April 30, 1935. P. L. VANNUCCI 1,999,491

CAN HANDLER

Filed March 14, 1934

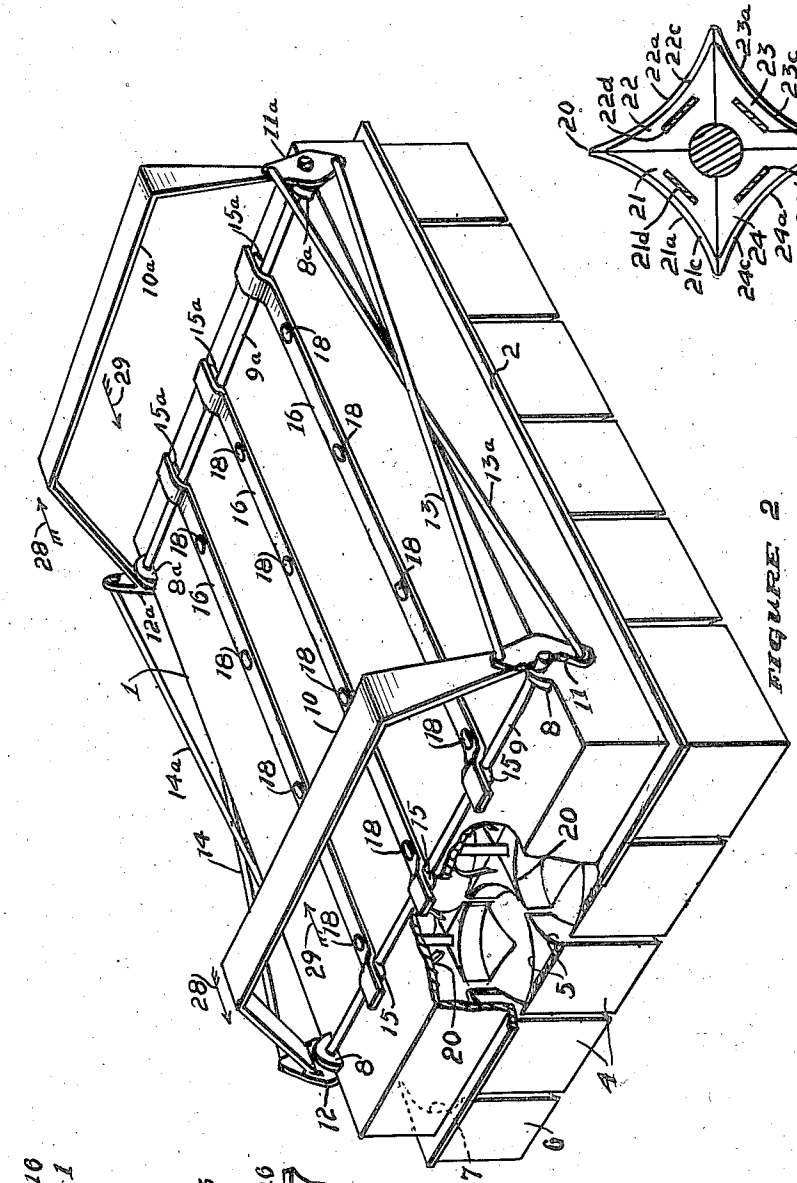


FIGURE 2

FIGURE 3

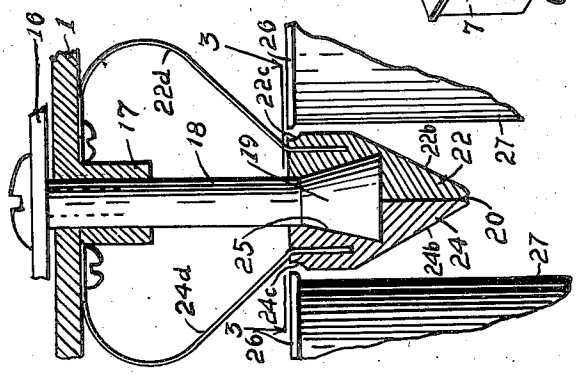


FIGURE 1

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CAN HANDLER

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3 Claims. (Cl. 294—87)

It is one object of the invention to provide a manually operated means for transferring, in one operation, a number of filled cans from one place to another.

It is another object to provide a device of the character indicated that will quickly and positively engage a given number of cans for movement as a unit, and as quickly and positively release the same when moved.

It is also an object of the invention to provide a device of the character indicated that will be economical in construction, light in weight, that consists of few parts, and that is strong, durable, and highly efficient in its practical application.

In the drawing:

Figure 1 is a full size sectional view of one of the lifting elements and its mounting.

Figure 2 is a perspective view of the device with a part broken away.

Figure 3 is a section on line 3—3 of Figure 1.

In the particular embodiment of the invention herein disclosed, I show at 1 a housing having an open bottom and having an outwardly turned flange 2 extending entirely around its lower edge. Mounted on flange 2, and depending therefrom, are lifting elements as 4, each element extending inwardly of the housing a distance approximating one-half the diameter of the can to be lifted and having its sides curved in conformity with the curvature of the can body as at 5.

In the present instance the device is designed to lift twenty cans and consequently there are fourteen of the elements 4 spaced along the sides and ends of the flange as shown, in addition to the four corner elements as 6 which are curved to engage a can as at 7.

Mounted in bearings 8 on the top of the housing are transversely disposed shafts as 9—9*a*, one adjacent each end.

At 10 is a handle having end plates 11—12 disposed thereon as an integral part thereof, these plates being centrally mounted on shaft 9 and secured thereto to rotate therewith. A similar handle 10*a* is provided with plates 11*a*—12*a* mounted on shaft 9*a*. One end of plate 11 is connected to the opposite end of the plate 11*a* by a link 13, and the other ends of the plates are connected by a link 13*a*. The plates 12 and 12*a* are similarly connected as indicated at 14—14*a*. Mounted on the shafts 9—9*a* are outwardly and oppositely directed cams as 15—15*a*. By swinging the handles inwardly toward each other the cams are elevated, and by spreading the handles the cams are lowered.

Disposed longitudinally of the housing and in a position to overlie each pair of cams 15—15*a*, is a bar 16. Mounted on each bar 16 and slidably engaging a bearing as 17 in the underlying housing top is a spreader pin as 18 having a flaring spreader portion 19 on its lower end.

At 20 is shown a spreader block that is, in the present instance, flat on top and cut into four segments as 21, 22, 23, 24. A socket as 25 is formed in the center of the top of the block, the side wall of the socket being inclined to slidably engage the spreader portion 19 of pin 18. The upper portion of the outer face of segment 21 is curved as at 21*a* to engage a cylindrical can body, and the lower portion may take any desired form. The upper and outer edge is grooved as at 21*c* to fit under the top edge 26 of a can 27. At 21*d* is a spring mounted on housing 1 and seated in the top of segment 21, this spring being formed to urge the segment 21 into intimate contact with pin 18. The four segments of each block, and their mountings, are identical.

In the present case where twenty cans are to be lifted at one time twelve spreader blocks are required, one for each interspace between each group of four cans, and consequently four pins 18 are mounted in each bar 16.

In using the device it is placed over the tops of twenty cans with the handles spread as indicated by arrows 28. The handles are then swung in the direction indicated by arrows 29 thereby expanding the blocks and gripping the cans whereby they may all be lifted as a unit.

It is to be understood, of course, that while I have herein shown and described but one specific embodiment of the invention, changes in form, construction, and method of assembly and operation may be made within the scope of the appended claims.

I claim:

1. A can handler comprising, in combination, a body member provided with fixed means to encompass and engage the outer row of a group of cans and normally retracted expansible means insertable in the space between each group of four cans, means for actuating the expansible means into lifting engagement with the cans and to urge certain cans into lifting engagement with said fixed means, and means for returning the expansible means to normal position.

2. A can handler comprising, in combination, a body member provided with fixed means to encompass and engage the outer row of a group of cans and having lifting means associated therewith, and lifting-means actuated expansible and

retractible devices insertable in the space between each group of four cans to urge certain cans into lifting engagement with the fixed means to engage and lift the cans as a unit.

3. A can handler comprising, in combination, a body member having means associated therewith to encompass and engage the outer row of a group of cans and having expansible means associated therewith and disposed to enter the space between each group of four cans, resilient means for normally retracting said expansible means, a pair of shafts rotatably mounted on the body, shaft actuated means to expand the expansible means, a handle fixedly mounted on each shaft, and a pair of crossed links connecting the corresponding ends of the shafts and handles whereby movement of the handles toward each other will rotate the shafts to effect expansion of the expansible means.

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