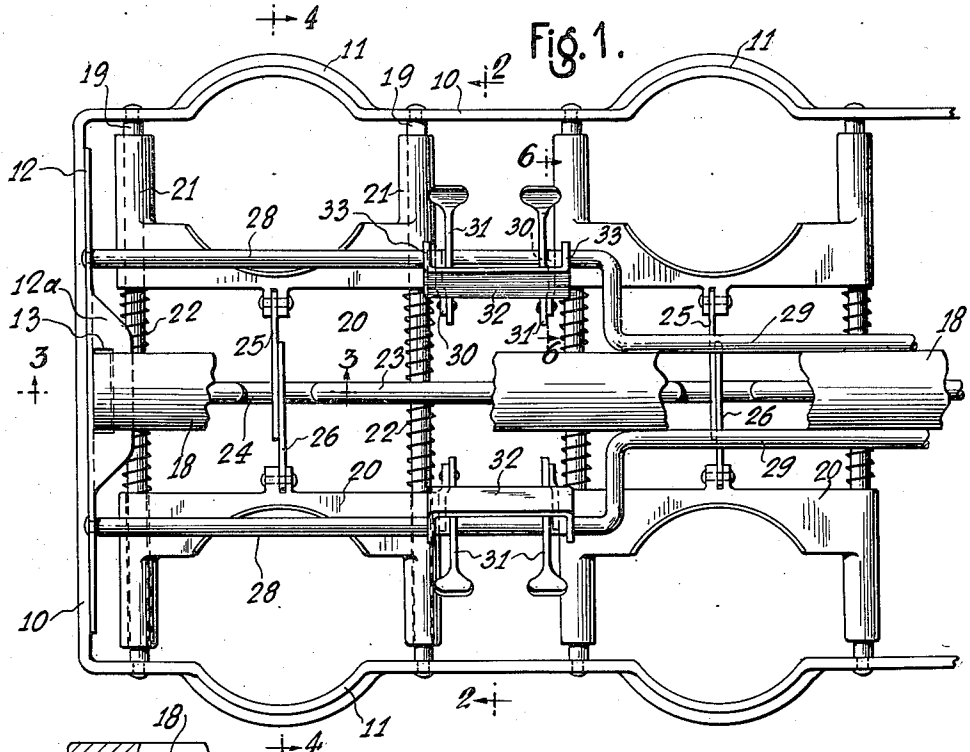
Sept. 1, 1936. H. A. ELLIOTT 2,052,756

BOTTLE CARRIER

Filed July 10, 1935 2 Sheets-Sheet 1

Fig. 1.



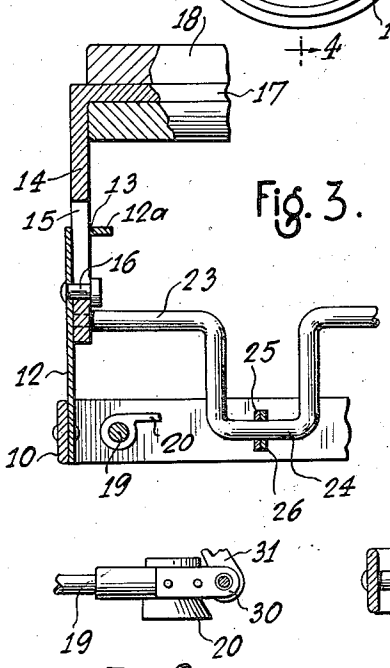
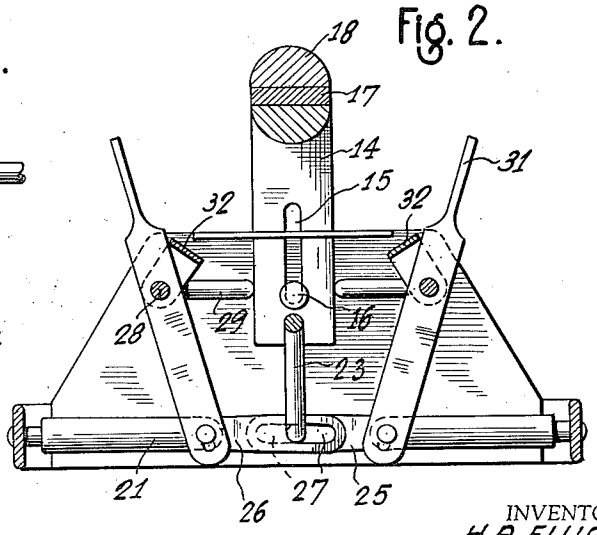


Fig. 3.

Fig. 6.

Fig. 2.



INVENTOR.
H. A. ELLIOTT.

BY

ATTORNEY.

Sept. 1, 1936. H. A. ELLIOTT 2,052,756

BOTTLE CARRIER

Filed July 10, 1935 2 Sheets-Sheet 2

Fig. 4.

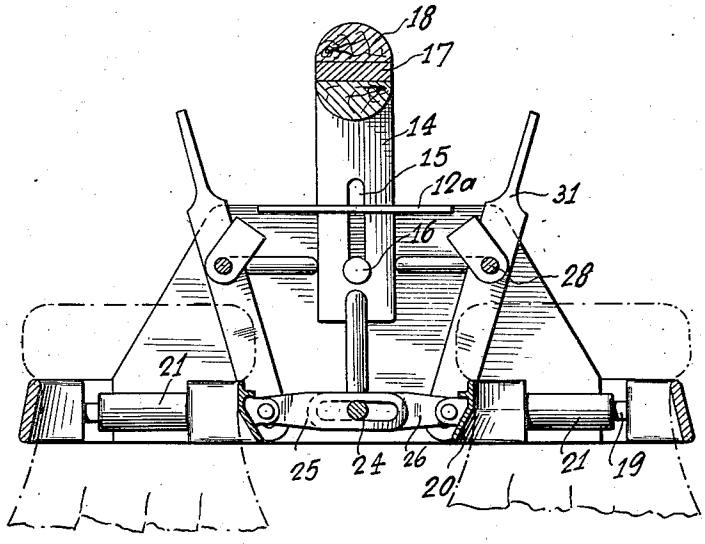
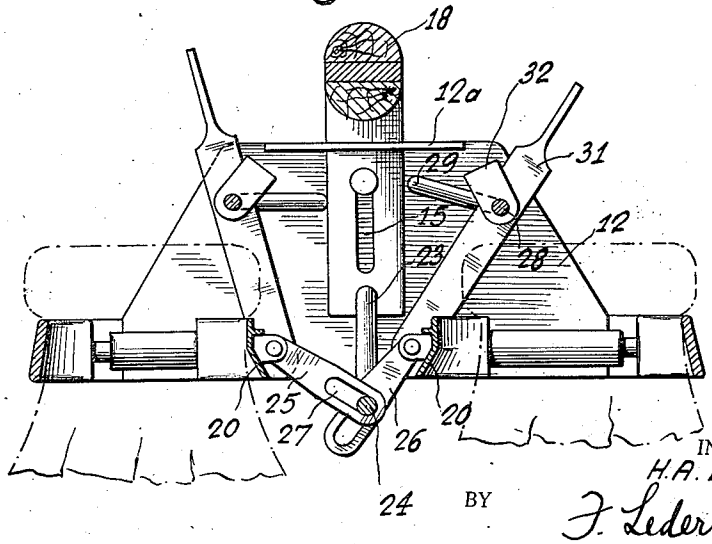


Fig. 5.



INVENTOR.
H.A. ELLIOTT.
BY
F. Ledermann
ATTORNEY.

Patented Sept. 1, 1936 2,052,756

UNITED STATES PATENT OFFICE

2,052,756

BOTTLE CARRIER

Hiram A. Elliott, East Orange, N. J.

Application July 10, 1935, Serial No. 30,741

4 Claims. (Cl. 294—87)

One object of this invention is the provision of a bottle carrier particularly applicable for carrying milk bottles, which is novel in design and operation and at the same time simple in construction and inexpensive in cost of manufacture.

Another object of the invention is the provision of a bottle carrier in which a plurality of bottles are suspended by the neck, and by which any of the bottles may be selectively released one at a time without releasing or disturbing any of the other bottles in the carrier.

A further object is the provision of means of forming a part of the bottle carrier whereby one of the rows or both rows of bottles may be released through the carrier simultaneously.

A still further object of the invention is the provision of means for automatically locking all of the bottles in the carrier when the same is lifted by the handle, which means also prevents the bottles from being released and dropping from the carrier.

The above and other objects will become apparent in the description below; in which characters of reference refer to like-named parts in the accompanying drawings which form a part hereof.

Referring briefly to the drawings, Figure 1 is a plan view of the carrier with one end broken away. It is to be noted that only a portion of an eight-bottle carrier is shown on the drawings. The carrier may of course be constructed to carry any desired number of bottles.

Figure 2 is a cross-sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a cross-sectional view taken on the line 3—3 of Figure 1.

Figure 4 is a cross-sectional view taken on the line 4—4 of Figure 1, with the carrier held by the handle and the releasing levers in closed position.

Figure 5 is a view similar to Figure 4 with the carrier set down and the releasing levers controlling one row of bottles in releasing position.

Figure 6 is a cross-sectional view taken on the line 6—6 of Figure 1.

Referring in detail to the drawings, the numeral 10 indicates the peripheral frame of the carrier which on opposite sides is provided with spaced-apart arcuate bends 11 which serve to provide one side of a collar in which the neck of the bottle is clamped.

On opposite ends of the frame 10 parallel extension walls 12 are rigidly mounted. The upper end of each wall 12 is bent at right angles to form a tongue 12a, and a slot 13 is cut out of this tongue. A flat arm 14 extends slidably through the slot 13. A vertical slot 15 is provided in the arm 14, and a pin 16 having an enlarged head is rigid on the wall 12 and passes through the slot 15. The arms 14 provide the bent ends of a longitudinal handle bracket 17 surrounded by a handle 18 by means of which the carrier is lifted and transported.

A pair of parallel rods 19 bridge the opposite sides of the frame 10, one on either side of opposite bends 11. A collar member 20, provided on each end with a sleeve 21 slidably surrounding the rod 19, is arcuately cut out on one side to provide the complementary collar section to the bend 11. One such member 20 is provided for each bend 11. Coiled springs 22 surrounding the rods 19 serve to urge collar members 20 apart, that is, each toward its complementary collar section 11.

A lock rod 23 formed in the manner of a crank shaft, has its ends rigid in the opposite handle supporting arms 14, and is provided with a plurality of U-shaped bends having at their bases shaft sections 24, one such shaft occurring between opposite members of each pair of collar sections 20. A link 25 is fastened to one collar section 20 and a link 26 to the opposite section 20. These links are united at their free ends by the shaft 24 which passes through slots 27 in the links.

Longitudinal shafts 28 are rigidly mounted in the frame extension walls 12, one on either side of the carrier, and at the middle are bent toward each other to provide grip levers 29. These levers 29 serve, as will presently become apparent, as levers to simultaneously release all the bottles in a row at one side of the carrier. Ears 30 extend from adjacent ends of adjacent collar sections 20, and pivoted in the ends of these ears are the lower ends of levers 31. A yoke 32 bridges the two adjacent levers 31 and the shaft 28 passes through the yoke ends 33. The latter are rigid on the shaft 28, the interlocking of these parts being accomplished by means of a key or in any other suitable manner. The position of the yoke 32 is such that it normally lies closely adjacent the levers 31.

The operation of the device is as follows. Whenever it is desired to remove one or more bottles, the carrier is set down on the ground or other suitable support, with the bases of the bottles on the ground. Releasing the handle 18 after the carrier has been set down causes the same to drop, owing to its own weight, a distance equal to the length of the slot 15, into the position shown in Figure 5. In falling, the handle carries down with

it the shafts, which in descending draws the adjacent ends of the links 25 and 26 downward. It is to be noted that while the carrier is being held by the handle 18, the links 25 and 26 are aligned (Figure 4) and the shaft 24 is at the near end (to each collar section 20) of the slots 27, so that it is impossible for any collar section 20 to move away from its locking position, which means that it is impossible for any bottle to be released, either accidentally or deliberately, while the carrier is being held by the handle 18. Upon being set down, the carrier release mechanism on each side first assumes the position shown in Figure 5 for the left side only; that is, the shaft 24 rotates each link 25—26 down until the shaft has traveled from the near end to the far end of the slot 27, as shown in Figure 5 for the link 25 only. When it is then desired to release a whole row of bottles (on the right side, Figure 5), the release lever or handle 29 on that side is rotated on an upward direction, into the position shown on the right side of Figure 5. This movement carries with the shaft 28 all of the yokes 32 on that shaft, and each yoke carries with it both of the release levers 31 which it bridges. The lever 31, in rotating about the shaft 28, has its lower end extended in a direction away from the bottle, carrying with it the collar section 20 and releasing the bottle. Since the shaft 24 was in the far end of the slot 27 prior to operation of the levers 29 and 31, the shaft 24 is free to travel back to the near end of this slot, which it does, into the position shown for the link 26 in Figure 5. The entire carrier is then lifted clear of the released bottles with the lever 29 still being held in its uppermost position, which may be done with a finger of the same hand which is lifting the carrier. When the carrier is free of the released bottles, the lever 29 is released and permitted to return to its normal locking position by the action of the shaft 24 of the rod 23 being raised by the handle 18 back to its normal position shown in Figure 4. When it is desired to release but a single bottle, the lever 31 controlling that bottle is rotated toward the bottle, without disturbing the lever 29, so that no other lever is operated. The releasing position for a single bottle is shown by the lever 31 at the right of Figure 5, except that the lever 29 and yoke 32 on that side would remain in the normal position shown by the same members at the left side of this figure. To release two bottles at a time, the two levers adjacent those bottles are operated simultaneously.

It is to be noted that the limited space between the ends of the sleeves 21 of the collar sections 20 and the ends of the rods 19 against the sides of the frame 10 prevent the sections 20 from traveling too far toward the bends 11 when the carrier is lifted while one or more of the bottle-carrying collars is empty.

Obviously, modifications in form and structure may be made without departing from the spirit and scope of the invention.

I claim:

1. A bottle carrier comprising a frame, a handle slidably mounted on said frame, a plurality of collars adapted to grip the necks of the bottles, said collars being formed of two sections one of which is rigid with the frame and the other slidably mounted thereon, means for urging said slidable collar sections toward said rigid collar sections when the carrier is supported from the handle, means for drawing any one of said slidable collar sections away from said rigid collar sections selectively into open position, and means for drawing all of said slidable collar sections on one side of the carrier away from their rigid collar sections simultaneously into open position, and means for locking said slidable collar sections in closed position upon lifting the carrier by the handle.

2. A bottle carrier comprising a substantially rectangular frame, a plurality of pairs of spaced apart parallel rods supported in opposite sides of said frame, said frame between the ends of said rods being arched to form a rigid collar section, a complementary collar section slidably mounted on each of said pairs of rods, the necks of the bottles being adapted to be gripped between each rigid and its complementary slidable collar section, a lever rotatably mounted adjacent each of said slidable collar sections and linked thereto to slide said slidable collar section toward or away from its complementary rigid collar section, and means for lifting said carrier.

3. A bottle carrier comprising a substantially rectangular frame, a plurality of pairs of spaced apart parallel rods supported in opposite sides of said frame, said frame between the ends of said rods being arched to form a rigid collar section, a complementary collar section slidably mounted on each of said pairs of rods, the necks of the bottles being adapted to be gripped between each rigid and its complementary slidable collar section, a lever rotatably mounted adjacent each of said slidable collar sections and linked thereto to slide said slidable collar section toward or away from its complementary rigid collar section, a rod rotatably mounted in the ends of said frame and having yokes rigid thereon, each of said yokes bridging two of said levers and lying closely adjacent thereto, said levers being rotatably mounted on said rod, and means for lifting said carrier.

4. A bottle carrier comprising a substantially rectangular frame, a plurality of pairs of spaced apart parallel rods supported in opposite sides of said frame, said frame between the ends of said rods being arched to form a rigid collar section, a complementary collar section slidably mounted on each of said pairs of rods, the necks of the bottles being adapted to be gripped between each rigid and its complementary collar section, a lever rotatably mounted adjacent each of said slidable collar sections and linked thereto to slide said slidable collar section toward or away from its complementary rigid collar section, means for locking all of said levers in position after said slidable collar section has been slid toward said rigid collar section, and means for lifting said carrier.

HIRAM A. ELLIOTT