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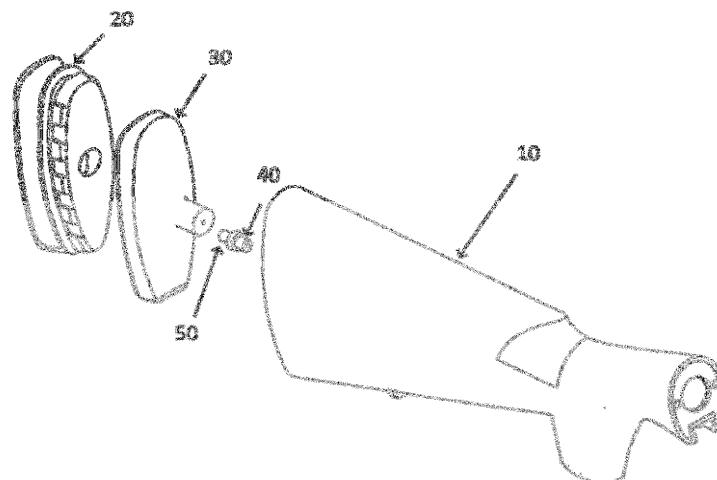
Remarks:

Amended claims in accordance with Rule 137(2) EPC.

(54) RECOIL PAD EMBODIMENT FOR RIFLES

(57) The invention relates to a recoil pad embodiment (100), comprising the stock (10) which is the part of the rifle (200) that rests on the shoulder of the user, which is used in all kinds of rifles (200), including rifles or smoothbore rifles, air rifles and Firearms rifles and non-firearms rifles, which are fired by resting the rifle on the shoulder. The characteristic of the invention is that it comprises a recoil pad (20) which can be attached

to and detached from the rear end of the stock (10) and allows the stock (10) to be set on the shoulder; and a pneumatic silicon (30) attached to and detached from the stock (10) together with the recoil pad (20) on the front side joining the recoil pad (20) with stock (10), which contains air and reduces the load on the user's shoulder by reducing the impact during firing and prevents the rifle (200) from muzzle climb.

**Figure 1**

Description

Technical Field

[0001] The invention relates to a recoil pad embodiment for use with all types of rifles, including rifles, smoothbore rifle, air rifles and firearms rifles and non-firearms rifles, which are fired by resting the rifle on the shoulder.

[0002] In particular, the invention relates to a recoil pad embodiment which reduces the load on the shoulder during firing and prevents the rifle from muzzle climb.

State of the Art

[0003] Rifles used as hunting and combat weapons are fired by resting them on the shoulder of the user. This is the most common and well-known type. All rifles, from military rifles to hunting rifles, have a stock embodiment as standard.

[0004] In the present applications, there is a recoil pad made of soft or hard plastic at the rear of the stock (the part that comes in contact with the shoulder). Technically, the recoil pad allows the absorption of the recoil generated during the firing of the rifle on the shoulder. During this absorption, a significant load is exerted on the user's shoulder. If the rifle is fired repeatedly or if the rifle is fired without being fully seated on the shoulder, this load causes pain in the user's shoulder area and even serious damage to the user's body. Also, as a result of the serious pressure on the shoulder, the tip of the rifle to muzzle climb. As a result of this muzzle climb, the bullet coming out of the rifle may deviate from the target and the shots may be unsuccessful. For this reason, it became necessary to eliminate the problems experienced during the firing of rifles in the known state of the art.

[0005] In the search conducted in the literature, the document numbered TR2022/006061 can be cited as an example of the known state of the art. The document is about the stock with an angled movable recoil pad. In said invention, a recoil pad is mentioned, which is connected to the recoil pad bearings formed in the main body of the stock by means of fixing elements and movement elements, and whose horizontal distance is adjusted at an angle relative to the main body of the stock within the recoil pad bearings. The recoil force during shooting is reduced by the angled movement of the recoil pad relative to the stock body. However, a mechanism is required for the angled movement of the recoil pad on the main body of the stock, which increases production and assembly costs. In addition, the force generated during the shot is tried to be reduced by the recoil pad, which is adjusted at an angle according to the physical characteristics of the user. On the other hand, it is not possible to use the said stock on all types of rifles.

[0006] The document numbered US2010242328 can be cited as another example of the known state of the art. The document relates to a stock. In the said invention, a

portable stock comprises a stock body with an intermediate pipe holder and a firearm intermediate pipe slidably mounted on the intermediate pipe holder, and the stock moves in a linear reciprocating motion relative to the intermediate pipe during the firing of the weapon. The recoil absorbing mechanism is placed inside the stock body and connected to the intermediate pipe. The locking pin is positioned on the stock body and is associated with the intermediate pipe. The stock body is adjusted for reciprocating motion during firing of the weapon. However, due to the use of a mechanism in the stock, production and assembly costs are high. In addition, the force generated during firing is attempted to be minimized by the recoil pad, which is adjusted at an angle according to the physical characteristics of the user. On the other hand, it is not possible to use the said stock on all types of rifles.

[0007] Therefore, the existence of the above problems and the inadequacy of the existing solutions necessitated a development in the relevant technical field.

Object of the Invention

[0008] The present invention relates to a recoil pad embodiment for rifles, which eliminates the disadvantages mentioned above and provides new advantages in the related technical field.

[0009] The main object of the invention is to provide a recoil pad embodiment which reduces the load on the shoulder during firing and prevents the rifle from muzzle climb.

[0010] The object of the invention is to provide a recoil pad embodiment that reduces the impact during shooting by means of the air-containing silicone embodiment between the stock and the recoil pad, and minimizes pain or injury to the user's shoulder or body due to the reduction of the pressure on the user's shoulder.

[0011] Another object of the invention is to provide a recoil pad embodiment which minimizes the problem of the rifle's muzzle climb and enables the bullet to reach the target more accurately by reducing the pressure generated during firing.

[0012] Another object of the invention is to provide a recoil pad embodiment which can be mounted and dismounted on all kinds of rifles, and thus can be presented to users in a disassembled manner.

[0013] Another object of the invention is to provide a recoil pad embodiment which can pump air into the air silicone side of the stock manually with the help of a valve depending on the lack of air in the air silicone in case of need, and to increase the comfort of the user.

[0014] In order to achieve all the objects mentioned above and those which may arise from the detailed description, the invention relates to a recoil pad embodiment, comprising the stock (10) which is the part of the rifle which rests on the shoulder of the user, that is used in all kinds of rifles, including rifles or smoothbore rifles, air rifles and firearms rifles and non-firearms rifles, which are

fired by resting the rifle on the shoulder and characterized by comprising the following,

- a recoil pad that can be attached to and detached from the rear end of the stock and allows the stock to be set on the shoulder,
- a pneumatic silicon that can be attached to and detached from the stock with the recoil pad at the front side of the joint of the recoil pad with the stock, and that reduces the load on the user's shoulder by reducing the impact during firing and prevents the rifle from muzzle climb by means of having air inside.

[0015] The structural and characteristic features and all advantages of the invention will be more clearly understood by means of the figures given below and the detailed description written with reference to these figures. Therefore, evaluation should be made by taking into consideration these figures and the detailed description.

Figures to Help Understand the Invention

[0016]

Figure 1: The disassembled view of the recoil pad embodiment according to the invention.

Figure 2: The disassembled view of the recoil pad and the pneumatic silicone of the recoil pad embodiment of the invention.

Figure 3: The disassembled view of the recoil pad and the stock of the recoil pad embodiment of the invention.

Figure 4: The assembled view of the recoil pad and the stock of the recoil pad embodiment of the invention.

Figure 5: The disassembled view of the recoil pad and the stock of the recoil pad embodiment in an alternative configuration of the invention.

Figure 6: The view of the stock of the recoil pad embodiment of the invention mounted on a rifle.

Description of Part References

[0017]

- 10. Stock
- 20. Recoil pad
- 30. Pneumatic silicone
- 40. Valve
- 50. Valve cap
- 100. Recoil pad embodiment
- 200. Rifle

Detailed Description of the Invention

[0018] In this detailed description, the preferred alternatives of the recoil pad embodiment (100) of the inven-

tion are described solely for the purpose of a better understanding of the subject matter and without any limiting effect.

[0019] Figure 1 shows a disassembled view of the recoil pad embodiment (100) according to the invention. Accordingly, in its most basic form, the recoil pad embodiment (100) comprises a stock (10) forming the part of the rifle (200) resting on the shoulder of the user, a recoil pad (20) which can be attached to and detached from the rear end of the stock (10) and which enables the stock (10) to fit on the shoulder, pneumatic silicone (30), which can be attached to and detached from the stock (10) together with the recoil pad (20) and which contains air to reduce the load on the shoulder during firing and to prevent the rifle from muzzle climb, valve (40) on the pneumatic silicone (30) and which allows air to be pumped into the pneumatic silicone (30), valve cap (50) which is placed on the valve (40).

[0020] The stock (10), which forms the main structure of the recoil pad embodiment (100) of the invention, constitutes the part of all kinds of rifles (200) resting on the shoulder of the user, including rifles or smoothbore rifles, air rifles and firearms rifles and non-firearms rifles. At the rear end of the stock (10), there is a recoil pad (20) which can be attached to and detached from the stock (10). The said recoil pad (20) is the part that allows the stock (10) to be set on the shoulder.

[0021] As can be seen in Figure 2, a pneumatic silicone (30) containing air is joined to the front side of the recoil pad (20) which joins with the stock (10), preferably by injection molding method in a leak-proof manner. Thus, as shown in Figure 3, the pneumatic silicone (30) and the recoil pad (20) are made monolithic. The pneumatic silicone (30) can be attached to and detached from the stock (10) together with the recoil pad (20).

[0022] As can be seen in Figure 4, the pneumatic silicone (30), which is located between the stock (10) and the recoil pad (20) by attaching recoil pad (20) to the stock (10), reduces the load on the user's shoulder by reducing the impact during the shot thanks to the air which is contained inside and prevents the rifle (200) from muzzle climb.

[0023] A valve (40) which allows air to be pumped into the pneumatic silicone (30) may preferably be located on the pneumatic silicone (30), and a valve cap (50) may be closed on the valve (40) to prevent the air from escaping from the valve (40). Thus, in case of need, depending on the lack of air in the pneumatic silicone (30), the user can remove the valve cap (50) and manually pump air into the side of the stock (10) where pneumatic silicone (40) is located, by means of the valve (40) and increase the user comfort.

[0024] In an alternative embodiment of the invention, the recoil pad embodiment (100) can also be used without the valve (40) and valve cap (50) on the pneumatic silicone (30), as shown in Figure 5.

[0025] The assembly and use of the recoil pad embodiment (100) of the invention is as follows;

[0026] The recoil pad (20), which has a monolithic structure with pneumatic silicone (30), is attached to the stock (10) and the stock (10) is attached to the rifle (200), as shown in Figure 6.

[0027] The pneumatic silicone (30) located between the stock (10) and the recoil pad (20), reduces the load on the user's shoulder and prevents the rifle (200) from muzzle climb, by reducing the impact during the shot thanks to the air inside.

[0028] In an alternative embodiment of the invention, the recoil pad (20) is detached from the stock (10) depending on the lack of air in the pneumatic silicone (30), and after detaching the valve cap (50) from the pneumatic silicone (30), air is pumped into the pneumatic silicone (40) side of the stock (10) manually by means of the valve (40). Then the valve cap (50) is replaced on the valve (40) and the recoil pad (20) is attached to the stock (10) and the rifle (200) is made ready for use.

Claims

1. A recoil pad embodiment (100), comprising the stock (10) which is the part of the rifle (200) that rests on the shoulder of the user, which is used in all kinds of rifles (200), including rifles, smoothbore rifles, air rifles and firearms rifle and non-firearms rifles, which are fired by resting the rifle on the shoulder, **characterized by** comprising:

- a recoil pad (20) that can be attached to and detached from the rear end of the stock (10) and allows the stock (10) to be set on the shoulder,
- a pneumatic silicon (30) that can be attached to and detached from the stock (10) with the recoil pad (20) at the front side of the joint of the recoil pad (20) with the stock (10), and that reduces the load on the user's shoulder by reducing the impact during firing and prevents the rifle (200) from muzzle climb by means of having air inside.

2. The recoil pad embodiment (100) according to claim 1, **characterized by** comprising; a valve (40) on the said pneumatic silicon (30) and that allows pumping of air into the pneumatic silicon (30).
3. The recoil pad embodiment (100) according to claim 1, **characterized by** comprising; a valve cap (50), which is closed on the valve (40) and prevents the air inside the valve from escaping.

Amended claims in accordance with Rule 137(2) EPC.

1. A recoil pad embodiment (100), comprising the stock (10) which is the part of the rifle (200) that rests on the shoulder of the user, which is used in all kinds of rifles

(200), including rifles, smoothbore rifles, air rifles and firearms rifle and non-firearms rifles, which are fired by resting the rifle on the shoulder, **characterized by** comprising:

- a recoil pad (20) that can be attached to and detached from the rear end of the stock (10) and allows the stock (10) to be set on the shoulder,
- an air-filled silicone (30) that can be attached to and detached from the stock (10) with the recoil pad (20) at the front side of the joint of the recoil pad (20) with the stock (10), and that reduces the load on the user's shoulder by reducing the impact during firing and prevents the rifle (200) from muzzle climb by means of having air inside.

2. The recoil pad embodiment (100) according to claim 1, **characterized by** comprising; a valve (40) on the said air-filled silicone (30) and that allows pumping of air into the air-filled silicone (30).
3. The recoil pad embodiment (100) according to claim 2, **characterized by** comprising; a valve cap (50), which is closed on the valve (40) and prevents the air inside the valve from escaping.

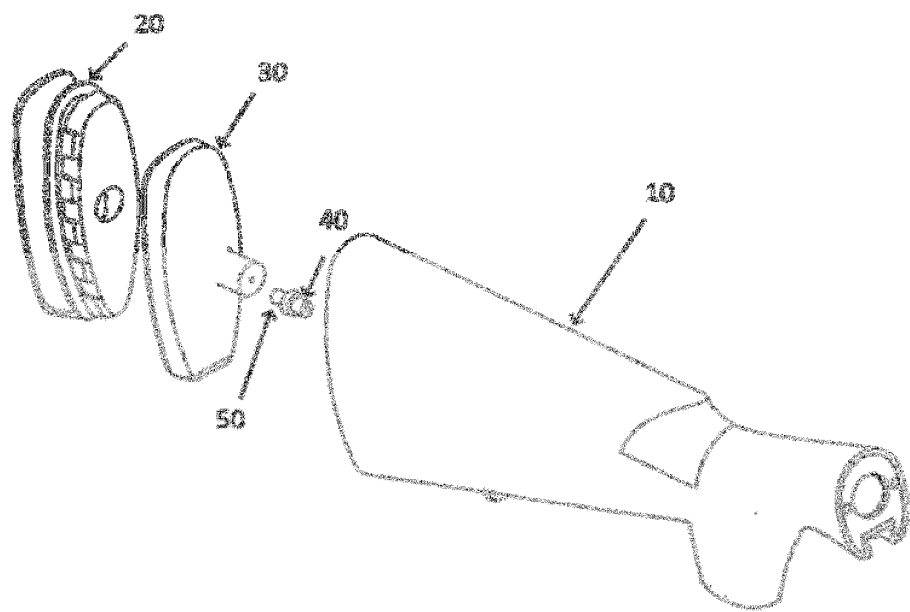


Figure 1

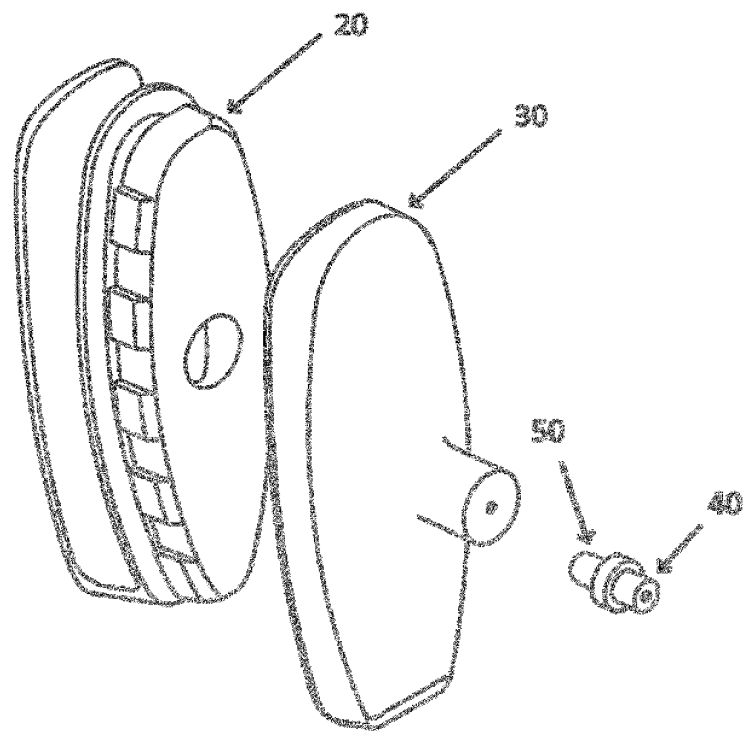


Figure 2

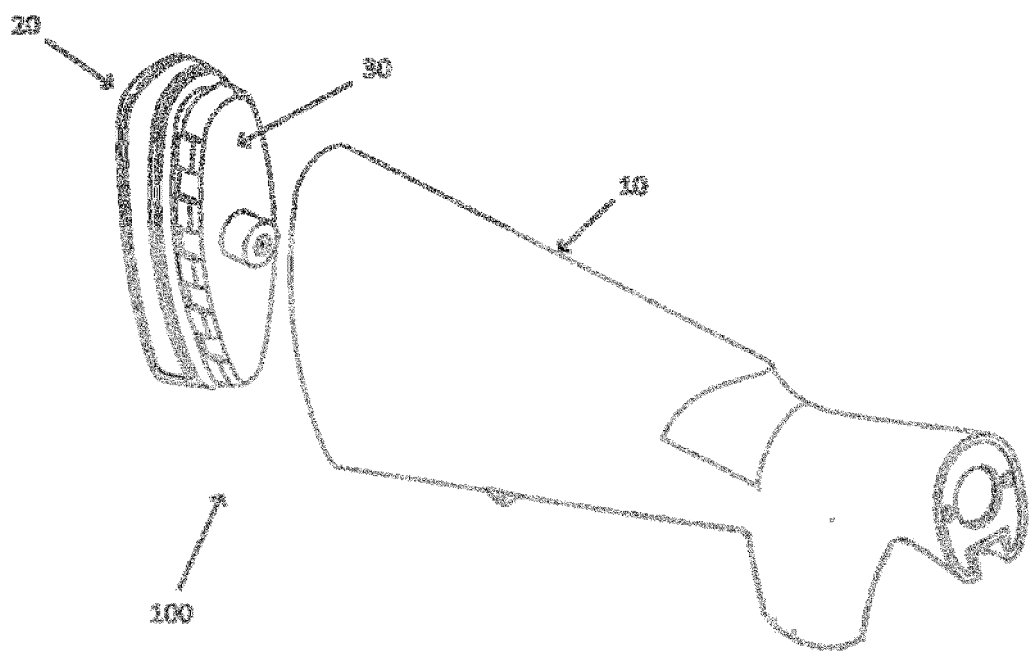


Figure 3

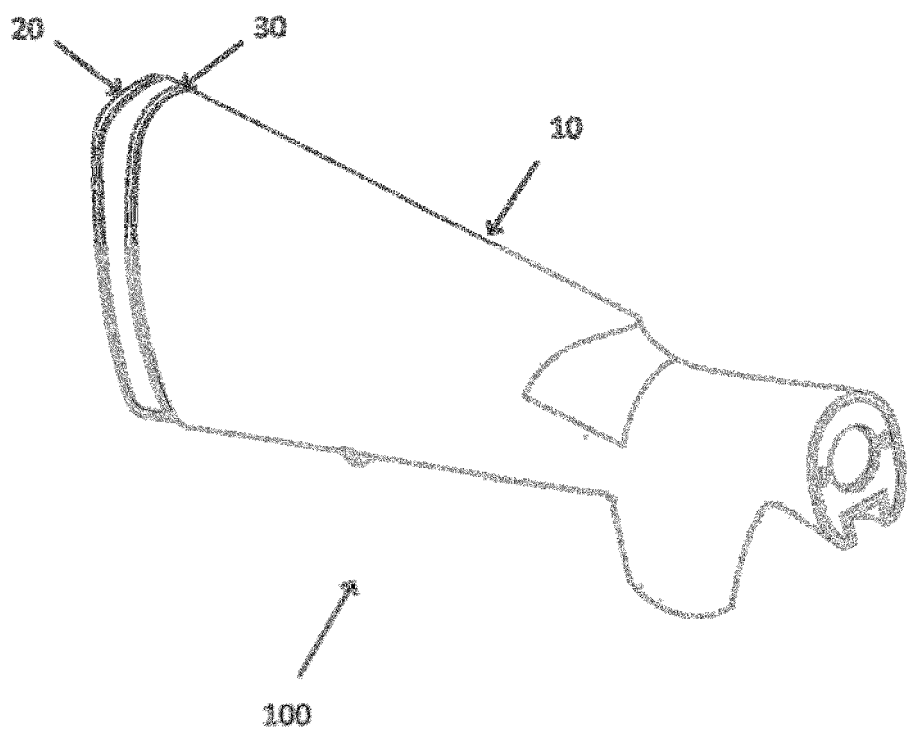


Figure 4

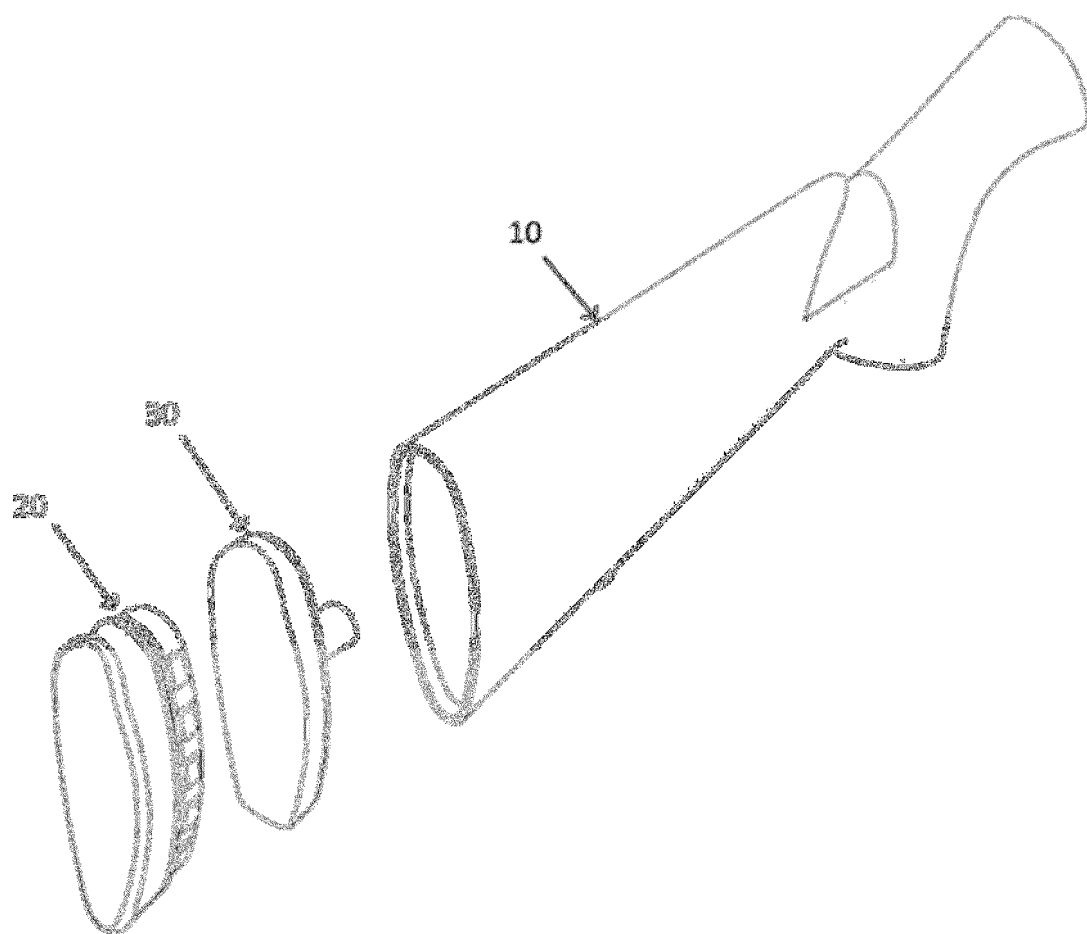


Figure 5

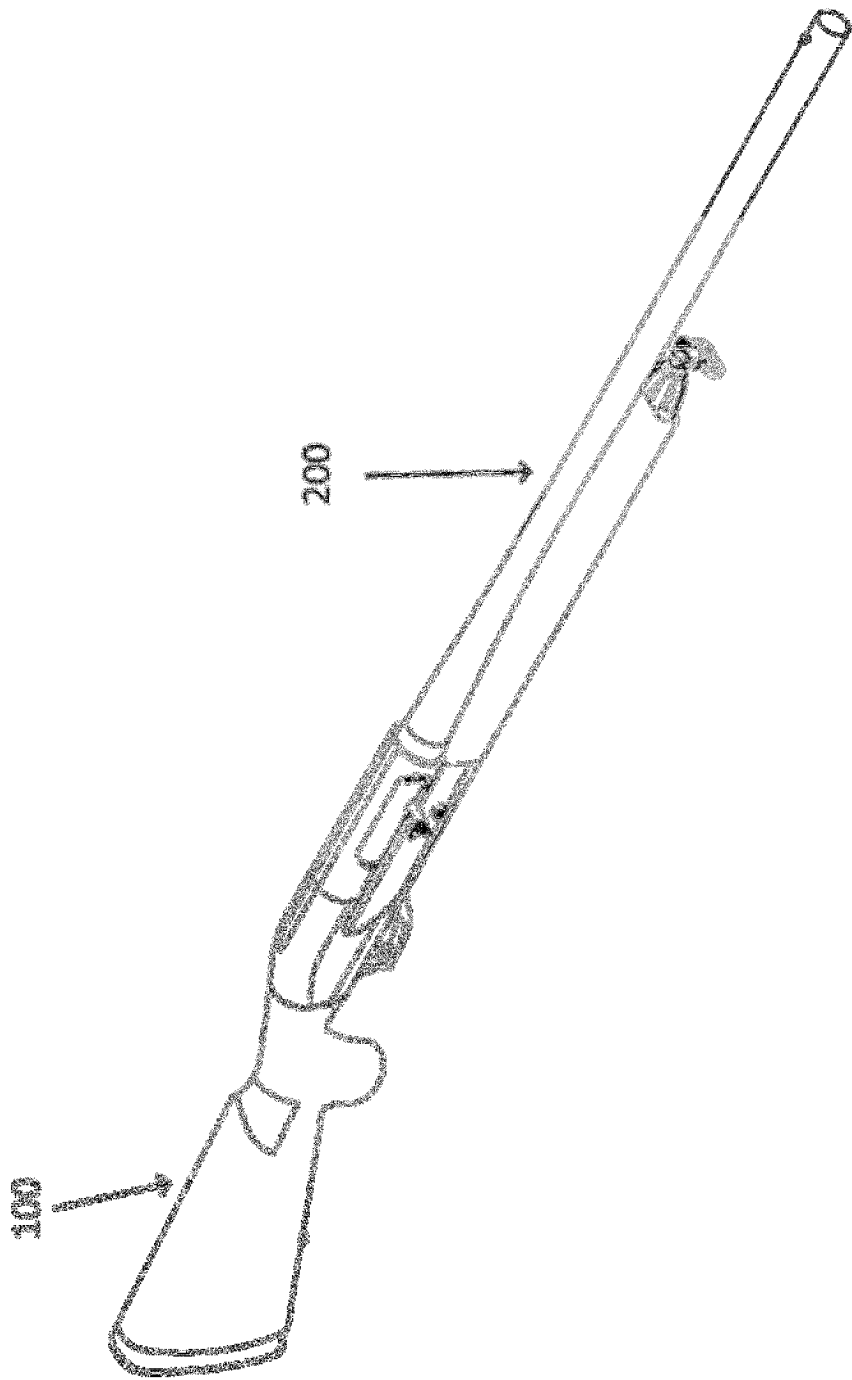


Figure 6



EUROPEAN SEARCH REPORT

Application Number

EP 24 16 3305

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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 14 August 2024	Examiner Schwingel, Dirk
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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