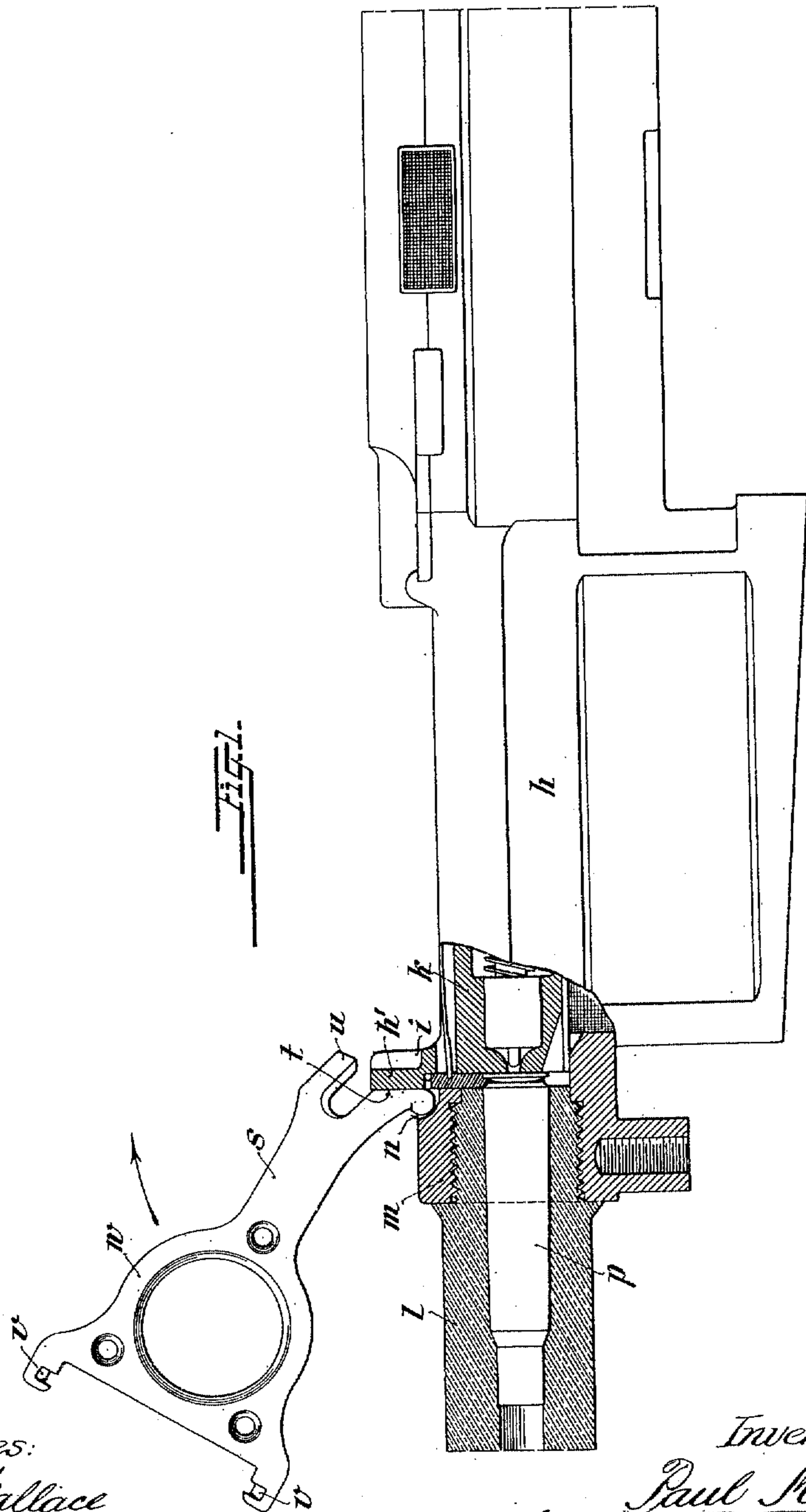


P. MAUSER.
TOOL FOR AUTOMATIC FIREARMS.
APPLICATION FILED AUG. 20, 1910.

985,190.

Patented Feb. 28, 1911.

3 SHEETS—SHEET 1.



Witnesses:
J. F. Wallace
William F. Martinez

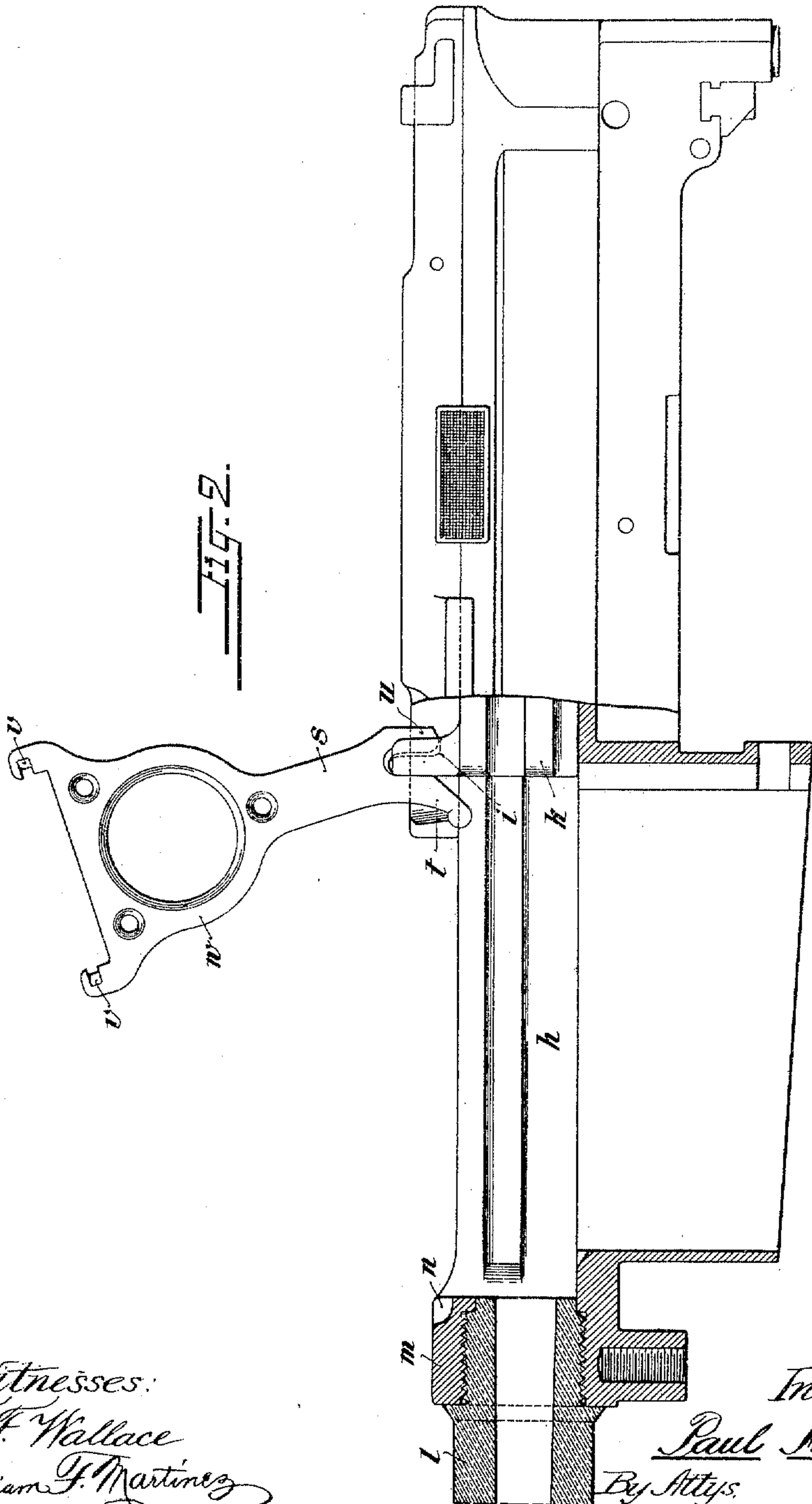
Inventor:
Paul Mauser,
By Atty's: Frazer, Turk & Myers

P. MAUSER.
TOOL FOR AUTOMATIC FIREARMS.
APPLICATION FILED AUG. 29, 1910.

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Patented Feb. 28, 1911.

3 SHEETS—SHEET 2.



Witnesses:
J. F. Wallace
William F. Martinez

Inventor:
Paul Mauser,
By Attys.
Flower & McKim

UNITED STATES PATENT OFFICE.

PAUL MAUSER, OF OBERNDORF-ON-THE-NECKAR, GERMANY.

TOOL FOR AUTOMATIC FIREARMS.

985,190.

Specification of Letters Patent.

Patented Feb. 28, 1911.

Application filed August 29, 1910. Serial No. 579,406.

To all whom it may concern:

Be it known that I, PAUL MAUSER, Royal Privy Councilor of Commerce, a subject of the King of Württemberg, residing at Oberndorf-on-the-Neckar, in the Kingdom of Württemberg, Germany, have invented certain new and useful Improvements in Tools for Automatic Firearms, of which the following is a full, clear, and exact description.

10 This invention relates to a device for positively loosening jammed cartridges in automatic loading fire arms. It is known that it sometimes occurs after firing that the discharged cartridge case is jammed in the cartridge chamber so that the cartridge can only be withdrawn when applying great force. Experience has shown that such jamming occurs even when the cartridge case has been made with great care, for among the best

20 cartridge cases, there are always some, which after firing bear more tightly against the sides of the cartridge chamber than the others.

In small arms of Mauser's system with

25 pivot bolt breech, the removal of such jammed cartridge case is comparatively simple as the loosening takes place on the chamber turning around the so-called curve and by an additional exertion on the part

30 of the hand. This is more difficult in automatic loaders, because the opening of the fire arm is effected with a force which remains practically constant and therefore when the cartridge is tighter than usual, disturbances or hindrances occur with respect

35 to the function of the loading mechanism. It is therefore important in connection with automatic loading fire arms that a jammed cartridge case can be easily and quickly removed and this object is attained by the subject matter of the present invention, which relates to a device for positively loosening jammed cartridges in a very simple and effective manner.

45 A constructional form of this new device is shown in the accompanying drawing by way of example.

Figure 1 is a longitudinal elevation partly in section showing the position of the parts

50 with jammed cartridge and inserted lever; Fig. 2 shows the position of the parts with withdrawn breech bolt after the jammed cartridge has been loosened and ejected; Figs. 3 and 4 show the action when the breech bolt

55 and the lock with the striking pin are dislocated, the former figure representing the

empty sleeve and the latter representing the parts (bolt, minor-breech and firing pin) dislocated by means of the lever with tensioned spring; Fig. 5 shows the lever only. 60 Fig. 6 is a longitudinal section through the parts shown in Fig. 4.

The new device is shown applicable by way of example to an automatic loading fire arm of Mauser's system with a rectilinearly guided breech bolt k and inwardly and outwardly oscillating supporting levers or arms b adapted to support the said breech bolt at its rearward end in the locking position. 70

The device proper consists of a gripping lever s , which for the purpose of loosening the jammed cartridge case p is inserted in a recess n of the breech casing or receiver or in the barrel sleeve m for the reception of the barrel end l . For the purpose of exerting an effective pressure, the gripping lever is provided at its lower end t with a pressure surface inclined toward the upper gripping part, whereby the lever bears against the shoulder k' of the bolt k in such a manner that it is capable of acting after the manner of a knee-jointed lever. The action is such that when the lever is inserted and oscillated backward in the direction of the arrow (the part w being held) a strong lever pressure is exerted, which is strong enough to loosen a very firmly jammed cartridge case. After this loosening effect has taken place, the gripping lever may be used in the usual manner for the further withdrawal of the chamber. For the purpose of a better grip on the bolt during its withdrawal, there is formed on the lower part of the gripping lever behind the end with the pressure surface a second gripping member u which, when the cartridge is loosened, engages in a recess i of the breech bolt, as shown in Fig. 2, when the lever s is swung backward. The gripping lever s which is thus adapted for loosening the cartridge and withdrawing the breech bolt can however also be used for another purpose. In fire arms of the system shown, the breech bolt and minor-breech together with the firing pin may be lifted upwardly out of the receiver when the spring f is compressed provided that the parts are properly held together against the pressure of the spring. Now the gripping lever s is so formed in its upper part that it may serve as a tool for holding these parts together and also for withdrawing them. 105 110

For this purpose, it is recessed at *w* and, at the ends of the handle, hooks or noses *v* are formed, which, as shown in Fig. 4, may engage with corresponding recesses *o* and *p* of the bolt *h* and the minor-breech *q* respectively. The engagement of the parts is insured by the pressure of the tensioned spring *f* so that by this pressure the parts are held on the tool, whereby they can be readily lifted out of the lock sleeve.

What I claim as my invention and desire to secure by Letters Patent is:—

1. A tool for use with automatic fire-arms, comprising a lever having a bifurcated end, one of the bifurcations of said end being blunt, contracted at its end, and provided with an inclined face, and adapted to be inserted between the breech-bolt and a fixed part of the barrel to exert a pressure on said breech-bolt to withdraw jammed cartridges or shells, the recess between said bifurcations being adapted to fit over and interlock with a projecting part of the breech bolt as the lever is turned in loosening a cartridge.

2. A tool for use with automatic fire-arms, comprising a lever having a bifurcated end, one of the bifurcations of said end being blunt; prolonged, contracted at its end and provided with an inclined face, and adapted to be inserted between the breech bolt and a fixed part of the barrel to exert a pressure on said breech bolt to withdraw jammed cartridges or shells, the recess between said bifurcations being adapted to fit over and interlock with a projecting part of the breech bolt as the lever is turned in loosening a cartridge.

3. A tool for use with automatic fire-arms, comprising a lever having a broadened end having fixed spaced projections for engag-

ing and coupling parts of the breech bolt and minor-breech together, for the purpose of withdrawing the said parts from the receiver, and having a blunt, contracted end, said end having an inclined face thereon and adapted to be inserted between the breech bolt and a fixed part of the barrel to exert a pressure on said breech bolt to withdraw jammed cartridges or shells.

4. A tool for use with automatic fire-arms, comprising a lever having a broadened end having spaced projections for engaging and coupling parts of the breech bolt and minor-breech together for the purpose of withdrawing the said parts from the receiver, and having a bifurcated end, one of the bifurcations of said end being blunt, contracted at its end and provided with an inclined face, and adapted to be inserted between the breech bolt and a fixed part of the barrel to exert a pressure on said breech bolt to withdraw jammed cartridges or shells.

5. A device for loosening jammed cartridges in self-loading firearms, comprising a handle (*S*) having an end (*t*), with a cam surface, for insertion between a fixed part of a gun structure and a breech bolt, and a recessed part *u* in rear of said part (*t*) adapted to come into interlocking engagement with a projection on the breech bolt as the handle is turned in loosening a cartridge.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

PAUL MAUSER.

Witnesses:

ERNEST ENSENMANN,
FRIDO KLAIBER.