

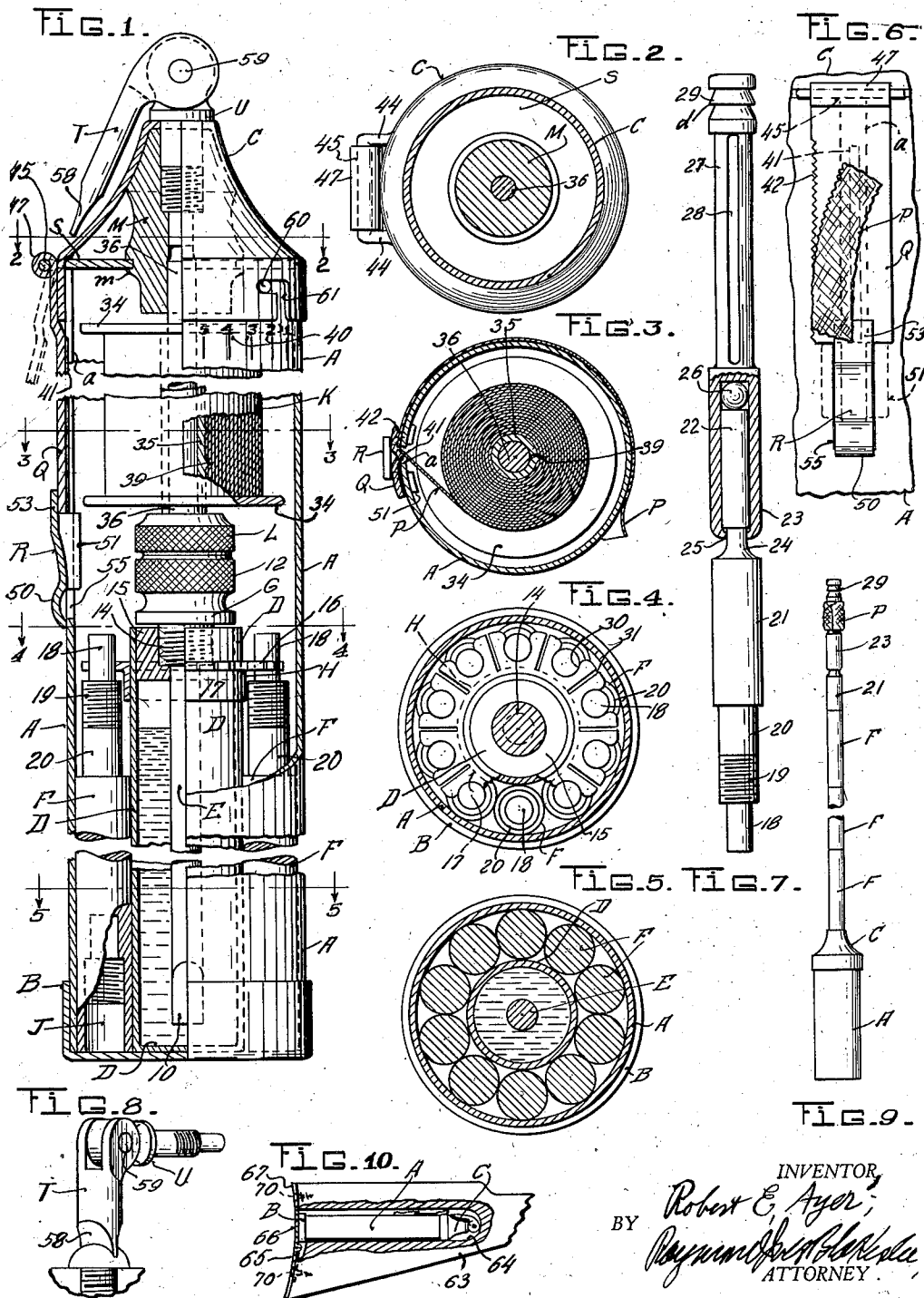
Oct. 27, 1936.

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2,058,756

FIREARM KIT

Filed Sept. 18, 1933



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UNITED STATES PATENT OFFICE

2,058,756

FIREARM KIT

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Application September 18, 1933, Serial No. 689,862

3 Claims. (Cl. 206—1)

This invention relates to a kit for the maintenance, cleaning and keeping in order of fire-arms, more especially rifles, though useful for other kinds of fire-arms; also for any articles or utensils having comparatively long tubes of small diameter that require cleaning and which are assembled or adjusted principally by screw drivers.

The objects of this invention are: to provide an assembled group of instruments, tools, supplies and especial appliances for cleaning, oiling, adjusting and maintaining in order fire-arms of every character and more particularly of the type having comparatively long barrels; to provide substantially all of the appliances and supplies required for said purposes, and for performing similar operations on any variety of utensils or appliances having tubes to be cleaned and screws to be adjusted, as vacuum sweepers and the like, all whereof are adapted to nest together and to pack in a very small compass; to provide an external holding casing for said appliances and supplies, common to, and enclosing them all; to arrange the parts and tools, of this "kit", for ease of removing from and replacing within, the said casing, any tools, parts or supplies therein contained; to provide such tools and supplies as will be convenient, suitable and effective for the purposes mentioned; the entirety to be low in cost, simple, easy to manipulate, quickly assembled for use, or disassembled and replaced in the said casing; to provide among the said tools, certain novel and useful appliances for cleaning long tubes or barrels, including compactly disposed cleaning material with means for measuring and cutting off the exact length required for cleaning barrels of varying diameters; to provide means for swivelling the barrel cleaning member so that it may turn easily relatively to the cleaning rod member; and combinations of single members adapted for a plurality of uses; the entirety being so shaped and compacted as to be accommodated within such space as is usually available in the stock of a gun or rifle or in the carrying case therefor, so that said combination of tools, supplies and cleaning devices may accompany the fire-arm and, therefore, be always conveniently at hand, and to so arrange and design the parts that the casing becomes a manipulating handle for the barrel cleaning member.

Other objects will appear as this description proceeds.

With the foregoing and other objects in view, the invention consists in the novel and useful formation, construction, interrelation and com-

bination of parts, members and features, as well as mode and methods of use thereof, all as hereinafter described, shown in the drawing and finally pointed out in claims.

In the drawing:

Fig. 1 shows a complete assembly of this appliance broken in its length and partly broken away in various parts to show clearly the different elements and their relation when assembled together, packed for carrying;

Fig. 2 is a transverse section on line 2—2 of Fig. 1 showing a detail of the hinge-plate which supports the cloth cutting plate;

Fig. 3 is a transverse section on line 3—3 of Fig. 1 showing the spool of cleaning cloth and the unrolling, measuring and cutting off of a predetermined length thereof;

Fig. 4 is a transverse section on line 4—4 of Fig. 1 showing the separate cleaning rod sections in position, with holding means for the upper ends of the rods;

Fig. 5 is a transverse section, on line 5—5 of Fig. 1 which shows the cleaning rod sections positioned around the central oil container;

Fig. 6 is a detail of the slot-cover plate, showing a front view thereof, and its holding clip, and with a short length of cleaning cloth in process of being cut by the serrated cutting edge of said plate, the slot in the casing under the plate being dotted;

Fig. 7 shows a detail, partly broken away, of the wad or cloth cleaning end of the cleaning rod;

Fig. 8 is a perspective view showing a screw driver comprising part of the device;

Fig. 9 is a view in side elevation showing the general assembly of rod sections with the casing attached as the handle and with a cloth swab in place;

Fig. 10 is a side elevation, partly in section, showing the kit positioned in a bore in the butt stock of a gun or rifle;

All the figures except Figs. 9 and 10 are made to an enlarged scale for clearness. Figs. 9 and 10 are drawn to a reduced scale. In practice, the preferred diameter of the casing is between 1 and 1 1/4 inches.

In the drawings, A is a tubular container or casing having removably attached end closures B and C. While the appliance, or "kit" may be placed in any position, the lower end in Fig. 1, lettered B, is herein called the "bottom" and the upper, conical-shaped end, C, the "top", for convenience in description. Coaxial with the casing A is the tubular container D attached to the

bottom of closure member B. This is a reservoir for cleaning and lubricating oil, suitable for fire-arms or any devices which this kit may be useful for cleaning and adjusting. Oil tube D has an insert 15 pressed into its upper end, which insert is bored as shown with a hole of smaller diameter than that of the container tube.

A screw-driver E having a comparatively long shank is provided with a suitable enlarged head end, G, knurled, at 12, which head G has a lower portion 14 adapted to fit into the bore through member 15, so that by inserting the screw driver shank in the oil tube the portion 14 of its head G will fit into the bore of member 15 and thus act as a stopper for the oil tube D. This closure may be made liquid-tight, and the stopper, with the screw driver, held firmly in place, in various ways. One preferred means is to thread the stopper portion 14 and tap the bore of member 15 to correspond, as shown. By this assembly the screw-driver, the oil tube with its contents, and the closure made by the screw-driver head, provide a combination of high degree of compactness.

A comparatively long, thin rod is required for pushing cleaners or swabs, made of pieces of fabric, preferably oiled, through a gun or rifle barrel or the like, and to wipe the swab interiorly, back and forth, therein. Also, the swab tends to rotate when moved through a rifle barrel due to the rifling thereof, as is obvious. The cleaning rod is formed of a plurality of short lengths F, connected together at their ends. When packed in the kit, these short lengths F are disposed circularly around the exterior of the oil tube D, as shown. Each rod section has one end bored to form a socket, the other end being reduced in size to fit into the socketed end of the next succeeding section, when assembled. A preferable means of attaching the sections together is to thread the end which is reduced in size, and tap the socketed portion, so that the reduced end of one section will enter and be screwed into the socket of the next section and, in this manner, the entire group is assembled to form a continuous rod of ample length for any standard hand fire-arm. One section, shown more in detail in Fig. 7, forms one end of the assembled cleaning rod, and is arranged for carrying the swab and to permit it to rotate as it moves in the rifle barrel, so that it has no tendency to unscrew the sections from each other.

As shown, it is composed of two longitudinal parts, 21 and 23, one end of member 21 having the reduced portions 18, 19 and 20 to mate in the socket of the next succeeding section, portion 19 being threaded, while the opposite end has also a reduced portion 22 and a short grooved part 24 intermediate the ends. Part 23 is bored at one end to accommodate the portion 22 of member 21. Steel ball 26 is placed in the bore of member 23, then portion 22 inserted, after which the end 25 of the hollowed portion of part 23 is crimped into groove 24, thereby fastening pieces 21 and 23 together against axial separation under tension. Thrust applied to part 21 is communicated to part 23 through the steel ball 26 interposed between the end of part 22 and the bottom of hollowed portion of part 23, this assembly thus providing a swivel or rotatable junction between the two parts 21 and 23, with a ball bearing for thrust forces. The upper end of part 23 is reduced in diameter over nearly all of the length between the bored portion and the end indicated by 27. A longitudinal slot 28

is formed diametrically through the length 27 of member 23. The remaining portion, 29, of unreduced size, has a pair of annular grooves formed therein, so shaped as to provide a sharp-edged flange, d, encircling the rod end, as shown.

When in use, a short piece of the cleaning cloth, P, is passed through the slot 28 and then wrapped around the reduced portion 27, which, by the construction described, has a stop shoulder at each end of the small portion, which shoulders tend to retain the cloth, twisted around portion 27, against longitudinal motion when the swab is moved through the gun barrel, and obviously, it can turn with the rifling without tending to twist the main length of rod to which the swab end is attached. The sharp edged flange d tends to catch and hold the cleaning cloth if it slips over end 29 when being moved back and forth in a gun barrel.

By inspection of Fig. 7, it is seen that the lower end of this member is the threaded reduced section end common to each rod section, so that the mating end of the next rod section must be the socket end, from which it follows that the free end of the last rod section will be its reduced threaded end. Any member to be attached thereto to form a manual grip or holding member must, therefore, be bored and tapped, similarly, to a rod socket end. This feature will later be applied and the purpose for which this arrangement was devised, clearly shown.

The individual rod sections, when separated and repacked, are placed in the bottom closure B with the socket ends resting on said bottom member. These rod sections are spaced around the oil tube D, with slight clearance therefrom, and are tangent to each other and to the casing wall, whereby the bottom ends are spaced and held in position. Member H is provided adjacent the upper end of oil tube D to hold the upper ends 18 of the rod sections F in spaced relation around tube D. This member H comprises a flat plate 16 having sleeve 17 attached to or integral therewith, the sleeve 17 being pressed over the upper end of oil tube D. Plate 16 is cut to form spring sockets 30 to accommodate the reduced upper ends 18 of rod sections F. The sockets 30 have a circular contour of approximately the same radius as the parts 18 of the rods. The radius of plate 16 is not great enough to completely encircle the rod ends, but only about 180 degrees of circumference are common to both rod end and socket. The outer portions of the sockets are open and flared in width as shown. Radial cuts 31 between each consecutive pair of sockets make the socket-sides resilient, so that the rod ends 18 may be forced into and out of the sockets. By removing closure B from casing A, the oil reservoir D, screw-driver E, and holding elements for rod sections F, with the sections therein, are withdrawn from the casing, so that these parts may all be easily removed from their individual positions and applied to their several uses.

The upper portion of the common casing tube A, so-called here for convenience, contains a spool K having spindle 36 and spool-heads 34, adapted to have wound thereon a strip of cloth of suitable width and of appropriate material for making cleaning wads or swabs, e. g., a thin cotton fabric. This spool K is coaxial with casing A and its spindle 36 projects beyond both ends of the spool. The upper spindle end is journaled in a central member M, positioned in the upper end of the casing and bored to

receive the spindle end 36. The opposite projecting spindle end is provided with a knurled turning member L which forms a manual member whereby the spool may be turned by the fingers to quickly and easily wind the cleaning cloth P on it, in a compact roll and so stored in the casing for many cleanings. The member M, in which the spindle 36 is journaled, is held in place by the removable top end, or casing closure C, and its lower end is supported by plate S. As stated, the top closure is preferably of a dished conical form, though it may take any preferred shape. Member M is crimped against the under surface of plate S to hold them firmly together.

A longitudinal slot *a* is formed in the periphery of the casing which registers with the spool and through which the fabric may be withdrawn from the spool, the latter being rotated by the tangential pull of the cloth P. Around the exterior of the casing and at an elevation suitable therefor, spaced longitudinal marks are made and indicia placed thereon, as indicated at 40, Fig. 1. These marks measure a definite length of cloth, drawn from the spool when the outer end of the cloth is drawn around the barrel or casing A to one of marks, the indicator of the mark showing the length of cloth included in the peripheral distance from slot *a* to the selected mark. These measurements guide the user as to the proper length of cloth suitable to be wound around the cleaning rod for different sizes of barrels to be cleaned. Hence, the proper quantity of swabbing or wadding cloth is not left to chance or individual estimate, but is definitely and easily measured for each condition without delay or difficulty.

A single member Q, which serves as slot cover, cutting plate and cloth anchor, is provided. This member Q is a long, narrow plate adapted to lie against the casing A over slot *a* and is supported at its upper end on extensions 44 of plate S by hinge joint 47, formed by bending the end of plate Q around portion 45 of extensions 44. Member Q is normally latched against the casing A, along and over the slot *a*, but is adapted to swing outward about the hinged end 47. A rib 41 is formed on the under surface of the plate which rib has a triangular cross section and enters the slot *a*, thereby wedging the cloth P projecting through the slot between one edge of the slot and a cooperating side of the rib 41, thus holding the cloth against movement. One longitudinal edge 42 of the plate Q is serrated and sharpened, so that when the previously measured end of the cloth is turned back over this edge and given a moderate pull, it is cut off along a straight line, thus providing a swab of proper length. Since the cloth is not cut off at the slot *a* but at a distance therefrom equal to the peripheral distance between the slot and cutting edge 42 of member Q, a short length of cloth always remains outside of the casing, which is exposed when the plate is swung away from the casing, and may be seized for withdrawal of a succeeding swab length from the spool K. Hence, while the cloth is always normally covered, a short external length sufficient to afford a finger grip, is exposed by raising the plate. Swinging the plate Q away from slot *a*, is indicated by the dotted lines in Fig. 1. No cloth remains uncovered or visible when the cover member Q is in its closed position, except the edge of the end portion under the plate.

The plate Q is latched or held closed against

the casing A in any suitable manner. One latching means is a sliding member R which is attached to casing A by paired projecting parts 51 which enter slots 55 in the casing and are bent to retain latch R, the length of slots 55 being sufficient to permit longitudinal movement of latch R and, thereby, hold plate Q in position, or release it.

A second screw driver T adapted for moving large screws is provided. In order to obtain a considerable twisting moment for this screw driver, a member U is hingedly connected to the end thereof opposite the working end 58. This member U is a short rod or stub which, when positioned perpendicular to the axis of the screw driver T, forms a lever for turning same. This screw driver is connected with the casing by providing a bore in the centre of the top conical closure member C and the member M, which bore is adapted to accommodate the lever member U. The end of member U is formed identical with the reduced threaded ends of the rod members F; hence, the bore to receive member U will accommodate the reduced end of any rod member F. The screw driver T has a length slightly less than that of the coned side of the upper closure and, normally, when not in use, it is turned about the hinged joint 59 to lie on or along the said coned surface as shown in Fig. 1.

By removing member U attached to screw driver T, the tapped boring, made in top closure C and member M, previously described, is free to receive any similar member, and since the reduced, threaded end of any rod section F will fit into this boring, the upper end C of the casing can be screwed on to the rod end, the entire casing thus becoming an enlarged handle for manipulation of the barrel-cleaning rod.

When the kit is to be used, the bottom end B, carrying the rod sections F, oil reservoir D and screw driver E is removed, then large screw driver T is also removed by unscrewing member U from the top central boring. This leaves the casing shell emptied of all interior contents except the spool of rolled cloth. The rod sections are taken from their holder and assembled. The empty casing A is then attached to one end of the rod to serve as a handle by inserting the reduced end 18 of the rod into the central bore in the upper member and screwing the parts together, the swivelled, swab-carrying member being attached to the opposite end of the assembled rod. Then plate Q is unlatched, swung away from the casing, and a proper length of cloth is drawn out from the spool, wrapped around the periphery of the casing until the end is brought to a desired length marking. The plate Q is then swung back in place and latched, and the projecting cloth is then cut off by the sharp edge 42 of the plate Q. This length is then inserted into slot 28 of the swivelled end member of the assembled rod, wound around the member, saturated with oil from reservoir D, and the entire appliance is ready for use. Two screw drivers of different size are free and available for any needed adjustment as are also ample quantities of oil and cleaning cloth.

When a new supply of cleaning cloth is required, the upper end C is removed, carrying with it the spool K with its knurled turning member L, and the cloth is started on the spool by catching the inner end of the cloth on a series of short sharpened projections 39 extending from the surface of the spool barrel. The cloth is then wound on the spool by twirling the

latter by knurled member L. Slot α extends from the upper end of the casing to the lower spool head 34, so that after a sufficient cloth stock is wound on the spool it is passed through slot α by simply starting the lower edge of the cloth into the upper end of slot α and moving cover C with spool K down into casing A until upper cover C is positioned over the casing end, so that the cloth does not have to be "threaded" or started endwise into the slot α . The end closures, B and C, may be removably attached to the casing A in any approved manner, as by a bayonet joint indicated by slot 61 and pin 60, for holding upper closure C or a fairly tight fit between the parts as shown for end B. When the kit is repacked it may be carried in any desired manner but the preferred arrangement is to bore the butt stock of the fire-arm to receive it as shown in Fig. 10.

The stock is indicated at 63 having the usual metal butt-plate 67 affixed thereto by screws 70. A hole 65 is bored in butt-plate 67 and an appropriate cover plate 66 is provided for hole 65, preferably of the same material as the butt-plate 67. A bore 64 is made in the material of the stock 63 of sufficient diameter and length to accommodate the kit casing as shown. When the kit is placed in the bore 64 and the cover plate 66 put in position the kit occupies no exterior space and is always ready for immediate use.

Having described my invention in connection with illustrative embodiments, forms, proportions and arrangements of parts, it will be understood that many variants thereof are possible to those skilled in the art, and my invention, in its broader aspects, is not limited to the specific construction herein described and shown, as changes in the sizes, proportions, configurations, arrangements, assemblage, interaction, juxtaposition and mechanical relations, as well as additions, omissions, substitutions, combinations and alterations of forms, parts, members and features may be made without departing from the broad spirit of this invention.

Having thus disclosed my invention, I claim and desire to secure by Letters Patent:

1. A kit of the character described comprising a casing, a closure element removably engaged with one end of said casing and having an axial bore in its inner end, a spindle having one end engaged in said bore and provided at its other end with a spindle rotating knob, a spool mounted on said spindle, the casing having a slot through which to unwind material from the spool, a second closure element removably engaged with the other end of the casing, and means extending inwardly from said second closure element for engagement with the knob of the spindle to hold the latter in the bore of the first mentioned closure element when both closure elements are engaged with the casing.

2. A kit of the character described comprising a casing, a closure element removably engaged with one end of said casing and having a bore in its inner end, a spindle engaged at its outer end in said bore and extending from said closure element into the casing, a material holding spool on said spindle, a closure element for the other end of said casing, and a member extending inwardly from said second mentioned closure element to engage the inner end of said spindle thus to hold the first mentioned end thereof engaged in the bore of the first mentioned closure element when the first mentioned closure element is engaged with the casing.

3. A kit of the character described comprising a casing having a slot, a closure element removably engaged with one end of said casing, a spool within the casing having wound thereon material to be withdrawn therefrom through said slot, a member pivotally mounted on the closure element to be swung between a position to permit free withdrawal of material from said spool through said slot and a position closing said slot and clamping the material against the side of the casing adjacent to said slot, and means carried by the casing for latching said member in its last mentioned position, said latching means comprising a member slidably engaged in the casing slot and having a lip to overlie the free end of the pivoted material holding member.

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