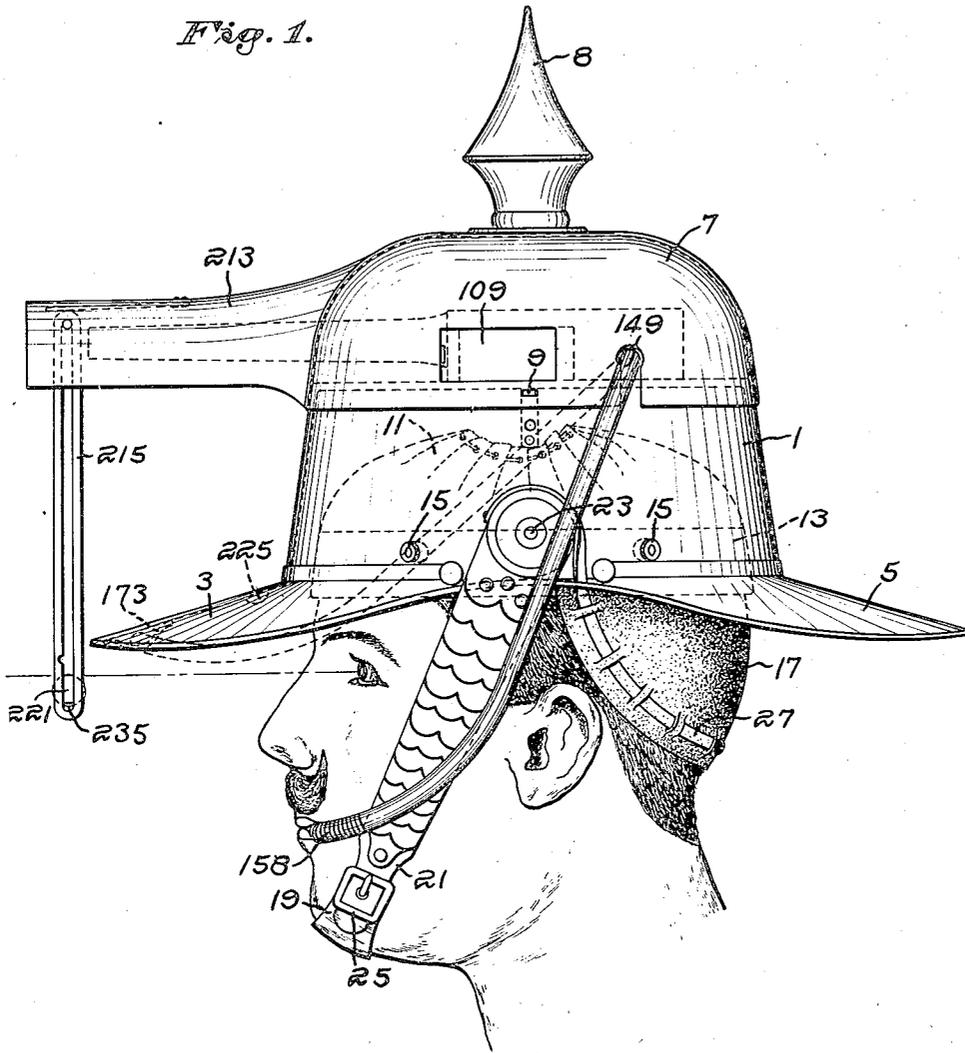


A. B. PRATT.
WEAPON.
APPLICATION FILED JULY 14, 1915.

1,183,492.

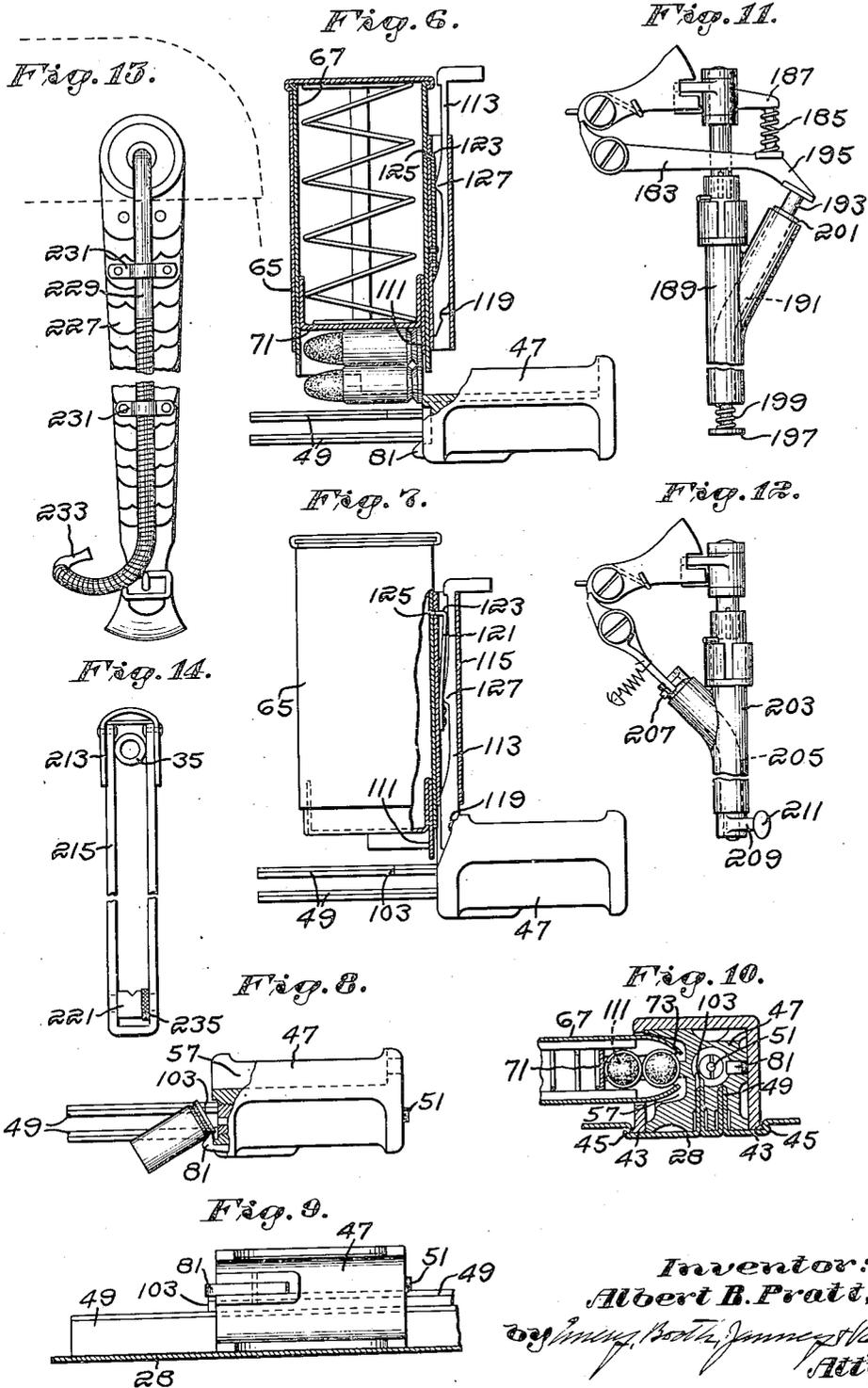
Patented May 16, 1916.
3 SHEETS—SHEET 1.

Fig. 1.



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1,183,492.



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UNITED STATES PATENT OFFICE.

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WEAPON.

1,183,492.

Specification of Letters Patent.

Patented May 16, 1916.

Application filed July 14, 1915. Serial No. 39,893.

To all whom it may concern:

Be it known that I, ALBERT B. PRATT, a citizen of the United States, and a resident of Lyndon, county of Caledonia, State of Vermont, have invented an Improvement in Weapons, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to weapons, and among other objects provides a gun adapted to be mounted on and fired from the head of the marksman.

The character of the invention may be best understood by reference to the following description of an illustrative embodiment thereof shown in the accompanying drawings, wherein,—

Figure 1 is a side elevation of a soldier's helmet equipped with a gun embodying the invention; Fig. 2 is a plan view of the gun showing parts in horizontal section; Fig. 3 is a vertical section taken on line 3—3 of Fig. 2; Fig. 4 is a transverse section taken on line 4—4 of Fig. 4; Fig. 5 is a transverse section taken on line 5—5 of Fig. 4; Fig. 6 is a view partly in plan and partly in section of the cartridge magazine and the breech-bolt; Fig. 7 is a view of the devices shown in Fig. 6 with parts in a different relation; Fig. 8 is a plan of the breech-bolt and means cooperating therewith for ejecting an empty shell; Fig. 9 is a side elevation of the parts shown in Fig. 8; Fig. 10 is a transverse section through a part of the magazine and the breech-bolt; Figs. 11 and 12 show different devices for operating the gun trigger from the mouth of the marksman; Fig. 13 is a side elevation of a form of chin strap and trigger operating tube which may be used; and Fig. 14 is a front elevation of the finder shown in Fig. 1.

Referring to the drawings, in Fig. 1 is shown a soldier's helmet which may be made of leather, metal or other appropriate material. This helmet may comprise a lower section 1 curved to conform to the contour of the head and having front and rear

vizors 3 and 5. Mounted on the lower section is a crown section 7 having a spike 8 thereon and detachably secured to the lower section by spring-pressed latches 9 mounted on the lower section and adapted to enter holes in the upper section.

The helmet preferably will be made in two sizes, a large size and a small size. To adapt these helmets to fit different sized heads, the lower section is provided with a flexible lining 11 having its lower edge secured to a band 13 detachably connected to the lower crown section by studs and nuts 15. The studs may be constructed and arranged to hold the band spaced from the lower section to permit the free passage of air into the helmet and contribute to the comfort of the wearer in warm weather. The upper margin of the lining may be perforated to receive a cord which may be tightened or loosened according to the size of the head of the wearer.

The helmet should be strongly secured to the head. To accomplish this an apron 17 of leather or other suitable material may be attached to and depend from the rear lower edge of the lower section of the helmet. Chin straps 19 and 21 are pivotally connected to studs 23 on said section, their lower ends being detachably connected by a buckle 25. To tighten the apron to the head, a thong 27 is inserted through a series of slits therein, and the ends of said thong are secured to and wrapped about rounded edges of the chin straps adjacent their fulcrum points. As a result, when the chin straps are swung down from a position adjacent the vizor, to a position on the chin of the wearer, the end portions of the thong will be taken up sufficiently to draw and secure the apron closely to the rear of the head.

The helmet described above is merely illustrative of one form of head gear which may be employed as a mounting for the gun. Other forms may be employed without departing from the spirit of the invention.

Next will be described an illustrative form of gun adapted to be mounted in a

chamber formed between the upper and lower sections of the helmet.

Referring more particularly to Figs. 2 to 10 inclusive, 28 designates a bed-plate 5 which may be riveted or otherwise secured on the top of the lower section of the helmet. This plate has an upstanding rim 29 adapted to receive a cover 31 having a depending flange 33 embracing said rim. On said bed-plate 10 is mounted a gun comprising a barrel 35 having its muzzle projecting through an aperture in the upper section of the helmet, and its opposite end tapped into a breech-block 37. This breech-frame comprises a 15 top wall 39, an end wall 40, and side walls 41 (Figs. 5 and 6) terminating in feet 43 adapted to slide in a dove-tailed groove 45 formed in the bed-plate.

A breech-bolt 47 is mounted in the breech-frame and adapted to slide toward and from 20 the chamber of the barrel on tracks 49 conveniently pressed up from the sheet metal of the bed-plate, said tracks being adapted to fit into grooves extending longitudinally 25 of the base of the breech-bolt. A firing pin 51 is provided in the breech-bolt having one end pressed outward by a small, helical spring 53 encircling a reduced end of said pin and confined between a flange on the 30 latter and a plug 55 tapped in a recess in said bolt.

The breech-bolt is provided with a lateral recess 57 for receiving cartridges from the magazine, as more fully hereinafter 35 described. The breech-bolt is normally urged to the left (Fig. 3) by a helical spring 59 confined between one end of said breech-bolt and the base of a socket 61 having a reduced end tapped into the rear wall of the 40 breech-block. To contribute to the guidance of the spring, a rod 63 is mounted therein having one end fast to the end of said socket, and its other end entered into 45 an eye in the breech-bolt. The socket 61 may have a knurled exterior surface to facilitate the removal and replacement thereof in dismantling and assembling the parts of the gun as desired.

A cartridge magazine carrier 65 is secured 50 to the bed-plate 28 referred to, and adapted to receive a cartridge magazine 67. The cartridges are fed toward the delivery end of said magazine by a spring-pressed plunger 71. The outer cartridge is 55 held between in-turned lips 73 at the end of the magazine in readiness to be delivered to the barrel chamber when required. To contribute to the guiding of the cartridge from the magazine to said chamber, there 60 is provided a guide member 75 (Fig. 2) fast in the breech-frame and presenting spaced tracks 77 extending diagonally from the cartridge magazine to the barrel chamber. When the breech-bolt is impelled for-

ward by its spring 59, it engages the cartridge 65 at the delivery end of the magazine and thrusts the same from the magazine to the barrel chamber. In the course of its transit, the rounded surface of the cartridge engages the tracks 49 and slides along 70 the same into the chamber. The cartridge is prevented from swinging out of axial alinement with the chamber to block the same by the inclined guide member 75. There is a further important advantage in 75 the tracks 49 and the guide member 75 since they enable the entrance to the cartridge chamber to be formed circular instead of elliptic-like, or of irregular form. As a result, the chamber closely embraces 80 the entire circumference of the body of the cartridge shell, with the exception of the small notch 79 (Fig. 4) for receiving the extractor 81 for extracting the empty shell. At the time of firing, however, the extractor 85 occupies the notch 79 and therefore there is substantially no interruption in the circumferential contact of the entrance of the chamber with the body of the shell. As a result, if a cartridge shell should burst, 90 it would expend its force merely in blowing back the breech-bolt without any outlet therefor such as would be likely to cause injury to the marksman.

To fire the gun there is provided a hammer 95 83 pivoted on the shank of a screw 85 tapped into a post 87 (Fig. 4) mounted on the bed-plate 27 referred to. The hammer is rocked through a port 89 in one of the 100 side walls of the breech-frame to strike the firing pin 51 by a helical spring 91 encircling the post 87 and having one end connected to the bed-plate and the other end connected to said hammer.

A trigger 93 is pivoted on the shank of 105 a screw 95 tapped into a post mounted on the bed-plate adjacent the hammer post 87 referred to. This trigger is provided with an end 97 normally urged into locking engagement with a short shoulder on the hammer 110 by a helical spring 99 confined between said trigger and a bearing lug 101 mounted on the bed-plate.

When the trigger 93 is pressed against the resistance of the spring 99, its end 97 will 115 be released from locking engagement with the hammer, thereby permitting the latter to fly sharply in a contraclockwise direction (Fig. 2) against the firing pin 51 which in turn will pound the primer of the cartridge and discharge the latter. The "blow-back" or expansion of the gases from the discharge in the breech-frame, will drive 120 the breech-bolt quickly back away from the barrel chamber against the resistance of the recoil spring 59. 125

The retreat of the breech-bolt is utilized to eject the empty shell from the gun. To

accomplish this, a portion of one of the tracks 49 (Figs. 7 and 8) on which the breech-bolt slides may be elevated above the other to present a shoulder 103. As the breech-bolt flies back, the ejector pawl 81 will engage the rim of the cartridge and drag the same back with the breech-bolt until the end of the cartridge engages the shoulder 103. Since this shoulder is a distance from the entrance to the barrel chamber greater than the length of the cartridge, the latter will be tilted and quickly ejected from the breech-frame through a port 105 in one of the walls thereof. The ejector pawl cooperating with the ejector shoulder as described, thus comprises an extremely simple and effective construction for ejecting the empty shells. These empty shells may be received by a chamber formed by walls 106 and 107 extending from the breech-frame to the rim of the housing containing the gun. The shells may be removed from said chamber through a port in one side of the crown section of the helmet normally closed by a door 109 (Fig. 1).

An important feature of the invention relates to means for automatically locking the breech-bolt in its retreated and inoperative position after the last cartridge in the magazine has been fired. To accomplish this, the spring-pressed plunger 71 of the magazine is provided with a finger 111 (Figs. 6 and 7) projecting forwardly therefrom. This finger advances with the plunger as the cartridges are progressively delivered from the magazine. When the last cartridge has been delivered to the barrel chamber, the end of said finger will engage the side of the breech-bolt. As soon as the last cartridge has been fired and the breech-bolt is blown back, the finger, urged forward by the plunger spring, will project into the path of the breech-bolt, intercept the same and automatically lock it in retreated position.

The "blow-back" of the breech-bolt operates automatically to cock the hammer. As said bolt retreats, one of its sides wipes against the hammer and rocks the same in a clockwise direction (Fig. 2) sufficiently to permit the trigger end 97 to snap into locking engagement with said hammer. After the last cartridge has been fired as described, the breech-bolt will be held retreated with its side engaging the hammer. As a result, the subsequent tripping of the hammer and will serve automatically to indicate to the marksman the fact that the last cartridge in his magazine has been fired. Then he should withdraw the cartridge magazine from its carrier and insert a filled magazine in place thereof. The cartridge

magazine cannot be withdrawn from its carrier so long as the plunger finger remains in engagement with the spring-pressed breech-bolt. Therefore a finger latch 113 (Figs. 6 and 7) is provided adapted to slide in a guideway 115 formed at one side of the magazine carrier. The outer end of this latch is formed to present a handle 117 and the inner end has a chamfer 119, which when the latch is thrust inward will engage, and with cam-like action, thrust the breech-bolt slightly away from the plunger finger, thereby transferring the holding of the breech-bolt from said finger to said latch. Said latch may also be utilized for controlling the locking of the magazine in its carrier. To accomplish this, a leaf spring 121 is introduced into the latch guideway and has one end fast to said carrier and its free end bent or offset to present a dog 123 for locking engagement with a notch 125 in the magazine. The resilience of the leaf spring is such that it tends normally to withdraw said dog from said notch. To press said dog into said notch the back of the latch 113 has a cam elevation 127 fast thereon which will be out of engagement with said leaf spring when the latch is thrust inward to lock the breech-bolt in its retreated position, but which will press said dog 123 into locking engagement with the magazine notch when the latch is pulled outward. Thus when the latch is thrust inward it serves the dual function of releasing the breech-bolt from the plunger finger and releasing the magazine from its carrier. After the empty magazine has been withdrawn from, and a filled magazine has been inserted in the carrier, the latch 113 is pulled outward, thereby serving the dual function of locking the magazine in its carrier and releasing the breech-bolt. The empty magazine may be removed and the filled magazine inserted by employing merely one hand of the marksman and without removing the gun or the helmet from his head.

When the latch 113 is pulled outward, the breech-bolt is impelled sharply forward by the recoil spring 59 and thereby thrusts a cartridge from the magazine into the barrel chamber. This eliminates the necessity of manually pushing back the breech-bolt to enable the same to transfer the cartridge from the magazine to the chamber, since the breech-bolt is held back in readiness to make the transfer as soon as the holding latch therefor is released.

The rim of the housing for the gun may have portions 129 and 131 bent inward as shown in Fig. 2 to allow ample room for the fingers to operate the latch 113 and to grasp the magazine for inserting the same in and removing the same from its carrier.

To push back the breech-bolt manually, for example after the gun has been taken apart for cleaning the same, a cocking rod 135 (Fig. 3) is provided beneath the barrel in a sleeve 137 carried by straps 139 secured to said barrel. The outer end of said cocking rod is formed to present a head 141 and the inner end is adapted to engage the forward end of the breech-bolt. The rod may conveniently extend between the tracks 49 and engage a portion of the breech-bolt between them. Thus the rod will be appropriately guided in the course of its movement to thrust back the breech-bolt and cock the hammer.

The sleeve 137 may be utilized to lock the breech-frame to the bed-plate. To accomplish this said sleeve is provided with a cam lug 143 (Fig. 3) adapted to enter a slot in said bed-plate. This will serve to lock the breech-bolt against forward movement relatively to the bed-plate, and the inner end of the barrel will engage the end of the tracks and will serve to lock the breech-block against rearward movement relatively to the bed-plate. The outer end of the sleeve may have an offset 147 which will serve as a handle to facilitate the turning of the sleeve for moving the lug 143 into and out of engagement with the slot in the bed-plate. The barrel and breech-frame may be very easily removed from the bed-plate for cleaning and without the necessity of removing the helmet from the head of the wearer. To remove said parts, it is merely necessary to withdraw the cartridge magazine from the recess in the breech-bolt and turn the locking sleeve 137 to disengage its lug 143 from the bed-plate. Then the barrel may be grasped and the breech-block may be slid forwardly off from the bed-plate. The breech-bolt tracks 49 extend through the grooves in the rear wall of the breech-bolt to permit this operation.

An important feature in the invention relates to the operating of the trigger to discharge the gun by means connecting said trigger with the mouth of the marksman. This means is typified in Fig. 1 as a tubular member 149 having a mouth piece of rubber or other appropriate material on one end thereof. The upper end is bent laterally and splined to a shaft 153 (Fig. 2) journaled in bearings in lugs secured to the bed-plate 28 referred to. To confine the tube against movement axially of said shaft, it is provided with a flange 149^a and a pin 149^b adapted to engage opposite faces of one of the bearing lugs. The lug has a slot 149^c therein permitting the pin to slide therethrough in connecting and disconnecting the tube from the shaft. When the tube is connected either to the mouth of the marksman or to the vizor of his cap,

the pin will not register with the slot, and thus there will be no danger of the inadvertent disconnection of the tube from the shaft when in said positions. The tube has a lateral port 154 (Fig. 2) therein adapted to communicate with a port in its bearing lug, the latter port in turn communicating with a hollow stud 155 projecting therefrom having a rubber bulb 157 attached thereto. This bulb is interposed between the empty cartridge chamber wall 107 and the trigger 93, the portions of said wall and trigger adjacent said bulb preferably being curved to conform to the contour of the latter. Preferably the tube extending from the gun to the mouth of the operator should be of ductile metal to enable the same to be readily bent slightly to conform to the distance from the gun to the mouth of the wearer. To further adapt the tube to the wearer, a portion 158 thereof adjacent his mouth may be formed of flexible tubing.

The mouth-piece of the tube may be inserted in a pocket 173 (Fig. 1) on the under side of the vizor to protect said mouth-piece when the tube is in inoperative position.

Means may be provided for locking the hammer to prevent any possibility of firing the gun when the tube is turned up onto the vizor in inoperative position. To accomplish this a cam 175 (Figs. 2, 3 and 5) is provided on the shaft 153 and adapted to enter a notch 177 in the hammer. When the tube is rocked upward the cam will move from its position shown in Fig. 5 up into the notch 177 and withdraw the hammer out of the port 89 in the breech-block. To prevent inadvertent release of the hammer by the cam, one of the side walls of the notch 177 (Fig. 5) may have an indentation 179 adapted to be engaged by the lower end 181 of the cam. By this construction a safety device is provided which will prevent firing of the gun excepting when the mouth tube is rocked down and inserted in the mouth.

In Fig. 11 is shown a form of trigger operating means somewhat different from that shown in Fig. 2. In this modification a trigger 183 is provided having an elongated arm normally urged in a clockwise direction to engage the hammer shoulder by a spring 185 confined between a heel of said arm and a lug 187 on the bed-plate. A hollow tube 189 extends from the mouth of the marksman upward to and is detachably connected to the hammer locking shaft by devices similar to those described for the tube shown in Fig. 2. Within the tube 189 is a flexible shaft 191 having its upper end 193 engaging a toe 195 of the trigger 183. The lower end of the shaft projects somewhat beyond the lower end of the tube and is provided with a button 197 adapted to be in-

serted in the mouth and to be pressed by the tongue to thrust said flexible shaft axially of the tube containing the same. This button is urged outward away from the tube by a helical spring 199, this movement of the shaft being limited by a flange 201 thereon engaging the upper end of the tube.

In Fig. 12 is shown another form of firing device for transmitting movement from the mouth to the trigger. This device comprises a tube 203 similar to that described in Fig. 11, and mounted in said tube is a flexible shaft 205. The upper end of said shaft has an arm 207 projecting therefrom adapted for engagement with the trigger. The lower end has an arm 209 projecting therefrom terminating in a button 211. When this button is inserted in the mouth of the marksman, it may be pressed by the tongue or the teeth to rotate the shaft 205 and thereby trip the trigger.

On the discharging of the gun there is, of course, a recoil immediately on the discharge. The "blow-back" causes the breech-bolt to retreat and automatically cock the hammer, but the strong spring back of the breech-bolt forces the same so quickly forward again following the recoil, that the two movements naturalize one another so promptly that no discomfort to the wearer results from the recoil.

To protect the barrel of the gun, the upper crown section may have an elongated hood 213 projecting therefrom and depending a sufficient distance beneath the barrel to cover the cocking pin. Preferably this elongated hood also projects a substantial distance beyond the end of the barrel.

To facilitate the adjusting of the helmet on the head of the wearer to present the barrel of the gun at the appropriate angle for firing, a finder may be provided comprising a fork-like guide member 215 having slots 217 therein adapted to slide along studs 219 fast in the sides of said hood. A sight or index 221 is adapted to slide along this guide and may be held in different positions of adjustment by a set screw 223. The guide member may be graduated in inches and the index held opposite to any of the graduations desired. Knowing the distance from the axis of the barrel of the gun, to a line connecting his eyes, the marksman may adjust the index to a point on the guide corresponding to this distance and then tilt the helmet up or down as required, until the index is on a level with his eyes. Then the gun is positioned properly for firing and the gun level finder may be rocked up and retreated back over the barrel of the gun into inoperative position. While the finder is of assistance in locating the helmet on the head, it is not indispensable, since after the helmet has been worn several times, the marks-

man will readily learn instinctively to place the same in its proper position.

To facilitate the proper vertical alinement of the barrel of the gun with the face of the marksman, a nub 225 (Fig. 1) may be provided on the under face of the front vizer directly over the nose of the wearer. In putting on the helmet, the thumb may, naturally, simultaneously engage said nub and the nose of the wearer and indicate the proper adjustment thereof.

In Fig. 13 is shown a chin strap 227 and a mouth tube 229 secured thereto by bands 231. The chin strap is connected to the helmet at a point in line with the hammer locking shaft 153 (Fig. 2), said strap and tube depending down from said point to the chin of the wearer. A substantial portion of the tube may be formed of flexible tubing to facilitate the bending of the tube with the chin strap to conform to the face of the wearer. The lower end of the tube terminates in a mouth-piece 233 which may be of rubber or other appropriate material.

When not in use, the chin strap and tube may be swung as a unit to a position above the front vizer and may be supported thereby. When in this position, the hammer will be locked in inoperative position as described in connection with the tube shown in Fig. 2.

The weapon described has many advantages. The gun is automatically aimed unconsciously and incidentally to the turning of the head of the marksman in the direction of the target. In self-protection, one immediately, instinctively turns the head in the direction of attack to see the enemy, or, in hunting, toward any sound made by nearby game. Thus the gun is automatically directed toward the mark in the course of the first instinctive movement. With the gun thus aimed, the only further operation necessary to fire the same is to blow through the tube and thereby expand the bulb and operate the trigger. This is accomplished entirely from the head of the marksman, leaving his hands and feet free further to defend himself or for other purposes as desired. Under some circumstances the gun can be fired not only without the use of the hands and feet, but also without the use of the eyes of the marksman. For example, in hunting at night if an animal made a sound in underbrush, the head of the marksman would be instinctively turned in the direction of the sound and then the gun would be fired, without the use of the eyes of the marksman.

The crown section 7 of the helmet when detached from the base of the helmet may be inverted and used as a cooking utensil, the elongated hood projecting therefrom for protecting the barrel of the gun serving as

the handle therefor. The spike may be stuck in the ground to support the utensil or may be detached therefrom as desired.

The gun is light, strong, simple, and compact in construction, and can be readily and conveniently carried. The several thicknesses of material in the upper and lower sections of the helmet, together with the metal bed-plate, its metal cover, and the gun between them, serve advantageously to protect the head of the wearer from shrapnel and blows. The elliptic-like section of the trigger operating tube presents a broad shield extending from the helmet along the side of the head of the wearer and furnishes protection to the face from blows from sabers or other weapons.

Having described one illustrative embodiment of the invention without limiting the same thereto, what I claim as new and desire to secure by Letters Patent is:

1. The combination of a gun with means for supporting the same on the head of a marksman and means operable from the mouth of the marksman for firing the gun.
2. The combination of a gun with means for supporting the same on the head of a marksman and means for firing the gun independently of the hands of the marksman.
3. The combination of a gun adapted to be worn on the head of a marksman with means for firing the gun from the head at will.
4. The combination of a gun with means for unconsciously aiming the same according to movement of the head of the marksman.
5. The combination of a gun with means for aiming the same incidental to the turning of the head of the marksman to visualize an object.
6. The combination of a gun with means for aiming the same by the turning of the head of the marksman to visualize an object.
7. The combination of a weapon with means for mounting the same on the head of a person and means operable from the head for rendering said weapon effective.
8. The combination of a gun with means for supporting the same on the head of a marksman and trigger operating means extending from the gun to the mouth of the marksman.
9. The combination of a gun with means for mounting the same on the head of a marksman and pneumatic means for firing the gun.
10. The combination of a gun with means for supporting the same on the head of a marksman and pneumatic means for firing the gun operated from the mouth of the marksman.
11. The combination of a gun with means for supporting the same on the head of a marksman, a tube adapted to be presented to the mouth of the marksman, and a pneumatic bulb connecting with said tube having provision for firing the gun.
12. The combination of a gun with means for supporting the same on the head of a marksman and means including a blow-tube for firing the gun.
13. The combination of a head-gear with a gun mounted thereon and means for firing the gun extending from the latter to the mouth of the wearer.
14. The combination of a head-gear with a gun mounted thereon and an operating member for firing the gun adjustable to an inoperative position and to an operative position at the mouth of the wearer.
15. The combination of a head-gear with a gun thereon, a member for firing the gun adjustable to operative and inoperative positions, and means for preventing the firing of the gun when said member is in its inoperative position.
16. The combination of a gun with means for supporting the same on the head of a marksman, a member for firing the gun extending from the latter to the mouth of the wearer, and means for adjustably connecting said member with the gun.
17. The combination of a head-gear having a chamber therein with a gun mounted in said chamber, and means for firing the gun.
18. The combination of a head-gear comprising upper and lower sections having a chamber between them with a gun mounted in said chamber, and means for firing the gun.
19. The combination of a head-gear comprising upper and lower sections having a chamber between them with a bed-plate secured to one of said sections, a gun carried by said bed-plate, and means projecting from said chamber for firing the gun.
20. The combination of a head-gear with a gun carried thereby, an apron depending from said head-gear, a chin strap, a flexible connection extending from said apron to said chin strap, and means for drawing said apron into engagement with the head of the wearer automatically on the adjustment of said chin strap to a position beneath the chin of the wearer.
21. The combination of a head-gear with a gun mounted thereon, a head engaging member depending from said gear, a chin strap and means connecting said strap with said member having provision for drawing said member into engagement with the head of the wearer.
22. The combination of a head-gear with a gun mounted thereon, a chin strap and a

member controlled thereby for engagement with the back of the head of the wearer.

23. The combination of a head-gear with a gun mounted thereon, a lining for said head-gear, and means detachably connecting said lining to the latter.

24. The combination of a head-gear with a gun mounted thereon, a head band and means detachably connecting said band to said head-gear.

25. The combination of a head-gear with a gun mounted thereon, a head band, means detachably connecting said band with said head-gear, and a lining connected to said head band.

26. The combination of a head-gear with a gun mounted thereon, a head band, means detachably connecting said head band with said head-gear, a lining connected to said band, and means for taking up or letting out said lining according to the size of the head of the wearer.

27. The combination of a head-gear with a gun mounted thereon, a head band spaced from said head-gear, and means detachably connecting said band with said head-gear.

28. The combination of a head-gear with a gun mounted thereon, a head band spaced therefrom, means detachably connecting said band with said head-gear, an apron depending from the latter, a chin strap connected to said head-gear and means connecting said apron with said chin strap.

29. The combination of a head-gear with a gun mounted thereon, and index means for indicating the proper position of the head-gear on the head of the wearer.

30. The combination of upper and lower head-gear sections having a gun receiving chamber between them, said upper section having a member projecting therefrom serving as a cover for the barrel of the gun and as a handle for the upper section when used as a cooking utensil.

31. The combination of upper and lower head-gear sections having a chamber between them for receiving a gun, means detachably connecting said sections and a handle member for the upper section for protecting the barrel of the gun.

32. The combination of a head-gear with a gun mounted thereon, and means on said head-gear for indicating the central location of the gun relatively to the eyes of the wearer.

33. The combination of a head-gear having a vizor with a gun mounted on said head-gear, and a member on the under face of said vizor for registry with the nose of the wearer to locate the gun centrally of the face of the wearer.

34. The combination of a gun with a head-gear having a housing for said gun formed to present a cartridge magazine receiving

chamber and an empty-shell receiving chamber.

35. The combination of a gun with a housing therefor having walls forming a cartridge magazine receiving chamber and an empty-shell receiving chamber, and a head-gear carrying said gun and housing having ports communicating with said chambers.

36. The combination of a bed plate with a barrel, a breech-frame mounted on said plate having ports therein, a cartridge magazine mounted on said plate for communication with one of said ports, an empty-shell receiving chamber communicating with said other port and a head-gear supporting said plate.

37. The combination of a head-gear with an automatic gun mounted thereon, and means for firing the gun from the head of the marksman.

38. The combination of a head-gear with a gun mounted thereon, and members extending from said head-gear to the chin and the back of the head of the wearer to secure the head-gear thereon.

39. The combination of a gun with means for mounting the same on the head of a marksman, and means for firing the gun independently of the eyes, hands and feet of the marksman.

40. The combination of a gun with means for supporting the same on the head of a marksman, and means for firing the gun including a tube extending therefrom to the mouth of the marksman.

41. The combination of a gun with means for supporting the same on the head of a marksman, and means for firing the gun including a tube extending from the gun to the mouth of the marksman and having a flexible portion.

42. The combination of a gun with means for supporting the same on the head of a marksman, and means for firing the gun including a flexible tube extending from the gun to the mouth of the marksman.

43. The combination of a gun with head gear for supporting the same on the head of a marksman, a chin strap connected to said head gear, and means for firing the gun including a mouth tube extending along and secured to said chin strap.

44. The combination of a gun with head gear for supporting the same on the head of a marksman, a chin strap connected to said head gear, and means for firing the gun including a flexible mouth tube extending along and connected to said chin strap.

45. The combination of a gun with means for supporting the same on the head of a marksman, and means for firing the gun including a flexible member adapted to be applied to the mouth of the marksman.

46. The combination of a gun with means

for supporting the same on the head of a marksman, and means for firing the gun including a flexible tube adapted to be applied to the mouth of the marksman.

- 5 47. The combination of head gear (1, 7) with a gun (35, 41) carried thereby, and means for firing the gun including a member (149) extending from the gun to the mouth of the marksman.
- 10 48. The combination of a head-gear with a gun comprising a bed-plate (28), a bar-

rel (35), a breech-block (41), and breech-bolt (47) in the latter, and tracks (49) for guiding said breech-bolt in said breech-block.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

ALBERT B. PRATT.

Witnesses:

HENRY T. WILLIAMS,
EVERETT S. EMERY.