July 9, 1946. S. T. NOVAK 2,403,452

SAFETY PLUG

Filed Aug. 25, 1942

Fig. 1.

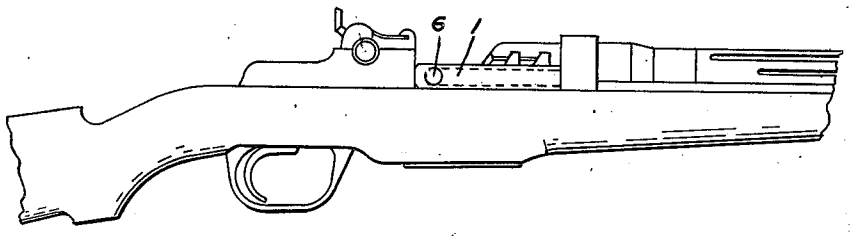


Fig. 2.

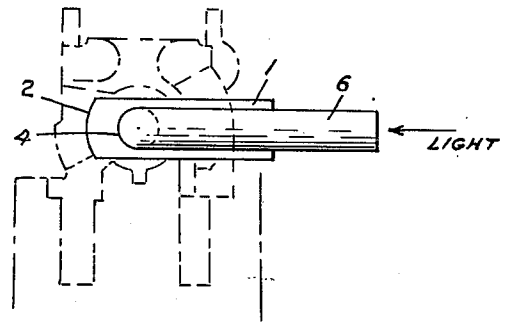


Fig. 3.

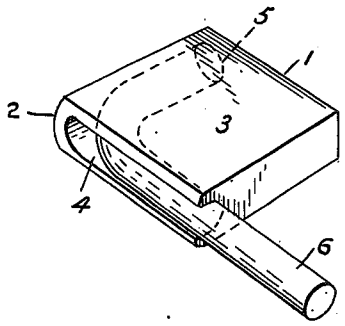
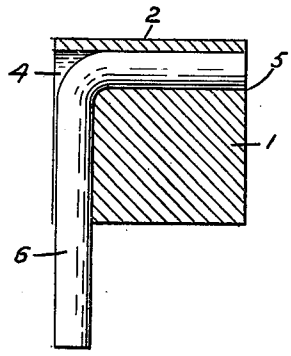


Fig. 4.



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SAFETY PLUG

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2 Claims. (Cl. 88—14)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

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The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

The present invention relates to a device that aids in the inspection of the bore of gun barrels and also prevents the closing of the breech block of a gun during the inspection.

The inspection of the bore of gun barrels during manufacture is complicated by the fact that the breech structure of a gun barrel so closely surrounds the barrel opening in most cases that one cannot see through the barrel with ease. The opening is so disposed that the face of a person cannot in all cases be placed in a position that the eye is in line with the bore of the gun. If the breech end of the gun is elevated to direct light into the breech end and permit inspection from the muzzle end, the breech block will in many cases slide into closed position and block any light from entering the breech end of the gun. If it is attempted to inspect the bore without elevating the breech, sufficient light is not reflected from the floor or surrounding surfaces to permit inspection.

By the use of the present invention the bore is illuminated with sufficient light to permit inspection of the bore in almost any position that the barrel may be placed, the breech block is prevented from closing, the chamber of the barrel is closed to the insertion of a cartridge that might be inserted accidentally and the body of the device provides a surface on which an identification mark may be placed.

The present invention is illustrated in the accompanying drawing, wherein:

Fig. 1 is a view in side elevation of a rifle with the bore inspection device installed on the gun,

Fig. 2 is a vertical section through the receiver of Fig. 1 with the rifle shown in dotted lines and the gun bore inspection and safety plug shown in full lines.

Fig. 3 is a perspective view of the gun bore inspection and safety plug and

Fig. 4 is a cross-sectional view taken through the body of the device of Fig. 3.

The safety plug and gun bore inspection device is formed of a rectangular shaped block 1 which may be made of wood or any other suitable material such as metal or a plastic. The block has one edge 2 suitably shaped to engage the curved side of the breech structure of a gun and the sides are made flat to rest upon the receiver structure of the gun. The block 1, if desired, provides a suitable surface 3 for the reception of

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identification marks or colors to identify the nature of inspection or the condition of the gun upon which the device rests.

The block 1 is formed with a channel 4 and an opening 5 disposed at right angles to the channel 4. A rod 6 or similar shaped material having light bending characteristics such as a transparent thermoplastic, or methyl methacrylate is bent into the form shown in Fig. 3 and inserted into the block 1. While the rod 6 has been shown as ending flush with one side of the block 1 it is obvious that both ends of the rod can be extended beyond the block. The amount which ends of the rod 6 extend beyond the body 1 can be varied as desired and if desirable one end of the rod may be made to extend into the barrel.

In the use of the device, the block is inserted in the breech of a gun as shown in Figure 1 and the gun bore inspected by looking in the muzzle end of the gun. With the use of this device sufficient light is transmitted to the bore of the gun to permit inspection of the bore without directing the breech end of the gun towards a source of bright illumination. Sufficient light is picked up under the normal level of illumination in a room to permit the inspection. In some cases it may be desirable to have the exposed end of the rod directed towards a source of light when the level of illumination in a room is not sufficient to provide ample illumination of the gun bore and this can be secured by shifting the position of the block or by bending the rod 6.

It should be understood that the present disclosure is for the purpose of illustration only and this invention includes all modifications and equivalents which fall within the scope of the appended claims.

I claim:

1. In a device of the class described, the combination of a block adapted to be placed in the receiver of a gun to hold the breech block against closing, the said block having a passageway formed therein in substantial alignment with the bore of the gun and a channel formed in the edge of the block normal to, and removed from, the said gun bore, one end of said channel opening into said passageway, the other end thereof opening through a face of said block removed from and parallel to said passageway, and an L-shaped rod of light transmitting material, one of the legs of the L-shaped rod being inserted in the said passageway and the other leg seated in the said channel whereby the first said leg is aligned with the said gun bore and the end of the second said leg faces laterally of the gun receiver

to collect light, the said L-shaped rod being effective to transmit the said collected light to the said gun bore.

2. A safety plug and gun bore inspection device comprising a body adapted to be positioned at the breech end of a gun, said body having a longitudinal passageway formed therein with its axis substantially in alignment with the bore of the barrel, a laterally extending recess in said body with one end of said recess opening into said passageway, the other end thereof opening through the face of the body removed from and opposite said passageway, and a bent light transmitting and bending means positioned in and substantially filling said passageway and said recess for directing light from an exterior source into the bore of a gun, said last mentioned means being inherently effective to diffuse transmitted light to facilitate inspection of the bore.

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