Nov. 2, 1965 C. J. BOYER ETAL 3,215,322

CANISTER HOLDER FOR GAS MASK HARNESS

Filed April 13, 1964

Fig.1.

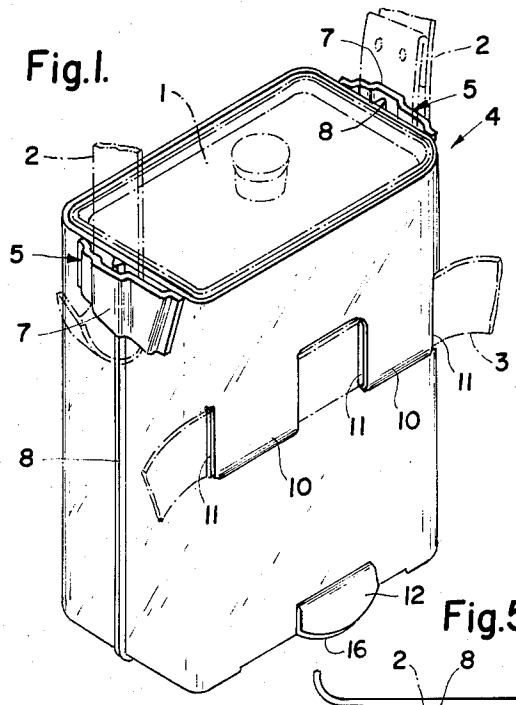



Fig.2.

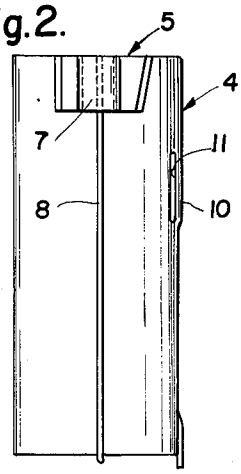



Fig.3.

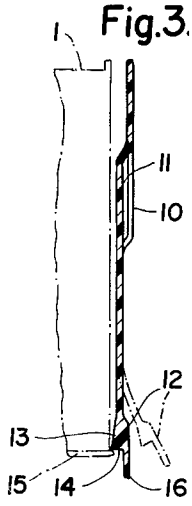



Fig.4.

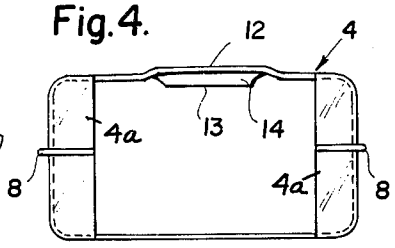



Fig.5.

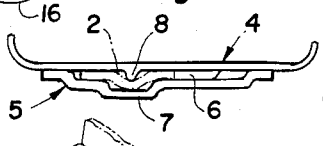



Fig.6.

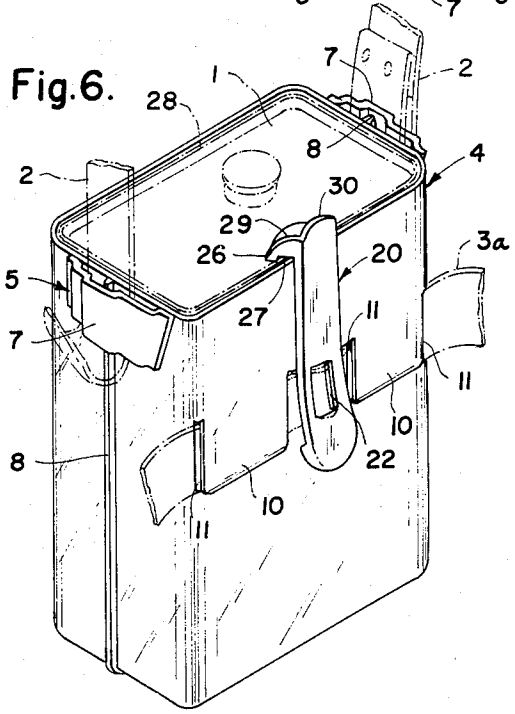



Fig.7.

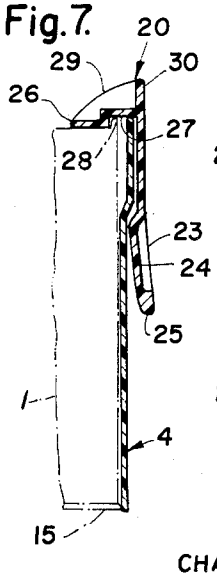
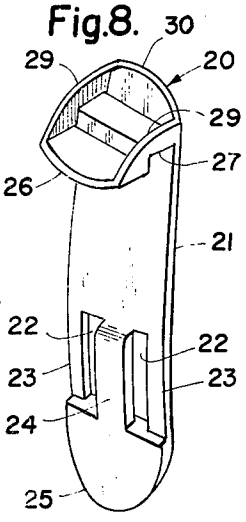



Fig.8.





INVENTORS
CHARLES J. BOYER and
GUY G. KLINGER

BY

William J. Ruano

their ATTORNEY

United States Patent Office 3,215,322 Patented Nov. 2, 1965



3,215,322

# CANISTER HOLDER FOR GAS MASK HARNESS

Charles J. Boyer, West Reading, and Guy G. Klinger, Shillington, Pa., assignors to The Electric Storage Battery Company, Philadelphia, Pa.

Filed Apr. 13, 1964, Ser. No. 359,286
3 Claims. (Cl. 224—26)

This invention relates to a canister holder for use in a gas mask harness and, more particularly, relates to a holder which will securely lock the canister in place and yet which will enable the canister to be easily and quickly removed from the harness for replacement purposes.

Conventional gas masks harnesses are rather complicated in construction, particularly in the portion for holding the canister in place. This portion generally involves a pocket with laces for wrapping around the canister, or a holder with straps wrapped about the top and bottom of the canister to prevent accidental displacement from the holder when the wearer stoops. Such construction has outstanding disadvantages when it is desired to replace the canister, since the laces must be untied and the straps unwrapped from the holder.

A still further disadvantage is that the holder and straps cover the outside surface of the canister so that important labels thereon cannot be seen, therefore requiring frequent removal from the holder as different wearers use the harness and gas mask assembly, or as the same wearer uses it from time to time.

An object of the present invention is to provide a novel holder for a canister in a gas mask harness which will overcome the above named disadvantages and which eliminates the necessity of lacing or wrapping straps about the canister holder and which provides an assured locking of the canister in the holder to prevent accidental displacement from the harness.

A further object of the invention is to provide a novel transparent plastic container or holder for the canister to enable the canister and its labels to be seen at all times, which holder can be easily carried by the harness and operated easily to unlock the canister from the holder when it is desired to replace the canister or withdraw it from the holder for any other reason.

Other objects and advantages will become more apparent from a study of the following description taken with the accompanying drawing wherein:

FIG. 1 is a perspective view of a canister holder or container embodying the principles of the present invention;

FIG. 2 is an end view of the holder shown in FIG. 1;

FIG. 3 is a vertical, cross-sectional view taken through the center of the major side of the container shown in FIG. 1;

FIG. 4 is a bottom view of the holder shown in FIGS. 1, 2 and 3;

FIG. 5 is a somewhat enlarged, fragmentary, top view showing the handle **5** and its connection to holder **4**;

FIG. 6 is a perspective view of a modification of the holder embodying a detachable stop for holding the canister in place in the holder;

FIG. 7 is a vertical, cross-sectional view through the stop and holder shown in FIG. 6; and

FIG. 8 is an enlarged, perspective view of the stop shown in FIGS. 6 and 7.

Referring more particularly to FIGS. 1, 2 and 3 of the drawing, numeral **1** denotes a canister enclosing activated charcoal or other suitable filtering material and having an inlet opening at the bottom end (not shown) and a top opening, shown in dash and dot outline, to which a flexible tube is connected which leads filtered air into the face piece of a gas mask—all which is well



known in the art. The canister **1** may be identified as to type by a special color, and generally has labels on both sides giving important information concerning the use of the canister, shelf life, etc., which makes it advisable to have the labels exposed at all times.

Accordingly, the plastic container or holder generally denoted by numeral **4**, into which the canister is inserted and closely fitted, is preferably made of transparent plastic material so that both labels will be visible at all times. It may be formed of two plastic halves having flanged mouth portions **8** sealed together or may be molded in one piece. Straps **3**, shown in dash and dot outline and forming part of a gas mask canister harness, are connected to the container **4** by being looped through slots or openings **11** formed by bulged out portions **10** of the container **4**. Straps **2**, shown in dash and dot outline, have, at their ends, closed loops, each of which is inserted through the opening provided by bulged out portion **7** of plastic handle **5**, whose side portions are integrally secured to opposite top end portions of the container.

As shown more clearly in FIGS. 4 and 5, the bottom of the container is open with exception of side base strips **4***a* which provide a base or shoulder on which the canister **1** is supported. An important feature of the invention is the shape of the wedge lock **12, 13, 14, 16**, more clearly shown in FIG. 3, which forms the bottom portion of the container. As the canister **1** is slid downwardly in place, the bottom edge will engage the wedge **13** and thereby push it outwardly by camming action until the bottom edge or bead **14** of the canister clears the bottom edge **14** of the container at which time wedge **13** springs back into the full line position shown in FIG. 3 and serves as a stop to prevent upward movement of the bead **15** or the canister **1**. An integral bottom portion **16**, also of plastic, serves as a tab to enable pulling out to the dot-and-dash position (since the side of the container is slightly flexible) so as to remove the stop function provided by edge **14** and enable the canister to be lifted freely when it is desired to remove it from the holder for replacement.

It will be therefore readily apparent so long as the canister **1** is locked in the manner shown in FIG. 3, the canister will not slide out of the container **4** when the wearer stoops down or otherwise tilts the container.

FIGS. 6, 7 and 8 show a modification wherein the handles **5** are identical to those shown in FIG. 1 for holding the straps **2** as well as the projections **10** which provide slots **11** through which straps **3** may be looped. However, instead of providing a wedge type lock at the bottom of the container, there is attached to strap **3***a*, by looping through slots **22**, an inwardly projecting hook portion **29** terminating in a ledge or stop portion **26** which is adapted to engage the top surface of the canister to prevent accidental sliding out of the holder **4**.

As shown more clearly in FIGS. 7 and 8, the stop element **20**, which may be also of plastic material, has a cut-out portion **27** for clearing the top bead of canister **1** and a body portion **21** bulged inwardly to form a projection **24** surrounded by slots **22** in strip portions **23** and terminating in a bottom tab portion **25**.

Thus it will be seen that we have provided an efficient, transparent plastic holder for a canister for support by a gas mask harness, which holder will allow the canister and its labels to be viewed at all times while in the holder without the necessity of removal; furthermore, we have provided a holder which has a latch or stop embodied in a wall thereof employing the slight flexibility of such wall to effect unlatching or unlocking of the canister when it is to be removed and replaced and which latch is easily and quickly unlatched and automatically latched by insertion of the canister and eliminates the

necessity of lacing or strapping the canister which would otherwise make removal thereof tedious and time consuming; furthermore we have provided a modified latch or stop that may be a separate part strapped to the container, rather than an integral part of the wall thereof.

While we have illustrated and described several embodiments of our invention, it will be understood that these are by way of illustration only, and that various changes and modifications may be made within the contemplation of our invention and within the scope of the following claims.

We claim:

**1.** In combination with a harness for use with a respirator device, a holder for supporting a canister, said holder being substantially tubular of transparent, plastic material and of substantially rectangular cross-section so as to snugly embrace the canister, means for attaching the straps of said harness to opposite end wall portions at the top portion of said holder, and a latch supported on one of the walls of said holder for latching onto a portion of said canister so as to serve as a stop to lock the canister securely in place in said holder, said one of the walls being provided with openings through which a strap of said harness may be looped, and said latch being secured to said strap and having a top hook shaped element for engaging the top surface of the canister and for locking it in place in said holder.

**2.** In combination with a harness for use with a respirator mask, a holder for supporting a canister, said holder



being substantially tubular of transparent, plastic material and of substantially rectangular cross-section so as to snugly embrace the canister, means for attaching the straps of said harness to opposite end wall portions at the top portion of said holder, the bottom wall of said holder having a large opening adjacent the side wall of greatest width so that said side wall may be slightly flexed outwardly, said side wall having an integral stop portion which is engageable with a marginal portion of said canister to prevent accidental removal thereof from the holder, said side wall including a tab for facilitating outward flexing of said side wall to unlatch said latch.

**3.** Apparatus as recited in claim **2** wherein said latch is in the form of a wedge-shaped element integrally formed on the inside surface on the bottom of said side wall and having a bottom shoulder for engaging the bottom bead of said canister and including an integral tab extending downwardly from said shoulder to facilitate outward flexing of said side wall and removal of said canister.

**References Cited by the Examiner**

UNITED STATES PATENTS

| | | | |
|---|---|---|---|
| 1,783,756 | 12/30 | Von Frankenberg. | |
| 1,842,936 | 1/32 | Franz | 224—1 X |
| 2,433,587 | 12/47 | Wentworth. | |
| 2,948,449 | 8/60 | Aronson et al. | 224—5.2 X |
| 3,169,171 | 2/65 | Wachs et al. | 150—52 X |


HUGO O. SCHULZ, *Primary Examiner.*