No. 688,462. Patented Dec. 10, 1901.

T. A. FIDJELAND.

GUN BARREL.

(Application filed Apr. 19, 1901.)

(No Model.)

Fig. 1.

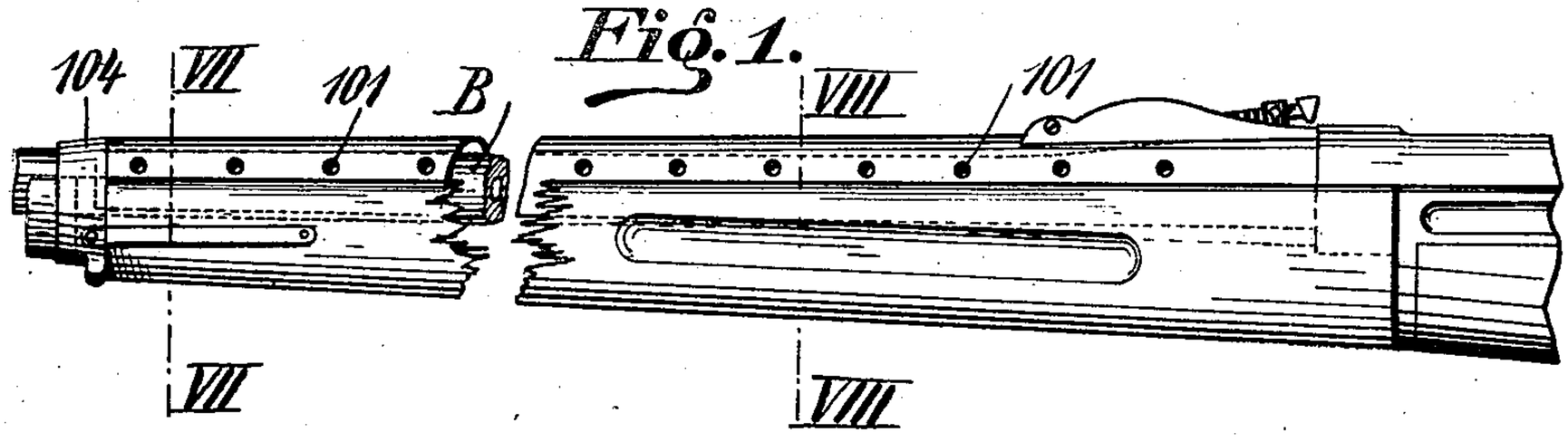


Fig. 2.

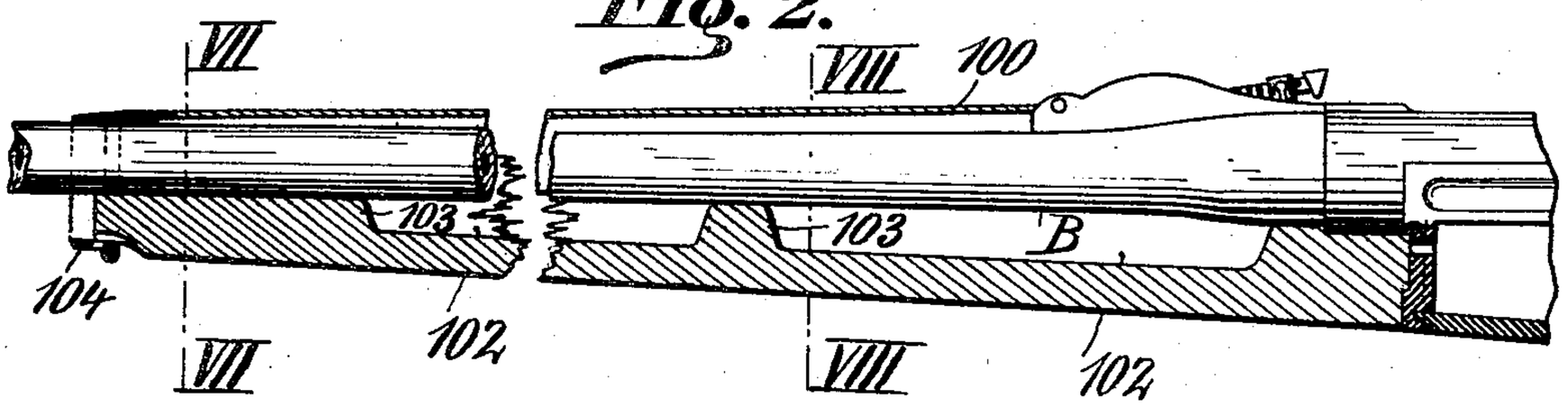


Fig. 3.

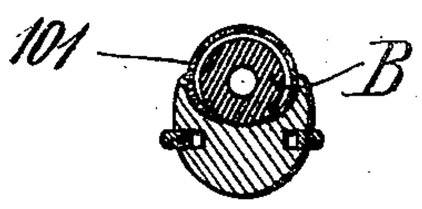
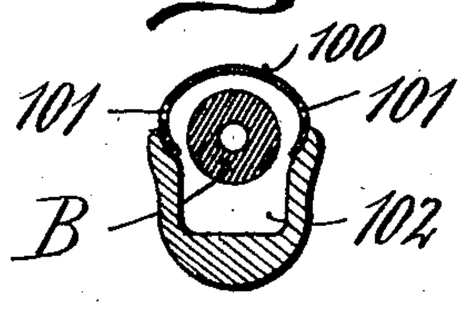


Fig. 4.



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UNITED STATES PATENT OFFICE.

TERJE AANENSEN FIDJELAND, OF FOSTVEDT, IVELAND, PR. CHRISTIANSAND, NORWAY.

GUN-BARREL.

SPECIFICATION forming part of Letters Patent No. 688,462, dated December 10, 1901.

Application filed April 19, 1901. Serial No. 56,623. (No model.)

To all whom it may concern:

Be it known that I, TERJE AANENSEN FIDJELAND, a subject of the King of Sweden and Norway, residing at Fostvedt, Iveland, pr. Christiansand, Norway, have made certain new and useful Improvements in Quick-Firing Rifles, of which the following is a specification.

In the modern magazine-rifle the barrel, as is known, under quick fire will soon become so hot that it is impossible for the soldier to hold the rifle. To avoid this disadvantage, the fore-stock of the rifle has been made in such manner that it entirely covers the barrel of the rifle. The wood of which the stock of the rifle is made is a poor conductor of heat, and therefore it takes time before the heat is transmitted through this material. Nevertheless, experience has shown that under a quick or a prolonged fire even the wood becomes at length so hot that it greatly inconveniences the soldier. Besides, another great disadvantage results from the covering of the barrel with the stock—namely, that the stock when it is again exposed after the firing to the usual temperature and, as often happens, also to dampness is liable to be warped very considerably, and this warping of the stock, which is fixed to the barrel, has often had fatal influence on the barrel, causing this to warp also, and the rifle has become therefore more or less unreliable or even at times entirely useless. I am therefore of the opinion that it is a quite unsuitable method to surround the barrel with a non-conducting material, whereby the unavoidably-developed heat is consequently preserved and prevented from escaping until at length it asserts itself so much more at a certain point, with the above-mentioned disadvantages. This present arrangement has for its object by the most practical and simple method to let the heat which has been developed in the barrel escape into the surrounding air as quickly as possible and so that at the same time this radiation of heat will have no disagreeable effect upon the hand that holds the rifle.

The invention is represented on the accompanying drawings, in which—

Figure 1 shows a part of a rifle-barrel with the stock in side elevation; Fig. 2, the same, also seen in side elevation, but with the stock in section; Fig. 3, a section on the line VII VII, Figs. 1 and 2; Fig. 4, a section on the line VIII VIII of Figs. 1 and 2.

The device comprises the steel cap 100, which incloses the hind part of the barrel and which incloses the barrel hemicylindrically, as will be seen from Figs. 3 and 4, by means of which there is formed an air-space between the barrel B and the cap, which air-space is proportionally larger at the hind part of the cap than at the fore part, corresponding to the taper of the barrel. (See Figs. 2, 3, and 4.) This cap 100 has on both sides a row of borings or holes 101, and it will be seen that the radiant heat from the barrel will first be met by an insulating stratum of air; but by the constant natural circulation through the openings 101 the heat developed is carried off as quickly as it is developed, and the cap which incloses the barrel when it is fixed at the calculated right distance from the barrel will never become so hot that the rifle cannot be held.

As shown in Fig. 2 especially, the present arrangement is also characterized thereby that the rifle-barrel B does not rest, as otherwise is the case, throughout its whole length on the wooden stock; but this latter is so cut out that there are formed long recesses or spaces 102, together with rests or blocks 103, which are placed at certain distances from each other and on which alone the barrel rests and is fastened in the usual way by hoops 104. By this latter arrangement the advantage is gained that the lower part also of the barrel in its more essential part is separated from the rifle-stock by the insulating air-space 102 and that it is only in contact with the stock on the rests 103 in such a manner that the evolved heat can escape through the holes of the cap 101. (See Fig. 4.) Even if, therefore, the stock should warp or deform, which by the present arrangement is far less likely than heretofore, this will naturally not be of such a great effect on the barrel as when the latter throughout its whole length lies against the stock.

Having now described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

In a rifle the combination with the barrel of a fore-stock having elongated recesses whereby the barrel is supported at a few points of limited contact by said fore-stock, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

TERJE AANENSEN FIDJELAND.

Witnesses:
AXEL LAHN,
RICHARD STOKKE.