May 26, 1964 D. G. WAY 3,134,506

HOLDER AND PUNCTURING DEVICE FOR CANS

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Fig. 1.

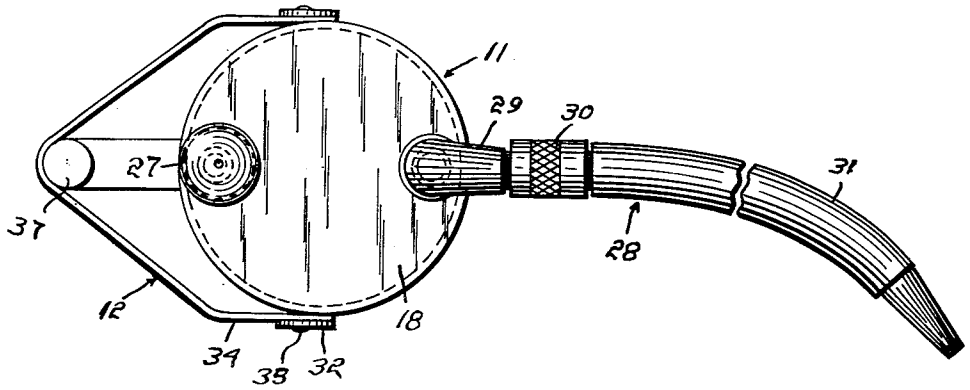
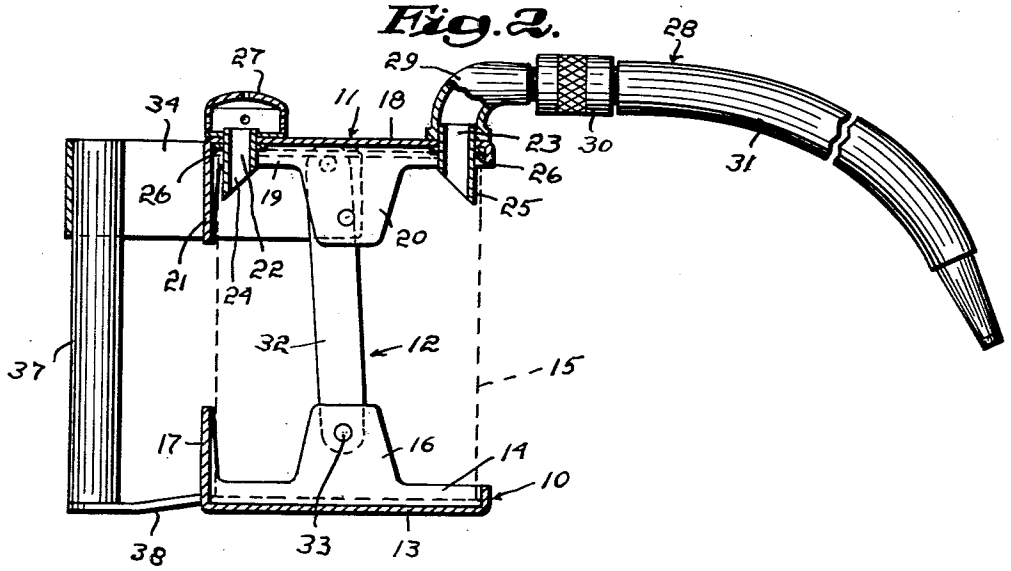


Fig. 2.



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Fig. 3.

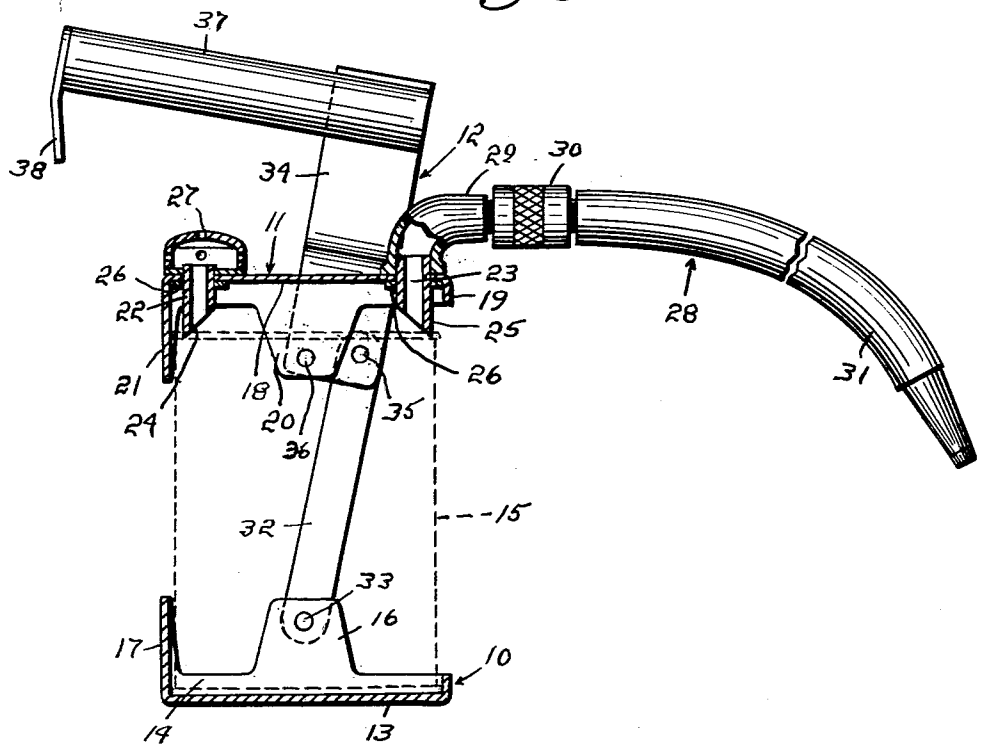
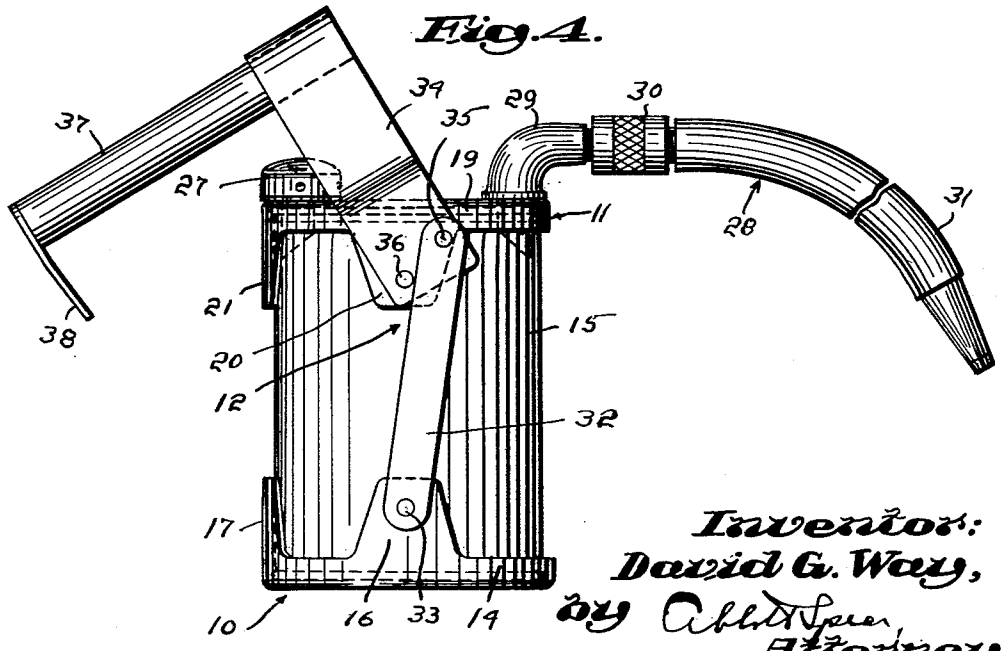


Fig. 4.



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HOLDER AND PUNCTURING DEVICE FOR CANS

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The present invention relates to holders for cans, each adapted to provide the can, as it is applied thereto, with a vent handle, and a pouring spout.

While the invention is adapted for use with any liquid-containing can where a pouring spout, vent, and a handle for it would enable the contents to be utilized with greater convenience, its novel features and advantages may be most readily appreciated by considering the holder as attached to a can of lubricating oil of the type used in gasoline engines.

While such engines usually have filler ports that are conveniently accessible, others notably those of certain power lawnmowers, have a crank case filler port that is so located that it is extremely difficult to pour from a can into it without spilling oil.

The principal objective of the invention is to provide a holder to receive and be easily locked to a can of predetermined size to provide it with a pouring spout, a vent, and a handle which will seal the can against contaminants and which will not have oil left in it after a used can has been discarded. In accordance with the invention, this generally stated objective is attained by providing a holder for a liquid-containing can that comprises a first section constituting a seat for one end of the can and provided with a pouring spout member, a vent member, and a depending lip for engagement with the can, the members being tubular and located forwardly of the lip and both including a depending, end wall puncturing point. Preferably, both members carry resilient, compressible seals and preferably both are of the same length. A toggle connection connects the sections and it has a part provided with a handle, a link pivotally connected to the first section, and first and second pivots connecting the link and the second section, respectively, to said part. The holder has two extreme positions, in one extreme position the sections being spaced to enable the second section to be swung over one end of a can, whose other end is seated in the first section, until the can is engaged by the lip. The first pivot is then forwardly of the second pivot, with respect to the lip, and in the other extreme position the sections are clamped against the ends of the can with the first pivot being between the second pivot and the lip.

In the accompanying drawings, there is shown an illustrative embodiment of the invention from which these and other of its objectives, novel features, and the advantages will be readily apparent. In the drawings,

FIG. 1 is a top plan view of a holder in accordance with the invention,

FIG. 2 is a partly sectioned side view of the holder locked to an indicated can,

FIG. 3 is a like view illustrating the holder with its upper section positioned on the top of a can seated in the lower holder section, and

FIG. 4 is a side elevation with the handle swung downwardly from its FIG. 3 position to cause the pouring spout and vent members to pierce the upper end of the can.

In the embodiment of the invention illustrated by the drawings, a can holder has a first generally indicated section **10**, a second generally indicated section **11**, and a generally indicated connection **12** of the toggle type between the sections **10** and **11**.

The section **10** has a bottom wall **13** and an annular wall **14** to establish a seat for one end of a can **15**, a one quart can of lubricating oil, for example. The wall **14** has a pair of diametrically opposed ears **16** and an upstanding stop **17** spaced equally therefrom.

The section **11** has a top wall **18** and an annular wall **19** to establish a cover to receive within it the upper end of the can **15**. The wall **19** has a pair of diametrically opposed ears **20** and a lip **21** spaced equally therefrom. The section **11** has a pair of diametrically spaced tubular members **22** and **23** extending vertically therethrough with their lower ends pointed as at **24** and **25**, respectively, and each carries a compressible and resilient washer **26**. The depending portions of the members **22** and **23** are of the same length. The tubular member **22** is a vent and its upper end is provided with a screen cap **27**. The tubular member **23** is part of a pouring spout, generally indicated at **28**, and its upper end is connected to an elbow **29** threaded to receive the attaching sleeve **30** of the flexible tubular extension **31**.

The toggle connection **12** includes a pair of links **32**, one for each ear **16** of the first section **10** and pivotally connected thereto as at **33**, and a U-shaped part **34** having its ends pivotally connected to the other ends of the links **32** and to the ears **20** as at **35** and **36**, respectively. Attached to the center of the part **34** is one end of a handle **37** at whose other end there is a shoulder **38** inturned for engagement with the stop **17** of the first section **10** when the holder is fully attached to the can **15**.

The stop **17**, handle **37** and the lip **21** are diametrically opposite the spout. In the use of the holder, a can **15** is seated in the first section **10** with the second section **11** so positoined that it may be swung upwardly over the upper end of the seated can, with its spout leading, until the lip **21** engages therewith. The second section is then supported by the tubular members **22** and **23** whose pointed ends are properly positioned to pierce the can in the desired places. As has been stated, the tubular members are of the same length and it will be noted that they are on opposite sides of a transverse zone inclusive of the pivots of the connection **12**. When the handle **37** is swung downwardly, the toggle connection **12** is effective to draw the sections **10** and **11** towards each other with such mechanical advantage that the can is punctured with a minimum of effort. Because of the dimensions and disposition of the tubular members **22** and **23**, the pressure exerted by the toggle connection **12** is evenly distributed and simultaneously applied thereto. As the two sections are drawn together to the maximum extent, the washers **26** are compressed so that, after the dead center position of the connection **12** has been passed, their resilience is operative to yieldably hold the handle shoulder **38** against the stop **17** against accidental release of the connection **12**.

I claim:

1. A holder and puncturing device for a liquid-containing can, comprising a first section constituting a seat for one end of the can, a second section to seat on the other end of the can, said second section being provided with a pouring spout member, a vent member, and a depending lip for engagement with the side of the can, said members being positioned forwardly of said lip and each being tubular and having a puncturing point, and a toggle connection between said sections including a part provided with a handle, a pair of links pivotally connected to said first section, first and second pivots connecting said links and said second sections, respectively, to said part, said device having two extreme positions, in one extreme position the sections being spaced to enable the second section to be swung over one end of a can, whose other end is positioned in said first section, until the can is engaged by the lip, said first pivot then being forwardly of said second pivot with respect to said lip, and

in the other extreme position said sections being clamped against the ends of the can with the first pivot being between said second pivot and said lip, said pivots being between said members in either extreme position.

2. A holder and puncturing device for a liquid-containing can, comprising a first section constituting a seat for one end of the can, a second section to seat on the other end of the can, said second section being provided with a pouring spout member, a vent member and a depending lip for engagement with the side of the can, said members being positioned forwardly of said lip and each being tubular and having a puncturing point, a resilient, compressible seal surrounding each tubular member to engage the punctured end wall of the can and a toggle connection between said sections including a part provided with a handle, a pair of links pivotally connected to said first section, and first and second pivots connecting said links and said second section, respectively, to said part, said holder having two extreme positions, in one extreme position the sections being spaced to enable the second section to be swung over one end of a can, whose other end is positioned in said first section, until the can is engaged by the lip, said first pivot then being forwardly of said second pivot with respect to said lip, and in the other extreme position said sections being clamped against the ends of the can with the first pivot being between said second pivot and said lip, and said seals being compressed against the punctured end wall thereby sealing the contents of the can and yieldably maintaining said toggle connection in its locked position.

3. A holder and puncturing device for a liquid-containing can, comprising a first section constituting a seat for one end of the can, a second section to seat on the other end of the can, said second section being provided with a pouring spout member, a vent member, and a depending rear lip for engagement with the side of the can, said

members being forwardly of said lip but in alignment therewith and with each other with the vent member near said lip and said spout member near the front of said second section and both being tubular and including a puncturing point, said tubular members being of approximately the same length, and a toggle connection between said sections including a part provided with a handle, a pair of links pivotally connected to opposite sides of said first section between said members, and first and second pivots connecting each of said links and each of said opposite sides of said second section, respectively, to said part, the axis of the second pivots being at right angles to the fore and aft axis defined by said members and centrally of said second section, said device having two extreme positions, in one extreme position the sections being spaced to enable the second section to be swung over one end of a can, whose other end is positioned in said first section, until the can is engaged by the lip, said first pivot then being forwardly of said second pivot with respect to said lip, and in the other extreme position said sections being clamped against the ends of the can with the first pivot being between said second pivot and said lip.

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