Title (en)

Piezoelectric igniter mechanism.

Title (de)

Mechanismus für piezoelektrischer Zündeinrichtung.

Title (fr)

Mécanisme d'allumeur piézo-électrique.

Publication

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Application

EP 84420149 A 19840831

Priority

- EP 84420149 A 19840831
- ZA 846976 A 19840905

Abstract (en)

1. A piezoelectric igniter mechanism, of the type including a female body (2) having a cylindrical bore in which is engaged a sleeve (3) of complementary external section containing, in order, starting from its external end, a metallic anvil (4) acting as an electrode, a piezoelectric element (6) and a metallic stop (7), whilst between the end (2a) of the female body (2) and the internal end (3a) of the sleeve (3) are disposed two concentric helicoidal springs, of which an external one (16) returns the sleeve (3) and bears against the internal end (3a) of the latter, and the other is an internal release spring (15) bearing on a striker (12) provided with two diametrically opposed lugs (11), each od which is engaged, on the one hand, in a window (14) formed the adjacent wall of the female body (2), and, on the other hand, in a longitudinal guiding slot (9) formed in the sleeve (3) and open at its internal end (3a) and each of which slots has a notch (13) of which an edge (13b) constitutes a catch for latching the corresponding lug (11) which is normally pushed into it by the action of a ramp (14a) formed in the transverse edge of the associated window (14) furthest from the end (2a) of the female body (2) and against which it is normally applied by the release spring (15), from which catch (13b) it is ejected by application against a ramp (14b), inclined in the same direction as the aforementioned ramp (14a) but having the inverse effect, formed in the opposite transverse edge of the aforementioned window (14) and against which it is applied when the mechanism is operated, in the direction correponding to an increase in the relative engagement of the sleeve (3) and the female body (2) and to a compresion of the two springs (15) and (16), charaterized in that, on the one hand, the transverse section of the bore the female body (2) and that of the sleeve (3) have a non-circular perimeter, in such a way as to have a greater dimension (D) in a direction not passing through the window (14) of the female body (2) than in other directions, and the other hand, the distance (L) separating the free ends of the diametrically opposed lugs (11) of the striker (12) is less than the aforementioned greater dimension (D) of the tranverse section of the female body (2) and of the sleeve (3) but greater than the distance separating the two windows (14) of the female body (2).

Abstract (fr)

Ce mécanisme est du type comprenant un corps femelle (2) dans lequel coulisse un fourreau (3) de section complémentaire et contenant une enclume (4), un élément piézo-électrique (6) et un butoir métallique (7), tandis qu'entre le fond (2a) du corps femelle (2) et l'extrémité interne (3a) du fourreau (3) sont disposés deux ressorts hélicoïdaux (16, 15), respectivement, de rappel du fourreau (3) et de détente d'un percuteur (12) muni de deux ergots diamétralement opposés (11), dont chacun est engagé dans une fenêtre (14) de la paroi adjacente du corps femelle (2) et dans une fente longitudinale de guidage (9) du fourreau (3), chaque fente présentant une encoche (13) dont un bord (13b) constitue un cran d'accrochage de l'ergot (11) correspondant sur lequel il est engagé par une rampe (14a) ménagée dans le bord transversal de la fenêtre (14) le plus éloigné du fond (2a) et duquel il est chassé par une rampe (14b) inclinée dans le même sens mais d'effet inverse, ménagée dans le bord transversal opposé de la fenêtre (14). La section transversale commune de l'alésage du corps femelle (2) et du fourreau (3) ont un périmètre non circulaire présentant une dimension maximale dans une direction ne passant pas par les fenêtres (14) et la distance séparant les extrémités libres des ergots (11) est inférieure à la dimension maximale (D) et supérieure à la distance (L) séparant les deux fenêtres (14).

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