April 23, 1935. J. J. SMITH 1,998,771

RECEPTACLE LIFTER

Original Filed Sept. 18, 1931

Fig. 1.

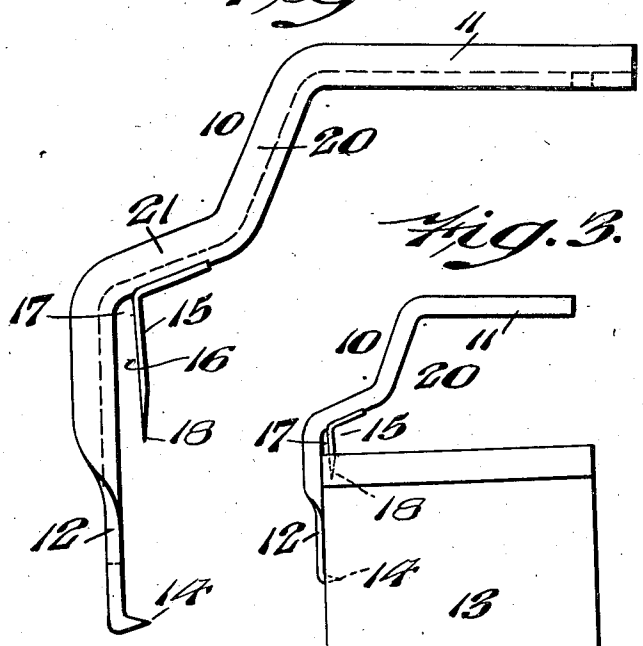


Fig. 2.

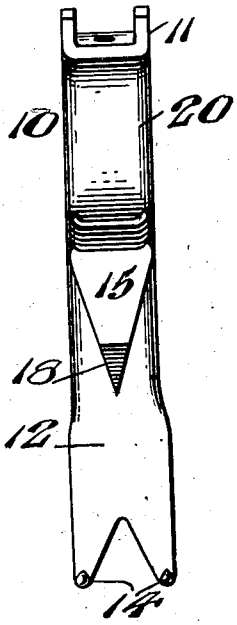


Fig. 3.

Fig. 4.

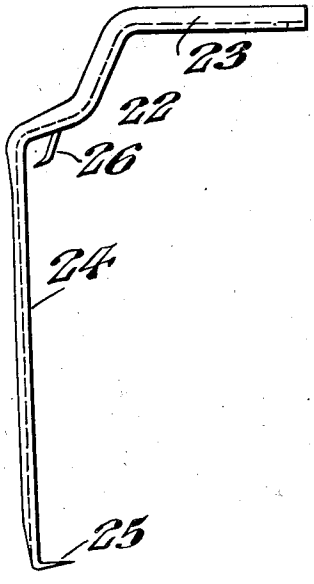
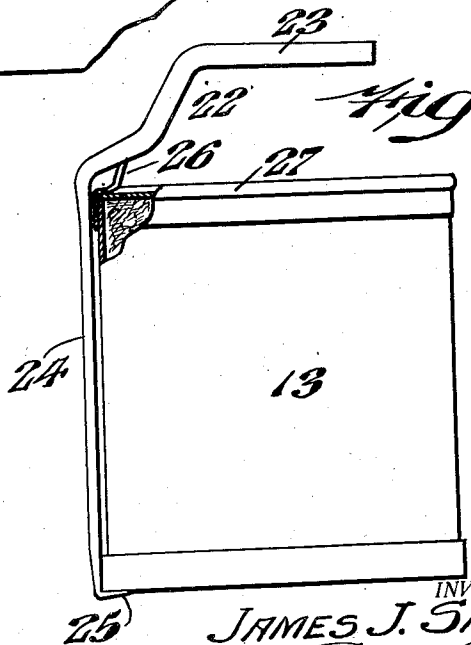


Fig. 5.



INVENTOR.
JAMES J. SMITH,
BY Robert M. Barr
ATTORNEY.

Patented Apr. 23, 1935 1,998,771

UNITED STATES PATENT OFFICE

1,998,771

RECEPTACLE LIFTER

James J. Smith, Philadelphia, Pa.; Mabel Smith and Provident Trust Company, executors of said James J. Smith, deceased, assignors, by mesne assignments, to Mabel Smith, Glenside, Pa.

Application September 18, 1931, Serial No. 563,516
Renewed September 13, 1934

2 Claims. (Cl. 294—27)

The present invention relates to lifting devices and more particularly to a utensil for lifting, carrying, and the handling of paper containers, such as now coming into use for ice cream.

Ice cream as heretofore handled has been packed in cylindrical metal cans, each of one or more gallons capacity, but on account of the weight and expense of metal cans there has been developed a container made of paper which serves all purpose of the metal cans except for the difficulty experienced in lifting the containers by the customary lifting utensils. No lifter has heretofore been devised which will lift and carry the paper containers without tearing and breaking the fragile material.

Some of the objects of the present invention are to provide an improved hand lifter for containers made of paper or other fragile material; to provide a lifter which will support a paper container from one side only; to provide a lifter for paper containers which will grip and support a container without damage thereto; to provide means operating upon one side of a paper container for lifting such container while maintaining it in a vertical position; and to provide other improvements as will hereinafter appear.

In the accompanying drawing Fig. 1 represents a side elevation of a lifter for paper containers embodying one form of the present invention; Fig. 2 represents a rear elevation of the same; Fig. 3 represents a side elevation of the lifter of the present invention in operative position upon a container; Fig. 4 represents a side elevation of a modified form of the invention; and Fig. 5 represents the lifter of Fig. 4 as applied to a container.

Referring to the drawing and particularly to Figs. 1 to 3 this form of the invention consists of a body 10 formed from shaped flat bar stock having a handle portion 11 with its side edges rounded for easy grasping. In use the handle 11 is positioned substantially horizontal or parallel to the top of the container which the lifter is to engage.

For attaching the lifter to a paper container the body 10 has an extension 12 arranged to extend downwardly alongside of the container 13 in close proximity thereto and terminating in one or more sharp pointed piercing teeth 14. In the preferred form there are two of these teeth 14 having ends which lie in the arc of a circle conforming in radius to that of the container with which the lifter is to be used. The length of the teeth 14 is such as to bite well into the side of the container to form points of force application which travel lines to a point of reaction provided by a thrust abutment 15. This abutment 15 projects downwardly from the body 10 and has an edge 16 so spaced from the extension 12 as to receive the thickness of the container wall between the two parts. It should also be noted that a rounded clearance 17 is formed at the junction of the abutment 15 with the body 10 which serves to permit such buckling of the container edge as occurs to take place in the clearance and thus form an auxiliary obstacle to loosening of the container should such happen. The end of the abutment 15 terminates in a taper forming a sharp point 18 so that the lifter can be quickly attached to a closed container by jabbing the point 18 through the top at the proper location to bring the teeth 14 against the side in penetrating position.

In order to maintain a container in a vertical position while lifting it from one side only by the lifter of the present invention, that portion of the body 10 between the handle 11 and the extension 12 has a new and novel configuration acting to so affect the lift forces as to maintain the center of gravity of the container substantially in the vertical axis of the container. This result is accomplished by bending the continuation 20 of the handle 11 downwardly and laterally at an obtuse angle to the handle proper and then giving it a rounding bend into a portion 21 which forms an acute angle to the horizontal with its lower end merging into the extension 12 at an angle of substantially one hundred and fifteen degrees. Thus the vertical upward pull of the handle 11 is translated, through the angularly arranged parts 20 and 21 and the action of the teeth 14 and 15, into a vertical force acting through the center of gravity of the container.

The form of the invention shown in Figs. 4 and 5 is more particularly adapted for use with paper containers which are relatively shallow with respect to height and in the embodiment here shown by way of example the body 22 and handle 23 are of substantially the same contour as heretofore described and in order to maintain the handle in horizontal position when operating and retain the container in a vertical position while being lifted or carried. The extension 24 which is arranged to parallel the side of the container is of a length substantially the same as the height of the container and carries a footpiece 25 projecting inwardly toward the container at substantially a right angle to form a ledge upon which the bottom edge of the container can seat. This lug extension 24 is turned inwardly at its upper end to pass over the top

edge of the container and has a fulcrum lug or abutment **26** depending from its under side and so located and positioned as to enter beneath the rim **27** of the container. This rim **27** is usually of metal and is beaded to receive and retain the paper disc which forms the top. In other words the distance between the abutment **26** and the ledge **25** is substantially equal to the vertical length of the container so that when the handle is placed upon one side of a container and brought to its operative position the abutment **26** can be forced between the paper top and the rim bead to effect anchoring with the bead of the rim. When the handle of this form of the invention is in operative position upon one side of the container the handle **23** projects diametrically across the top of the container where it can be grasped at that side and the container lifted or carried from one place to another.

It will now be apparent that a complete, unitary lifter has been devised which can be quickly attached to a container of paper or other fragile material and will support the weight of the container and its contents without danger of distorting, tearing, or otherwise injuring the container. Also it will be noted that the parts have been so ingeniously associated together as to alter the direction of the resultant of the applied forces to such an extent as to maintain the center of gravity of the container when suspended from the lifter within the vertical axis of the container.

Having thus described my invention, I claim:

1. A lifter for paper containers comprising a substantially straight handle having one end extended laterally at an obtuse angle, container piercing teeth at the extremity of said extended portion, and an abutment carried by said angled extension and coacting through the side of a container with said teeth to grip one side of said container, the angle of said extension being such with respect to said handle as to maintain the center of gravity of a container in its vertical axis during a lifting operation.

2. A lifter for cylindrical paper cans comprising a handle arranged in operative position to extend across the top of a can to be lifted, an extension disposed at an angle to said handle, a plurality of teeth on said extension and projecting toward the side of said can and adapted to bite into the wall of the can, the ends of said teeth terminating in the line of a circle having the same radius as said can in order to simultaneously contact with the outside wall of said can when said lifter is in use, and a member projecting from said extension above the plane of said teeth for coacting with the wall of said can at the opposite side from said teeth.

JAMES J. SMITH.