No. 732,540.

PATENTED JUNE 30, 1903.

G. H. GARRISON.

SUBCALIBER FIREARM.

APPLICATION FILED OCT. 17, 1902.

NO MODEL.

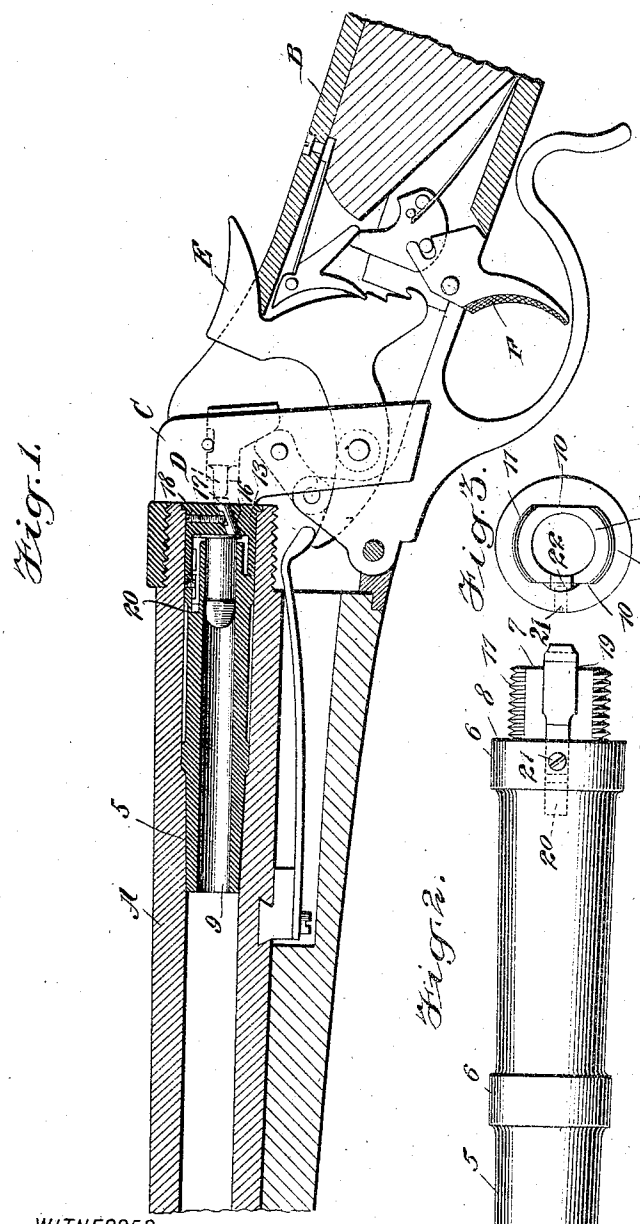


Fig. 1.

Fig. 2.

Fig. 3.

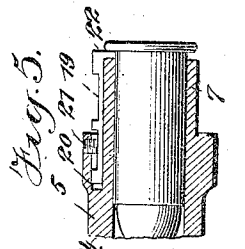


Fig. 5.

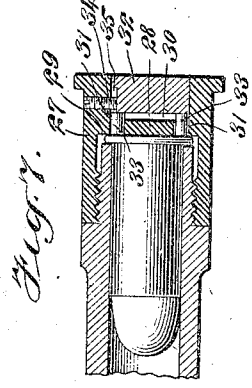


Fig. 4.

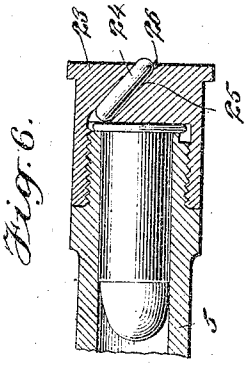


Fig. 6.

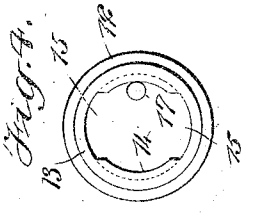


Fig. 7.

WITNESSES:

Geo. Maylor.

H. J. Benchoff

INVENTOR

George H. Garrison

BY Munn & Co

ATTORNEYS.

No. 732,540. Patented June 30, 1903.

UNITED STATES PATENT OFFICE.

GEORGE H. GARRISON, OF ROCKFORD, ILLINOIS.

SUBCALIBER FIREARM.

SPECIFICATION forming part of Letters Patent No. 732,540, dated June 30, 1903.

Application filed October 17, 1902. Serial No. 127,642. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. GARRISON, a citizen of the United States, and a resident of Rockford, in the county of Winnebago and State of Illinois, have invented a new and Improved Subcaliber Firearm, of which the following is a full, clear, and exact description.

My invention relates to subcaliber firearms; and the object that I have in view is to provide an attachment or auxiliary means adapted to be placed in the breech of standard-gage rifles in order to make the firearm available for use in discharging cartridges of smaller caliber.

A further object is to equip the insertible subcaliber device with means arranged to receive the impact of the center-fire firing-pin of the main rifle and to transmit the force to the rim of a subcaliber cartridge.

A further object is to enable the parts of the subcaliber device to be easily assembled or separated and to provide for the ready extraction of the exploded cartridge-shell.

The further objects and advantages of the invention will appear in the course of the subjoined description and the novelty will be defined in the annexed claims.

Figure 1 is a sectional elevation through a standard-gage firearm equipped with the subcaliber device of my invention. Fig. 2 is an enlarged side elevation of the auxiliary barrel adapted for insertion in the chamber of the main barrel. Fig. 3 is a rear elevation of the barrel shown by Fig. 2. Fig. 4 is a front elevation of the removable cap adapted to be fitted to the breech of the subcaliber or auxiliary barrel. Fig. 5 is an enlarged sectional view through the breech of the subcaliber barrel shown by Figs. 1 and 2 to more clearly illustrate the extract-plate in position to limit the insertion of a subcaliber cartridge, and Figs. 6 and 7 are sectional views of other embodiments of my invention.

A designates the barrel of an ordinary rifle; B, the stock; C, the breech-block; D, the firing-pin mounted in the breech-block; E, the hammer, and F the trigger. It will be understood that these parts may be of any suitable construction, and they are shown in Fig. 1 merely for the purpose of illustrating the application of my improved subcaliber mechanism, which will now be described.

5 designates the subcaliber barrel, which in Fig. 2 is shown as provided with the collars 6, said barrel being of such size as will readily enable it to be inserted into the chamber of the main barrel A, as represented by Fig. 1. The rear portion or breech of the subcaliber barrel 5 is reduced to form a tenon 7 and a shoulder 8 between the tenon and the body of the barrel. The tenon is in axial alinement with the barrel, and the bore 9 of said barrel is extended or prolonged through the tenon.

By reference to Fig. 3 it will be seen that the tenon is flattened on opposite sides, the flat faces of said tenon being indicated at 10, but the remaining portion of the tenon is provided with interrupted or broken screw-threads 11. 12 (see Fig. 4) designates a cap which is constructed for easy and quick application to or removal from the subcaliber barrel. This cap is in the form of a cylinder having a head 13 at its rear end. The sleeve of said cap is provided with an internal mutilated thread 14, said thread being interrupted or broken by the gaps or spaces 15, the latter being spaced and separated by the threads 14, so as to correspond to the flattened faces 10 of the threaded tenon 7. The head 13 of the removable cap is provided with an inclined passage 16, (see Fig. 1,) in which is arranged a supplemental firing-pin 17. This firing-pin occupies a diagonal position within the cap in order that its front striking end may impinge the rim of the cartridge, while the rear end of said supplemental firing-pin is at the middle of the head 13, whereby said firing-pin 17 lies in the path of the firing-pin D of the rifle. Any suitable means may be adopted to limit the play of the firing-pin in the cap, but, as shown by Fig. 1, this pin is engaged by a stop-screw 18, secured in the head 13 and arranged to fit in a groove or recess which is provided in said pin 17.

The cap 12 is intended to be fitted on the tenon on the subcaliber barrel by turning the cap in a position for the gaps or spaces 15 to lie opposite the threads 11 of the tenon, after which the cap is slipped endwise over the tenon, this movement of the cap taking place freely, because the threads 14 of the cap are opposite the flat faces 10 of the tenon, while the threads 11 of the tenon occupy the gaps or spaces 15 of the cap. It is now necessary

to turn the cap 12 a quarter-turn, and this brings the threads 14 into interlocking engagement with the threads 11, whereby the cap is easily and securely attached to the tenon at the breech of the subcaliber barrel. It is evident that the cap can be readily removed from the barrel 5 when it is desired to insert a cartridge into the chamber of said barrel 5; but after the cartridge shall have been exploded the cap is removed in order to displace the shell.

I have provided an extractor adapted to displace the exploded shell from the breech of the subcaliber barrel, and in Figs. 1, 2, and 3 this extractor 19 is in the form of a flat plate, which is arranged against one of the flat sides of the breech-tenon and is loosely fitted in a recess 20. (Shown by dotted lines in Fig. 2 and by full lines in Fig. 1.) A stop-screw 21 is secured in the barrel 5 to play between certain shoulders on the exposed face of the extractor, the latter being provided with a lip 22, which is in the path of the cartridge-rim, as shown by Fig. 3. When the cartridge is inserted into the subcaliber barrel, it is received in the chamber and its rim impinges against the lip 22 of the extractor, after which the cap 12 is fitted and connected to the breech-tenon. The breech-block C of the firearm may now be adjusted into its active position to bring the firing-pin D opposite to the supplemental pin 17. When the trigger is pulled, the hammer E strikes the pin D and the latter impels the pin 17 against the rim of the cartridge, thereby exploding the latter. The bore of the subcaliber barrel is intended to be rifled, and the bullet passes through the barrel 5 and thence through the barrel A, the bullet in its flight through said barrel A being free from contact with the rifling therein.

In Fig. 6 I have shown another form of cap and supplemental firing-pin, but the extractor is not employed in this construction. The cap 23 is secured to the breech-tenon of the subcaliber barrel 5, and in the head of this screw-cap is arranged a diagonal supplemental firing-pin 24, the latter being retained in place by contracting the rear end portion of the inclined passage 25, in which said pin 24 is slidably fitted. The contracted rear end of this passage 25 is indicated at 26, and it retains the firing-pin 24 against accidental loss.

In the construction shown by Fig. 7 the cap 27 is provided with a transverse partition 28, the latter serving to separate the front chamber 29 of the cap from the rear chamber 30 thereof. The partition 28 is provided with two passages 31, and in the small chamber 30 of the cap is arranged a slidable firing-pin 32, the latter being provided with studs 33, which are arranged to project through the passages 31 of the partition 28. The firing-pin 32 is limited in its play in the cap 27 by a screw 34, secured in the cap 27 and projecting into a groove 35 in the firing-pin. The firing-pin 32 is in the path of the main firing-pin D when the subcaliber mechanism is inserted into the barrel A, and the studs 33 of this firing-pin are adapted to strike the rim of the subcaliber cartridge.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A subcaliber mechanism for firearms, comprising a subcaliber barrel having a rearwardly-extending breech-tenon and an extractor-recess, a slidable extractor fitted in said recess and exposed on one side of the tenon, said extractor having a lip which is arranged to lie in the path of a cartridge-rim, means for confining the slidable extractor in place, a cap having detachable connection with the breech-tenon, and a supplemental firing-pin mounted in said cap.

2. A subcaliber mechanism for firearms, comprising a subcaliber barrel having a breech-tenon formed with flat faces and with a mutilated thread, a cap having a mutilated female thread and removably attached to said breech-tenon, a supplemental firing-pin supported by said cap, and an extractor slidably confined on one of the flat faces of the breech-tenon.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE H. GARRISON.

Witnesses:
L. E. SCOTT,
W. S. MILLER.