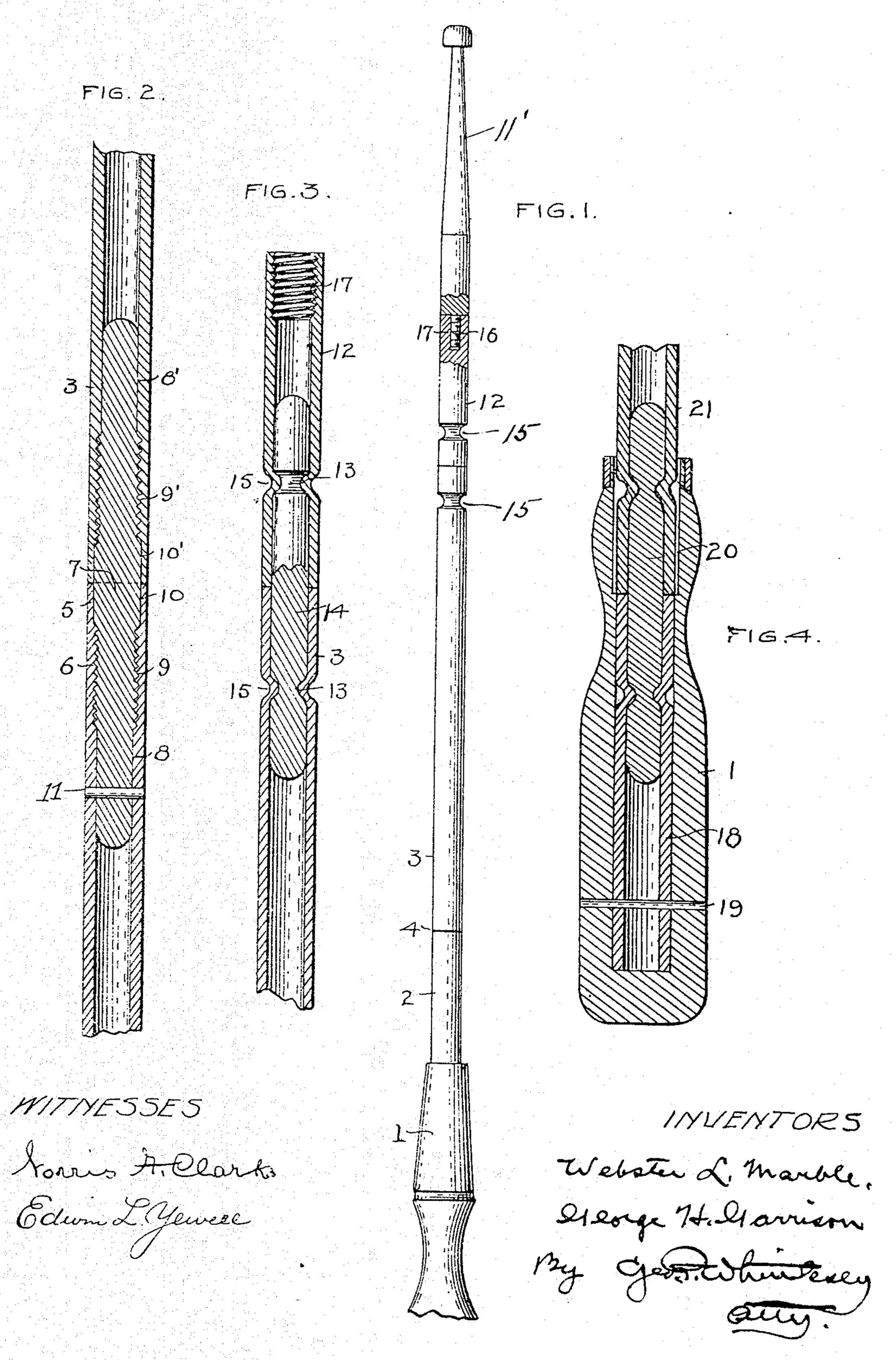
W. L. MARBLE & G. H. GARRISON.

CLEANING ROD FOR FIREARMS.

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## UNITED STATES PATENT OFFICE.

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## CLEANING-ROD FOR FIREARMS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, WEBSTER L. MARBLE and George H. Garrison, citizens of the United States, residing at Gladstone, in the 5 county of Delta and State of Michigan, have invented new and useful Improvements in Cleaning-Rods for Firearms, of which the following is a specification.

This invention relates to cleaning-rods for 10 firearms; and its object is to produce a rod having considerably more strength than those ordinarily in use and to locate the swiveljoint in the rod in such a manner as to give

better satisfaction in use. The ordinary cleaning-rod is made of brass rod with reduced screw-threaded ends on one or more sections to fit into screw-threaded sockets formed in the adjacent end or ends of other sections; but inasmuch as the central 20 portion of the rod is much softer than the harder rolled surface portion the screwthreaded tenons are weak and are liable to wear out and break. We therefore make the joint by boring out the soft central portion, 25 screw-threading the bored socket internally, and then providing a steel dowel having screw-threads to fit those in the socket. The socket is preferably countersunk, and the dowel has a smooth portion to fit this. More-30 over, the extreme end of the dowel is preferably left smooth and of a diameter less than the screw-threaded portion, so as to pass freely through the threaded portion of the socket and into a smooth continuation thereof, which 35 it fits snugly. The rod-sections may be made from brass tubing instead of solid stock, in which case the tip of the dowel will fit the bore of the tube. In entering the patch or brush into the barrel of the gun or rifle to be 40 cleaned it is natural to grasp the rod near the tip; but if the swivel is located in the handle it does not come into play until the rod has been completely entered. In order to give the operator the benefit of the swivel when 45 introducing the patch or brush, we locate the swivel near the tip of the rod. Another ad-

there is less tendency for the screw-threaded joints of the rod to unscrew when the rod ro-50 tates as it is pushed along the rifled barrel. Moreover, it is necessary to provide a swivel which will move easily and not get out of order in order to prevent vexatious delay by

vantage of this location for the swivel is that

having the swivel stick and the rod unscrew when in use.

Our invention therefore consists in a strengthened screw-joint and an improved swivel-joint for a cleaning-rod, as hereinafter set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a longitudinal elevation of our improved rod. Fig. 2 is a longitudinal section of the screwjoint on a larger scale. Fig. 3 is a similar section of the swivel-joint on the same scale 65 as Fig. 2. Fig. 4 is a similar section of a swivel-joint located in the handle.

Referring first to Figs. 1, 2, and 3, the handle 1 is of wood, rubber, or the like and has rigidly secured in it a section 2 of the rod, 70 preferably a piece of brass tubing, as shown in Fig. 2. The section 3 abuts against the section 2 at 4, being fastened thereto by the joint shown in Fig. 2. Near its upper end the section 2 is cylindrically countersunk at 5. 75 Below this is a female screw-thread 6, and screwed into the socket thus formed is a steel dowel-pin 7, having a lower smooth portion 8 to fit the bore of the section 2 below the female screw-thread, a screw-threaded portion 80 9 to mesh with the female screw-thread 6, and a large cylindrical portion 10 to fit the countersink 5. After the pin has been screwed into place it may be secured by a transverse rivet 11. The upper half of the pin is a reversed 85 duplicate of the lower half—that is to say, it has a smooth cylindrical portion 10', a somewhat reduced screw-threaded portion 9', and a smaller smooth portion 8'. The lower end of the section 3 is countersunk and screw- 90 threaded in the same manner as the upper end of the section 2, so as to fit the upper end of the pin 7, as clearly shown in Fig. 2. This form of joint gives great strength and rigidity, because of the long bearing of the pin in 95 the tube and the comparatively small portion of the tube that is cut away for the screwthreads. Moreover, these threads are cut in the material near the outer surface of the tube or rod, where the brass is harder, and there- roo fore less liable to wear out or give way.

The rod may have as many screw-joints as may be necessary, though only one is shown in the drawings. The tip 11' is removably attached to the upper end of a section 12, 105 which is secured by a swivel-joint to the up-

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per end of the next lower section of the rod, such as the section 3 in the drawings. This swivel-joint is made by turning two grooves 13 in a short length of steel rod 14, inserting 5 the grooved portions into the abutting ends of the sections 3 and 12 and then compressing the walls of these sections into said grooves, as shown at 15. By this construction the pintle 14 has a long bearing in each section, re so as to give stiffness to the joint, and each section can rotate freely on the pintle without any longitudinal movement. The section 12 is preferably a short one and the tip 11' may be attached to its upper end by an 15 ordinary screw-threaded tenon 16, engaging with a screw-threaded socket 17 in the section 12. If desired, the special screw-joint shown in Fig. 2 may be used in place of the tenon 16 and socket 17. The tip shown is for 20 a cleaning-brush; but any other kind of tip may be substituted, as desired. By having the swivel-joint near the tip the latter will be free to turn as soon as the brush or patch is introduced into the barrel of the rifle or 25 pistol, even though the rod is grasped at some point above the handle. This result could not be effected with a swivel located in the handle. Futhermore, there is less likelihood that the screw joint or joints will become un-30 screwed if the swivel is near the tip, since they do not have to transmit the torsional strains, as is the case when the swivel is in the handle. In case, however, it is desired to locate the swivel in the handle it can be 35 done, as shown in Fig. 4. The handle is bored out to receive the stationary section 18 of tubing, which is secured to the handle by a transverse rivet 19. The pintle 20 connects

this section with the rotatable section 21,

which enters a counterbore in the upper end of the handle, so that the grooved indentations in the sections are concealed.

Having thus described our invention, what we claim is—

1. A cleaning-rod having two sections united by a joint comprising an independent long dowel-pin having one end rigidly connected with one section, and its other end provided with a screw-threaded portion detachably screwed into the other rod-section and a 50 smaller end portion beyond the screw-threads having a smooth surface fitting the bore of said section.

2. A cleaning-rod having two sections united by a joint comprising a long dowel-pin having 55 smooth end portions and larger screw-threaded portions, the former fitting the interior of the sections and the latter engaging with internal screw-threads in said sections.

3. A cleaning-rod having two sections united 60 by a joint comprising a dowel-pin having smooth end portions, adjacent screw-threaded portions and a larger smooth middle portion, the latter fitting countersinks in the abutting end portions of the sections, and the threaded 65 portions engaging with internal threads in said sections, while the end portions of said pin fit the interior of said sections beyond the internal threads.

In testimony whereof we have signed our 70 names to this specification in the presence of two subscribing witnesses.

WEBSTER L. MARBLE. GEORGE H. GARRISON.

Witnesses:

Elmer Beach,

Raymond T. Bouton.