

The  
"Parabellum"

Automatic Pistol

its Construction  
its Manipulation and its Use



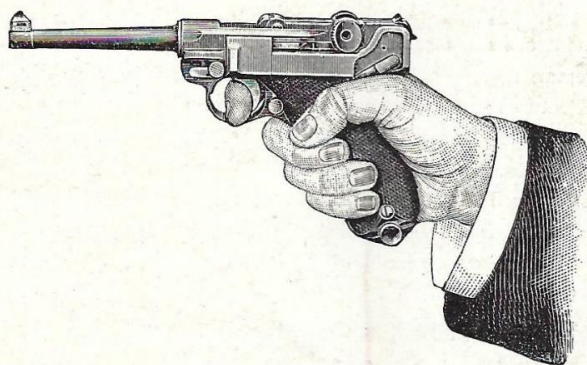
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THE "PARABELLUM"  
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ITS CONSTRUCTION,  
ITS MANIPULATION AND ITS USE

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WITH 12 ILLUSTRATIONS AND 5 TABLES

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BERLIN 1902

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## Important Introductory Remarks.

The "Parabellum" Automatic Pistol answers in every respect the requirements of an up-to-date hand-weapon.

The marksman can, however, appreciate and fully avail himself of its valuable qualities only, when **thoroughly acquainted** with all the details, the manipulation and the effective use thereof.

It is therefore indispensable to the marksman, **before using the weapon** to master the description given in this book together with the instructions for handling it. This done, he will feel more confident in possessing a hand-weapon of unsurpassed efficiency which, in case of need, will stand him in good stead in attack as well as in defence.





## General Remarks.

Selfloading or automatic fire-arms are repeaters in which the recoil pressure of the powder gases performs, in firing, all the functions of reloading, as long as there is a cartridge in the magazine; so that the marksman has no mechanical operations to perform but aiming, firing and refilling the magazine.

According to the energy utilised for firing, viz: the tension of the powder gases and the recoil — these arms are divided into two distinct classes, each with either moveable or fixed barrel.

The principal difference between the two classes is the manner in which the breech opens, viz: —

- 1) Through a direct utilisation of the tension of the powder gases whilst the projectile advances in the barrel;
- 2) Through recoil after the projectile has left the barrel.

It is perfectly clear that the first type is not fit for serious purposes. It is of an inferior ballistic efficiency, due partly to the danger arising if powerful charges are used, and partly to the unavoidable fluctuation in the strength of the escaping gases; the effect of these is moreover, even to a greater extent than in the case of revolvers, that the mechanism fouls considerably, corrodes, and consequently is soon rendered useless. It must also be taken into consideration that for this type the ammunition must be most accurate, with hardly any allowances, and not be subject to any changes through being stored, which often

takes place with smokeless powder; otherwise the weapon does not work satisfactorily.

The arrangements of the second type, on the other hand, offer the same advantages as the solid mechanisms of the non-automatic breech loaders.

## The “Parabellum” Automatic Pistol

is of the latter type, i. e., it belongs to the recoil firearms with lock fixed whilst the projectile passes through the barrel. In this way no gases can escape; they maintain a uniform full effect upon the projectile, — a condition which alone assures that absolute reliable efficiency which for all purposes is essential, but indispensable in warfare.

The excellence of this weapon is evident from the fact that, as a result of its superiority over several other types of automatic pistols in the course of three years' comparative trials, it has been adopted by the Swiss Government as the Service Pistol.



## Principal Features and Advantages of the "Parabellum" Automatic Pistol.

**T**he Breech Mechanism, — the most important feature of a selfloader — corresponds in principle with that of the worldfamous Maxim gun.

Its peculiarly constructed toggle-joint lever mechanism provides an absolutely secure safety lock, the prime necessity for a fire arm. It permits great allowances in the powder charges, and is set in motion by a comparatively small energy as against other systems which are hooked by flat arrangements and, in consequence of the high specific pressure, are subjected to considerable friction and therefore frequently get out of order.

Like all modern weapons this pistol is provided with a non-protruding hammer.

It is a well known fact that the hammer which cocks the weapon from outside by means of the thumb, as is the case with revolvers and sporting rifles, is the main cause of accidents through being caught, etc. With automatic arms this antiquated arrangement of the protruding hammer is still more dangerous because if in cocking or uncocking, the hammer, as often has occurred, is by mistake set free and fires the cartridge, the breech is quickly forced back and seriously injures at least the thumb from which the hammer has escaped.

This proves that, especially with automatic fire arms, the firing parts of the breech must be arranged in such a manner that only the trigger sets them in motion. On this principle the Parabellum is constructed, for this pistol cannot possibly go off unless it is

held in the hand of the marksman and the trigger is purposely pulled.

In connection with the breech mechanism stands the **Safety-Sear** which is so arranged that firstly it blocks automatically whenever the weapon is not pressed by hand, and also, like all other safety arrangements, can be fixed or brought out of contact by a separate action.

The circumstance that this pistol when not gripped by hand remains by its own action absolutely at safety, whether it dangles from a belt, is carried in a pocket or falls upon the ground, etc., is of inestimable value for the safety of the man who carries it and of all round him, whereas a hand weapon without automatic safety is, if carried about, continually a source of danger, should the bearer fall or knock against anything without having previously fixed the safety-sear which does not act unless actually set every time.

And surely an automatic safety is logically necessary for selfloading weapons, considering that recoil arms, to answer their purpose, should always be ready for action; this does not imply only that the weapon should be merely ready for firing a second shot directly after the first shot has been discharged, but principally that the marksman should be able to fire the first shot at the shortest possible notice. This is out of the question unless the handarm is perfectly safe when carried about in pocket or belt, yet on an emergency is ready the moment it is laid hold of. For if first it has to be cocked and the safety-sear to be arranged — actions, which in the confusion are generally forgotten or wrongly performed — the weapon is rendered useless just when the danger is greatest.

Of course in presence of the enemy and on all



occasions of suspected danger the pistol can and should be carried with the safety catch free, because, when taken up, it must be ready for action whilst when not carried in hand it is automatically fully secure.

Its loading arrangement gives a further advantage, to this weapon.

The use of closed fixed frames have the following advantages over other cartridge carriers, viz: — in case of danger the attention is not taken off the adversary, the pistol can be loaded whilst on foot or on horseback, with stiff or gloved hands and in every position, leaving alone the fact that when the loose magazine is introduced and withdrawn from beneath the weapon the hand is fully secure from being jammed or otherwise hurt by the mechanism.

## The Caliber of the "Parabellum" Automatic Pistol.

As regards the caliber selected, the automatic action of the pistol does not in any way depend on the size of the caliber but on the total energy which the bullet develops at firing and on the amount of recoil thus obtained. This energy may vary to a considerable extent, but its minimum should be sufficient to disable the enemy, that is, to render further fighting impossible on the part of the opposing soldier who is in full service uniform, protected by all sorts of equipments such as belts, cartridge pouch, buckles, metal buttons, mantle breastplate, etc., and perhaps under an additional cover of planks or brushwood.

This effect can only be advantageously produced with small calibre by selecting the two factors forming this energy, viz: size and velocity, in such a manner that both the energy acting upon a unit of the transverse section, and the velocity of the projectile, are as high as possible.

To form an idea of the total effect produced by the bullet upon the body of man or animal, a specially prepared plastic clay is usually fired at, because this substance is, like water, not compressible, and, like flesh, allows its molecules to be dislocated by a passing bullet, these molecules in their turn impinge upon their surroundings with greater or less force according to the velocity of the bullet. Clay also retains unaltered these dislocations and demonstrates thereby the effect of expansion produced by bullets of high velocity.



The figures from 1 to 5 are illustrations of results obtained by firing at clay during comparative tests of the energy of bullets from: —

1. the Russian Army Revolver, Smith & Wesson, cal. 10,6 mm and
2. the "Parabellum" Automatic Pistol, cal. 7,65 mm.

Repeated tests confirm the correctness of these illustrations.

The blocks of clay used at these tests were 75 cm long, 30 cm high and 30 cm wide. They were fired upon from a distance of 10 metres and then cut open to show the effect produced by the bullet in its course.

- Fig. 1. shows the result obtained with a normal charge from the Smith & Wesson revolver;
- Fig. 2. shows the result obtained with a normal charge from the "Parabellum" pistol;
- Fig. 3. shows the result obtained from a "Parabellum" pistol with a charge reduced by 10%;
- Fig. 4. shows the result obtained with expansive bullet from the Smith & Wesson revolver;
- Fig. 5. shows the result obtained with expansive bullet from the "Parabellum" pistol.

Hence it is seen that in every case the Parabellum pistol proved of more expansive effect and of greater shock than the Smith & Wesson revolver. This superiority of the pistol is entirely due to the greater velocity, and to the greater energy upon each unit of the transverse section. The former amounts with normal charge to:  $V^{10} = 350$  m, as against  $V^{10} = 203$  m, with the revolver; the weights of the bullets are respectively 6 g and 16,5 g resulting in 37,4 metre kilo and 34,6 metre kilo total energies, and consequently 0,813 mk and 0,392 mk respective energy per square mm.

This higher final velocity and higher relative energy of the Parabellum bullet was no doubt the reason why, as is the case with smaller velocities, the parts first hit were not simply pushed aside by the conical point of the projectile but torn asunder so quickly that they themselves flew about into small fragments and took their immediate surroundings with them. It is clear that the higher the velocities the greater is the expansive result, and that the bullet will have a more spreading than penetrating effect in the body.

Though the absolute shot energy of the pistol is not much greater than that of the revolver, a look at the illustrations proves the larger expanding effect more than makes up for the smaller external wound.

There is so much advantage in a bullet of greater velocity and higher relative energy that, as fig. 3 shows, even with a smaller charge and a velocity thereby reduced to 300 m, whereat the absolute energy drops to 27,5 mk as against 34,6 of the Smith & Wesson revolver, — that even then the spreading effect of the bullet appears greatly superior.

The reason is that also in this case the pistol bullet surpassed the revolver bullet considerably in relative energy (0,580:0,392 mkg per square mm) and also in velocity (300:203 m).

The high velocity combined with highest possible pressure per unit of transverse section, which is of preponderating importance with a hand weapon can only be obtained by the use of the smaller calibers; for with larger calibers not only weight of weapon and ammunition would have to be increased but the recoil would also produce too great a shock.

It is a known fact that the so-called lighter wounds,



from small caliber bullets, result only from long distance shots, that is, with a decidedly reduced velocity, whilst at short range their effect exceeds that of the larger caliber. The pistol is mainly used at short range, and, for the reason just mentioned, the small caliber pistol shows a preponderating effect. Eminent physicians admit that the so-called "stopping effect" is more noticeable with shots of small caliber, because the arteries can never evade bullets of higher velocity in the way they do bullets of larger caliber but of inferior velocity. Indeed, frequently men have been known to carry several of the latter in their bodies without being aware of it.



## Constituent parts.

The parts of the pistol are grouped in two divisions: like the Maxim weapons, on which this is based; one forming **the part which moves** at firing, consisting of barrel, mechanism and breech (fig. E table I) the other one, with the case containing all the other apparatus which produces the automatic action, representing the **fixed part**.

It belongs to:

a) **the moveable part:**

1. Barrel with foresight (1<sup>I</sup>) and bifurcated receiver (1<sup>II</sup>).
2. Breech-block, in connection with
- (3.) forward and
- (4.) rear link of toggle-joint, with coupling link for recoil spring (4<sup>I</sup>) and pin (4<sup>II</sup>),
- (5.) connecting pin between the breech-block and the forward link,
- (6.) connecting pin between the forward and rearward link.
7. Hinge pin between the rear-link and the bifurcated receiver.
- (8.) Retaining catch on rear link, with
- (9.) connecting pin and
- (10.) spring.
12. Firing pin.
13. Firing pin spring.
14. Breech-block end piece.
15. Cartridge extractor.
16. Cartridge ejector.

18. Trigger-bar with spring-stud (18<sup>I</sup>), spring (18<sup>II</sup>) and rivet (18<sup>III</sup>).
19. Trigger-bar spring.

b) the fixed part:

11. Recoil spring (double) with rivet (11<sup>I</sup>).
17. Stock with catch (17<sup>I</sup>), sling swivel (17<sup>II</sup>) and breech-block catch-link rivet (17<sup>III</sup>).
20. Trigger with spring (20<sup>I</sup>).
21. Trigger plate.
- (22.) Trigger lever.
- (23.) Trigger lever pin.
24. Locking-bolt.
- (25.) Locking-bolt spring.
26. Breech-block catch-link with spring (26<sup>I</sup>).
27. Cartridge holder catch.
28. Cartridge holder catch spring.
29. Automatic safety sear.
30. Automatic safety sear spring.
31. Safety-catch.
32. Pin for same.
33. Butt side-pieces, of wood.
34. Screws for same.

Furthermore:

The Cartridge holder consisting of the following parts (and which may be taken to pieces)

35. {
  - a. Metal-plate frame.
  - b. Cartridge-feeder spring.
  - c. Cartridge-feeder or carrier.
  - d. Cartridge-feeder pressure-knob.
  - e. Cartridge-feeder guide-knob.
  - f. Bottom piece.
  - g. Connecting pin.



### Accessories.

- I. Screw-driver.
- II. Cleaning rod.
- III. Gun-pick.

**N. B.** The parts, the consecutive numbers of which are bracketed, and those parts which are bracketed together as well as those with small numbers attached (e. g. 1<sup>I</sup>, 1<sup>II</sup>, 4<sup>I</sup>, 4<sup>II</sup> etc.) should never be detached unless absolute necessity.



## Manipulation and Action.

1. Charging the cartridge holder. Grasp the cartridge holder with the left hand, the aperture upwards and its point to the right, place the thumb on the chequered guide-knob (35e) and pull it down to an extent equalling the diameter of a cartridge; simultaneously (as shown in the illustration) push with the right hand a cartridge from the front backwards underneath

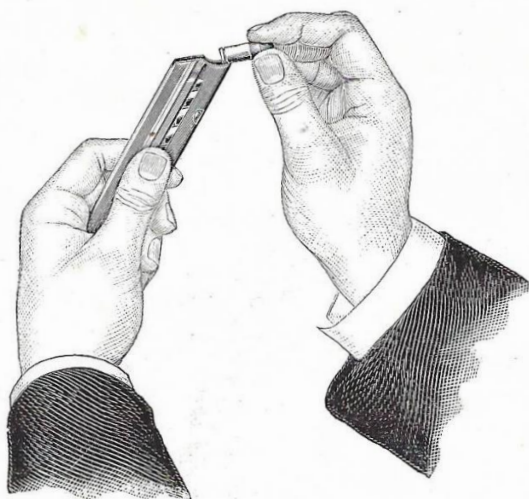


Fig. 1.

the overlapping lips of the cartridge holder, **without forcing the latter asunder**, and repeat this operation until the cartridge holder is filled; but in doing this, always draw down the guide knob **step by step** so as to allow each time only sufficient space for one cartridge. In this way the strong spring will not needlessly recoil and the correct position of each cartridge is ensured.

The cartridge holder is emptied by removing the cartridges one by one, each time slightly drawing back the guide knob and releasing it again. At this operation, as at all others, the guide knob must not be allowed to spring up freely.

2. The insertion of the cartridge holder into the pistol. The right hand holds the pistol firmly, as in firing, whilst the left hand pushes the cartridge holder, with the points of the cartridges turned towards the muzzle, upwards into the pistol until the catch (27) snaps into its seat (u); this is easily done by a slight tap with the left hand upon the bottom of the cartridge holder.

To withdraw the cartridge holder, the pistol remains in the right hand, and is by the same hand



Fig. 2.

turned a little to the left so that, as shown in illustration 2, the thumb of the right hand can press the



catch (27); simultaneously the cartridge holder is either withdrawn with the left hand by the bottom piece, or, in case of urgency, simply allowed to drop out so that the left hand can insert another one immediately.

3. **Loading the barrel.** Hold the pistol firmly by grasping the butt with the **right hand** (whilst doing this, as in firing, the safety sear (29) must be pressed in) the first finger stretched out on the right side of

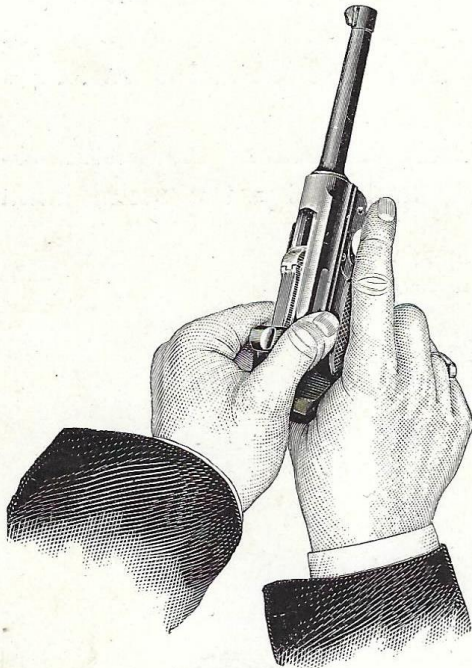


Fig. 3.

the trigger guard, the barrel pointed horizontally forward, the breechblock toward the left, grasp firmly (see fig. 3) the two cheeks of the toggle joint with the **thumb** and the first finger of the left hand (not merely hooking the fingers into them) **jerk back in a straight line** (not in an upward direction) until the face of the breechblock stands **behind** the uppermost cartridge in the magazine; then let it spring forward ab-

ruptly. (If the links of the toggle joint are not completely extended thereby, this will be effected by a gentle pressure of the hand.)

Now the top cartridge is transferred from the magazine into the barrel, the firing pin is cocked and the weapon is ready for firing (fig. J).

Single loading, without using a cartridge holder, is performed, grasping the pistol with the right hand in the manner described before. The right hand grasps the pistol, the left draws the toggle joint completely to the rear, the first finger holds the left cheek of the toggle joint tightly, the thumb leans backward against the sling swivel, the middle finger against the edge of the trigger plate (see fig. 4), thereby keeping the breech

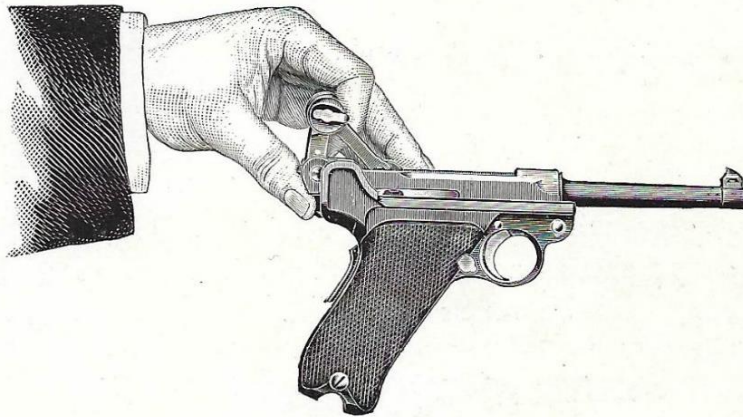


Fig. 4.

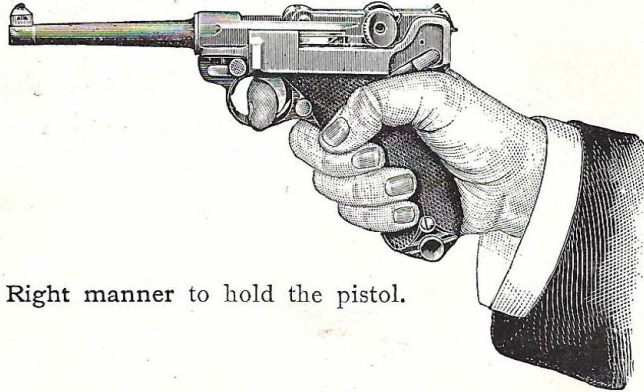
open, whilst the right hand inserts the cartridge into the barrel, which is easily done with a little practice, and closing the breech by straightening out the toggle joint.

If a full cartridge holder is inserted, whilst the barrel is loaded, nine shots can be fired without interruption.

**Unloading.** Withdraw the cartridge holder, if such be in the weapon, draw the breech carefully back to prevent the loaded cartridge from falling to the ground but let it drop through the handle into the open palm.



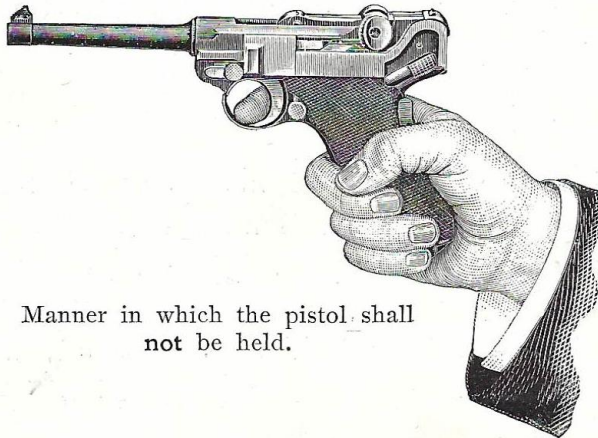
4. Firing. The position of the pistol as shown in fig. 5 guarantees a splendid percentage of hits, because the hand is almost in exact prolongation of the axis



Right manner to hold the pistol.

Fig. 5.

of the piece; if held loosely or too low down as shown in fig. 6 the resistance to recoil is insufficient and the efficiency will be much impaired.



Manner in which the pistol shall  
not be held.

Fig. 6.

Therefore hold the pistol firmly pointed at the target so that the automatic safety sear (29) projecting from the rear of the stock is pressed in. To fire the pistol, pull the trigger (20) and **release it again** as long



as the cartridges last. When firing slowly it is better each time to take aim.

The pressure from the first and from the middle finger upon the trigger is transferred upon the front portion of the trigger bar — the spring stud (18<sup>l</sup>) — by means of the lever attached to the plate. This pressure acts upon the lower arm of the trigger lever and by a still further pressure being put upon the trigger the firing pin retaining catch (n<sup>l</sup>) becomes detached from the trigger bar seat (n<sup>u</sup>). The firing pin, propelled by its spring, fires the cartridge.

#### 5. Automatic action of the mechanism in firing.

On firing the pistol the moveable part (table I, fig. E) recoils in the grooves of the fixed stock.

The joint remains straight, and the breech perfectly closed whilst the bullet runs up the barrel.

During the continued recoil the retaining catch (8) in the right hand link cheek of the toggle lever recedes behind the catch (17<sup>l</sup>); the toggle joint links are then free to rise.

The link cheeks (c<sup>x</sup>) meet the corresponding curves (C<sup>x</sup>) of the side plates at the stock. The connecting pin between the forward and rear link (6) rises above the connecting pin between the breechblock and the hinge pin between the rear link and the bifurcated receiver (5 & 7). Whilst the barrel with the bifurcated receiver (I<sup>u</sup>) returns only as far as the catch (r) in the stock, the energy during the recoil raises the toggle joint until the recoil spring (11) is completely drawn out and the breech block (2) reaches its rearmost position (Table II fig. L). The spent cartridge, drawn out of the barrel by the extractor (15), strikes against the ejector (16) (which intercepts it), and is thrown out; the firing pin (12) is by means of the cocking piece (n) of the

forward link (3) of the toggle joint drawn back at the retaining catch ( $n^I$ ) and the firing pin spring is compressed.

The recoil spring (II), cocked but not kept back in cocked position, propels the breech block by means of the coupling link ( $4^I$ ) which hangs on the rear link (4); this movement is transferred upon barrel and bifurcated receiver which run forward till the catch (r) meets the locking bolt (24); the toggle joint straightens, the retaining catch (8) on the rear link engages with the catch on the stock ( $17^I$ ), and the breech mechanism becomes fixed. Simultaneously the top cartridge is lifted in front of the breech by the feeder spring ( $35^6$ ) and inserted from the magazine into the barrel, the firing pin retaining catch ( $n^I$ ) is caught by the trigger bar and the firing pin is cocked (Fig. H).

Again the breech is fixed. It is secured in this position by the middle pin (6) lying below the line connecting the outer pins (5 & 7) and the straightened joint being opposition to the gas pressure by means of cheeks ( $c^I$ ) of the rear link (4) against seats ( $c^{II}$ ) of the bifurcated receiver ( $I^{II}$ ) as well as against the hinge pin (7) (Fig. C & J).

After firing, the trigger must be immediately released by pushing the finger forward; so that the spring stud ( $18^I$ ) which during the preceding movement was leaning against the upper arm of the trigger lever (22) can again go forward and effect the next firing. **This is very important.**

The pistol is now automatically reloaded, locked, cocked and ready for firing. **Therefore, take care!**

After the last shot (i. e. when the cartridge holder is empty) the guide knob ( $35e$ ) acts upon the

breech block catch link (26), whose tooth presses into the retaining catch (c) of the breech; the breech remains open, the toggle joint erect and the line of sight obstructed (Fig. D, table I).

The recoil spring keeps the joint raised even after the removal of the cartridge holder and leaves the open breech resting on the catch link. This latter is pressed into its seat by its own spring (26<sup>l</sup>) as soon as the joint is withdrawn.

After the empty cartridge holder has been removed the breech is left open if it is to be reloaded.

After inserting a new (full) cartridge holder, draw the toggle joint cheek slightly back with your hand and let it spring forward; and the weapon will again be ready for firing.

The breech, if open after the cartridge holder has been emptied or after an empty one has been inserted cannot be closed until the magazine has been entirely or anyhow partly extracted.

The **Safety sear** works in the following manner: The safety lever (29) is in the handle so that through its spring (30) it automatically catches with the upper end (S) upwards over the trigger bar and moves its lower shoulder (S<sup>o</sup>) backward. The upper end (S) prevents a movement of the trigger bar (18) and holds it firmly so that neither the action of the trigger nor an accident can release the firing pin. As the trigger bar is fixed there is a stoppage of the movement of the barrel and therewith of every part because the upper safety end (S) blocks the way of parts which are moveable with the barrel. Only by firmly holding the handle and compressing the lower shoulder (S) against the



action of its spring the upper end (S) is disengaged and the moveable parts are free to act.

To throw the safety arrangement out of gear, so that a special operation is necessary to set it going, a safety catch (31) is provided. This catch is on the left side plate of the handle and can be turned round by the thumb of the hand which holds the pistol, just like the trigger of a revolver. The action of the safety catch is simply that the hook on the lower arm ( $S^{\text{II}}$ ) which goes inside falls according to its position either in front (Fig. A) or to the flange (Fig. C) of the catch ( $S^{\text{I}}$ ) of the safety lever (29) and thereby prevents or allows the movements of the lever.

It might be thought that this unusual shoulder ( $S^{\circ}$ ), protruding from the handle, would be irritating; but after very little practice the marksman will hardly notice it and fire much better than with other hand firearms, because he has used himself to grasp the pistol firmly for the sake of releasing the safety, and will always hold the pistol correctly.

Eventually the safety sear spring may be removed when first practising, in which case the sear does not work automatically, and the pistol like other systems, has to be made secure by means of the safety catch. (31).

## Cleaning the Pistol.

With this pistol as with all other weapons where smokeless powder is used, the greatest attention must be bestowed on the barrel; therefore, the barrel should be cleaned as soon as possible after the pistol has been used. If there is no time to do this at once, thoroughly then the bore should any how be well greased, for which purpose thick grease must always be ready in the grease box of the cleaning rod, and the final cleaning and removal of the grease should take place at the earliest opportunity. To this end insert an **empty** cartridge holder, open the breech, with the toggle joint raised, and draw a greasy rag or cotton waste repeatedly from the muzzle end through the barrel until all dirt is removed. To keep all rust out it must be cleaned once in a while from the rear. Any little dirt spots in the breech mechanism may be removed from the top. But if the weapon should have seen hard wear and fouling, or disarrangements appear in the mechanism, it should be taken to pieces, where necessary, cleaned, lubricated on all working surfaces (preferably with pure vaseline) and properly put together again.

The cartridge holder as well must be kept clean. The spring is compressed and greasy rags over the cleaning rod passed down the interior.

## Dismantling and Assembling.

a) for ordinary use.

### Dismantling.

1. *Separate the moveable part from the fixed portion.*

First take out the cartridge holder, pull back the breech as far as the cam (see Fig. 7. The thumb presses the shoulder of the safety sear, the first finger holds the left and the middle finger the right toggle joint

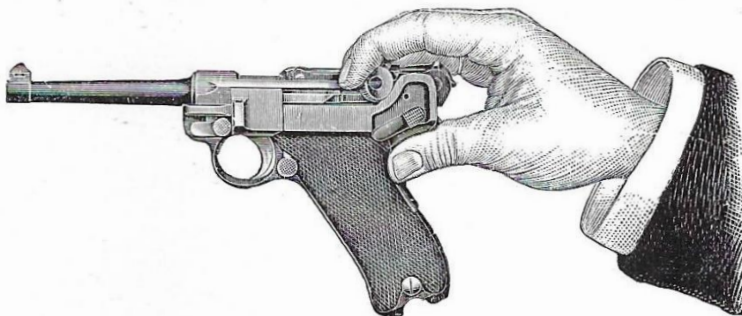


Fig. 7.

link cheek) and retain it there; then turn the locking bolt lever (24) downward with the thumb, let the recoiling portion slide forward so that the trigger plate (21) rises and can be lifted off, next push the barrel with the breech mechanism (i. e. the moveable part of the pistol) forward and remove it from the handle i. e. the fixed portion.

2. *Separate breech mechanism from bifurcated receiver.*

Withdraw the hinge pin (7) from right to left, after releasing the firing pin by a pressure upon the front part of the trigger bar (18), then lift the toggle joint cheeks and withdraw the breech block.



3. *Remove cartridge ejector from the bifurcated receiver.*

Barrel with bifurcated receiver is held in the left hand, the thumb nail lifts the rear end of the ejector just sufficiently to cause its round shoulder to leave its socket, and lodge against the edge, the first finger presses from the inside against the catch which projects into the bifurcated receiver (I<sup>II</sup>). The ejector jumps out to intercept it, place the thumb over it.

Another way of removing the ejector is by simultaneously raising with the thumb nail of the right hand the rear end and pressing the catch outward with the first finger of the left hand.

In no case force is to be used.

(This part is only removed to prevent any cotton waste from lodging between the parts when cleaning the barrel from the rear).

4. *Remove the firing pin from the breech.*

Hold the breech tightly (see Fig. 8) with the toggle

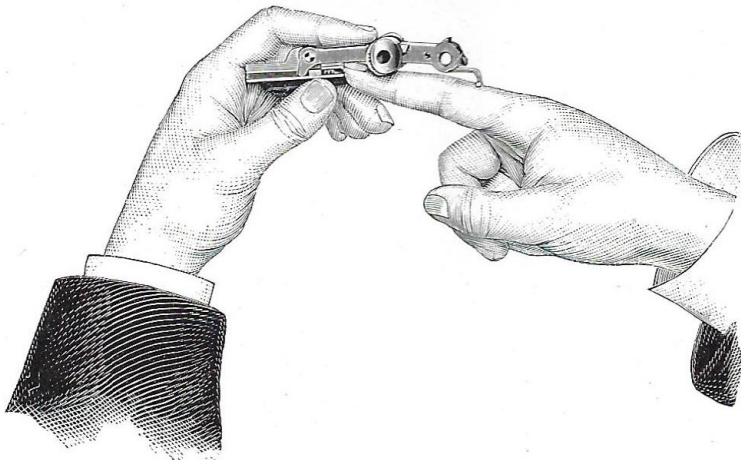


Fig. 8.

joint as straight as possible, use the first finger of the right hand (or a small screw driver) and press the

breech block end piece (14) firmly inward so as to compress the firing pin spring, turn quickly to the left, thus getting its shoulder out of the groove, and let the bottom pin, yielding to the pressure of the spring, slowly glide out. Remove firing pin and spring.

### Assembling.

This is effected in the reverse order of dismantling:

1. *Insert the firing pin into the breech block.*

First put firing pin and spring into position, then place the end piece with its shoulder in the slot in the breech block, whilst compressing the spring (the parts

to be held and moved as shown in fig. 8) turn quickly to the right until the shoulder or catch recedes through the transverse groove into the axial notch until the line stands **vertically**. It is very important to attend to this.

2. *Insert the ejector into the bifurcated receiver.*

Fit the part exactly over the corresponding openings of the receiver and press down slightly on the centre and rear shoulder. No force to be used.

3. *Connect breech block with bifurcated receiver.*

Turn the lower sides of the parts upwards towards your face (see fig. 9), lay

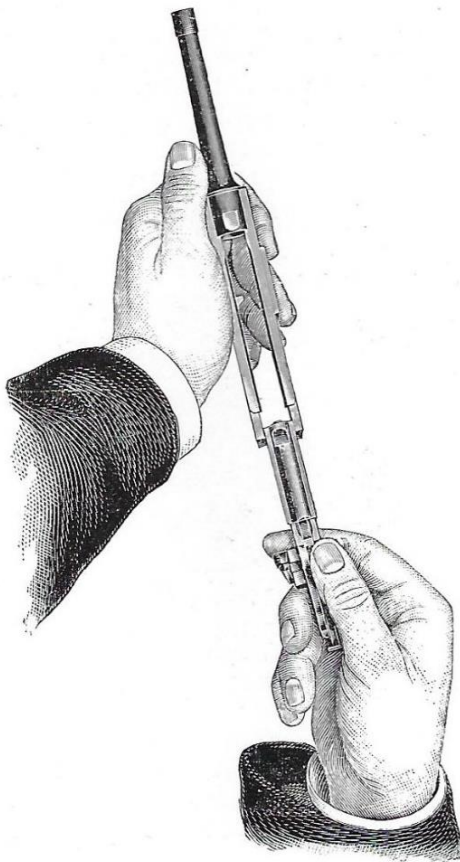


Fig. 9.

the guide fillets into the grooves carefully and whilst pressing down the front of the trigger bar (in order that the breech block with the firing pin point can be freely pushed forward) turn the whole lot round then insert the hinge pin (7) from the left, thus joining the parts (fig. E) which move in firing. To ensure proper position for fixing the hinge pin the surfaces ( $c^I$  et  $c^{II}$ ) behind the link cheeks must meet correctly.

*4. Join the moveable parts to the fixed portion.*

Hold de former i. e. the barrel with the breech mechanism in the left hand horizontally, the fore-sight downwards, the coupling link to the rear, the firing pin always uncocked. Slide the stock carefully with the right hand on to the bifurcated receiver (fig. 10). Turn

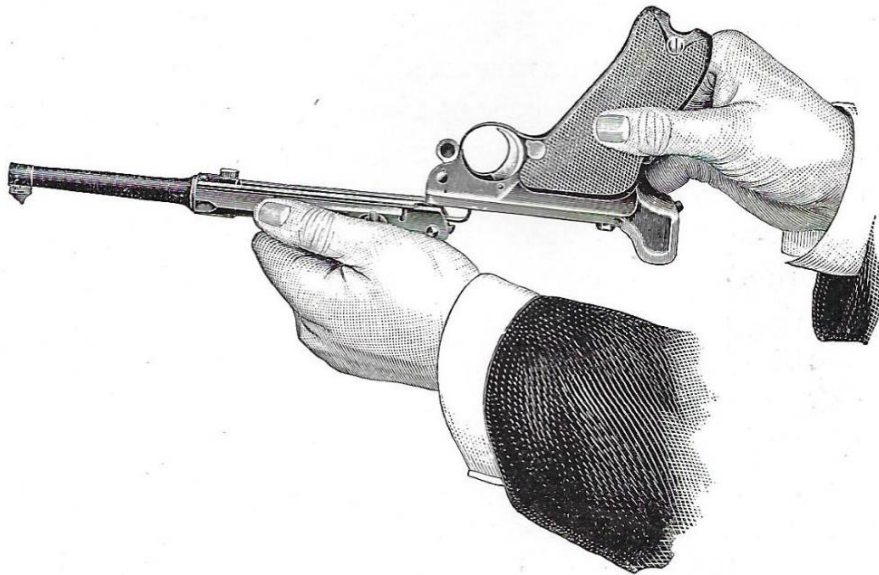


Fig. 10.

the whole (the handle passing the chest and downward to the left) then bring the barrel with the breech mechanism back again until the coupling link (see fig. 11)



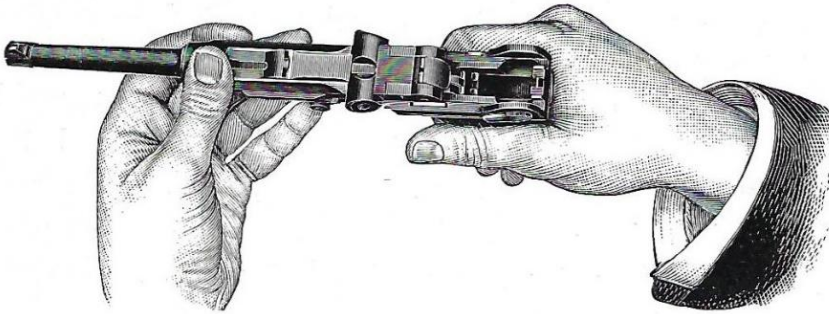


Fig. 11.

can fall into its place in front of the hooks of the recoil spring, with which the breech mechanism engages, when pressed back.

There is yet another way of joining the barrel and the breech mechanism to the stock which after some practice is performed more quickly. Whilst barrel and mechanism are held in the left hand, the lower side of the parts remains at first, with the coupling link pointing backward, turned towards the chest, then the stock, its lower opening also turned towards the chest, is pushed over the bifurcated receiver until the coupling link falls in front of the hooks of the recoil spring as in fig. 11. Then the whole is held vertically so that, immediately the breech mechanism is pushed in, the link engages with these hooks.

Whether the main parts are joined in the former or the latter way, the pistol is now held as shown in fig. 7, the automatic safety sear is pressed in, the breech mechanism is drawn back, till it reaches the curved surfaces. It is then held tightly in its position, the trigger plate inserted, with the rearward projecting narrow fillet beneath the slot in the casing and the small part pointing towards the locking bolt lever (24); this lever is then turned upward.

Now repeatedly draw back and release the toggle

joint i. e. open and close the breech over and over again to make sure that the recoil spring is properly caught and works well. **This has to be done every time the pistol has been assembled.**



## Further dismantling and assembling.

b) As far as it can be done without special tools.

**Trigger bar (18).** *To remove:* Slightly lift the trigger bar spring (19) by inserting the thumb nail beneath the upturned part and slide it straight forward. Before doing this, press in the front of the trigger bar so as to lift the spring. Turn the bifurcated receiver to the left and the bar will drop out. If necessary strike the pistol upon the palm of the hand.

*To assemble:* Insert the trigger bar in its place, the pin pointing forward; lay the spring into its groove and push straight in whilst slightly pressing down the centre.

**Extractor (15).** *To remove:* Hold the breech block in the left hand with the first finger over the spring; pass the screw driver held in the right hand under the claw of the extractor and lift it just enough to bring the supporting pin outside the breech block then press the extractor out toward the front.

*To insert:* Place it in its right position and push backward in a straight line, until the supporting pin snaps into its seat.

**Breech bolt catch link (26).** *To remove:* Whilst gently pressing with the first finger of the right or the thumb of the left hand against the adjacent side

of the casing lift it, but no more than it was originally inserted and push straight back.

*To insert it*, hold the adjusting piece with the thumb and first finger of the right hand so that the middle finger presses the spring from the top. Press the point of the spring down into the slanting notch in the handle and push the link in, in a forward direction whilst the hook rests underneath the pin. If wrongly inserted, turn the stock over and the link falls out.

**Trigger (20).** *To remove it*, compress the spiral spring by a slight counter pressure and lift out horizontally.

*To insert it* push in the spiral spring (with the wire always pointing backward, never sideways) holding it compressed against the slanting part of the casing.

**Locking bolt (24).** *To remove it* take hold of it by the lever, give it an upward pressure and pull out in a straight line, *to insert it*, lift the lever and press it in.

**Automatic safety sear.** *To remove it* unscrew and lift off the left side piece of the butt; press the automatic safety sear (29) against its spring, hold it in its position, lift out the lower end with the stud or catch and pull out the piece downward, without using force. *To insert it*, push it underneath the safety catch (31) upwards from the left to the right, lift up the stud and drop it into its seat. Whilst this is being done, care must be taken, that the shoulder or projection working the spring does not lodge between the spring and the partition in the stock, but stands behind the spring.

**Safety catch.** *To remove it* push out the pin (32) which holds the lever in the stock by means of a drift, in doing which the lower arm should be turned down-



wards. Then simply remove the catch. *To insert it*, place the part in its right position chequered button upwards, press the upper arm of the lever and insert completely.

Further dismantling especially of the rivetted parts is hardly ever necessary and should be left to a trained armourer.

The cartridge holder (35) should not be taken to pieces except in special cases. The pin, holding the lower part, is withdrawn, the spring taken out and the cartridge holder can be cleaned from underneath. The platform cannot be removed, being rivetted to the cartridge feeder guide knobs (e), and therefore inseparable from the metal plate frame.

## Tools and their use.

**T**he **Cleaning Rod** made of brass so as not to damage the bore, is used solely for cleaning this bore. Its handle forms a box with screwed lid for the grease (vaseline) to be used at the end of firing.

**The Screwdriver** is used for loosening or tightening the screws of the butt side pieces, the only screws in the weapon, and, if necessary, when removing or inserting the firing pin and the cartridge extractor; furthermore the handle part with the hole in it serves to fill quickly and easily the cartridge holder at continuous firing, being pressed down over the cartridge feeder guide knob so that the bend projects beneath on the right side and can be drawn off with the thumb when the cartridges are being inserted.

**The Drift** is used on the very rare occasions when the automatic safety gear spring and the safety catch or the catch pin are removed.



## Final Remarks.

The "Parabellum" Automatic Pistol has stood every test it has been subjected admirably.

The mechanism of one of these pistols acted, after firing 34,000 rounds as well as it did at the commencement.

Apart from the severe tests prescribed by the Authorities for every pistol, several official trials of continuous firing proved the absolute reliability of the weapon. In one instance 3,000 rounds were fired with a charge increased by 25%.

Experienced marksmen acknowledge this weapon to be the best modern target pistol, and they have noted that, with the use of reduced powder charges and round lead bullets weighings 3 grammes, it makes a very successful single loader at all ranges even at saloon practice. This is of great value to sportsmen indulging in all sorts of pistol firing.





## Dimensions and Efficiency.

### I. The Weapon.

Caliber . . . . .	7.65 mm.	.301 inch.
Depth of the 4 concentric rifling grooves . . . . .	0.125 „	.004 „
Width of same . . . . .	3. „	.117 „
Length of rifling (right hand twist)	250. „	9.84 „
Length of barrel . . . . .	122. „	4.80 „
Distance between sights . . . . .	215.3 „	8.46 „
Length of pistol (in centre line) .	237. „	9.31 „
Height of same . . . . .	135. „	5.30 „
		lb. oz.
Weight of same . . . . .	835 grs.	1. 13. 4
Weight of cartridge holder . . . .	56 „	1.96 oz.

### II. The Ammunition.

Weight of cartridges complete . .	10.5 „	.36 „
Weight of smokeless powder charge	0.33 „	.012 „
Weight of projectile (hard lead core with full or half envelope of steel plate, coppered and nickel plated) . . . . .	6. „	.21 „
Length of cartridge, complete . .	29.8 mm.	1.18 inch.

### III. Efficiency.

Muzzle velocity of projectile $V^{10} =$	350 m. = 382.8 yds. say 1150 ft.
Maximum range with an angle of elevation equal to about $27^{\circ} 30'$	1800 m. = 1967 yds.
Penetration of bullet (50 m from the muzzle)	
in pine . . . . .	160 mm. = 6.24 in.
in beech . . . . .	70 „ 2.73 „
in iron plate . . . . .	8 „ .31 „
Velocity of fire, mechanically, without aim; — new cartridge holder each time at hand . . . .	100 shot per minute.

