This invention relates to improvements in cleaning devices and more particularly to a novel unitary structure to be used in the cleaning of gun barrels and other cylindrical bores.

One of the objects of the invention is to provide a device, the use of which will eliminate the bother of making a rag or swab into the proper size for cleaning or polishing cylindrical bores.

Another object is to supply a device which will serve as a core on which may be placed one or more thicknesses of cloth or abrasive to be pushed through the object to be cleaned or polished, the core being of such construction that it will exert a uniform and constant pressure against the entire surface of the bore being cleaned or polished.

A further object is to provide a cleaning accessory designed for use in cleaning or polishing cylindrical bores of varying diameters, or tapered bores, without being too loose at one end and jamming at the other.

I accomplish the foregoing objects by constructing a rod-shaped device formed mainly of resilient material which may be reciprocated in a gun barrel or the like, either alone or while covered with a piece of cloth or carrying an abrasive.

With the foregoing objects outlined and with other objects in view which will appear as the description progresses, the invention consists in the novel features hereinafter described in detail, illustrated in the accompanying drawing and more particularly pointed out in the appended claims.

In the drawings:

Figure 1 is an elevation of one end of one form of the device.

Figure 2 is a diametrical longitudinal sectional view taken on the line 2—2 of Figure 1 and showing the device attached to an operating rod.

Figure 3 is a side elevation of a modification.

Figure 4 is a transverse cross sectional view taken on the line 4—4 of Figure 3.

Referring to the embodiment of the invention illustrated in Figures 1 and 2, the cleaning device comprises a rod-shaped element 5 of rubber-like material, preferably neoprene or some other elastic substance which is not affected by oils or solvents. The element 5 is preferably of cylindrical shape and is pointed at one end, as indicated at 6, to facilitate its introduction into a gun barrel or the like. A connecting device 7 of any suitable construction is secured to the opposite end of the element so that it may be fastened to a manipulating rod 8 or its equivalent. The fastening device may consist of a screw having a head 9 embedded in the element and a threaded shank 10 projecting from one end of the element so that it may be connected to internal threads in the rod 8.

To increase the resiliency of the peripheral portion of the element 5, and to provide clearance through the element, it is preferably provided between its axis and periphery with a series of holes 11, each of which extends entirely through the element preferably parallel to the axis thereof.

The device shown in Figures 3 and 4 is similar to the one illustrated in Figures 1 and 2, except that the holes 12 are inclined or spirally arranged and each hole communicates with a slot 13 that extends to the periphery of the element and has a length substantially equal to the length of the element. The element in the modification is also preferably formed of rubber-like material, such as neoprene or the like.

The use of the device will be obvious. It may be used alone in the cleaning of the bore of a gun barrel or the like and due to its resiliency and its perforations, it will accommodate bores of different sizes or of varying diameter from end-to-end. Furthermore, a cloth may be placed around the device, if desired, and such cloth will not affect the introduction of the device into the gun barrel because the device will contract to compensate for the thickness of the cloth. In addition, an abrasive may be applied directly to the periphery of the device for use in cleaning or polishing the surface of a bore.

While I have disclosed what I consider to be some preferred embodiments of the invention in such manner that the same may be readily understood by those skilled in the art, I am aware that changes may be made in the details disclosed without departing from the spirit of the invention as expressed in the appended claims.

What I claim and desire to secure by Letters Patent is:

1. A device of the character described comprising a rod-shaped element having a peripheral portion with a substantially cylindrical outer surface and formed of elastic material and through which apertures, arranged between said surface and the axis of the element, extend from end-to-end of the element.

2. A device of the character described comprising a rod-shaped element having a peripheral portion with a substantially cylindrical outer surface and formed of elastic material and through which apertures, arranged between said surface and the axis of the element, extend from end-to-
3. A device of the character described comprising a rod-shaped element having a peripheral portion with a substantially cylindrical outer surface and formed of elastic material and through which apertures, arranged between said surface and the axis of the element, extend from end-to-end of the element, each of said apertures being arranged substantially spirally of the element.

4. A device of the character described comprising a substantially cylindrical element pointed at one end and provided at its opposite end with means to facilitate its attachment to manipulating means, said element being formed of non-metallic elastic material not affected by oils or solvents and having apertures extending through its peripheral portion from end-to-end of the element and arranged between the axis of the element and said substantially cylindrical surface.

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