

Aug. 27, 1968

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3,398,417

DEVICE FOR CLEANING GUNS

Filed Oct. 19, 1966

FIG. 1

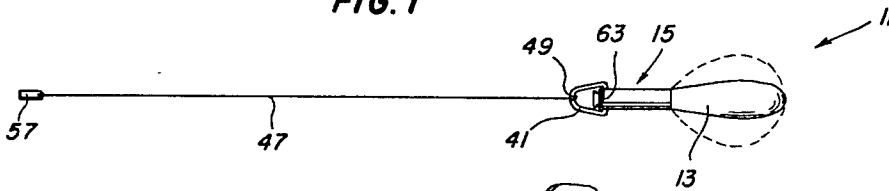


FIG. 2

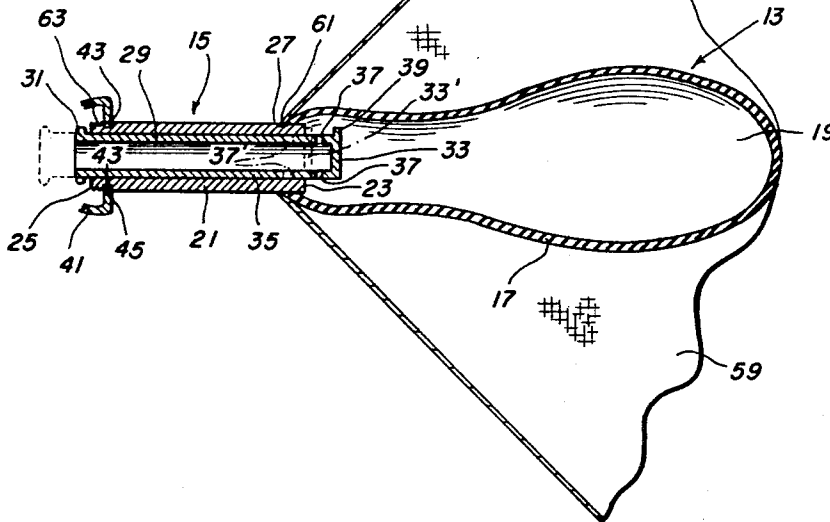
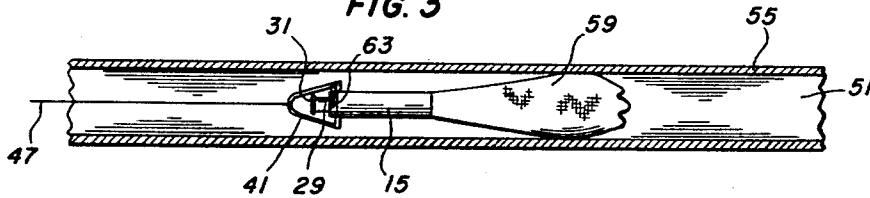


FIG. 3



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DEVICE FOR CLEANING GUNS
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Filed Oct. 19, 1966, Ser. No. 587,877
5 Claims. (Cl. 15—104.19)

ABSTRACT OF THE DISCLOSURE

A portable gun barrel cleaning device having a small balloon-like inflatable portion with rigid sleeve means secured on the mouth portion of the inflatable portion and including valve means for inflating or deflating the inflatable portion and including cord means for pulling the portion through the bore of the gun barrel. The inflatable portion is adapted to be inflated by mouth by the user of the device. The device includes a cleaning cloth which is adapted to be arranged over the inflated inflatable portion, and said portion is adapted to be pulled through the bore of the gun barrel in cleaning the barrel.

This invention relates to a device for use in the cleaning of the bores of guns, as for example, pistols, rifles and shotguns.

One of the principal objects of the present invention is to provide a device that has a resilient inflatable portion that can be inflated to desired sizes for accommodating the device to different sizes of bores of guns.

A further object is to provide such a device that is deflatable to a compact size that can be easily carried, as for example, by placing in a small pencil size case adapted to be clipped to the pocket and containing other cleaning accessories such as grease and patches.

A further object is to provide such a device that is economical to manufacture yet highly efficient.

A further object is to provide such a device having valve means that can be quickly and easily manipulated for quickly and easily deflating and inflating the device.

A further object is generally to improve the design and construction of devices for cleaning bores of guns.

The means by which the foregoing and other objects of the present invention are accomplished and the manner of their accomplishment will be readily understood from the following specification upon reference to the accompanying drawings, in which:

FIG. 1 is a side elevational view of the device of the present invention shown in a partially inflated disposition in solid lines for one size gun and showing in broken lines a greater inflated disposition for a larger gun bore.

FIG. 2 is a fragmentary sectional view along a vertical plane showing a portion of the device of the present invention and showing a cleaning patch in combination therewith.

FIG. 3 is a view of the device of the present invention in use to clean the bore of a gun with the barrel of the gun being shown in section.

Referring now to the drawings in which the various parts are indicated by numerals, the device 11 of the present invention comprises in general an inflatable portion 13 and an assembly 15 attached to inflatable portion 13 for selectively inflating portion 13, deflating the portion or maintaining the air pressure in the portion. Inflatable portion 13 consists of a resilient wall 17 which is preferably formed of an integral piece of resilient rubber, nylon or other suitable resilient material. Inflatable portion 13 is preferably of the bulbous and elongated shape shown in the drawings. Inflatable portion 13 is attached to assembly 15 at one end thereof and defines in the interior thereof an air chamber 19.

Assembly 15 comprises an outer sleeve 21 having a proximal end 23 and a distal end 25. The proximal end

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23 of outer sleeve 21 extends through an opening 27 in the end of inflatable portion 13 and into air chamber 19 so that it is in communication with the air chamber. The part of inflatable portion 13 that defines opening 27 is closely and sealingly engaged by suitable means, such as an adhesive or the like, to prevent any air passage through opening 27 between the outside surface of outer sleeve 21 and inflatable portion 13.

Assembly 15 also includes an inner sleeve 29 slidably mounted in telescopic relationship in the interior of outer sleeve 21 and is movable between a first position shown in solid lines in FIG. 2 and a second position shown in broken lines in this figure. A mouthpiece 31 is preferably formed at the end of inner sleeve 29 that is adjacent the distal end 25 of the outer sleeve. Inner sleeve 29 is provided with a circular end piece 33 which is preferably integrally formed with the side walls 35 of inner sleeve 21 to block off the end of the inner sleeve opposite from mouthpiece 31. Valve ports 37 are provided through wall 35 adjacent end 33. The opposite end of inner sleeve 29 is open adjacent mouthpiece 31, as best seen in FIG. 2. Valve ports 37 are so positioned that when inner sleeve 29 is moved to the heretofore mentioned first position the inner sleeve extends substantially into air chamber 19 beyond the proximal end 23 of outer sleeve 21 to uncover the valve ports 37 and provide communication between the interior of inner sleeve 29 and air chamber 19. Thus, with inner sleeve 29 in said first position a person can blow on mouthpiece 31 into the interior of inner sleeve 29, to cause air to pass into air chamber 19 through valve ports 37 whereby the inflatable portion 13 can be inflated. Then, after the inflatable portion 13 is inflated to the desired size, inner sleeve 29 can be manually moved by pulling it outwardly relative to outer sleeve 21, that is, to the left as viewed in FIG. 2, until the inner sleeve is in said second position wherein the valve ports are blocked off by outer sleeve 21 to maintain the air in air chamber 19 and seal it off from the outside atmosphere. It will be noted in FIG. 2 that the position of the valve ports when inner sleeve 29 is in said second position are shown as at 37'. Preferably, a stop 39 is provided on the end of inner sleeve 29 to engage the proximal end 23 of outer sleeve 21 to limit the outward movement of the inner sleeve and stop it in said second position.

A bail-like swivel element 41 is pivotally attached to outer sleeve 21 as by means of the end portions 43, thereof respectively turnably extending into the sockets 45 in outer sleeve 21 adjacent the distal end 25 thereof. Pull means as a cord 47 is attached to element 41 as at 49 to pull the device through the bore 51 of a gun as shown in FIG. 3 (only the barrel 55 of the gun is shown). At the opposite end of cord 47 from element 41 is preferably provided a weight 57 for initially guiding the cord 47 through the bore 51 so that the end of the cord can be received for pulling the device through the bore.

In certain instances it may be desirable to use the device 11 with the inflatable portion 13 bearing directly against the interior of the barrel 55 during cleaning, as for example, the wall 17 may be of such construction as to clean the bore by direct contact therewith. Thus, the outer layer of wall 17 could be formed of a suitable cloth material or the like, or the entire wall could be formed of a suitable resilient cleaning material. However, it is contemplated that in most instances the device 11 of the present invention in the use thereof will have incorporated therewith a piece 59 of cleaning material as cloth or the like having a hole 61 therethrough. During the use of the device the piece of cleaning material extends over inflatable portion 13, as shown in FIGS. 2 and 3 and bears against the interior of the barrel 55 with the inflatable portion urging it thereagainst. It will be noted that the outer sleeve 21 extends through hole 61. Also, the clean-

ing pieces 59 are preferably replaceable. It will be seen that the hole 61 is small enough that the piece 59 will not be disengaged during use from the inflatable portion 13. In addition, it will be noted that in using the device 11 of the present invention normally the swivel element 41 extends over the mouthpiece 31 and the inner sleeve 29 is in said second position, but when it is desired to inflate the portion 13, the swivel element 41 is moved to one side out of the way of mouthpiece 31 so that after moving inner sleeve 29 to said first position a person can inflate portion 13 by blowing on the mouthpiece.

From the foregoing description it is apparent that a very handy and efficient device is provided which can be inflated to desired sizes for accommodating the device to different sizes of bores of guns. Also, it will be understood that with a given size gun bore it is possible to vary the pressure of the inflatable portion so that it will push harder or easier against the inside of the barrel. For example, in FIG. 3 it will be noted that the device is bearing against the interior of the barrel only along a minor part of the device, but if desired, as for example, to clean a relatively dirty bore, the inflatable portion 13 may be inflated to a greater extent than that shown in FIG. 3 so that more of the device and cleaning piece 59 will be urged against the interior of the barrel. Additionally, it will be understood that when carrying the device 11, the inflatable portion 13 may be deflated and rolled or folded back upon assembly 15 to make a very compact size.

In addition, outer sleeve 21 is preferably threaded adjacent the end thereof as at 63 whereby, if desired, the device 11 can be used with existing gun cleaning rods. It will be understood that suitable adapter means may be provided if the end of assembly 15 is larger than the fitting on standard gun cleaning rods. Also, it will be understood that if used with existing cleaning rods, the cleaning pieces 59 would be produced in a bulbous form and positioned over inflatable portion 13 before inflating for use, whereby the cleaning material would remain in position during forward and backward use. Also, it will be understood that inflation would have to be performed before attaching to a gun cleaning rod. Additionally, it will be apparent that element 41 would lay back against assembly 15 while the device is attached to a gun cleaning rod.

Although the invention has been described and illustrated with respect to a preferred embodiment thereof, it is to be understood that it is not to be so limited since changes and modifications may be made therein which are within the full intended scope of this invention as hereinafter claimed.

I claim:

1. A device for cleaning the bore of a gun comprising an inflatable portion consisting of a resilient wall substantially defining an enclosed chamber, and means communicating with said chamber for inflating said inflatable portion including an outer sleeve extending sealingly through said inflatable portion resilient wall and having a proximal end terminating in said chamber, an inner sleeve snugly fitted in said outer sleeve and displaceable relative to said outer sleeve, said inner sleeve including air passageway means for communicating said chamber with the outside atmosphere and including mouthpiece structure at the distal end of said inner sleeve, and including selectively operative valve means operative upon relative displacement of said inner and outer sleeves for respectively opening and closing the passageway of said passageway means.

2. The device of claim 1 in which is included a piece of cleaning material having a hole therethrough, said piece of cleaning material extending over said inflatable portion and with said outer sleeve extending through said hole.

3. The device of claim 1 in which is included elongated pull means, and means attaching an end of said pull

means to the distal end portion of said outer sleeve for pulling said inflatable portion through the bore of the gun.

4. A device for cleaning the bore of a gun comprising an inflatable portion consisting of a resilient wall substantially defining an enclosed air chamber, and means communicating with said chamber for inflating said inflatable portion to a desired size for urging against the bore of the gun during the cleaning thereof, said means for inflating said inflatable portion comprising an outer sleeve having a proximal end and a distal end, said outer sleeve being attached adjacent said proximal end to said inflatable portion and communicating with said air chamber, an inner sleeve slidably mounted in said outer sleeve, said inner sleeve having a mouthpiece on the end thereof adjacent said distal end of said outer sleeve, said inner sleeve including an end piece closing off the end thereof adjacent said distal end of said outer sleeve, said inner sleeve including an end piece closing off the end thereof adjacent said proximal end of said outer sleeve, said inner sleeve having at least one valve port therethrough, said inner sleeve being movable between a first position in which said inner sleeve extends into said air chamber substantially beyond the proximal end of said outer sleeve to uncover said valve port and provide communication between the interior of said inner sleeve and said air chamber whereby said inflatable portion can be inflated by blowing on said mouthpiece and a second position in which said valve port is blocked by said outer sleeve to seal off said air chamber from the outside atmosphere and maintain said inflatable portion at a desired inflated size.

5. A device for cleaning the bore of a gun comprising an inflatable portion consisting of a resilient wall substantially defining an enclosed air chamber, an outer sleeve having a proximal end and a distal end, said outer sleeve being attached adjacent said proximal end to said inflatable portion and communicating with an air chamber, an inner sleeve slidably mounted in said outer sleeve, said inner sleeve having a mouthpiece on the end thereof adjacent said distal end of said outer sleeve, said inner sleeve including an end piece closing off the end thereof adjacent said proximal end of said outer sleeve, said inner sleeve having at least one valve port therethrough, said inner sleeve being movable between a first position in which said inner sleeve extends into said air chamber substantially beyond the proximal end of said outer sleeve to uncover said valve port and provide communication between the interior of said inner sleeve and said air chamber whereby said inflatable portion can be inflated by blowing on said mouthpiece and a second position in which said valve port is blocked by said outer sleeve to seal off said air chamber from the outside atmosphere and maintain said inflatable portion at a desired inflated size, a piece of cleaning material having a hole therethrough, said piece of cleaning material extending over said inflatable portion with said outer sleeve extending through said hole, an elongated pull means, and means attaching said pull means to said outer sleeve for pulling said inflatable portion through the bore of a gun.

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