MAGNETIC POUR SPOUT FOR CANS
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1 Claim. (Cl. 222—570)

The present invention relates to a pour spout which is provided with magnetic means for attachment to a can.

In the past numerous attempts have been made to provide a detachable pour spout for cans, but most of these prior devices incorporate mechanical means which may be subject to mechanical mal-function, and may require instruction in order to comprehend their manner of use.

An object of the present invention is to provide a magnetic pour spout which retains itself attached by magnetic attraction to cans of magnetic permeable material and of approximately the same radius.

A further object of the invention is to provide an improved pour spout which is adapted to fit, in substantially sealing arrangement on a can, and which embodies magnetic means for holding the spout in proper, pouring position on the can.

These, and other objects and advantages of the invention, will be apparent from the following description and the accompanying drawings, wherein:

FIG. 1 is a fragmentary, perspective view showing the upper portion of a press top can having a double magnet pour spout embodying the invention mounted thereon.

FIG. 2 is a fragmentary, top, plan view of the pour spout and can of FIG. 1, portions being broken away.

FIG. 3 is a fragmentary, sectional view taken along line 3—3 of FIG. 2.

FIG. 4 is a fragmentary, sectional view taken along line 4—4 of FIG. 2.

FIG. 5 is a fragmentary, perspective view similar to FIG. 1, but showing a smaller can and pour spout embodying the invention.

Briefly, as illustrated in FIGS. 1—4, the invention is embodied in a pour spout A formed of suitable material such as plastic or sheet metal and adapted to have fitted engagement with a can B of a radius for which the pour spout is designed. Magnet means, such as double pairs of magnets 10 and 11 are securely attached to the under side of the pour spout A in position to engage, and to magnetically attract, the magnetically permeable side wall 12 of a can B on which the pour spout is mounted.

Referring to the drawings in greater detail, the can B of FIGS. 1—4 is assumed to be a gallon can of the type customarily used to contain paint, other liquids or powder, while the can B of FIG. 5 is assumed to be of a similar type but in quart size.

It is well known that most cans are made of sheet steel coated with a light coating of tin to resist rusting. The cans shown in FIGS. 1 and 5 are of the type known as "press top" cans, which are provided with a roughed rim 13 around their upper ends for interfitting, sealing relation with a usual cover flange (not shown).

The pour spout A (FIGS. 1—4) has a radially outwardly tapered bottom portion 14 and upturned, converging side flanges 17 and 18. The inner, or can edge 19 of the spout bottom portion 14 is curved to conform approximately with the curvature of the radially inward side of the trough 20 in the can rim 15. A downturned flange 21 (FIGS. 3 and 4) also is preferably provided along the curved inner edge 19 of the spout bottom portion 14 to extend downwardly into the can trough 20 and to fit along the radially inward wall 22 of said trough.

Each pair of magnets 10 and 11 are of suitable material, such as, for example, the material known as Alnico, and each magnet of each pair thereof is magnetized in a conventional manner so as to be a permanent magnet. Each pair of the magnets, for example the magnets 11a and 11b (FIG. 4) are mounted in a channel member 23 which may be of sheet metal, and are secured therein by rivets 24. An outwardly bent integral flange 25 is provided on the upper end of each magnet mounting channel member 23, and this flange 25 is securely attached to the under side of the spout bottom portion 14 by spot welds 27. The uppermost magnet 11b is mounted slightly below the upper end of the channel member 23 to provide clearance for the channel-forming top rim 13 of the can B.

For applying the pour spout A to a can B for which the pour spout is designed, the spout A is positioned with its curved inner flange 21 slightly above the can trough 20 and the magnet assemblies 10 and 11 in contact with the side wall 32 of the can. The magnets, by magnetic attraction with the can, urge the pour spout A radially inwardly toward the can, and thereby urge the curved spout flange 21 toward closely fitted relation with the inner wall 22 of the can trough 20. The pour spout is then pressed axially downwardly on the can to the position shown in FIGS. 3 and 4, with the curved flange 21 inserted to maximum depth in the can trough 20. The pour spout is then ready for use for directing liquid or powdered contents of the can B into a desired narrow stream, and for preventing dripping of such contents down the side wall of the can. The pour spout may be easily removed from the can when desired by reversing the steps explained previously herein for applying the pour spout to the can.

The modified, single magnet assembly form of the invention shown in FIG. 5 is preferred for use on smaller cans, such as quart cans or smaller. The structure and operation of the pour spout A' shown in FIG. 5 is similar to that of the pour spout A illustrated in FIGS. 1—4 and explained previously herein except for its size and the fact that the former has but a single magnet means 24 secured to the under side of the pour spout bottom portion 14' instead of the double magnet assemblies 10 and 11 of FIG. 1. The same reference numerals employed in the description of the form A of the invention illustrated in FIGS. 1—4 are employed in FIG. 5 with the prime (' ) added.

The operation and use of the pour spout A' shown in FIG. 5 will be obvious after perusing the foregoing description of the form A of the invention illustrated in FIGS. 1—4.

While I have illustrated and described a preferred embodiment of the present invention and one modified form thereof, it will be understood, however, that various changes and modifications may be made in the details thereof without departing from the scope of the invention as set forth in the appended claim.

Having thus described the invention, what I claim as
new and desire to protect by Letters Patent is defined in the following claim:

A pour spout for a press-top can having a lid receiving channel around the upper end thereof, said pour spout comprising a bottom portion, a downturned flange on the radially inward edge of the bottom portion, said flange being shaped to fit freely into, and to conform to, the radially inward side of such channel, a magnet holder comprising a channel member secured to the under side of the pour spout with its open side directed inwardly, the channel member extending downwardly from the pour spout, a flange on the upper end of the channel member fitted against the under side of the pour spout bottom portion, and a magnet mounted in the channel member and exposed through the open, radially inward side thereof to magnetically attract a side wall of such can with the pour spout flange inserted in the can channel, the magnet being so positioned relative to the side of the can when so mounted as to urge the downturned flange into close, conforming relation with the radially inward side of such can channel, and in pouring relation with an upper portion of such can, thereby to retain the pour spout in such relation during a pouring of the contents of the can through the pour spout.

References Cited in the file of this patent

UNITED STATES PATENTS

1,987,834 Linthouse ------------ Jan. 15, 1935
2,145,632 Pollifieone ------------ Jan. 31, 1939
2,682,360 Wigert ------------- June 29, 1954
2,812,886 Weinstein ------------ Nov. 12, 1957
2,990,198 Imming ------------- June 27, 1961
3,031,112 Smith -------------- April 24, 1962
3,094,253 Hvistendahl ------- June 18, 1963