A. TÉPINS.

ELECTRIC FIREARM.

APPLICATION FILED JAN. 5, 1911.

1,076,530.

Patented Oct. 21, 1913.

2 SHEETS—SHEET 1.

Fig. 1.

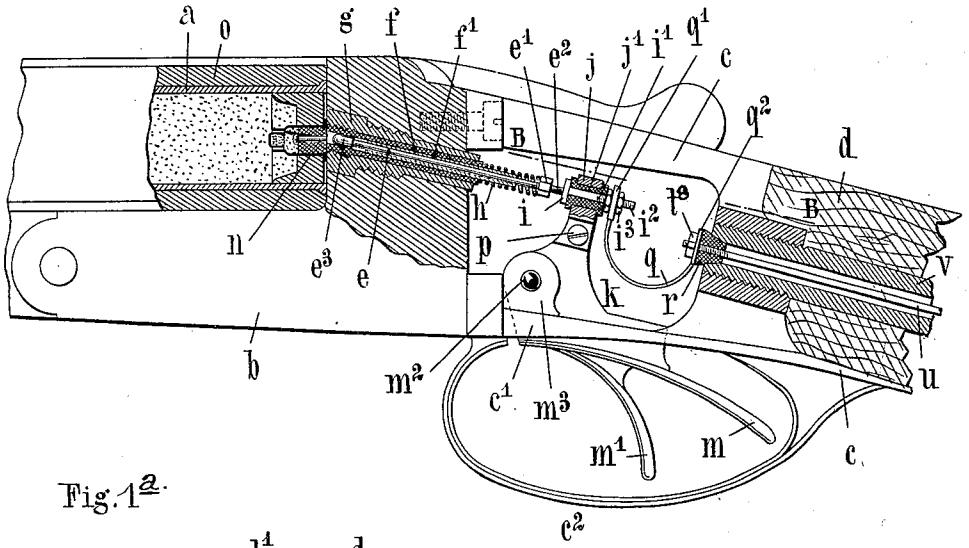
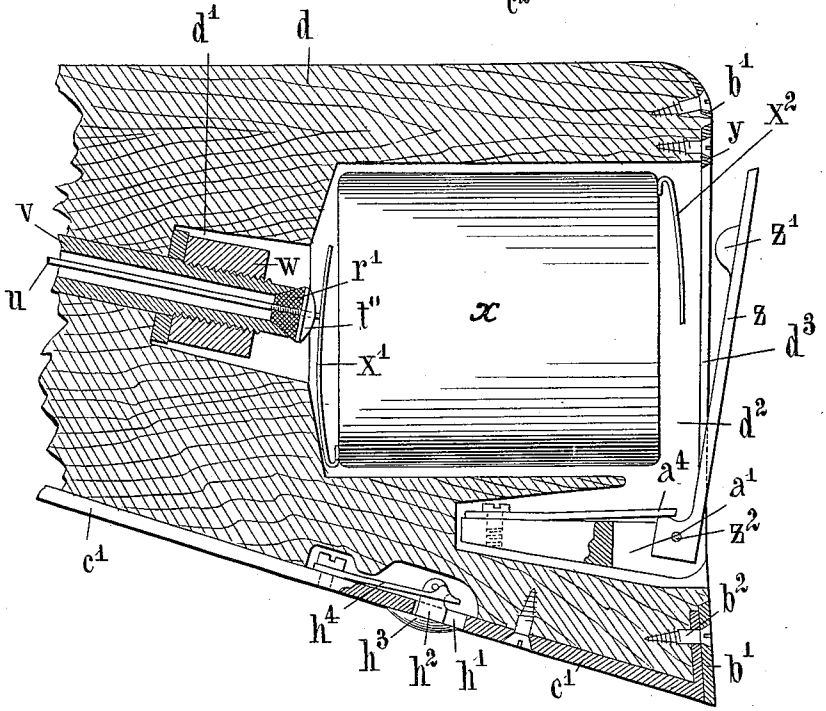


Fig. 1ª.



Witnesses
H. K. Boulter
A. C. Collins

Inventor
Alexandre Tépins
By Wm. E. Boulter,
Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

A. TÉPINS.

ELECTRIC FIREARM.

APPLICATION FILED JAN. 5, 1911.

1,076,530.

Patented Oct. 21, 1913.

2 SHEETS—SHEET 2.

Fig. 3

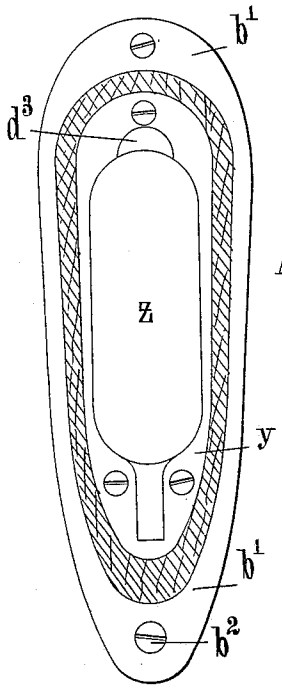


Fig. 2

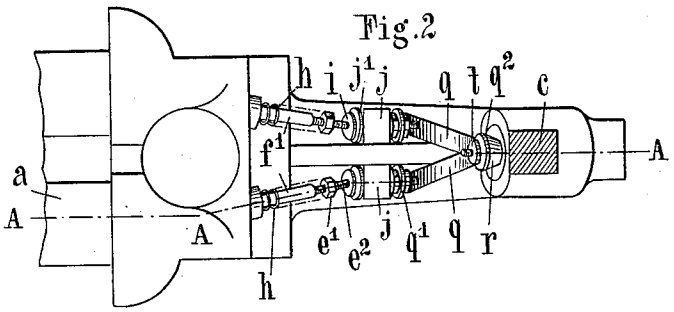


Fig. 4

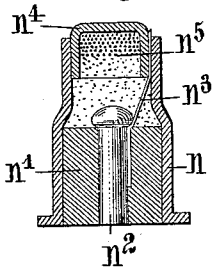
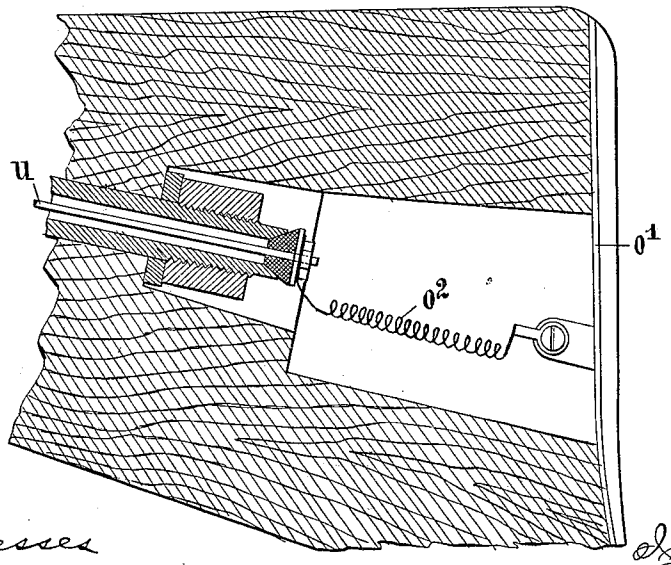




Fig. 6.

Fig. 5



Witnesses
H. K. Boulter
A. C. Collins.

Inventor
Alexandre Tépins
By Wm. C. Boulter
Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ALEXANDRE TÉPINS, OF PARIS, FRANCE.

ELECTRIC FIREARM.

1,076,530. Specification of Letters Patent. Patented Oct. 21, 1913.

Application filed January 5, 1911. Serial No. 600,936.

To all whom it may concern:

Be it known that I, ALEXANDRE TÉPINS, citizen of the Republic of France, residing at 8 Rue Montgallet, Paris, Seine, France, have invented certain new and useful Improvements in Electric Firearms, of which the following is a specification.

This invention consists in a gun which is discharged by electricity and comprises a battery or other source of electricity which is placed in the butt of the weapon or in the marksman's pocket, the feature which distinguishes this gun from those previously introduced being that the loaded gun cannot possibly be discharged accidentally either through a shock or from any other cause, as the firing of the special priming of the cartridge cannot be effected by operating the trigger except when the marksman presents the gun for the purpose of firing. This assurance is obtained by the construction of the weapon which comprises circuit closing devices which can only be effective, 1st, either by the contact of a flexible metallic part arranged on the marksman's clothing, in the hollow of the shoulder, this flexible metallic part forming an integral part of the clothing, or being detachable at will; 2nd, or by means of this flexible metallic part placed in the shoulder in combination with a glove likewise comprising metallic parts, connected through any suitable conductor with the metallic part in the shoulder; 3rd, in case the battery or other source of electricity be placed in one of the marksman's pockets, the metallic shoulder piece is connected through a conductor with one of the poles of this battery, while the metallic part of the glove is connected with the other pole.

With this object the gun that constitutes the present invention is provided with special contrivances which are about to be described.

Figure 1 is a sectional elevation of the gun on line A—A of Fig. 2, and Fig. 1^a is a sectional elevation of the butt end of the gun. Fig. 2 is a partial plan showing the hinge block with a part of the devices for discharging the gun, the upper portion of the body or principal part of the mechanism being removed. Fig. 3 is an end elevation of the butt showing the special arrangement of the heel plate. Fig. 4 is a vertical section of the primer. Fig. 5 a vertical section showing the arrangement of the butt when the source of electricity is placed in the marksman's pocket. Fig. 6 illustrates by dotted lines a marksman and in full lines the flexible metallic part secured in the shoulder portion of the marksman's clothing, the glove, and the metallic connections.

o in Fig. 1 is one of the two barrels of the gun; *b* is the hinge block, *c* the body of the mechanism, *d* the butt.

The device for discharging the gun comprises a contact rod *e* which is movable in an insulating sleeve *f* that is itself lodged in a sleeve *g* suitably screwed into the hinge block *b*. The sleeve *g* is inclined backward and downward. The rod *e* has at its lower screw end a nut *e'* which serves as a support for one of the ends of a spring *h*, the other end of this spring bearing against the back of the insulating sleeve *f*. Instead of being guided directly in the insulating sleeve *f* the rod *e* may be guided in a metal casing *f'* which strengthens the insulating sleeve. Normally the back end e^2 of the rod *e* has a tendency, under the influence of gravity and of the spring *h*, to bear against a contact *i* on a support *j* firmly connected with the head-piece *k* which is itself firmly connected with the trigger *m*. The front end e^3 of the rod, when in this position, is removed from the primer *n* lodged in the bottom part of the cartridge casing. The contact *i* is formed as the head of a metal rod *i'* which through the medium of an insulating sleeve *j'* passes through the metal support *j* fixed on the head-piece *k* by a screw *p*. The screw end i^2 of the rod *i'* receives a nut i^3 by means of which one of the suitable drilled ends *q'* of a conducting plate *q* is secured, the other end q^2 of which is tightened by means of a small nut t^3 to an insulating screw socket *r* screwed on to the front end of a conductor *u*, which can be made tight on the insulating sleeve *j*. This conductor *r* is lodged in a metal tube *v* between the body of the mechanism *c* and the butt *d*. The lower end of the conductor *u* is screwed into an insulating screw socket *r'* which is made tight, by means of a nut *t'* on the back opening of the tube *v*, while the screw-socket *r* is made tight on the front opening of the same tube.

The tube *v* is screw-threaded at its lower end and receives a nut *w* by means of which the tightening together of the butt and the body of the mechanism can be regulated. The nut *w* and the lower end of the tube *v* are lodged in a suitable recess *d'* in the butt.

In a seat or recess d^2 forming a continuation of the seat or recess d' a dry battery x is placed, one of the poles x' of which is in contact with the conductor u. The other pole x^2 is formed by a conductor projecting on the back end of the battery and opposite an opening d^3 provided at the back of the butt and formed by the central part of the opening of the seat or recess d^2 not covered by the guard-plate y. The opening d^3 affords access to the nut w, and enables the battery to be inserted in the butt after the shutter z presently referred to has been swung into an open position, Fig. 1ª showing such shutter as being partly open. Through this opening an interior projecting part z' of a shutter z passes which is pivoted by its heel z^2 on a bed a' placed in the butt. A spring a^4 has a constant tendency to keep the shutter turned down on the butt and the projection z' in contact with the pole x^2 of the battery. The back of the butt is provided with a metal butt plate b' connected by a screw b^2 to a conducting strip c' extending as far as the trigger plate and guard c^2 and the hinge block b.

The connected head-piece and the trigger m are pivoted around a pin m^2 borne by a cheek m^3 firmly connected with the plate c. Under the butt an elongated opening h' is formed in which a push piece h^3 slides which forms a bridge for joining the two parts of the strip c' which is interrupted at this point. The pusher h^2 is retained in place by a spring h^4. When the said pusher is at the front end of its course the electrical connection between the two parts of the strip c' is interrupted, and on the other hand, if it is pushed into the back end, the circuit is closed.

The special priming is illustrated in sectional elevation in Fig. 4. It comprises a tube n in which an ebonite tube n' is seated. In the bore of this tube a conducting rod n^2 is retained. Between the outside of this rod and the outside of the insulating tube n' one of the ends of a platinum wire n^3 is held, the other end of which is made tight between the outside of the tube and a reversed cap n^4. The detonating material n^5 is placed in the cap n^4 and the space between this detonating material and the tube n' is filled with powder or some other suitable explosive.

The device for discharging the gun acts as follows:

First case.—Normally, the circuit of the battery is interrupted at two points, *i. e.* by the insulating part of the butt comprised between the heel plate y and the mounting b' and between conductor n^2 for the primer and the head e^3 of rod e. In order to form the proper connection the marksman carries on his clothing around the place where the butt rests against his shoulder, strips t^{10} of metallic tissue, so that connection is formed between y and c' when the marksman presents the gun. Then pressing the trigger m he causes the connected pieces m and k to swing forward, and brings the head e^3 of the rod in contact with the conductor n^2 for the priming. The passing of the current causes the platinum wire n^3 to become red hot, the effect of which is to ignite the priming. The current passes from pole x^2 of the battery to shutter z, the metallic tissue t^{10}, plate b', strip c', the metallic mass of the gun, cup n of the primer, conductor n^2, head e^3, rod e, contact i, conductor q, conductor u, and pole x' of the battery. When the gun is not in use it is only necessary in order to insure complete safety to force the pusher h^3 to the front end of its guide.

Action in the second case.—In the arrangement in which a glove t^9 with metal parts is employed the pieces y and b' of the butt are omitted, and also the conductive strip c'. The closing of the circuit can be effected at the moment of firing only, on the one hand by the rod u, the spring q, the contact i, the head e^3 and the conductor n^2 by operating the trigger and on the other hand by means of a flexible metal part t^{10}, arranged in the hollow of the shoulder in the marksman's clothing, and connected through flexible conductors t^4 t^5 with the metallic part of a glove t^9, which forms the circuit through the mass when the marksman presents the gun, the metallic part of the clothing coming in contact with the plate z. The current passes from one pole of the battery to conductor t^4, metallic part t^{10}, plate o', conductor o^2, conductor u, conductor q, contact i, rod e, head e^3, conductor n^2, of the primer, cup n, of said primer, the metallic mass of the gun, metallic glove t^9, conductor t^5, and the other pole of the battery.

In the case in which the source of electricity is placed in one of the marksman's pockets, the butt is arranged as shown in Fig. 5. The butt comprises a metallic part o' fixed in the ordinary manner to the wooden body of the butt, but it is connected internally by a wire conductor o^2 to the conducting rod u described above. The closing of the circuit is thus effected, at the moment when the marksman bears on the trigger m, by the metallic shoulder piece being connected with one of the poles of the battery x, the other pole being connected with the metallic part of the glove that comes in contact with the metallic body of the gun when the firing position is assumed.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. In an electric fire-arm, the combination with the butt of the gun, the trigger,

and the head-piece connected to said trigger, of a source of electricity one pole of which is connected with the said head-piece, a rod in contact with said head-piece, the primer, the conductor therefor, and with which conductor the said rod is adapted to come into contact, a shutter pivoted on the butt, said shutter being in contact with the other pole of the electric source, a guard-plate, a conducting strip connected with the metallic body of the gun, and with which strip said guard-plate is connected, and a flexible metallic part adapted to be secured in the hollow of the shoulder portion of the clothing worn by the marksman and to form electric contact between the said shutter and guard-plate.

2. In an electric fire-arm, the combination with the metallic body and the butt, the trigger, and the head-piece connected with said trigger, of a slidable rod in contact with said head-piece, the primer, a conductor for the primer, and with which conductor the said rod is adapted to make contact when moved by the head-piece, a metallic element adapted to be secured to the shoulder portion of the clothing worn by the marksman, an electric battery, and electrical connections between the battery, the said metallic element, the slidable rod, the metallic body of the gun, and the primer as and for the purpose set forth.

3. In an electric fire-arm, the combination with the butt of the gun, the trigger, and the head-piece connected to said trigger, of a source of electricity one pole of which is connected with the said head-piece, the primer comprising a cup and an insulating tube and a filament adapted to be rendered incandescent under the influence of an electric current, one end of said filament being held between the conductor for said primer and the said insulating tube, a cap serving as a seating for the detonating material, between which cap and said cup the other end of the filament is tightly fixed, a shutter pivoted on the butt, said shutter being in contact with the other pole of the electric source, a guard-plate, a conducting strip connected with the metallic body of the gun, and with which strip said guard-plate is connected, a flexible metallic part adapted to be secured in the hollow of the shoulder portion of the clothing worn by the marksman and to form electric contact between the said shutter and the guard-plate, all as and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ALEXANDRE TÉPINS.

Witnesses:
H. C. COXE,
ALEXANDRE MATHIEU.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."