

T. Y. BROWN.
Gun-Wiper.

No. 219,385.

Patented Sept. 9, 1879.

Fig 1

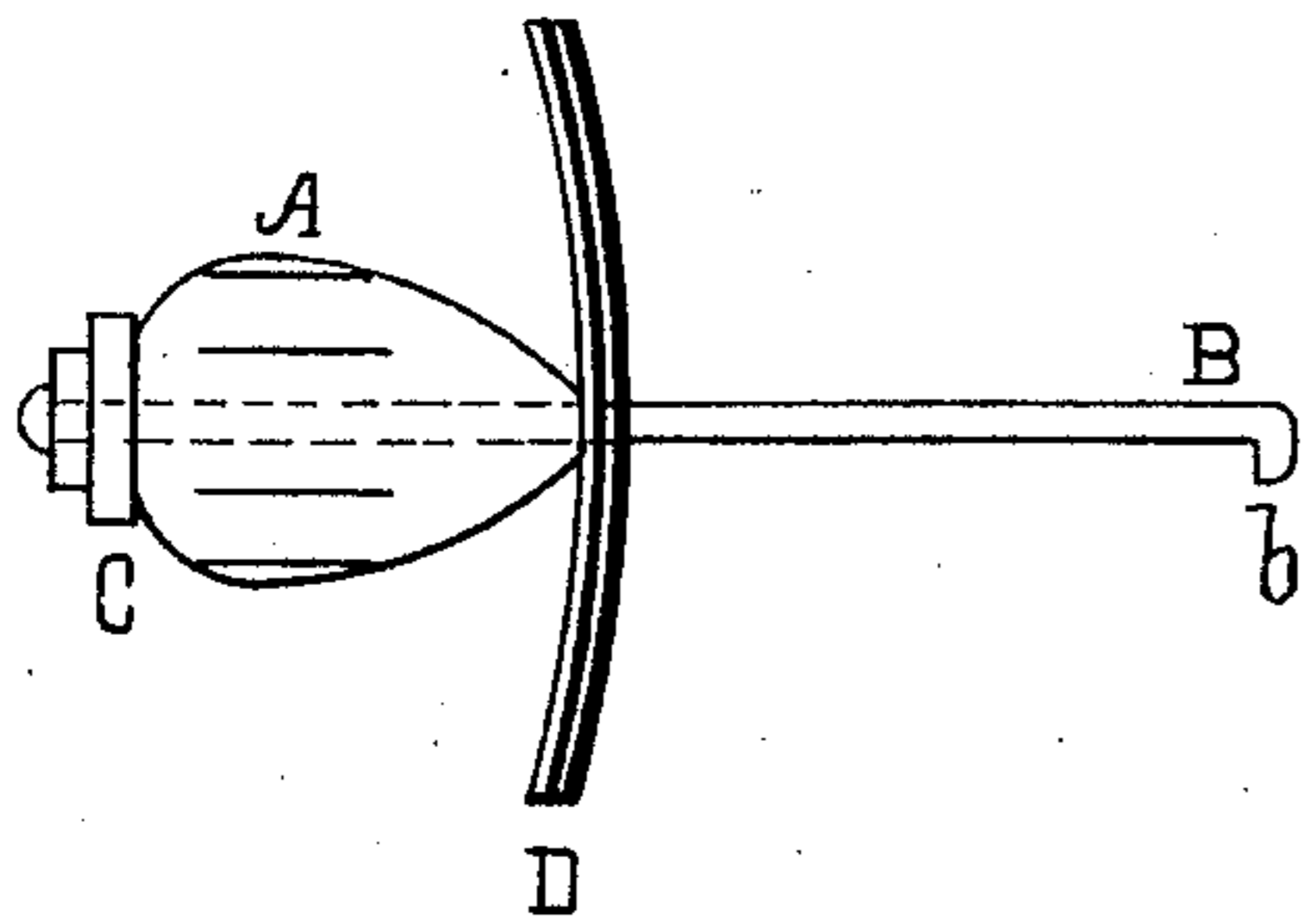


Fig 2

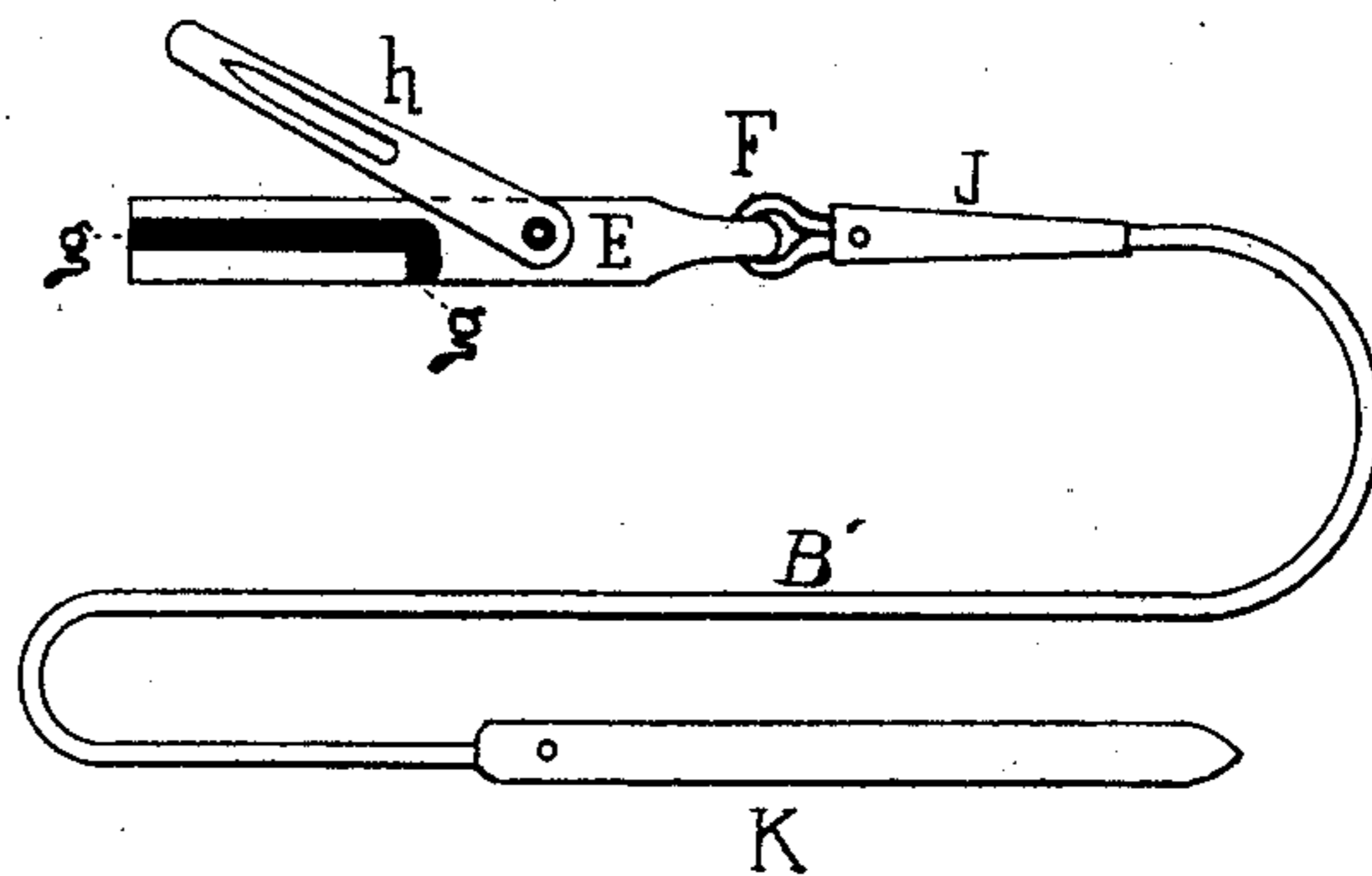
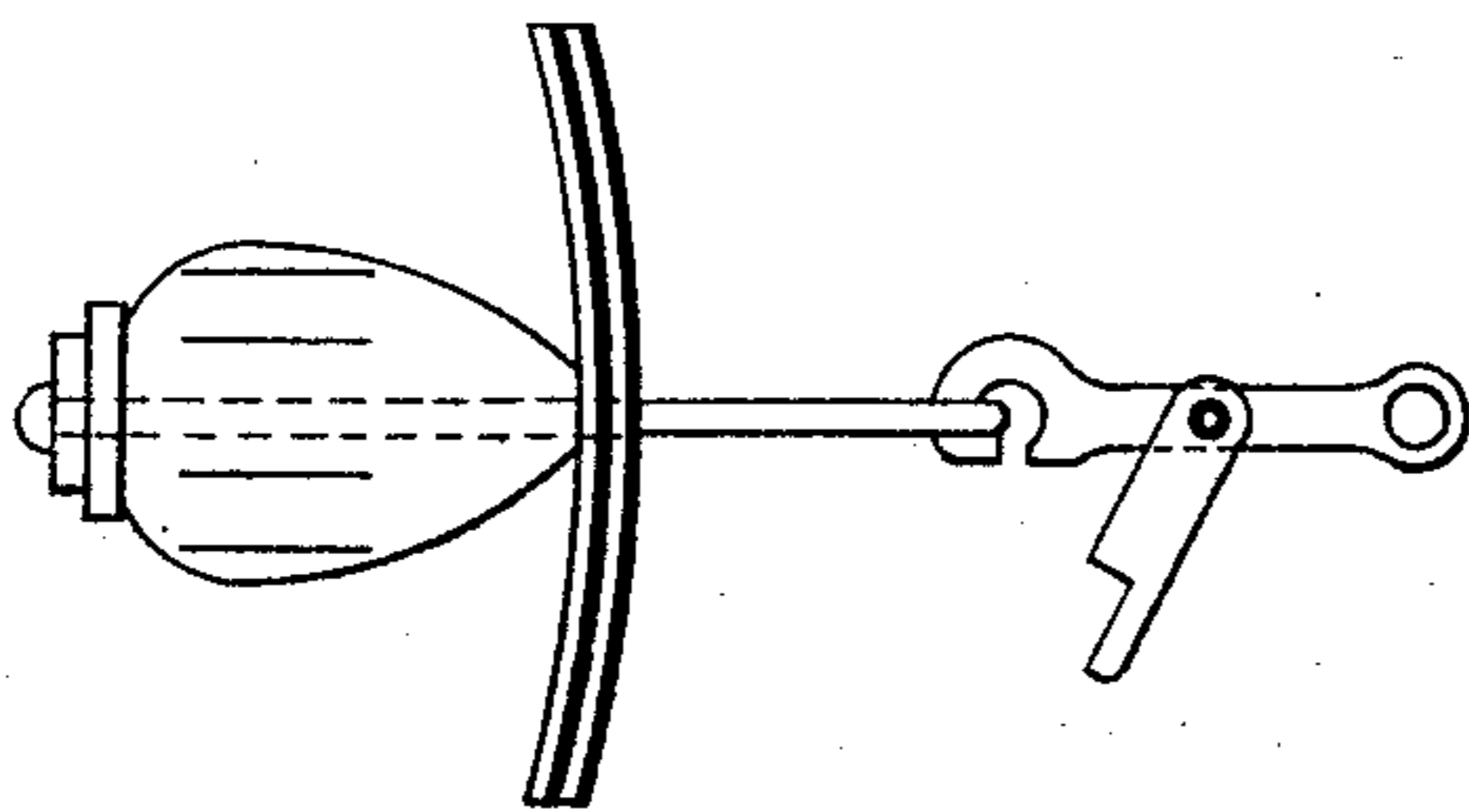


Fig 3



Witnesses
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UNITED STATES PATENT OFFICE.

T. YARDLEY BROWN, OF READING, PENNSYLVANIA.

IMPROVEMENT IN GUN-WIPERS.

Specification forming part of Letters Patent No. **219,385**, dated September 9, 1879; application filed May 12, 1879.

To all whom it may concern:

Be it known that I, T. YARDLEY BROWN, of the city of Reading, county of Berks, State of Pennsylvania, have invented a new and useful Improvement in Gun Wipers or Cleaners, of which the following is a specification.

This improvement is more particularly related to the gun-wiper patent, No. 214,484, issued to me on the 22d day of April, A. D. 1879; and consists in a change in the mode of stringing the elastic cone and patches, by which change I am enabled to make use of a heavier and stronger cord than was possible under the patent above mentioned.

In practice I have found that where a barrel has become very rusty considerable force must be used to draw the cone and patches through, very frequently more force than the cord as previously used could sustain.

After an extended trial of several modifications of my improvement, I find the arrangement depicted in Figures 1 and 2 to meet every requirement. Fig. 3 is an alternative device.

I make no change in the elastic cone, except that the hole pierced through it longitudinally is now made very small, just sufficient for a wire of about one-sixteenth ($\frac{1}{16}$) of an inch to pass through; this for sporting-guns, small-arms, &c. For ordnance the size of the holder is proportionally increased.

The wires, of brass, iron, or steel, after being cut to lengths, usually about two inches long, have one end bent at right angles with the body, forming a hook varying in length from one-eighth ($\frac{1}{8}$) of an inch upward, according to the size of bore to be operated upon. The elastic cone is then slipped upon the opposite end and backed up with a leather washer re-enforced by a metal washer, upon which the wire end is riveted down, thus preventing the withdrawal of the cone. The patches are drawn over the bent end of the wire upon the cone. In bending the hook the wire is partially upset, so that the shearing section of the hook shall equal the tensile section of the body.

To enable the hunter to use the cone-holder, I provide a cylinder, E, Fig. 2, of such diameter as will slide freely through the barrel to be cleaned. This cylinder has at one end an eye, F, for the reception of the loop of the cord B'.

At the other end it is slotted both longitudinally and at right angles, as shown at *g g*, and of depth sufficient to drop the holder B below the surface of the cylinder E.

To retain the holder B in position, I place upon the cylinder E a swinging latch, *h*, corrugated in the center longitudinally for the purpose of stiffening it, and also that the corrugation shall catch in the slot *g* above the holder B, and thus remain fixed until purposely lifted and turned aside.

The loop of the cord B' through the eye F of the cylinder E is secured by a metal tube-protector, J, punched down at the center of the lap, which gives a strong and neat connection between the two. The metal guard K at the opposite or terminal end of the cord B' is modified, dispensing with the knife-point of my Patent 214,484, and increasing the weight and length of the guard, for the purpose of first drawing the cord B' more rapidly through the barrel, and, secondly, to gain more purchase in drawing the cone and patches through the barrel. By wrapping the cord around the guard and grasping both in the hand, the strain of the pull is borne by the guard, and the hand is to that extent relieved.

One cord and cylinder will answer for several sizes of elastic cones, the wires for guns and small-arms being of a uniform size. A very slight addition to the weight of the sportsman's kit therefore gives a very great range of cleaning capacity.

Fig. 1 represents the cone-holder B, elastic cone A, patches D, hook *b*, and washers C. Fig. 2 represents the cylindrical holder E, with the slot *g g* for the reception of the cone-holder B, catch or latch *h*, eye F, loop-protector J, cord B', and guard K.

To use the cleaner or wiper, the cone-holder B is removed from the cylinder-slot *g g* by lifting and turning the latch *h* to one side. A half-turn is then given the cone-holder B, when it can be slid out of the slot *g* of the cylinder E. The patches D are then slipped over the hook *b* onto the cone A. The holder B is reinserted in the slot *g*, slid up, a half-turn given, the latch *h* swung back in place, and the wiper is ready for cleaning. The guard K is now dropped through the barrel, carrying the cord B' along. When wrapping the pro-

truded cord on the guard it is grasped by the hand and drawn through the barrel, the elastic cone A causing the patches D to follow all the inequalities of the bore, and thoroughly cleansing the same.

Having fully described my improvement, what I claim is as follows, to wit:

1. A gun-wiper, A, composed of a corrugated elastic material of cone shape mounted upon wire holders B, said holders being hooked at one end for the purpose shown, and at the other end riveted upon re-enforced washers C back of the cone A, as described.

2. The cylinder E, slotted at *g g* for the reception of the hook end of the holder B, and having a swinging latch, *h*, corrugated longi-

tudinally, and provided with an eye, F, for the loop of the cord B', as shown and described.

3. The cord B', provided at one end with the metal guard K, and at the other end with the loop F and loop-protector J, when used in connection with the cone-holder B and cylinder E, for the purpose described.

4. The combination of the elastic cone A, holder B, with hook *b* and washer C, patches D, cylinder E, with slots *g g* and latch *h*, in connection with the cord B' and guard K, when used for the purpose shown and described.

T. YARDLEY BROWN.

Witnesses:

JAMES R. KENNEY,

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