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(54) **Trigger mechanism with an adjustable trigger for rifles.**

(57) In a trigger mechanism for rifles, the trigger (3) is pivoted in a lever support (5) and between the trigger and support are screw devices (7) to adjust the angular position of the trigger (3) in relation to the support (5) along the firing axis.

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This invention relates to a trigger mechanism for rifles, of the type comprising a trigger associated with a support.

As is known, within the field of rifles and in particular so-called shotguns, a need has been felt to adjust the position of the trigger along the firing axis. This adjustment involves slight variations in the position of the trigger and is usually done directly on the target range to enable a perfect, final adjustment of the firearm to the shooter, for example to compensate for the greater or lesser thickness of the clothes worn by the shooter on that specific occasion.

In order to perform the above-mentioned adjustment trigger mechanisms are known, such as those described in Italian Patent No. 1186263 and Application for Italian Patent No. 5118-A/87, in which the trigger slides on a lever support which has notches along the firing axis and to which the release mechanisms are associated.

These conventional trigger mechanisms also have pawls, catches and spring and unspring stop elements to lock the trigger in the preselected notch.

Although they enable adjustment of the position of the trigger along the firing axis, conventional trigger mechanisms have the drawbacks of considerable structural complexity and a limited number of trigger adjustment positions, corresponding to the notches formed in the support.

It will also be remembered that in order to enable translation of the trigger along the firing axis there must be clearances between the trigger and support and, as frequently occurs, failure by the said stop elements completely to eliminate such clearances constitutes an additional serious drawback of conventional trigger mechanisms.

The problem that lies at the heart of this invention is to devise a trigger mechanism for rifles which has structural and operating characteristics such as to overcome the drawbacks mentioned as regards the known state of the art.

This problem is resolved according to the invention by a trigger mechanism of the type previously described, characterised in that the trigger pivots in the said support, there being devices to adjust the angular position of the trigger in relation to the support.

Advantageously, according to a preferred embodiment of the invention the said adjustment devices are threaded.

The characteristics and advantages of a trigger mechanism according to the invention will emerge from the following description of a preferred embodiment, given by way of example and not limited by the single drawing attached. In this drawing a trigger mechanism for a rifle according to the invention is shown in a side, partly cutaway, cross-

sectional view.

With reference to the said drawing, 1 shows a trigger mechanism as a whole for a rifle, in particular for a so-called shotgun.

The trigger mechanism 1 comprises a trigger 2 formed in a single piece and having an appendix 3 essentially semi-circular projecting from a body 4 extending along a longitudinal axis of the rifle, or firing axis, shown by X; body 2 has a muzzle portion 4a and an opposing breech portion 4b.

Trigger 2 pivots in a lever support 5, fitted with a lever 6 designed to operate in a known manner a release mechanism which is totally conventional and therefore not shown.

In particular trigger 2 pivots in support 5 at an intermediate portion of body 4 and the relative pivot axis Y is perpendicular to firing axis X.

Trigger mechanism 1 also comprises threaded adjustment devices 7 to adjust the angular position of trigger 2 in relation to support 5.

These threaded adjustment devices 7 comprise a threaded through hole 8, formed in the breech portion 4b of body 4 and facing a ledge 9 formed in support 5, and a threaded dowel 10 engaged in the said hole 8 and having a head 10a facing essentially towards appendix 3, and an opposing end 10b protruding beyond hole 8 and facing towards ledge 9.

Between support 5 and trigger 2, at the muzzle end 4a of body 4, are spring devices acting on trigger 2 constantly to press the above-mentioned end 10b of dowel 10 against ledge 9 in support 5.

By turning the threaded dowel 10 with an Allen key or screwdriver, the end 10b of which is kept pressed by the spring devices 11 against ledge 9, the angular position of trigger 2 in relation to support 5 is varied. Consequently, the position of appendix 3 of trigger 2 along firing axis x is varied, until the desired adjustment is achieved.

With the trigger mechanism according to the present invention it is possible to make a continuous adjustment of the position of the trigger; this adjustment is also very quick and effective. In this regard, the fact that the head of the threaded dowel is immediately accessible, without the need for any component of the trigger mechanism to be removed is a particular advantage.

An additional advantage offered by the trigger mechanism according to the invention is that of a simple structure completely free of clearances between the trigger and support thanks to the above-mentioned spring devices.

Claims

1. A trigger mechanism for rifles, of the type comprising a trigger (2) associated with a support (5),

characterised in that the trigger (2) pivots in the said support (5), there being devices (7) to adjust the angular position of the trigger (2) in relation to the support (5).

2. A trigger mechanism according to Claim 1, characterised in that the said adjustment devices (7) are threaded. 5

3. A trigger mechanism according to Claim 2, characterised in that the said adjustment devices (7) are mounted in a breech portion (4b) of the trigger (2). 10

4. A trigger mechanism according to Claim 3, characterised in that the said adjustment devices (7) comprise a threaded through hole (8) formed in the said breech portion (4b) of the trigger (2), a threaded dowel (10) engaged in the said hole (8) and having one end (10b) protruding beyond hole (8) towards the said support (5), being fitted with spring devices (11) mounted between the support (5) and a muzzle portion (4a) of trigger (2) constantly to press the said end (10b) of dowel (10) against the support (5). 15 20

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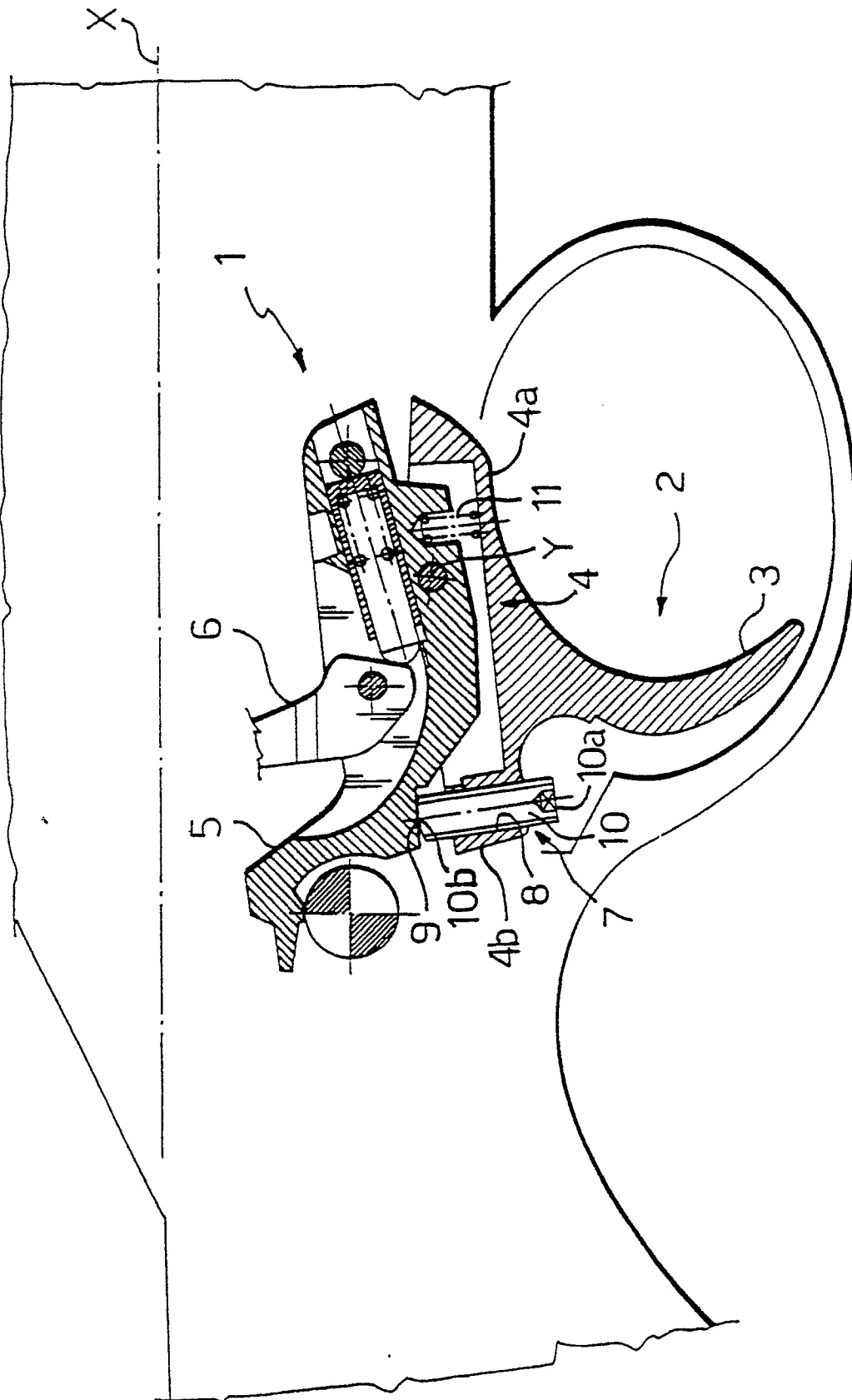
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EUROPEAN SEARCH REPORT

Application Number

DOCUMENTS CONSIDERED TO BE RELEVANT			EP 90202797.8
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	<u>CH - A - 516 131</u> (FA. R. ZIEGENHAHN) * Fig. 1-3 * --	1,2	F 41 A 19/16
D, A	<u>US - A - 4 667 429</u> (D. PERAZZI) * Fig. 1-3 * --	1,2	
A	<u>DE - A1 - 2 631 254</u> (MAYER & GRAMMELSPACKER) * Fig. 1-3 * ----	1,2	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			F 41 A 19/00
The present search report has been drawn up for all claims			
Place of search VIENNA	Date of completion of the search 18-12-1990	Examiner JASICEK	
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			