranged, so that the four incisions of any one set will form angles with the four incisions of the adjacent sets. Thus the incisions will appear substantially as shown by dotted lines in Fig. 4 of the drawings.

The object and advantage of this arrangement of the cuts, is that the sets of incisions may thus be made quite close together, without unduly weakening the material; the practical and important advantage of this construction resides in the enlarged capacity of the case with respect to the number of bottles it will carry, while not requiring any enlargement of the diaphragm plate. In other words, the maximum capacity permitted by the construction of the bottle holders is obtained, and at the same time a durable construction secured.

If the case is being made for holding round bottles, the sector-shaped tongues 9, formed by the radial incisions 7, are next acted upon by a plurality of cylindrical dies which strike down said tongues and force them to bend upon curved lines 10 instead of upon straight lines. The result of this operation is that the tongues 9 are curved like the surface of a vertical cylinder and are left standing at vertical angles to the plane of the diaphragm, while circular openings of proper size to receive the bottles 11 are formed in the plates 4. It will be noted that the tongues of each set are so disposed as to bisect the angle formed by the adjoining tongues of adjacent sets. The bottles when lowered through said openings will be held in upright position by the tongues 9, which,

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though slightly resilient, are amply strong for the purpose, owing to their curved cross-sectional shape.

The upper edge of the body of the case is preferably inset, as shown at 12, in order to provide a shoulder for the reception of the bottom flanges of a similar case. The said upper edge is rolled around a wire in a well known manner.

10 The lid or cover 3 may be hinged to the top and locked in any suitable manner forming no part of the present invention. It will be noted, however, that the lid or cover is provided with a downwardly turned rolled edge 18 which may contain a stiffening wire. 15 When one case is placed upon another, in a wagon or elsewhere, the depressed rolled edge 5 of the bottom of the upper case will rest upon the depressed rolled edge 18 of the cover of the lower case, and thus the upper case will be held in position and will in like manner hold another case upon itself.

The bottom of the case I prefer to form with transverse, continuous, raised ribs or beads 19, and with interrupted longitudinally extending raised ribs 20, or vice versa; the ribs of one set being arranged to extend at right angles to those of the other set. These ribs form retainers for the bottoms of the 30 bottles (not shown), preventing contact between the bottles and also materially stiffening the bottom of the case.

The perforations 21, in the bottom of the case, permit circulation of air around the bottles and also facilitate the washing out of the case. The air circulation prevents the usual condensation of water upon and rusting of the bottom plate, and especially prevents rust stains on the bottoms of the bottles.

40 While I have herein shown a preferred embodiment of my invention it is, of course apparent that it is not limited to details of construction except as set forth in the claims.

I claim as my invention:

45 1. In a bottle case having sides and ends,

the combination with a horizontal sheet metal plate, said plate being provided with rows of bottle holding openings, a set of four curved downwardly extending sector-shaped tongues surrounding each of said openings, 50 the tongues of each set being disposed so as to bisect the angle formed by the adjoining tongues of adjacent sets, and a plurality of bottle holding compartments in the bottom of said case formed by two sets of spaced 55 apart parallel ribs, the ribs of one set extending at right angles to those of the other set, said bottom plate being also provided with a plurality of apertures therethrough, there being one aperture for each compartment. 60

2. In a bottle case having sides and ends, the combination with a horizontally shaped metal plate supported above the bottom of said case and rigidly connected to the sides thereof, said plate being provided with rows 65 of bottle holding openings, a set of four curved downwardly extending sector-shaped tongues surrounding each of said openings, the tongues of each set being disposed so as to bisect the angle formed by the two adjoining tongues of adjacent sets, and bottle holding compartments formed in the bottom of said case. 70

3. In a bottle case having sides and ends, the combination with a horizontally shaped 75 metal plate supported above the bottom of said case and rigidly connected to the sides thereof, said plate being provided with rows of bottle holding openings, a set of four inwardly curved downwardly extending sector-shaped tongues surrounding each of said openings, the tongues of each set being disposed so as to bisect the angle formed by the two adjoining tongues of adjacent sets. 80

In testimony whereof I hereunto affix my signature. 85

HENRY F. STOCK.

Witnesses:

W. E. LADEWIG,
ARTHUR J. MINZ.