

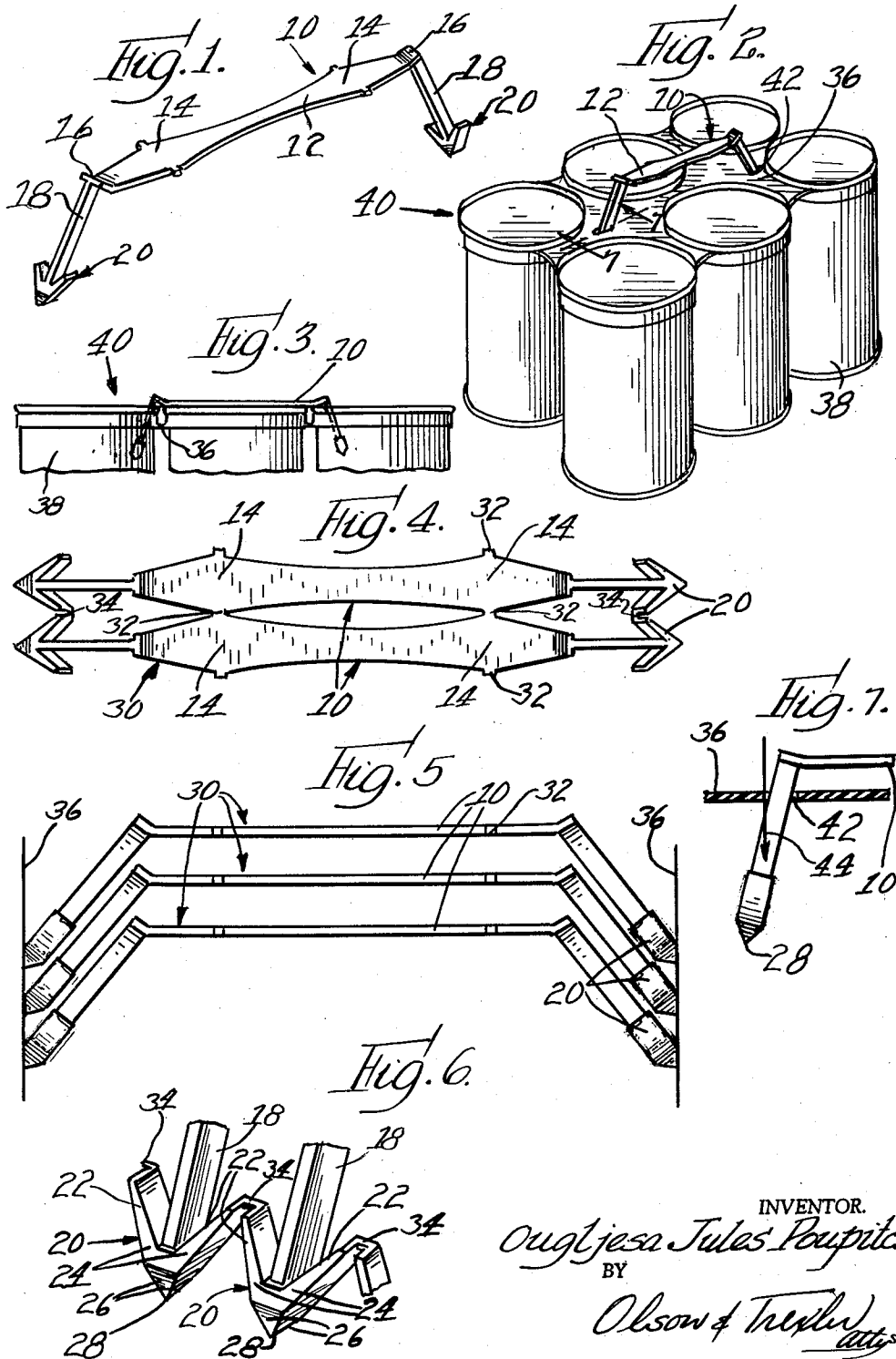
Jan. 9, 1962

O. J. POUPITCH

3,016,136

HANDLE DEVICE

Filed Feb. 24, 1959



INVENTOR.

Ougljesa Jules Poupitch

BY

Olson & Trexler

1

3,016,136 HANDLE DEVICE

Ougljesa Jules Poupitch, Itasca, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Filed Feb. 24, 1959, Ser. No. 795,103
4 Claims. (Cl. 206—56)

This invention relates generally to the art of carrying containers, such as cans, and more specifically to a handle for carrying such containers.

In my copending patent application S.N. 775,333, filed December 1, 1958, now Patent No. 2,874,835 and entitled "Container Carrier and Package" I have disclosed and claimed a superior carrier and resulting package. Specifically, the carrier comprises a sheet or web of plastic material having apertures therein through which the upper ends of containers, such as cans preferably having peripheral beads thereon, are forced, the plastic adjacent the apertures being stretched and deformed into substantially frustoconical lips aggressively gripping the containers. The handle forming the subject matter of this invention is particularly useful with a carrier and package of this type.

It is an object of this invention to provide an improved handle of integral molded plastic construction.

A further object of this invention is to provide a handle which is readily assembled with a carrier by automatic machinery.

It is another object of this invention to provide a handle which is easily stored and handled before assembly with a carrier.

Yet another object of this invention is to provide a handle which is comfortable to the hand and of adequate strength, and yet which lies flat against the top of a carrier package for shipment.

Other and further objects and advantages of the present invention will be apparent from the following description wherein:

FIG. 1 is a perspective view of a handle constructed in accordance with the principles of this invention;

FIG. 2 is a perspective view of a carrier package with the carrier of FIG. 1 applied thereto;

FIG. 3 is a fragmentary side view of the package and handle of FIG. 2;

FIG. 4 is a top view of a plurality of the handles arranged in a "stick";

FIG. 5 is an end view showing the manner in which a plurality of "sticks" can be stacked for storage or shipment;

FIG. 6 is a perspective view showing an interconnection between adjacent handles of a "stick," and

FIG. 7 is a fragmentary longitudinal section view along the line 7—7 in FIG. 2.

Referring now in greater particularity to the drawings, there will be seen a handle designated generally by the numeral 10 and comprising an elongated substantially flat or planar body 12. The body has wide areas 14 relatively toward the opposite ends and tapers inwardly in both directions therefrom. The extreme ends of the body are tipped or inclined upwardly at 16 from the general plane of the body, and a pair of legs 18 depends respectively from the tipped ends 16 substantially at right angles thereto. The legs 18 comprise substantially flat straps or bars lying substantially in a plane perpendicular to the plane of the body and disposed longitudinally of the body. The legs 18 are somewhat narrower than the narrowest width of the body, but are somewhat thicker than the body; as will be apparent, the legs are mostly disposed beyond the ends of the body. The significance of this will be brought out shortly.

The lower end of each leg 18 is provided with an

2

arrow-shaped head 20, the details of which are perhaps best seen in FIG. 6. Each head 20 comprises a pair of flanges 22 extending upwardly in diverging relation and meeting at a sharp edge at the lowest extremity of the head. The flanges are of the same width as the legs, but taper in thickness from a maximum at the roots 24 where they join the leg to a minimum at the top edges. The heads further are tapered on the inner and outer surfaces at 26 whereby to form a sharp point 28 with the junction of the flanges 22.

The handles 10 are molded in groups or "sticks" 30 with the bodies 12 lying in a common plane and the legs at each end extending in parallelism. The wide sections 14 of the bodies of adjacent handles are joined by readily severable integral sections 32. Similarly, confronting corners of the flanges 22 of adjacent heads 20 are joined by readily severable integral sections 34. The integral severable sections 32 and 34 serve to hold substantially any number of the handles 10 together to form a "stick" 30. A plurality of such "sticks" 30 is readily stacked in nested relation between the parallel sidewalls of a box, as at 36 in FIG. 5. As will be apparent, the projection of the legs out beyond the ends of the bodies is important in such nesting.

The "sticks" 30 can be readily handled by automatic machinery, and are not susceptible to tangling due to the several connections between each pair of adjacent handles. Each handle is separated from the "stick" by severing the connections 32 and 34 when it is desired to assemble the handle with a carrier. A suitable carrier is shown in FIGS. 2 and 3 and comprises an apertured horizontal sheet or web 36 of plastic material, in accordance with my aforesaid patent application S.N. 775,333. Containers such as beaded cans 38 are inserted through the apertures and form with the carrier 36 a package or unit 40, including, for example, six cans. The carrier is provided with a pair of spaced slits or apertures 42 along the longitudinal center line thereof, and the legs of a handle are inserted through these apertures with the flanges of the heads opening up and locking beneath the carrier.

Insertion of the legs is illustrated in FIG. 7. A needle-like tool as represented by the arrow 44 presses straight down beyond each end of the handle body (again pointing up the importance of the projection of the legs beyond the end of the body) against the junction between the leg 18 and a flange 22 of the head 20. The point of the head readily opens up the slit or aperture 42 to allow the head to pass through, the flanges then opening up below the carrier to hold the handle assembled therewith. The needle-like tool is readily retracted. As will be understood, the slits or apertures 42 could, in some instances, be dispensed with, and the pointed heads could simply punch through the body.

The slits or apertures 42 are spaced substantially the length of the handle body. Hence, the legs must be pulled in nearly to parallelism for insertion, as in FIG. 7. The natural resiliency of the plastic material of the handle urges the legs toward their initial diverging relation, and this tends to hold the body 12 flat down against the top of the carrier, thereby facilitating shipping and stacking of packages 40.

As will be understood, the specific example of the invention as heretofore set forth is for illustrative purposes only. Various changes in structure will no doubt occur to those skilled in the art, and are to be understood as forming a part of this invention insofar as they fall within the spirit and scope of the appended claims.

The invention is claimed as follows:

1. A molded plastic handle structure comprising an elongated bight forming a nominally horizontal elongated body portion, a pair of legs at the opposite ends of and

3

integral with said body portion, said legs depending from said body portion and diverging relative to one another to free ends, and a head at each of said free leg ends integral therewith and each adapted to enter an aperture smaller than the maximum transverse dimension of said head and to resist retraction therethrough, each said head having a tapered nose and a pair of oppositely disposed arms extending upwardly in diverging relation therefrom to upper ends spaced from the handle structure legs and flexible relative thereto to permit insertion through an aperture smaller than the maximum dimension across said arms, said arms thereafter springing back to initial position to resist retraction, each leg and pair of arms lying in substantially a common plane, and the arms having an appreciable dimension substantially normal to said plane to impart stiffness in said arms normal to said plane whereby said arms resist deformation other than toward and away from said legs.

2. A molded plastic handle structure as set forth in claim 1 wherein each head tapers toward the common plane of the arms and leg to form a point.

3. A molded plastic handle structure as set forth in claim 1 wherein the ends of the body portion are tipped up, and wherein the legs are respectively perpendicular to said tipped up ends.

4. A molded plastic handle construction comprising a plurality of like handle structures as set forth in claim 1,

4

wherein each body portion is wide near its opposite ends and tapers inwardly in both directions therefrom, and further including narrow sections of readily severable material interconnecting confronting upper ends of the head arms of adjacent handle structure heads and interconnecting adjacent wide body portions.

References Cited in the file of this patent

UNITED STATES PATENTS

712,422	Stokes	Oct. 28, 1902
1,026,093	Johnson	May 14, 1912
1,431,792	Hassler	Oct. 10, 1922
1,864,516	Becket	June 28, 1932
2,086,489	Bowersox	July 6, 1937
2,142,953	Raymond	Jan. 3, 1939
2,338,735	Person	Jan. 11, 1944
2,341,930	Lipet	Feb. 15, 1944
2,359,193	Bechik	Sept. 26, 1944
2,360,011	Popp	Oct. 10, 1944
2,434,630	Van Rosen	Jan. 13, 1948
2,826,332	Hudson	Mar. 11, 1958

FOREIGN PATENTS

394,334	Great Britain	June 21, 1933
717,076	Great Britain	Oct. 20, 1954