April 8, 1924. 1,490,038

R. J. SMITH

DRIFT FOR GAUGING AND CLEANING RIFLE AND GUN BARRELS

Filed Nov. 17, 1922

Fig. 1.

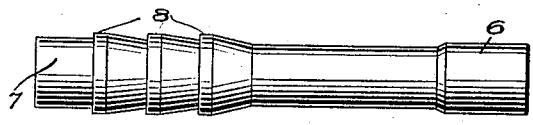
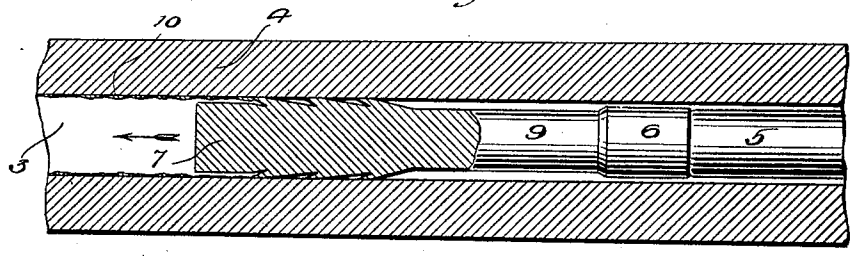


Fig. 2.



WITNESSES

Edw. Thorpe

INVENTOR

Richard J. Smith

BY Munn & Co.

ATTORNEYS

Patented Apr. 8, 1924. 1,490,038

UNITED STATES PATENT OFFICE.

RICHARD JOHN SMITH, OF GWELO, SOUTHERN RHODESIA, SOUTH AFRICA.

DRIFT FOR GAUGING AND CLEANING RIFLE AND GUN BARRELS.

Application filed November 17, 1922. Serial No. 601,651.

To all whom it may concern:

Be it known that I, RICHARD JOHN SMITH, subject of the King of Great Britain and Ireland, and a resident of Gwelo, Southern Rhodesia, South Africa, have invented a new and Improved Drift for Gauging and Cleaning Rifle and Gun Barrels, of which the following is a full, clear, and exact description.

This invention has for its principal object to provide as a new article of manufacture, a simple and efficient unitary implement in the nature of a rod-like drift to be forcibly driven through the barrel of a rifle or gun for removing nickel, lead, or other obstructions therein, and so designed that such use of the drift may in all cases be depended on to remove such obstructions with facility and particularly the nickel usually so difficult to remove.

It is well-known that in this art the practice heretofore has been, in attempting to clean such barrels, to resort to the use of acids, a dangerous practice and one having a destructive effect on the barrels; but yet necessarily to be used in the total absence of any implement or other mechanical means adapted to perform the required cleaning operations in a satisfactory, convenient and rapid manner.

I have discovered from actual use that a drift of a very simple and inexpensive type and comprising merely a unitary substantially cylindrical member having a cutting edge or edges rigid on the main body of the member and otherwise designed as hereinafter described, may always be depended on to act at once as a perfect cleaner and gage when forcibly made to travel endwisely through the bore of a barrel.

The invention thus provides a generally rod-like drift to act as cleaner and gage, the entire drift being a unitary body of a metal of great hardness, and, while elongated, being preferably of very short length as compared with the length of the barrel; this rod-like body carrying cutting means so arranged thereon and made to fit the barrel bore that when another part of the drift is used as an anvil portion, against which a suitable ram rod or the like is driven to forcibly project the drift endwisely through the barrel, all the other various parts of the drift coact with the cutting means thereof to insure a proper cleaning and gauging action of the drift, even when nickel is accumulated in the bore to a considerable extent.

The invention will be more clearly understood from the following description when taken in connection with the accompanying drawing. This drawing shows an embodiment of the invention as at present preferred, but one merely illustrative of the general character of the invention, as obviously the scope of protection contemplated will be indicated by the appended claims.

In the drawing—

Figure 1 is a side elevation of the drift; and

Fig. 2 is an axial section taken through a rifle or gun barrel, showing the new implement travelling endwisely through the bore, the drift being partially broken away and partially in section to better show the cutting means.

Similar reference characters refer to similar parts throughout the several views of the drawing.

In Fig. 2 the drift of Fig. 1 is shown as being projected through the bore 3 of a barrel 4 in the direction of the arrow, a ram rod 5 forcibly acting against a terminal shoulder 6 of the drift. Such shoulder, so far as the ram rod is concerned, acts as an anvil portion of the drift.

Shoulder 6 also constitutes one of a pair of guiding shoulders or portions at the forward and rear ends of the drift, the shoulder 6 being, of course, the rear guiding shoulder, while the reference character 7 indicates the forward shoulder. In passing, I wish to say that I have found from actual tests that the guiding construction exactly as illustrated is certain to give satisfactory results.

Intermediate the guiding portions 6 and 7 of the drift is the cutting means, here comprising three cutting edges 8, and a shank portion or cylindrical portion of minimum diameter 9.

It will be noted that the particular but merely illustrative embodiment herein described, and the one as aforesaid which I have operated successfully to remove from gun barrels obstructions of lead and even of nickel, as indicated at 10 in Fig. 2, is further characterized by the fact that the guiding portions 6 and 7 are of less diameter than the diameter of the circle defined by each of the parallel and peripherally arranged cutting edges 8. It will further be

noted that such three cutting edges in addition to being circular as just indicated, are concentric and, therefore, define a cylinder of greater diameter than the diameter of guiding portion 6 or guiding portion 7. It will further be seen that said cutting edges are, in effect, carried by three annular projections as illustrated, such projections located intermediate the ends of the drift and with each projection constituting what may be termed a frusto-conical shoulder, carrying its cutting edge at the plane of maximum diameter of the shoulder; so that, as above indicated, the circular cutting edges 8 themselves all lie in spaced but parallel planes perpendicular to the axis of the drift.

I would state in conclusion that while the illustrated example constitutes according to actual tests, a practical embodiment of my invention, I do not limit myself strictly to the exact details and relations of the parts as herein illustrated, since manifestly the same may be variously structurally modified and otherwise considerably varied without departure from the spirit of the invention as defined in the appended claims; particularly as I do not attempt at this time to give any adequate explanation of just why the precise details and relations as specified herein and as shown in the drawing, combine to provide a drift which has proved so highly satisfactory in practice.

I claim:

1. As a new article of manufacture, a rifle-barrel drift comprising a unitary generally cylindrical metal body, said body having a plurality of peripheral cutting edges.

2. As a new article of manufacture, a rifle-barrel drift comprising a unitary generally cylindrical metal body, said body having an annular projection intermediate its ends, said projection carrying a cutting edge encircling but spaced from the other parts of said body.

3. As a new article of manufacture, a rifle-barrel drift comprising a unitary generally cylindrical metal body, said body having a plurality of peripheral cutting edges, said body having intermediate its ends a plurality of frusto-conical shoulders with one of said cutting edges arranged circumferentially of each shoulder at the plane of maximum diameter of the latter.

4. As a new article of manufacture, a rifle-barrel drift comprising a unitary generally cylindrical metal body, said body having a plurality of peripheral cutting edges, said edges being circular, concentric and of the same diameter.

5. As a new article of manufacture, a rifle-barrel drift comprising a unitary generally cylindrical metal body, said body having a plurality of peripheral cutting edges, and a reduced portion ahead of said edges.

6. As a new article of manufacture, a rifle-barrel drift comprising a unitary generally cylindrical metal body, said body having a plurality of peripheral cutting edges, and an anvil portion in rear of said edges.

7. As a new article of manufacture, a rifle-barrel drift comprising a unitary generally cylindrical metal body, said body having a plurality of peripheral cutting edges, and guiding and anvil portions for the drift ahead and in rear of said edges.

8. As a new article of manufacture, a rifle-barrel drift comprising a unitary generally cylindrical metal body, said body having a plurality of peripheral cutting edges, a reduced shank in rear of said edges, and a guiding collar in rear of said shank.

9. As a new article of manufacture, a rifle-barrel drift comprising a unitary generally cylindrical metal body, said body having a plurality of peripheral cutting edges, a reduced shank in rear of said edges, and a plurality of spaced guiding collars for the drift, one located in rear of the shank.

10. As a new article of manufacture, a rifle-barrel drift comprising a unitary generally cylindrical metal body, said body having an annular projection intermediate its ends, said projection carrying a cutting edge encircling but spaced from the other parts of said body, and a guiding collar spaced from said edge of less diameter than said projection.

11. As a new article of manufacture, a rifle-barrel drift comprising a unitary generally cylindrical metal body, said body having a plurality of peripheral cutting edges, and a guiding collar spaced from said edges of less diameter than said edges.

12. As a new article of manufacture, a rifle-barrel drift comprising a unitary generally cylindrical metal body, said body having a plurality of peripheral cutting edges, and guiding cylindrical portions ahead of and in rear of said cutting edges, said cutting edges defining a cylinder of greater diameter than said guiding portions.

RICHARD JOHN SMITH.