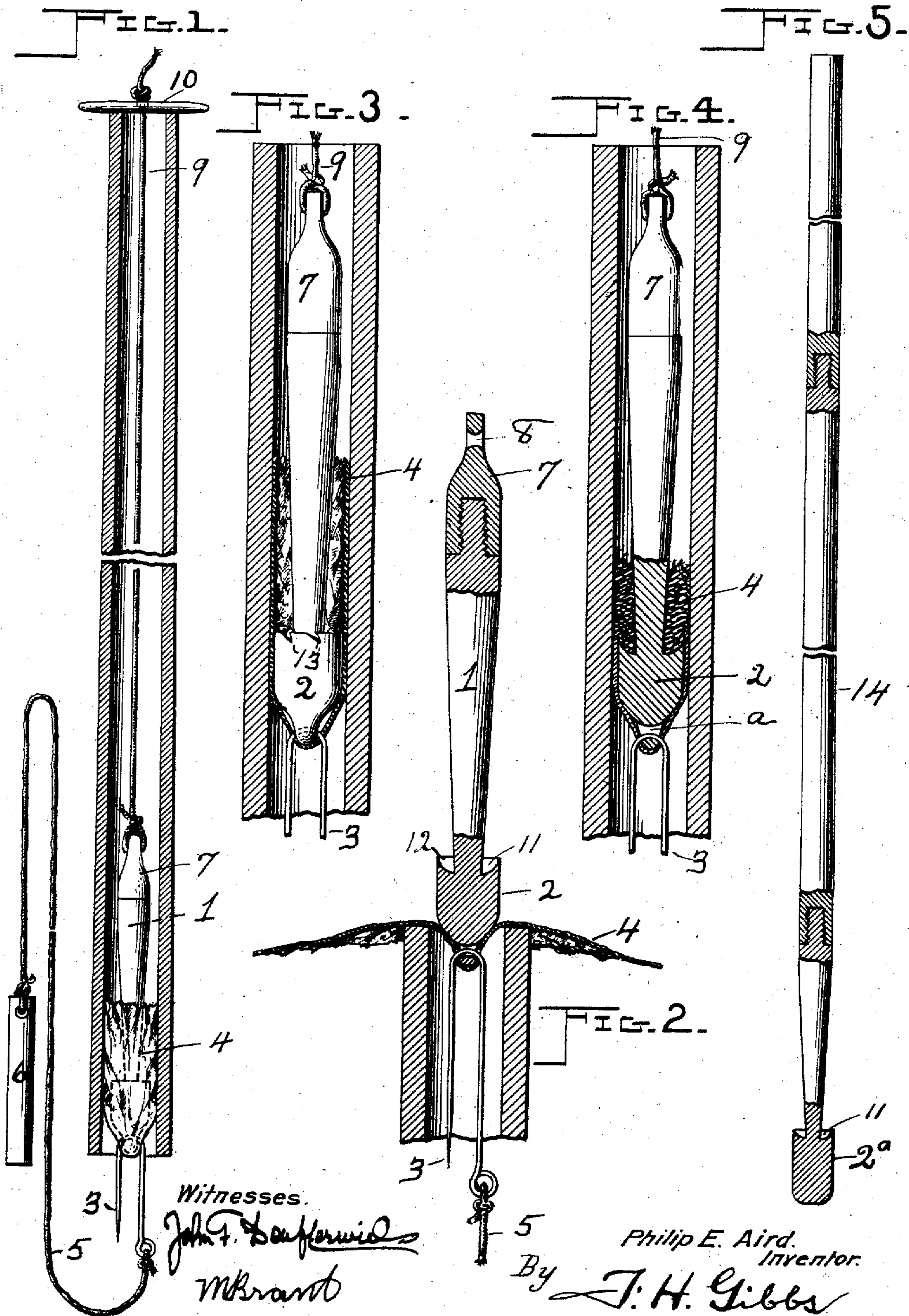


No. 860,180.

PATENTED JULY 16, 1907.

P. E. AIRD.
GUN CLEANER.

APPLICATION FILED NOV. 8, 1906.



UNITED STATES PATENT OFFICE.

PHILIP ERNEST AIRD, OF ST. LOUIS, QUEBEC, CANADA.

GUN-CLEANER.

No. 860,180.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed November 8, 1906. Serial No. 342,574.

To all whom it may concern:

Be it known that I, PHILIP ERNEST AIRD, whose residence and post-office address is 777 Mance street, in the town of St. Louis, Province of Quebec, Canada, and being a subject of the King of England, have invented certain new and useful Improvements in Gun-Cleaners, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and to use the same, reference being had to the accompanying drawings, which illustrate the preferred form of the invention, though it is to be understood that the invention is not limited to the exact details of construction shown and described, as it is obvious that various modifications thereof will occur to persons skilled in the art.

This invention relates to new and useful improvements in gun-cleaners, adapted for use in cleaning the interior of both military and sporting rifles, shot guns and arms of various sorts.

The object of the invention is to provide a device which is simple, convenient and portable and which may be used indiscriminately with arms of various bores.

Figure 1 is a longitudinal sectional view of a gun barrel with my invention in position therein: Fig. 2 shows the device in position, provided with a patch, entering the open mouth of a gun barrel; Fig. 3 is a section of a gun barrel with a slightly modified form of device therein, with a portion of the patch cut away for purposes of illustration; Fig. 4 is a view similar to Fig. 3, in section, for the purpose of illustrating the "bunching" of the patch in the channel formed in the head and above the same while in use; Fig. 5 illustrates a slightly modified form of device in which a sectional rod is used.

Referring to the parts —1— is a stem, which is preferably slightly attenuated near its lower end, as shown, so as to permit bunching of the patch as illustrated in Fig. 4. Formed preferably integral with said stem is a head —2— which in Figs. —1—4 is perforated transversely at its lower end for the passage of the hook —3— which hook is used for the double purpose of securing the patch —4— in position on the head and as a draft appliance to which the cord —5— may be attached for the purpose of drawing the device into a gun-barrel. To the opposite end of this cord —5— may be applied the weight —6— which weight may be used to carry the cord —5— through said barrel to permit it being grasped by the operator.

Connected to the stem piece —7—, and passing through the perforation —8— therein, is a cord —9— on which may be placed a stop —10—, which is shown as a rigid perforated bar, and by knotting said cord to form an enlargement too great to pass through the perforation in said bar the bar will act as a stop to prevent

passage of the head —2— into the enlarged cartridge chamber of a barrel at its breech.

In operation the patch —4— is placed on the head —2— surrounding the same; the pointed hook —3— is passed through the patch and the transverse perforation —a— in the head as shown in Figs. —1—4. The weight —6— is then dropped into and through the gun-barrel carrying with it, part way at least, the head —2—, patch 4 and stem —1— and attached cord 9. The head may be drawn into the barrel until the stop —10— abuts against the mouth thereof after which the device may be reciprocated longitudinally within the gun barrel to clean the interior thereof.

When the device is retracted the patch —4— will be bunched or puckered into a mass as shown in Fig. 4 with portions thereof resting in and being locked in the annular channel —11— surrounding said attenuated stem portion and this bunching will be intensified by the sharp or relatively sharp biting edge 12 surrounding said head channel —11— so that no escape of particles of dirt will result when drawing the head toward the mouth of the barrel.

The perforation —a— is preferably extended through a slightly reduced end portion of the head —2— so as to form a guide for the pin hook 3 and it is evident that there is a great advantage in using a pointed hook as thereby the patch may be secured in position without breaking the threads thereof, consequently it will resist great strain in use, whereas a textile patch which is perforated will quickly be shredded in use.

In Fig. 3 is illustrated a modification in which serrations or obliquely disposed notches —13— are provided, which notches may be found efficacious in "bunching" the patch where the device is used to clean the enlarged cartridge chamber of a gun-barrel by rotation of the head 2 therein, as may sometimes be desirable.

In the modification of Fig. 5 a sectional rod —14— is provided of a common type and to this is screwed the stem —1— when desired. The head 2^a of Fig. 5 has the channel —11— and sharp edge —12— surrounding it as in the other views and this edge may be serrated or not as desired. This type of device is adapted for use by sportsmen while that shown in Figs. —1—4 is designed especially for military use.

It is especially desirable that the heads —2— 2^a— shall be elongated so as to form a solid backing for the cloth patch —4— thereby forming a tighter wedge in the gun-barrel and a patch of sufficient size should be used to extend above and into the channel —11— when in use. The hook 3 should also be elongated to avoid torsional displacement within the gun-barrel. This hook serves a useful purpose in preventing "creeping" of the patch away from the head —2— and it is evident that one patch, or any larger number of patches,

may be secured in position thereby at one time to serve barrels of different bores.

- Having described the invention, what is claimed as new is:

- 5 1. In a gun cleaner, a stem having an attenuated portion near its end and an elongated rigid head at the end of said stem, there being an annular channel formed in the upper face of said head of sufficient depth to receive a fold of cloth therein.
- 10 2. In a gun cleaner, an attenuated stem portion and a rigid elongated head on the end of said stem, said head having a relatively deep annular channel formed in its upper face and there being an acute biting edge surrounding said channel.
- 15 3. In a gun cleaner, an attenuated stem portion terminating in an integral head having an annular channel in its upper face, there being a serrated outer edge to said channel.
- 20 4. In a gun cleaner, an attenuated stem portion terminating in an integral head having an annular channel in its upper face and having a perforation extending transversely through its lower end.
- 25 5. In a gun cleaner, an attenuated stem portion terminating in an integral head having an annular channel in its upper face and having a perforation extending trans-

versely through its lower end, in combination with a hook adapted to pass through said perforation to secure a cloth patch in position and means for moving said device longitudinally of a gun barrel.

6. In a gun cleaner, an attenuated stem and an integral head, said head being perforated transversely at one end and provided with a relatively deep channel in its opposite end, said channel surrounding said stem, in combination with means for pinning a patch in position surrounding said head and flexible means for reciprocating said head in a gun barrel. 30 35

7. In a gun cleaner, an attenuated stem and an integral head, said head being perforated transversely at one end and provided with a relatively deep channel in its opposite end, said channel surrounding said stem, in combination with means for pinning a patch in position surrounding said head and flexible means for reciprocating said head in a gun barrel, there being a transversely extending stop secured on said flexible means. 40

In witness whereof I have hereunto set my hand in the presence of two witnesses. 45

PHILIP ERNEST AIRD.

Witnesses:

F. H. GIBBS,
M. SANGER.