

Jan. 19, 1937.

S. W. BARNES

2,068,637

FIREARM CLEANING ACCESSORY

Filed May 2, 1935

2 Sheets-Sheet 1

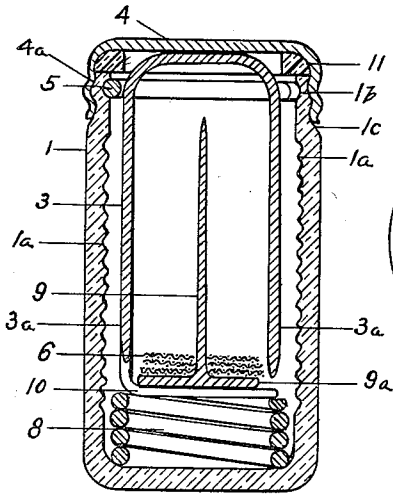


FIG. 1.

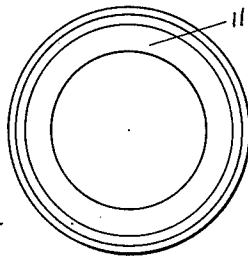


FIG. 4.

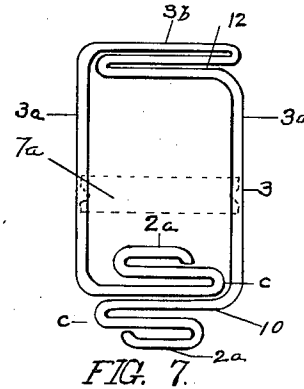


FIG. 7.



FIG. 7A.

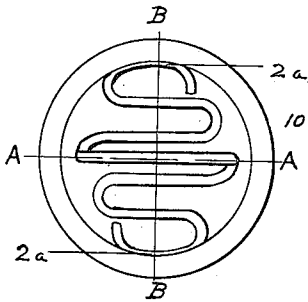


FIG. 2.

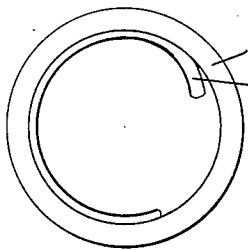


FIG. 5.

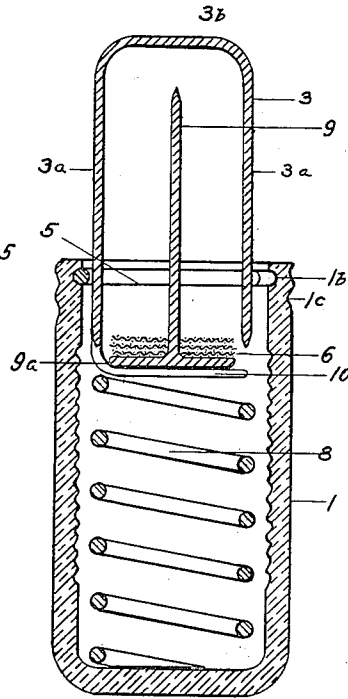


FIG. 8.

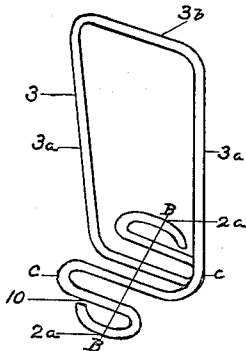


FIG. 3.



FIG. 6.

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2 Sheets-Sheet 2

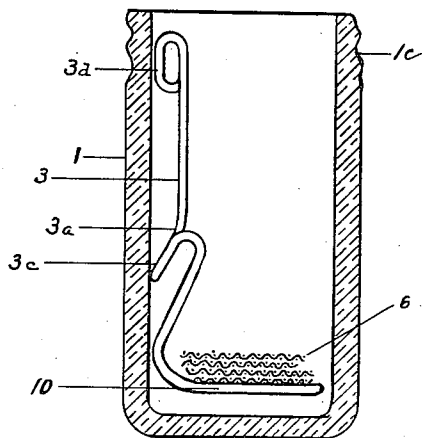


FIG. 9.

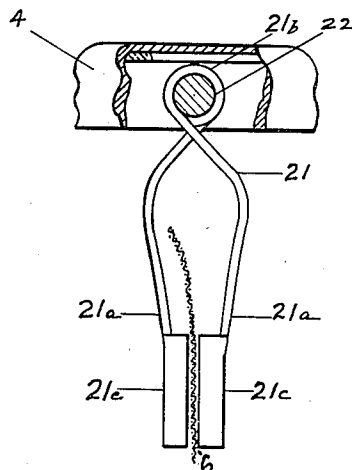


FIG. 13.

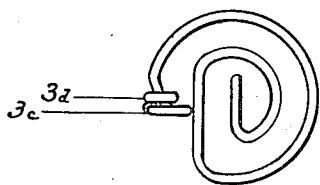


FIG. 10.

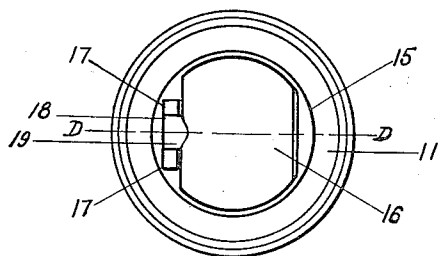


FIG. 11.

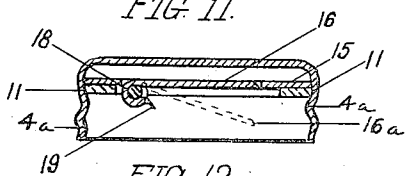


FIG. 12.

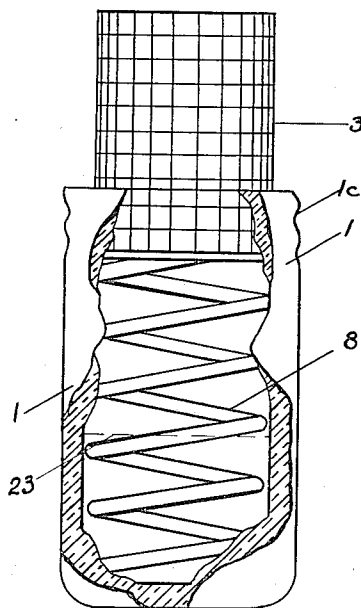


FIG. 14.

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2,068,637

FIREARM CLEANING ACCESSORY

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Application May 2, 1935, Serial No. 19,338

5 Claims. (Cl. 206—56)

A particular object of my invention is to provide a positive means and device by which the operator of any firearm whether in the heat, urge or necessity of battle, chase, or other emergency may conveniently have at hand a compact, handy container for cleaning patches of proper size and material properly saturated with a suitable solvent, cleaner and lubricant and ready for convenient and immediate use. The necessities which the use of my invention supplies cannot be efficiently met by the ordinary means and practice of carrying an oily and otherwise saturated piece of cloth about the clothing. This practice tends to ruin clothes and also prevents the proper saturation of the cleaning patch at the time of use. Another practice of carrying a piece of cloth to be torn into patches of rough and irregular sizes and shapes, and a separate bottle or other container of saturant to be applied to the patch when desired for use is also impractical, wasteful, inefficient and very unsatisfactory. Proper solvents for the present high-powered firearms, when using modern high explosives, are exceedingly volatile and flowable and any attempt to perform the act of saturating the cleaning patch in any field of activity by dipping or by pouring the solvent onto a cleaning patch out of an open container, results in great waste of the liquid element by evaporation, leakage or escape.

Another object of my invention is to provide a proper container adapted to efficiently carry and maintain a supply of cleaning patches, of a predetermined size and shape, in a state of being saturated with a desired solution, said container making it possible and practicable to have the patches and solution prepared and assembled before the time of use; and the container to provide, in combination therewith, means for conveniently abstracting the patches therefrom and to reduce the saturation of the patches to a uniform and proper degree.

The proper size and material of the cleaning patch are of great importance in the proper cleaning of the bores, rifles and shell chambers of firearms. It is also of importance that the patch should be properly saturated with the cleaning solvent and lubricant when thrust into the bore of the gun, all of which necessitates a container for the collecting and maintaining and making available the required cleaning accessories in a condition prepared for use.

Another object of my invention is to provide a container wherein an adequate supply of suitable cleaning patches may be prepared, properly

saturated, stored in a leak-proof and evaporation-proof container for long periods of time without deterioration or waste, and in a manner to be most readily and conveniently carried and used under all conditions of stress, emergency and use, such as in hunting afield, at the traps, or in battle engagements.

Another object of my invention is to provide such a container, and in combination therewith a means for convenient extraction of the saturated patch from the container without soiling the hands or clothing, and without liability of increased loss by evaporation or leakage and also to strip off from the patch as it is removed from the container all surplus of the liquid or saturating element which, if allowed to follow into the bore of the gun, would prove deleterious to the arm as and after it was fired.

The availability of a handy kit and combination of the essential elements for the use and under the conditions above named is imperative and it is especially important that the exact proper size of cleaning patch be ready without the necessity of guesswork or delay in cutting and fitting to size when required for use. The same should be readily available and provided by a handy and convenient means whereby the proper size of patch may assuredly be taken, as otherwise the cleaning operation is ineffective. If an undersize patch is used, the rifles, or the larger portion of the bore in shotguns, are neglected and do not get the proper service. If the patch is oversize, clogging and sticking in the bore results. Avoidance of all these annoying or even fatal contingencies and evils is facilitated by my combination leak-proof container and stripper.

Other objects, improvements and advantages of the invention will be apparent in the course of the following description.

While I have referred to this application of my invention as embodied in a container of accessories for cleaning the bores and chambers of firearms, I desire it to be understood that the invention may, and is intended to be embodied in devices applicable to storing, carrying and maintaining in proper usable condition accessories for cleaning bores and chambers of other mechanisms also which are susceptible to corrosion, rust, and fouling from use or neglect, and which require swabbing out and cleaning or lubrication.

In the accompanying drawings, forming a part of this specification, and in which like numerals

are employed to designate like parts throughout the same.

Fig. 1 is a vertical cross section through the center of the complete assembly of the device taken at the position indicated by the line A—A in Fig. 2.

Fig. 2 is a top plan view of the container with the lid No. 4 and other parts removed, and showing the lower end of the carrier No. 3 in position.

Fig. 3 is a perspective view of the carrier member designated by the numeral 3 in the assembly drawings Figs. 1 and 8.

Fig. 4 is a bottom view of the lid member, designated by the numeral 4 in the assembly drawing Fig. 1.

Fig. 5 is a top outline of the container member No. 1 with parts removed, to illustrate a suggested stripper member, numeral 5 in Fig. 1.

Fig. 6 is a perspective view of a cleaner patch, designated by the numeral 6 in Figs. 1, 8, 9, 13.

Fig. 7 is a perspective view of an optional form of carrier member 3 shown in Fig. 3. In this form is shown the means for stripping the cleaner patches 6 of surplus liquid by drawing them through the slot 12 when removing for use. This form may be used instead of that shown at No. 5 in Fig. 1 and Fig. 5 respectively in which the stripping means is applied in the body of the container as shown.

Fig. 7A is a perspective view of a modification of a patch-retaining member.

Fig. 8 is a vertical cross section through the center of the complete assembly of the container No. 1 of the device taken through line A—A of Fig. 2, with the lid 4 removed, and showing the spring 3, extended so as to elevate the carrier to a position permitting the excess solution in the patches, 6, to drain back into the container. This also permits of the convenient removal of the patches for use.

Fig. 9 illustrates an optional form of the carrier No. 3.

Fig. 10 is a top view of the carrier as shown in Fig. 9.

Fig. 11 is a bottom view of lid member 4 with an optional form of stripper.

Fig. 12 is a cross section of lid and stripper member taken through line D—D of Fig. 11.

Fig. 13 is an illustration of the lid member 4 showing mounted therein an optional form of a cleaner patch carrier and stripper.

Fig. 14 illustrates a side elevation view of container member and with the wall thereof partially cut away so as to reveal mounted therein an optional form of carrier member 3 and elevating spring member 3.

The numeral 1 designates the body, or container, member of the device. 1a, 1a are corrugations of the inner walls of the container body adapted to engage the extended portions of the rim of the base of the carrier member 3, indicated at 2a, 2a in Figs. 2 and 3 respectively, and thus aid in holding the latter at any desired elevation in the container. 1b is a circular recess in the inner wall of the container 1, disposed therein at a convenient position near the top thereof, adapted to engage and seat under suitable compression a spring, numeral 5, circular in shape, extending substantially but not entirely around the wall of the container.

One end of the spring member 5 is bent inwardly from the wall of the container so as to permit of the insertion of the upward edge of the cleaner patch 6 when being removed from the carrier 3, frictionally between the said spring

member and the wall of the container. The cleaner patch may then be withdrawn upwardly through the space between spring member 5 and the wall of the container thus stripping from the cleaner patch the surplus of the liquid element with which said patch is saturated, as herein-after more fully described.

Numeral 9 indicates a needle-like spike with a disc-like base, 9a integral therewith mounted detachably on the bottom of the carrier member 3, adapted to receive by impaling thereon one upon the other the cleaning patches 6. The use of this spike member is one method used to maintain the cleaner patches in their normal position in the carrier, regardless of the variety of positions in which the device may be placed or carried from time to time.

Fig. 7A is the detail of a suggested alternative method of maintaining the patches in the desired position in the container and carrier. This is shown at 7a in dotted lines in Fig. 7 and illustrates the working position. It is intended to fit with some tension between the side arms 3a and to slide downwards to the top of the stack of patches, thus holding them compactly in normal position in the carrier.

The carrier, numeral 3, shows in perspective in Fig. 3 is made in my preferred embodiment of the invention, of a continuous spring wire of suitable gage and tempering and is shaped with side arms 3a and a cross bar 3b at the top connecting said side arms, and shaped at the lower extremity of the carrier on a plane at right angles to the side arms 3a so as to form a base, or bottom of the carrier as at 10.

The outside dimension of the carrier base so formed is normally slightly greater than the inside diameter of the container. The base of the carrier is, however, obviously adapted to be sprung inwardly towards the center sufficiently to permit of the inserting of the carrier into the container. The tension of the spring when the carrier is mounted in the container tends to hold the portions of the rim of the base of the carrier at positions 2a, 2a in frictional contact with the inner walls of the container so that the carrier may be depressed or elevated to, and held at, any desired elevation within the confines of the container.

The dimensions of the base 10 of the carrier on a line at right angles to the line B—B in Fig. 3 is less than the inside diameter of the container and so disposed as to leave the said base at the portions thereof at the points c, c in Fig. 3 and the side arms of the carrier free from the inner side walls of the container.

The numeral 4a (see Figs. 1 and 12 respectively) designates a coarse-threaded inner wall of the lid 4, adapted to engage a like thread, 1c to receive the same on the upper end of wall of container 1.

The numeral 1c in Figs. 1, 8, 9, and 14 respectively designates a threaded upper end of the container adapted to receive threaded lid 4.

The numeral 11 designates a gasket of any suitable material disposed intermediate the top of the container 1 and the lid 4, for the purpose of making the device leak-proof.

The numeral 12 in Fig. 7 indicates a slot formed in the crossbar of this optional form of carrier 3, formed by successive lateral bends of said crossbar member, so disposed that a cleaning patch 6 may be frictionally engaged therein whereby, when a patch is drawn therethru, the excess of liquid with which the patch may be

impregnated is stripped off and allowed to drain back into the container.

When the optional form of carrier 3, as shown in Fig. 9, is used, the spring, numeral 8, shown in Figs. 1, 8, and 14 respectively, may be dispensed with. This optional form of carrier member 3 is made of wire of a suitable material and gage so shaped as to comprise a side arm member, 3a in Fig. 9, and a convenient eye, 3d, at the upper end of the side arm, the latter for a convenient handle for lifting the carrier in the container for extracting the cleaning patches or for placing a new supply of same.

An outwardly-extending hook-shaped loop 3c is also formed in the side arm, so disposed as to be hooked over the rim of the sidewall of the container when the carrier is lifted up to a suitable position for draining and removal of the cleaning patches 6.

In Figs. 11 and 12 I illustrate, mounted in lid member 4, an optional form of the means for removing excess liquid elements from the cleaning patches before use. In Fig. 12 is a cross section taken on line D—D of Fig. 11. In these Figures 11 and 12, numeral 15 designates a metal diaphragm with the inner portion thereof, 16, separated from the outer portion but hinged thereon so that portion 16 may be swung downwardly from portion 15. The latter is securely attached to the inner wall of lid member 4 and has lug-like portions turned so as to form the mountings 17, 17 for the hinge member of the diaphragm. Numeral 18 is the hinge pin. Numeral 19 is a lug disposed upon the member 16 bent around the hinge pin so as to complete the hinge member connecting parts 15 and 16. Numeral 16a shows in dotted lines part 16 depressed into position for receiving cleaning patch 6 preparatory to stripping from the latter the excess liquid saturant.

In Fig. 13, illustrating a vertical elevation of lid 4 with a portion thereof cut away so as to reveal an optional form of carrier member and stripper, numeral 21 designates an integral combination of these elements of my invention.

The illustration shows a vertical elevation view of this member suspended upon a stud, a cross section of which is shown at numeral 22, formed within the lid member 4; but it is not wholly essential that this member 21 should be thus suspended as it may be merely deposited loosely in the well of the container. The upright arms 21a and the eye thereof, 21b, are made of spring material of any suitable gage and tempering, and attached thereto at the lower extremities of the same are discs 21c, substantially the same in diameter as the cleaning patches.

Fig. 13 shows the member 21 in normal position before the supply of patches is placed in the carrier. As the patches are put in place, the arms 21a, 21a are sprung outwardly to receive the patches, thus holding them in place under tension. When the lid and carrier are removed to permit the use of the patches, the latter are withdrawn one at a time, and in the process of being withdrawn from the pressure of the discs 21c, 21c, the surplus liquid saturant of the patch is stripped off and allowed to drain back into the container.

In Fig. 14, which illustrates a vertical plan view of the container 1 with a portion cut away so as to reveal the spring 8 and carrier 3, the numeral 3 designates an optional form of carrier 3 in the form of a wire mesh basket-like device. The cleaning patches are deposited in such a device in a stack.

In any form or adaptation of my invention, the cleaning and lubricating fluid, or element for the saturation of the cleaning patches is placed in the cuplike container in sufficient quantity to assure the complete saturation of all the patches carried or accommodated by the device. It is to be noted that in order to insure each and every patch being sufficiently supplied with the saturating fluid, all should be completely saturated.

However, when so saturated to the full liquid-carrying capacity of the patches, the latter will contain a surplus of the solvent which, if allowed to go with the patch into the bore and chambers of the gun, would prove deleterious and harmful. This necessitates a practical, convenient and suitable means for the stripping of the patches to a proper content of the saturant before use, and at the same time and operation a salvaging of the surplus solution.

A more detailed explanation of the use, benefit and operation of my invention is described as follows:

The proper and efficient cleaning of the bore, rifles and chambers of a modern highpower firearm using nitro powders requires a thorough and timely cleaning of all residue from the explosives and also abrasions and fusions of metal from the projectile in its passage through the bore of the gun. Neglect of complete and prompt removal of all foul and deleterious residues resulting from the firing of the arm means damage and the ultimate ruination of the arm.

Damage to a firearm from such neglect is occasioned

(a) By putting the arm away after use without cleaning and then, as too often happens, forgetting to clean it at all until another occasion for use develops.

(b) Through the improper use of (or the use of improper) cleaning equipment and materials failing to obtain a thorough removal of the deleterious matter.

(c) Through a casual inspection after a superficial attempt at cleaning, putting the arm away without its being completely clean. Especially is this the case when residuum of metal from the projectile is not fully removed because it cannot be discovered in the bore of the gun by sight inspection: also, because it is impossible to discern by sight metal deposits in the bottom of the grooves of rifled guns.

The greatest contribution to the neglect in properly and completely cleaning the gun after use is because of the lack of a complete combination and co-action of the necessary elements to accomplish the desired end. It is often impossible to secure at the proper time and place the co-ordinating materials for the purpose: e. g., in trap or range shooting where a great many rounds are fired, it requires repeated cleaning operations to keep the gun in good condition and to prevent injury thereto. Also in battle operations and field use this applies.

The cleaning patch must be of a close exactness as to size, thickness and quality of material—these factors being determined by the caliber of the arm. The patch must be forced down to the deleterious matter at the extreme bottom of the grooves, as otherwise the rifles will accumulate and retain such matter to the ruination of the arm. Thus the patch must be of proper size and of proper material; if it is too small it slips by and over the fouling matter without removing it. If too large, the patch clogs

and sticks in the bore thus preventing the forcing of the patch through the bore, or causing the cleaning rod to tear out and leave a portion of the patch stuck in the bore. The cleaning patch must be properly saturated with a suitable solvent having the qualities of dissolving deleterious residues left in the chambers, bore and rifles of the arm after firing. The best authorities also advocate a proper lubricant in the cleaning and solvent element used so as to leave a protective coating in the bore and rifles to prevent rusting from sweating or from encroaching dampness from the atmosphere. All of these necessary and proper elements must be available at the proper time and in a convenient and practical form and combination for ready use or the gun is certain to suffer neglect. Such a combination should also provide a safety measure to prevent spilling of the liquid, loss of the volatile ingredients from evaporation, and a means for cleanly use and application of the cleansing device and operation. The assembly of all the elements is accomplished and facilitated in my invention and the ends attained as follows;

A proper supply of cleaning patches together with any suitable and effective solvent having in combination therewith any proper lubricant and protective agent are brought into co-ordinate relation and co-action, maintained within a suitable liquid and gas leak-proof container such as No. 1 in the accompanying drawings, and so there contained in such relation to each other that will permit and cause the thorough saturation of all the cleaning patches with the combined lubricant and solvent elements. The container may be made of glass, earthenware, bakelite or other suitable liquid and gas resisting material.

The container is sealed with a lid and a washer, or gasket member intermediate the container and the lid: the latter to be applied to the container and the gasket with a juncture such as will prevent leakage and escape of the liquid and the volatile elements in the container.

In my invention, when the lid of the container is removed for access to the cleaning elements the carrier 3, adapted to contain and carry the stock of cleaning patches, may be elevated in the container either by lifting with the fingers as in Fig. 9, or by the release of the coiled spring 8 as in Figs. 1, 8 and 14 respectively. This brings the cleaning patches upward in the container to a convenient elevation such as will permit the removal of the successive patches from the container for use. This operation also brings the patches up out of and above the level of the fluid saturant in the container, thus allowing the surplus of the saturant to drain off of the patches back into the common supply in the cup of the container for further use. The spring 8 in the one case, or the hook 3c in Fig. 9 when elevated and hooked over the upper edge of the container wall, 1, serves to hold the carrier and patches in the elevated position as shown in Figs. 8 and 14 respectively, until cleaning operations in the gun are completed, after which the carrier is depressed into the container and the lid 4 is replaced upon the container.

When the patches are removed from the container for use, all surplus of the saturant element should be removed from same in some manner such as will save it for further use. A surplus of this solvent element in the gun bore and chambers will be harmful instead of beneficial when the arm is fired. Instead of squeezing this surplus out of the patch onto the ground wastefully,

thus also soiling the hands and clothing therewith, a proper means should be provided for the salvage of this material, and without the disagreeable results above mentioned. In my invention, I provide a cleanly and economical means for stripping the surplus liquid off the patch as it is being removed for use. In my preferred embodiment of my invention, I use the container 1, the removable screw-fitted lid 4, the gasket 11, the carrier 3, as in Fig. 3, the patch stack binder 7a, as in Figs. 7 and 7a respectively. The patch binder 7a is disposed against the top of the patch stack under a slight pressure so as to maintain the patch stack in proper normal position in the carrier, and at the same time as the top patch is removed from the pile under the pressure of 7a, the excess liquid is stripped from the patch.

The numeral 23 in Fig. 14 indicates the approximate level to which the container should be filled with the saturating element.

It is to be understood that the form of my invention, herewith shown and described, is to be taken as a preferred example of the same (some optional forms being shown for better illustrating the full scope of my invention) and that various changes in shape, size and arrangement of parts may be resorted to without departing from the spirit of my invention or the scope of the subjoined claims.

No invention is claimed as to the cleaning rod used in connection with my device nor for the fluid saturant for the cleaning patches, any accepted protective agent, solvent and lubricant saturating element and any conventional type and make of cleaning rod may be used, therefore I have not shown these in my drawings or description.

Having thus described my invention, I claim:

1. A container for the purposes specified, comprising a jar-like receptacle closed liquid tight at the bottom and open at the top, the outside wall of the receptacle adjacent to its top being threaded to receive a threaded cover, a detachable cover having a downwardly turned rim threaded on the inner wall thereof, a gasket disposed intermediate the top of the receptacle and the cover, adapted to hermetically seal the container; a carrier arranged within the receptacle adapted to be raised and lowered to any desired level in the container, having a resiliently compressible base frictionally engaging the walls of the receptacle, having side arms connected at their tops by a slotted crossbar adapted to carry gun cleaning patches, and a crossbar member notched at either end, slidably disposed crosswise between the carrier sidearms, substantially as described.

2. A container for the purposes specified, comprising a jar-like receptacle closed liquid tight at the bottom and open at the top, the outside walls of the receptacle adjacent to its top being threaded to receive a threaded cover, a detachable cover disposed over the top of the receptacle having a downwardly turned rim threaded on the inner wall thereof, a gasket disposed intermediate the top of the receptacle and the cover, adapted to hermetically seal the container; a carrier member arranged within the receptacle to hold in stack formation gun cleaning patches adapted to be raised and lowered to any desired level in the container, upon removal of the cover, having sidearms connected at the upper ends with a crossbar and having the other ends bent inwardly at right angles thereto and thence in S-like

curves, arranged so as to form an ovate shaped, resilient, compressible bottom to the carrier, the sidearms being disposed free of the sidewalls of the container, and the portions of the outer rim of the carrier bottom which are at right angles to the sidearms, being contacted with the walls of the container with a tight sliding fit.

3. A container for the purposes specified, comprising a jar-like receptacle closed liquid tight at the bottom and open at the top, the outside walls of the receptacle adjacent to its top being threaded to receive a threaded cover, a detachable cover disposed over the top of the receptacle having a downwardly turned rim threaded on the inner wall thereof, a gasket disposed intermediate the top of the receptacle and the cover, adapted to hermetically seal the container; a carrier member arranged within the receptacle to hold in stack formation gun cleaning patches, adapted to be raised and lowered to any desired level in the container, upon removal of the cover, having sidearms connected at the upper ends with a slotted crossbar and having the other ends bent inwardly at right angles thereto and thence in S-like curves, arranged so as to form an ovate shaped, resilient, compressible bottom to the carrier, the sidearms being disposed free of the sidewalls of the container, the portions of the outer rim of the carrier bottom which are at right angles to the sidearms being contacted with the walls of the container with a tight sliding fit and horizontally disposed corrugations on the inner surface of the container walls adapted to receive the contacting portions of the rim of the carrier bottom, substantially as shown.

4. A container for the purposes specified, comprising a jar-like receptacle closed liquid tight at the bottom and open at the top, the outside walls of the receptacle adjacent to its top being threaded to receive a threaded cover, a detachable cover disposed over the top of the receptacle having a downwardly turned rim threaded on the inner wall thereof, a gasket disposed intermediate the top of the receptacle and the cover, adapted to hermetically seal the container; a carrier member arranged within the receptacle to hold in stack formation gun cleaning patches, adapted to be raised and lowered to any desired level in the container, upon removal of the cover, having sidearms connected at the upper ends with a slotted crossbar and having the other ends

bent inwardly at right angles thereto and thence in S-like curves, arranged so as to form an ovate shaped, resilient, compressible bottom to the carrier, the sidearms being disposed free of the sidewalls of the container, the portions of the outer rim of the carrier bottom which are at right angles to the sidearms being contacted with the walls of the container with a tight sliding fit; horizontally disposed corrugations on the inner surface of the container walls adapted to receive the contacting portions of the rim of the carrier bottom and means for stripping the cleaning patches of surplus saturant, substantially as shown.

5. A container for the purposes specified, comprising a jar-like receptacle closed liquid tight at the bottom and open at the top, the outside walls of the receptacle adjacent to its top being threaded to receive a threaded cover, a detachable cover disposed over the top of the receptacle having a downwardly turned rim threaded on the inner wall thereof, a gasket disposed intermediate the top of the receptacle and the cover, adapted to hermetically seal the container; a carrier member arranged within the receptacle to hold in stack formation gun cleaning patches, adapted to be raised and lowered to any desired level in the container, upon removal of the cover, having sidearms connected at the upper ends with a slotted crossbar and having the other ends bent inwardly at right angles thereto and thence in S-like curves, arranged so as to form an ovate shaped, resilient, compressible bottom to the carrier, the sidearms being disposed free of the sidewalls of the container, and the portions of the outer rim of the carrier bottom which are at right angles to the sidearms being contacted with the walls of the container with a tight sliding fit; horizontally disposed corrugations on the inner surface of the container walls adapted to receive the contacting portions of the rim of the carrier bottom, a circular spring means concentrically disposed within the container near the top thereof, for stripping the cleaning patches of surplus saturant and a coil spring interposed intermediate the carrier and the bottom of the container adapted to elevate the carrier when the cover member is removed, substantially as shown.

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