

March 5, 1946.

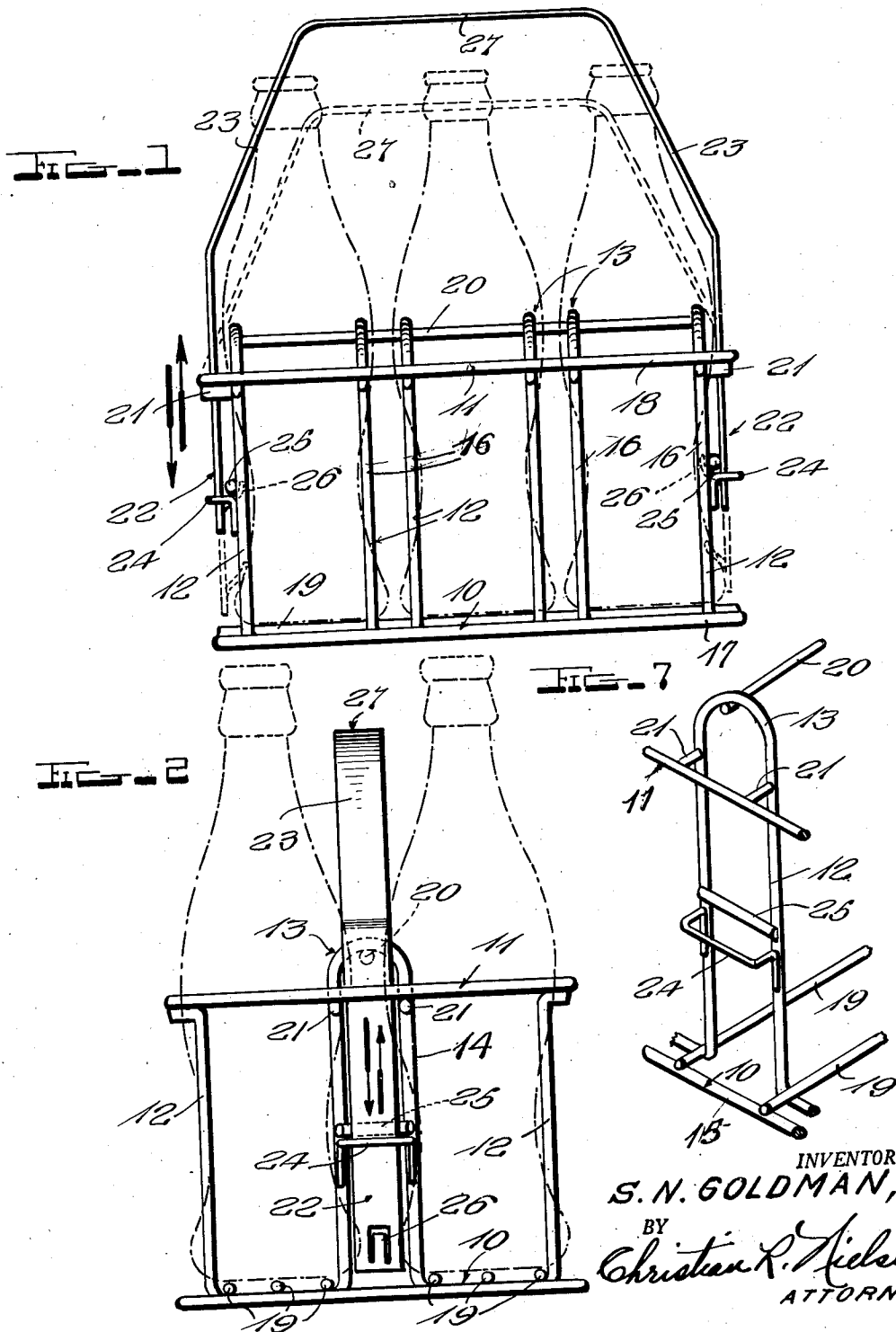
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2,396,003

BOTTLE CARRIER

Filed Sept. 22, 1944

2 Sheets-Sheet 1



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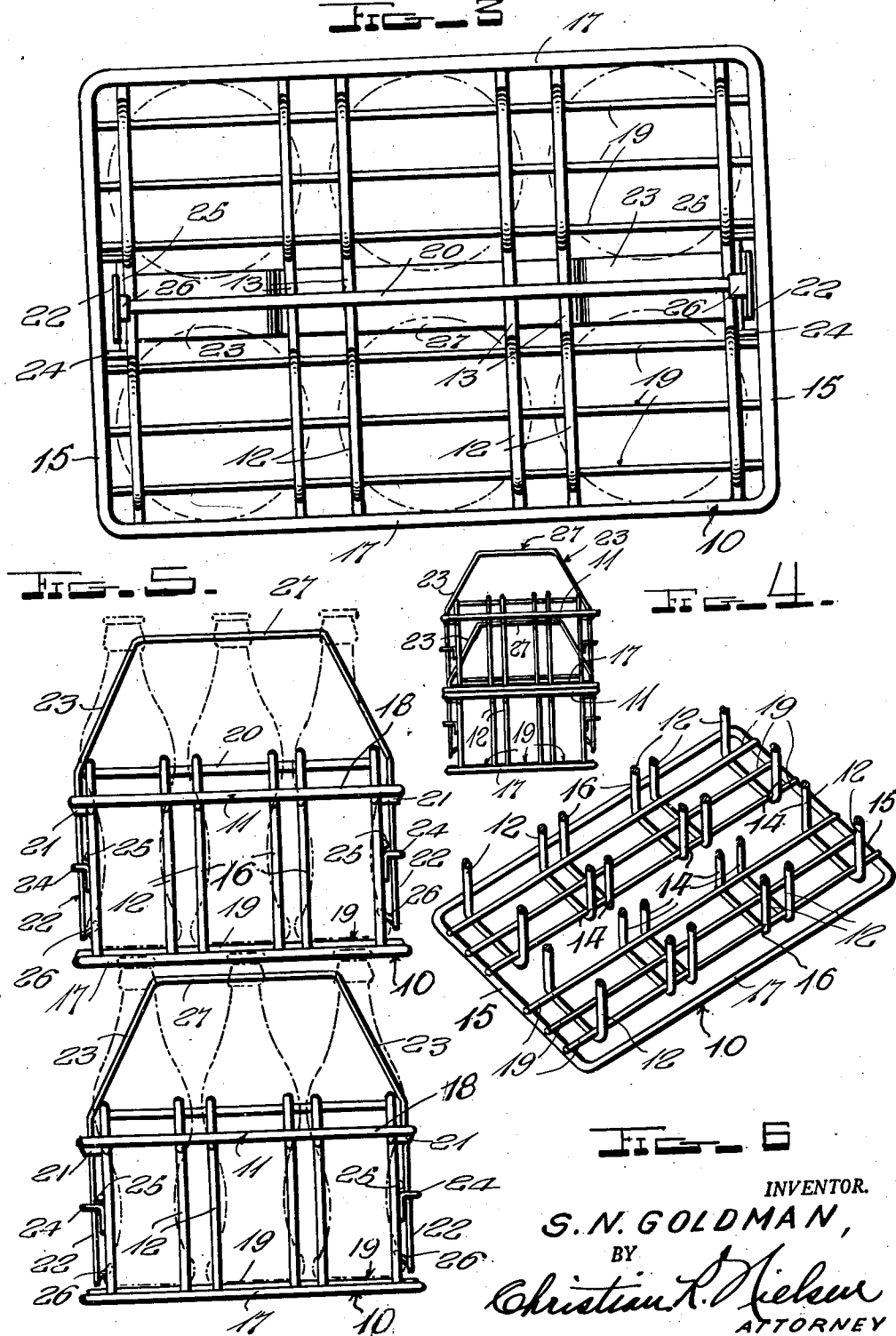
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BOTTLE CARRIER

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4 Claims. (Cl. 224-48)

The invention relates to devices for carrying bottles such as milk bottles, soft-drink bottles, and the like, and has for an object to present a carrier which is especially adapted to heavy use in delivery trucks, so that a multiplicity of carriers may be stacked, one over the other, so that the top carrier will rest upon the tops of the bottles in the next below, and so that when being carried, the handles will extend conveniently above the tops of the bottles, yet when stacked will be out of the way.

It is a cardinal object of the invention to provide a bottle carrier in which each carrier is constructed with a medial, longitudinally and vertically extending space or compartment adapted to receive the carrying handle of a carrier when the carriers are arranged in superposed nested relation, thereby insuring stability to a tier of the carriers so nested as well as to conserve space during transportation or storage.

An especially important aim of the invention is to present a construction in wire of a holder which will space the bottles safely out of contact with each other in a novel way, which will be liable in a minimum degree to accumulation of dirt and trash, which may be readily cleaned, and which may be produced at low cost by simple operations from stock materials.

A further important aim of the invention is to present a novel construction of a bail handle and the manner of its connection with a basket structure for carrying a multiplicity of bottles.

A further important aim is to present a construction of this kind which is especially adapted to be secured in assembled condition by stock welding.

Additional objects, advantages and features of invention reside in the construction, arrangement and combination of parts involved in the embodiment of the invention, as will be more readily understood from the following description and accompanying drawings, wherein:

Figure 1 is a side elevation of a carrier for carrying six bottles, constructed in accordance with my invention, the handle being shown in raised position and its lower position being dotted.

Figure 2 is an end view of the carrier.

Figure 3 is a bottom view thereof.

Figure 4 is a side elevation of a pair of nested carriers.

Figure 5 is a side elevation illustrating a manner of stacking the carrier.

Figure 6 is a fragmentary perspective view of the bottom of the carrier.

Figure 7 is a fragmentary perspective view of a portion of an end of the carrier.

Referring more particularly to the drawings, there is shown a carrier adapted for the carrying of six bottles, although it may be made in larger sizes for carrying a greater number if desired, and preferably is increased in length for carrying additional bottles, without being increased in width, the basket being designed to carry two rows of bottles in the present instance, three on each side.

The carrier comprises two rectangular frames of heavy wire, 10 and 11, at the bottom and the top of the carrier, both of the same size and vertically aligned with each other. These are connected by six cross wires 12, and as shown, each of these wires is bent at its middle to form a bight 13, the wires extending nearly vertical in parallel for a distance slightly greater than the width of the body of the bottles to be carried, the end portions being bent outwardly approximately at right angles, to extent in a horizontal line, and at a distance from the last mentioned bend, substantially less than the diameter of the body of the carrier, they are bent upwardly at right angles to extend vertically a distance inwardly of the longitudinal or side bars 17 of the bottom frame. At their upper ends they are turned outwardly at right angles, beneath the side bar 18 of the top frame 11 and securely welded thereto, being cut off diagonally, so that the end portions are inclined inwardly toward their lower cut-off parts, thus avoiding projections that would tend to hook into articles and cause interference with portage or handling generally, as well as avoiding damage to other articles. Each of the cross wires is formed in identically the same form, and they are arranged in the carrier in pairs, constituting cross members, the cross members in each pair being spaced apart less than the diameter of the body portion of the bottles to be carried. This spacing may be slightly more than the spacing between the inner vertical bars 14 and the outer vertical bars 16. In each pair at each side of the carrier, there are thus formed four vertical bars, so arranged that when a bottle is set between the four the bottle will be loosely engaged by all four with arcuate portions of the bottle extending out between the two bars at each of the four sides of the individual receptacle thus provided. It should be noted that the size of the top and bottom frames 11 and 10 is such that the longitudinal bars of these frames lie outwardly of the arcuate portions of the bottles which extend

through the two vertical outer bars of each of these receptacles, as may be seen in the bottom view. A plurality of longitudinal bottom bars 19 are laid across the bottom cross bars 15 of all of the cross members 12 at each side of the carrier, these longitudinal bottom bars 19 being preferably of somewhat lighter gauge wire than the cross members as described.

It should be noted that the pairs of bars 12 are spaced sufficiently to prevent bottles in longitudinal adjacent receptacles at each side of the carrier coming into contact, the bottles engaging against the two vertical bars so that they do not project between these far enough to contact the projecting portion of the bottle in the next receptacle.

It will also be noted that the end cross members 12 at each end of the carrier are spaced inwardly of the end bars of the bottom and top frames 10 and 11, and that the longitudinal bottom bars 19 are extended sufficiently beyond the outermost cross members at each end to rest upon the cross bars 15 at the ends of the bottom frame 10, to which they are securely welded, as well as being welded to the bottom cross bars of the cross members. A single, heavy longitudinal central top bar 20 is laid under the bight 13 of all of the cross members, and securely welded thereto, stopping short at the end at the endmost cross members 12, and all of these bights, of uniform height, are extended a distance above the top frame 11 of the basket or carrier. The cross members of the top frame at each end of the carrier are connected to the adjacent vertical bars 14 of the endmost cross members by means of short connectors 21. In the space between the short connectors 21, vertical end portions 22 of a bail handle 23 are vertically slidable, these vertical ends of the bail being approximately of the same height as the spacing between the bottom and top frames 10 and 11, and the bail is bent diagonally inward, so as to rest upon the bight 13 of the endmost cross members when the bail is at the lower limit of its movement.

Midway of the height of the carrier, a guide loop 24 is connected between the inner vertical bars 14 offset outwardly, so as to engage outwardly of the bail end against the outer sides of the vertical end bars 12, a heavy horizontal cross bar 25 is welded, the guide loop having its central portion spaced outwardly of this bar sufficiently to permit the bail end 22 to move freely in vertical reciprocation therebetween. A heavy hook tongue or lug 26 is bent inwardly from the extreme lower end portion of the bail end 22, and arranged so as to engage under the bar 25 when the bail is raised, and limits the upward movement of the bail. With this construction at both ends of the carrier, the carrier and its contents may readily be lifted by raising the same until the lugs 26 engage the cross bars 25. When so lifted, the bars 25 being spaced some distance below the short connectors 21, the weight of the carrier is carried upon the lugs 26 and cross bars 25, while the short connectors 21 prevent the bail from moving laterally or the carrier from tilting with respect to the bail. Likewise, the guide loops and short connectors serve to hold the ends 22 of the bail in vertical position, so that the bail always remains erect and with ample clearance between the adjacent rows of bottles.

The diagonal portions 23 of the bail are connected by a horizontal handle portion 27.

By reason of the closer spacing of the inner vertical bars 14 and outer vertical bars 16, a projection of the arcuate surfaces of the bottles therebetween is less than is permitted between the two outer vertical bars of each pair of cross members, so that the liability of contact between mutually adjacent bottles in the carrier is well safeguarded against. At the same time, safety against contact between bottles in adjacent baskets is provided, since the bottom and top frames extend beyond the vertical planes of the outermost vertical bars 16.

As may be seen in Figure 4, empty carriers may be nested in vertical tiered formation, one above the other. The handle 27 of the lower carrier is accommodated within the opening defined by the bight 13 of the cross members 12, and in this position, the bottom frame 10 of the uppermost carrier will come to rest upon the upper frame of the lowermost carrier. With the carriers thus interlocked, or nested, considerable space is conserved and the carriers are maintained against accidental displacement.

With the further reference to the bail, it will be noted that the lower end of the bail is prevented from passing through the bottom of the basket so as to interfere with other baskets beneath, or surfaces upon which the device may be set if the bail may be lowered sufficiently to permit flat bottom boxes or other baskets of similar contents set upon the tops of bottles in the basket. By reason of the resilience of the wire as used in such constructions, rapid rough handling of fitted bottles is made possible with a minimum liability of damage to the bottles, either by the structural parts of the basket or by contact between the adjacent bottles in the basket, or mutually adjacent bottles in separate baskets.

While I have disclosed the invention with great particularity, it will nevertheless be understood that this is purely exemplary, and that various modifications in construction, arrangement and combination of parts, substitution of materials, and substitution of equivalents, may be made without avoiding the spirit of the invention, as more particularly set forth in the appended claims.

I claim:

1. A carrier for bottles circular in section comprising two rectangular horizontal frames vertically aligned, a plurality of cross members each consisting of inverted U-shaped central parts constituting two vertical arms, each end being bent outwardly and then upward to form two bottom bars and outer vertical bars parallel to said arms, said arms and bars being laid in a common vertical plane in each cross member, the outer bars of all said cross members being fixed to each of said frames, said cross members being arranged in pairs, the cross members of each pair being spaced less than the diameter of the bottles to be carried, whereby the bottom of the bottles may set upon the bottom bars and be retained between the said arms and vertical bars, a central longitudinal member connected to said cross members and a bail connected to the endmost cross members.

2. The structure of claim 1 in which the ends of the upper frame are spaced outwardly of the respective outermost cross members, respective connecting members between the arms of the cross members thereadjacent and the end members of said upper frame, said bail having respective arms vertically slidable between

said connecting members, and movable to near the bottom of the carrier, and means to limit upward movement of the bail arms relative to said frame and cross members.

3. The structure of claim 1, in which the ends 5 of the upper frame are spaced outwardly of the respective outermost cross members, respective connecting members between the arms of the cross members thereadjacent and the end members of said upper frame, said bail 10 having respective arms vertically slidable between said connecting members, and movable to near the bottom of the carrier, and means to limit upward movement of the bail arms relative to the said frame and cross members, consisting of a bar connected midheight between 15 the said arms of each outermost cross member, and an inwardly projected lug on each arm of the bail arranged to engage under the adjacent bar last named.

4. The structure of claim 1 in which the ends of the upper frame are spaced outwardly of the respective outermost cross members, respective connecting members between the arms of the cross members thereadjacent and the end members of said upper frame, said bail having respective arms vertically slidable between said connecting members, and movable to near the bottom of the carrier, and means to limit upward movement of the bail arms relative to the said frame and cross members, consisting of a bar connected mid-height between the said arms of each outermost cross member, an inwardly projected lug on each arm of the bail arranged to engage under the adjacent bar last named, said lugs being projected inwardly between said arms of the respective adjacent cross members, whereby to move slidingly between said arms as guides and retain the bail erect.

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