Jan. 22, 1929. 1,699,937

M. YABLICK.

CASE FOR GAS MASKS AND CANISTERS

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FIG. 1.

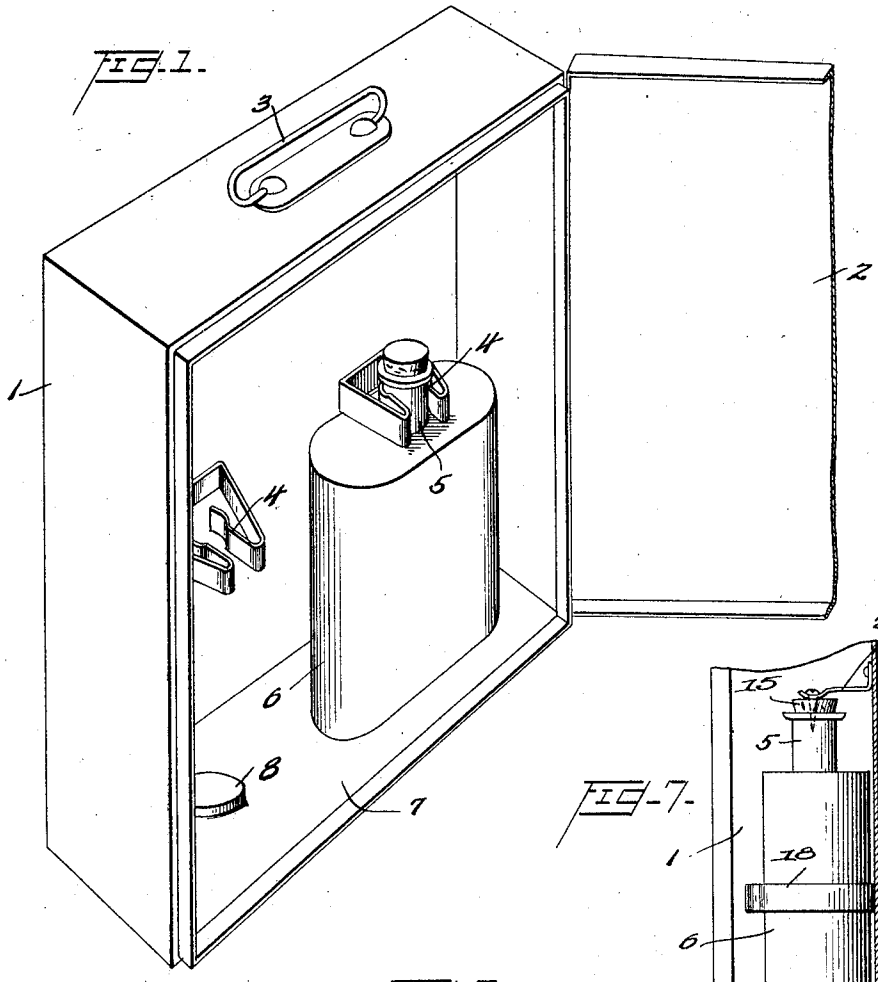

FIG. 7.

FIG. 8.

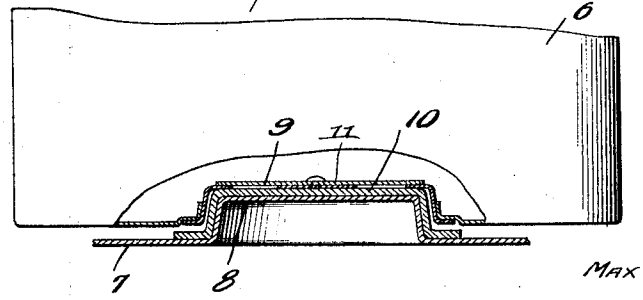

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FIG. 3.

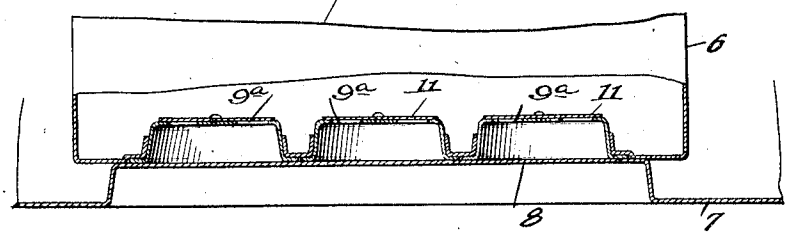


FIG. 4.

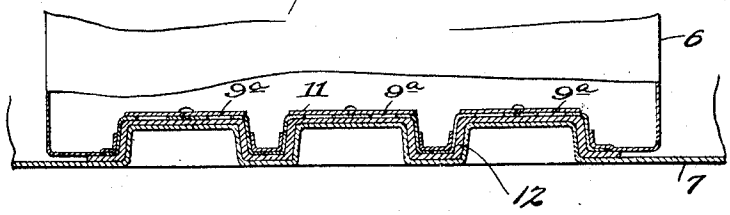


FIG. 5.

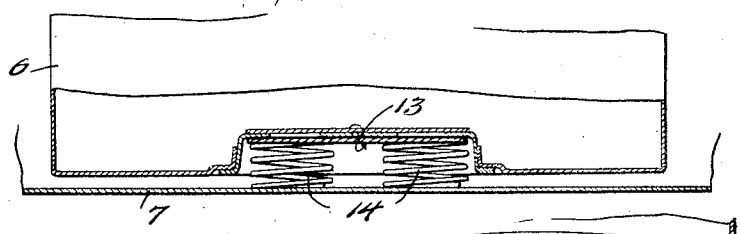
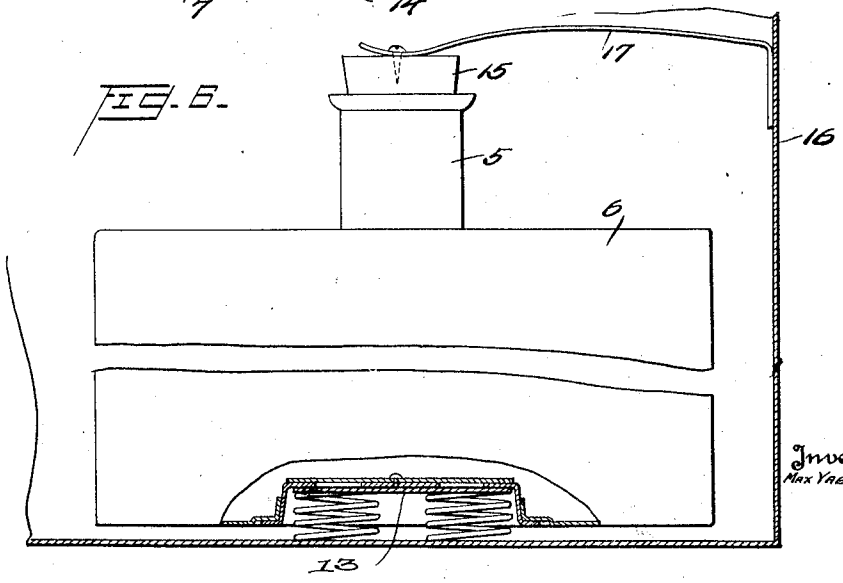


FIG. 6.



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UNITED STATES PATENT OFFICE.

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CASE FOR GAS MASKS AND CANISTERS.

Application filed June 18, 1927. Serial No. 199,800.

This invention relates to a case for gas mask canisters and has special reference to a case wherein a canister and the gas mask employed therewith may be securely held until use is to be made thereof, while at the same time permitting ready and easy withdrawal of both the canister and gas mask from the case.

Gas purifying materials commonly employed in gas mask canisters, for example, activated carbon, hopcalite, soda-lime, etc., are inclined to deteriorate when in contact with the air, owing to the presence of impurities such as moisture, CO_2, etc. This deterioration, when occurring during the period of disuse, reduces the life of the canister, and when prolonged renders the purifying materials valueless for service when the emergency arises.

During war time, the practice was to seal the top of the canister with a cork and the bottom of the canister with a cardboard disc similar to the ordinary milk bottle disc. This disc was removed before the canister could be used and was replaced when the canister awaited use in order to protect canister contents against deterioration during the period of idleness. Almost invariably, when the emergency arises for use of a gas mask, there is considerable excitement and confusion, as well as need for prompt action, so that often when the gas mask was placed in service removal of the disc was forgotten with the consequent result that the wearer could not breathe. This added to the confusion and resulted in further delay before the emergency was properly attended to, thus often occasioning serious consequences.

Among the objects of this invention is the provision of a case for holding a gas mask canister securely and readily for immediate withdrawal when the need arises, while at the same time providing an effective means for preventing deterioration of the gas purifying materials within the canister, which normally takes place on prolonged exposure to the air or atmosphere.

A further object of this invention is to overcome the disadvantages of prior gas mask equipment heretofore described by so constructing the carrying case that when the canister or gas mask and canister are placed within the case, the canister is automatically sealed and ready for instant use upon removal from the case, and without the need of further operations.

A still further object of this invention is to provide the carrying case with means for automatically sealing the canister, when idling or in disuse, while at the same time having the canister ready for instant use upon removal from the carrying case, and this without requiring the removal of a sealing means such as heretofore employed.

My new construction is specially valuable in protecting gas masks and canisters employing hopcalite, because this material is readily affected by the moisture of the air.

Other, further and more specific objects of this invention will become readily apparent to persons skilled in the art from a consideration of the following description when taken in conjunction with the accompanying drawing wherein:

Fig. 1 is a perspective view showing my improved case having a canister positioned therein, the front door being opened in order to show the interior of the case.

Fig. 2 is a fragmental view, partly in section, showing the lower part of the canister in position upon the bottom of the case.

Figs. 3 and 4 are fragmental views, partly in section, showing the lower parts of modified forms of canister from that shown in Fig. 2 and illustrating their positioning upon the bottom of my improved case.

Fig. 5 is a view similar to Fig. 2, and illustrating the employment of specific resilient means upon the bottom of my improved case for effecting proper seating and closure of the opening in the bottom of the canister when properly positioned in the case.

Fig. 6 is a fragmental view, partly in section, illustrating the use of resilient means for effecting closure of the bottom and top of the canister when positioned within my improved case.

Fig. 7 is a fragmental view, partly in section, showing resilient members gripping the sides of the canister and resilient means for effecting closure of the top of the canister when positioned within my improved case.

The apparatus comprises a case (1), preferably of rectangular box structure, and having a front door (2) hinged to the side thereof and a handle (3) to facilitate the transportation of the device from place to place, when desired. Within the case and fastened

to the rear wall are the resilient fasteners (4), which are adapted to grip the neck (5) of the canister (6) and thereby hold the canister. The neck of the canister may be withdrawn from the fasteners (4) by the application of sufficient forward force to pull the neck out of these fasteners. The bottom (7) of the case (6) is provided with one or more projections or inward indentations (8) of sufficient area to cover all of the openings (9) of the canister, when in proper position thereon. In this position the projection (8) registers with the openings (9) of the canister and forms a seal against the admission of air through the openings (9) to the interior of the canister. In order to provide further insurance of tight closure, a gasket (10) of rubber or other suitable material is provided. This effect may also be produced by having the indented portion (8) of stout rubber or by substituting for the indentation (8) a solid piece of rubber, such as used for rubber stoppers.

It will be seen from Fig. 2 that the openings (9) are covered by a disc (11) serving as a valve This valve cannot be relied upon to always function properly so as to insure against deterioration of the canister contents.

In positioning the canister within my improved case the neck (8) is forced into the gripping fastener (4) and the rest of the canister is swung into position so that the depression containing the openings (9) will register with the projection (8) of the bottom of the case.

Fig. 3 shows the relative position of the projection (8) upon the bottom of my improved case when a canister (6) containing a plurality of sets of perforations or openings (9^a) is positioned thereon

In Fig. 4, a canister similar to that shown in Fig. 3 is employed and a special gasket (12) is also used to further insure tight closure.

In the modified form shown in Fig. 5, instead of having a projection upon the bottom (7) of the case, a plate (13) is positioned upon springs (14) which are attached to the bottom (7). This arrangement facilitates the positioning of the canister in the case.

In Fig. 6, I have shown a modified form which provides for a stopper (15) connected to the sides (16) of the case by means of a spring (17). This spring (17) forces the stopper against the outlet of the neck (5) of the canister and thus insures proper closure of same. In this arrangement the circulation of air in the canister is entirely prevented.

In Fig. 7, the canister is held by the springs (18) bearing against the sides of the canister and rests either upon the bottom (7) of the case or preferably upon a plate or disc (19), which may be of a flexible material such as rubber. A spring (20) projecting inwardly from the rear wall of the canister serves to hold the stopper (15) in proper position to insure an effective closure.

It will be seen that by the arrangements shown in Figures 6 and 7, the canister may be readily inserted into the case and will be properly held against displacement, while at the same time insuring positive sealing against the passage or flow of air at both open ends of the canister

If desired, the case (1) may be made of sufficient size to hold a gas mask as well as the canister. In such case, the gas mask may be kept attached to the canister when idling so that the entire gas mask equipment will be ready for instant use when the need arises.

The present invention is not limited to the specific details set forth in the foregoing examples which should be construed as illustrative and not by way of limitation, and in view of the numerous modifications which may be effected therein without departing from the spirit and scope of this invention, it is desired that only such limitations be imposed as are indicated in the appended claims.

I claim as my invention:

1. A case for a gas mask canister containing a material which deteriorates when air passes through it and provided with openings at its top and bottom for the passage of air through it, said case being provided with means for sealing said bottom opening of the canister, and being provided with means for holding the canister with its bottom opening positioned upon said sealing means.

2. A case for a gas mask canister containing a material which deteriorates when air passes through it and provided with openings at its top and bottom for the passage of air through it, the bottom of said case being provided with a projection for sealing said bottom opening of the canister, and being provided with means for holding the canister with its bottom opening positioned upon said sealing projection.

3. A case for a gas mask canister containing a material which deteriorates when air passes through it and provided with openings at its top and bottom for the passage of air through it, the bottom of said case being provided with a yielding projection for sealing said bottom opening of the canister, and being provided with means for yieldingly engaging and holding the canister with its bottom opening positioned upon said yielding sealing position.

In testimony whereof I affix my signature.

MAX YABLICK.