

# UNITED STATES PATENT OFFICE.

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## LOCK MECHANISM FOR GUNS.

SPECIFICATION forming part of Letters Patent No. 393,842, dated December 4, 1888.

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*To all whom it may concern:*

Be it known that I, PAUL MAUSER, of Oberndorf-on-the-Neckar, in the Kingdom of Württemberg, Empire of Germany, have invented certain new and useful Improvements in the Locking Mechanism of Magazine Fire-Arms, of which the following is a specification.

The invention relates to that class of magazine-guns known under the name "Mauser," which are closed by a cylindrical breech-piece, and in which the cartridge-magazine is situated beneath and along the barrels.

The construction of different parts of the gun, except in regard to the present new invention, is covered by the United States Patents Nos. 270,599 and 289,113.

The object of this invention is to provide improved means for taking up the recoil and for securing the breech-chamber in its axial position when the arm is fired.

In the accompanying drawings, forming a part of this specification, the same letters of reference indicate corresponding parts.

Figure 1 is an axial and horizontal section of the lock-case *c*. Figs. 2 and 3 are vertical cross-sections in the line A B of Fig. 1, the bolt *ch* being in the first instance in the vertical position and in the next instance in a horizontal or closed one. Fig. 4 is an end view of the case *c*. Fig. 5 is a side view of the bolt *ch*, showing the recoil-shoulder *zw*.

To enable the bolt *ch* to better take up the recoil of the exploding cartridge and to keep it more correctly in its axial position than it has been possible by laying the guide-bar *ch*<sup>2</sup> in closing the breech into the recess of the case *c* and pressing the back of the guide-bar *ch*<sup>2</sup> against the recoil-face *sf* of the recess of the heretofore-constructed Mauser magazine-gun, a second recoil take-up is made use of. Within the case the difficulty was to find a place inside of the case *c* where the necessary arrangements could be made, as the case *c* is already occupied in its front portion by the opening for the carrier *b*, and the recesses for the movements in the guide-bar *ch*<sup>2</sup> in the back portion by the groove *ns* for the nose of the small lock, (the latter is not shown in the drawings), and the recess for the sliding block of the repeating mechanism, and in its whole

length by the groove *l'* for the extractor *o* or the expeller *j*, as the case may be, and by the opening for the reciprocating movement of the guide-bar *ch*<sup>2</sup>. The guide-bar *ch*<sup>2</sup> has a handle, as shown. The metal of the case *c* remaining between the groove *l'* and the groove *ns*, I use to constitute, in combination with a shoulder, *zw*, provided upon the bolt *ch* at its back end, a second recoil take-up. For this purpose there is milled inside of the case *c* a longitudinal groove, *zw'*, which allows the bolt *ch*, with its shoulder *zw*, to be shoved completely into the case *c*, Fig. 2. Further inward in the metal of the case *c* is milled an annular groove, *zw*<sup>2</sup>, which registers with *zw'*, and is in such position that the bolt *ch* can be thrown over to the right, Fig. 4, into the recess of the case *c*, when the shoulder *zw* will slide through the groove *zw*<sup>2</sup> and in front of the metal left standing between the grooves *ns* and *l'*, forming with this abutment here a second recoil take-up. Thus I produce a recoil take-up in the interior of the case besides the take-up *ns* on the side of the case formed at the end of the slot.

As the two recoil take-ups form in radial direction an obtuse angle with each other—that is to say, are or about diametrically opposite sides of the case *c*—the axial position of the bolt *ch* is maintained thereby in the moment of the explosion of the cartridge very effectually, so that the accuracy of a gun provided with this improvement is much greater than that of the same gun without it.

I know that recoil take-ups of different constructions are known and used on other guns than those called "Mauser;" but, as far as I know, a second recoil take-up of any construction was never used on Mauser guns, nor was the precise identical construction described above used or known at all.

I therefore claim as my invention—

1. In a gun, the case *c*, having the internal parallel longitudinal grooves *l'* and *ns*, leaving between them a metal projection, the longitudinal groove *zw*, and the transverse groove *zw*<sup>2</sup>, registering with the groove *zw'*, in combination with the bolt *ch*, having the shoulder *zw*, that passes through the grooves *zw'* and *zw*<sup>2</sup> and in line with the said metal projec-

tion, substantially as shown and described, and for the purposes set forth.

2. In a gun, the combination of the case *c*, having the parallel grooves *l'* and *ns*, forming  
5 between them a metal projection, longitudinal groove *zw'*, transverse groove *zw<sup>2</sup>*, and shoulder *s f*, with the bolt *ch*, having shoulder *zw*, that comes in line with said metal projection, and guide-bar *ch<sup>2</sup>*, that comes in line

with the shoulder *s f*, all arranged for operation substantially as herein shown and described, and for the purpose set forth.

This specification signed by me this 24th day of March, 1887.

PAUL MAUSER.

Witnesses:

CARL T. BURCHARDT,  
KARL JANECKE.