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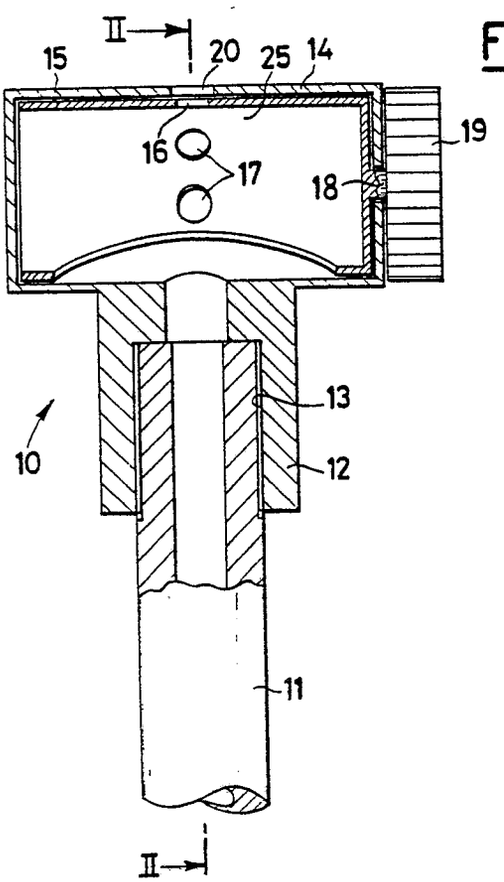
(54) Recoil strengthening device, in particular for rifles.

(57) Recoil strengthening device constituted by a pair of cylindical elements connected with each other, wherein one of them is equipped with a revolving element freely positionable according to the type of ammunition used, with said device being provided with a series of bores which can be placed, as desired, in correspondence of the outlet bore of the cylindical element which contains it.

Fig.1



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RECOIL STRENGTHENING DEVICE, IN PARTICULAR FOR RIFLES

The present invention relates to a recoil strengthening device, in particular for rifles.

During the training of troops, both the normal war cartridges and short-range cartridges with plastic projectiles and reduced launch charge, or dummy cartridges, without projectile, and with furthermore reduced launch cartridge, are used.

In this regard, the rifles in order to shoot war cartridges, and therefore the backward movement of their obturator is proportionated to their high launch energy. Now, in case short-range cartriges or dummy cartridges are used, it happens that the generated energies are insufficient in order to obtain the normal recoil of the obturator, and in order to be able to correctly perform the shooting sequence, on the weapon, and precisely on the muzzle of the barrel, a recoil strengthening device has to be installed.

The strengthening of the recoil is obtained by increasing the pressure of the gas inside the barrel, by using a choke on the discharge of the same gases, in correspondence of the muzzle.

Some types of recoil strengthening devices known from the prior art are constituted by a hollow cylindrical body installed on the muzzle of the barrel; on said hollow cylindrical body, at its free end, a disk provided with a bore is installed. On said recoil strengthening device, different types of diskes provided with bores of different size can be mounted.

In case a cartridge is fired, the projectile of which has a larger diameter than the bore of the disk, said disk will be damaged, with a possible dangerous projection of splinters taking place.

A purpose according to the present invention is of giving the user the possibility of using cartridges with different types of projectiles, as well as dummy cartridges, without him being obliged to replace any elements in case an accidental damaging occurs.

A further purpose according to the present invention is of enhancing the safety of the recoil strengthening devices known from the prior art.

In order to achieve the above purposes, according to the present invention a recoil strengthening device is provided, which is essentially constituted by a first hollow cylindrical body, which can be connected with the barrel of a fire-arm, with atop said first hollow cylindrical body a second hollow cylindrical body being connected, with said first body and said second body having their generatrices positioned perpendicular to each other, characterized in that inside the interior of said second cylindrical body, and coaxial with it a further hollow cylindrical body having a partial side surface is provided, with said further body being provided, on said partial side surface, with a plurality of through-bores suitable for being positioned in correspondence of a further through-bore constituting an outlet bore provided through the side wall of said second hollow cylindrical body and coaxial with said barrel, by means of a rotatably-actuatable knob.

Advantageously according to the present invention said plurality of bores is constituted by four bores, pairs of which have a same diameter.

In order to better understand the characteristics of the present invention and further advantages thereof, the present invention is now disclosed by referring to the figures of the hereto attached drawing, in which:

Figure 1 shows a sectional view of a damper according to the present invention, installed on the barrel of a fire-arm, and

Figure 2 shows a sectional view according to path II-II of Figure 1.

Referring to the figures, by the reference numeral 10 a recoil strengthening device according to the present invention is generally indicated. Said device is mounted on the barrel 11 of a fire-arm, not shown in the figure.

The recoil strengthening device 10 is constituted by a first hollow cylindrical body 12, coupled with the barrel 11 by means of a screw-thread 13. Said first cylindrical body 12 is surmounted by a second hollow cylindrical body 14 so positioned that the generatrices of this latter result to be perpendicular to those of said first body 12.

Inside the second cylindrical body 14 and coaxial with it a further hollow cylindrical body 15 is provided, which has a partial side surface 25 provided with two pairs of bores indicated by the reference numerals 16 (the first pair of bores) and 17 (the second pair of bores).

The body 15 is furthermore provided with a pivot 18 protruding from its single base surface and connected with a knob 19, which is suitable for rotatably actuating it in order to move the bores 16 and 17 to come into correspondence of an outlet bore 20 provided on the side surface of the second cylindrical body 14, with the centre of said bore 20 lying on the longitudinal axis of the barrel 11.

The partial side surface 25 defines an opening which makes it possible said barrel 11 to communicate, by a rectilinear path, with the pair of bores 16 and 17 and with the outlet bore 20.

The bores 16 and 17 have different diameters; the smaller-diameter bores (16) are used in case dummy cartriges are fired, and the larger-diameter

bores (17) are used in case, on the contrary, short-range cartridges are fired; and through the opening defined by the partial side surface 25, also normal war ammunitions can be used.

Thus, the recoil strengthening device according to the present invention makes it possible the position of the bores to be selected as a function of the cartridges used, directly on the training site, and without the user being obliged to replace any pieces, and still with the same device being installed on the muzzle of the barrel. It also makes it possible the user to operate under fully safe conditions, because even if the hollow cylindrical body 15 is damaged during the firing, owing to the accidental firing of a war cartrige while the bores provided for the dummy cartridges or the short-range cartridges are set in operating position, it will always be inside the interior of the cylindrical body 14, thus preventing splinters from being dangerously projected towards the outside.

Obviously, even in case one of the bores belonging to either of said bore pairs is damaged, the other bore of said bore pair can be used, as an emergency bore, without the user being obliged to replace the whole device, by simply actuating the knob 19, which can rotate the cylindrical body 15.

The present invention has been disclosed for illustrative and non-limitative purposes, and it should be understood that modifications and changes may be supplied by those skileed in the art, without anyway departing from the scope of the present patent-right.

Claims

1. Recoil strengthening device essentially constituted by a first hollow cylindrical body, which can be connected with the barrel of a fire-arm, with atop said first hollow cylindrical body a second hollow cylindrical body being connected, with said first body and said second body having their generatrices positioned perpendicular to each other, characterized in that inside the interior of said second cylindrical body, and coaxial with it a further hollow cylindrical body having a partial side surface is provided, with said further body being provided, on said partial side surface, with a plurality of through-bores suitable for being positioned in correspondence of a further through-bore constituting an outlet bore provided through the side wall of said second hollow cylindrical body and coaxial with said barrel, by means of a rotatably-actuatable knob.

2. Recoil strengthening device according to claim 1, characterized in that said plurality of bores is constituted by four bores, subdivided into pairs of same-diameter bores.

3. Recoil strengthening device according to claim 1, characterized in that said partial side surface of said further cylindrical body defines such an opening as to make it possible said barrel to communicate, by a rectilinear path, with said outlet through-bore.

4. Recoil strengthening device according to claim 3, characterized in that said opening furthemore makes it possible said barrel to communicate, by a rectilinear path, with said outlet through-bore.

5. Recoil strengthening device according to one or more of the preceding claims, substantially as herein disclosed and illustrated.

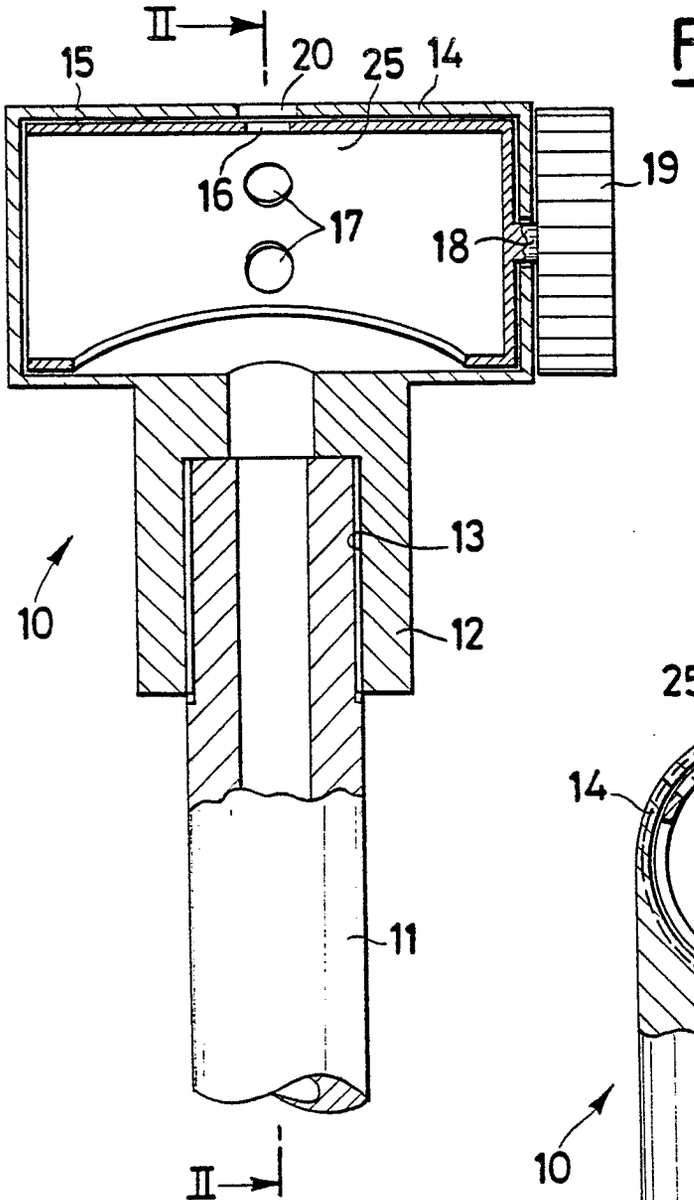
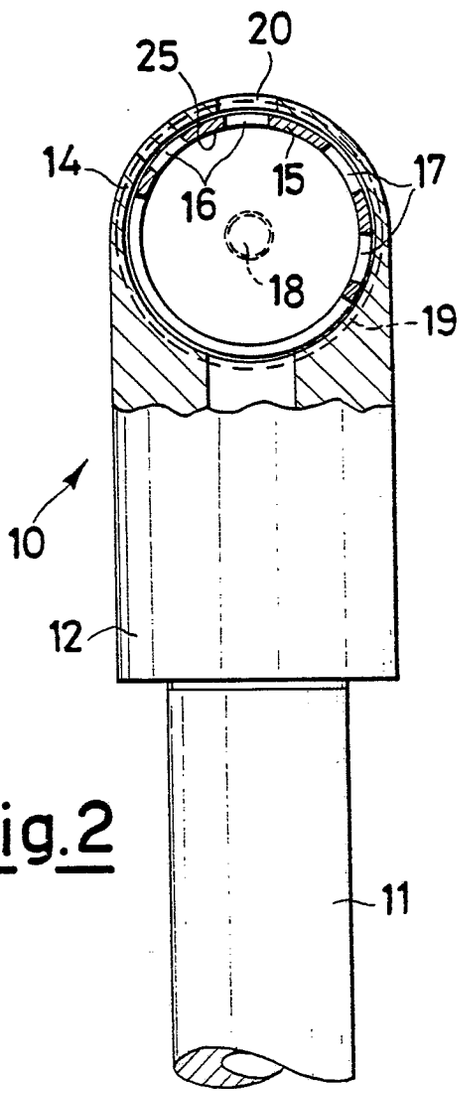

II
15
20
25
14
16
17
18
19
13
12
10
11
II

Fig.1


25
20
14
16
15
17
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19
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12
11

Fig.2