R. DEMELE.

GUN.

APPLICATION FILED NOV. 21, 1910.

1,084,848.

Patented Jan. 20, 1914.

2 SHEETS—SHEET 1.

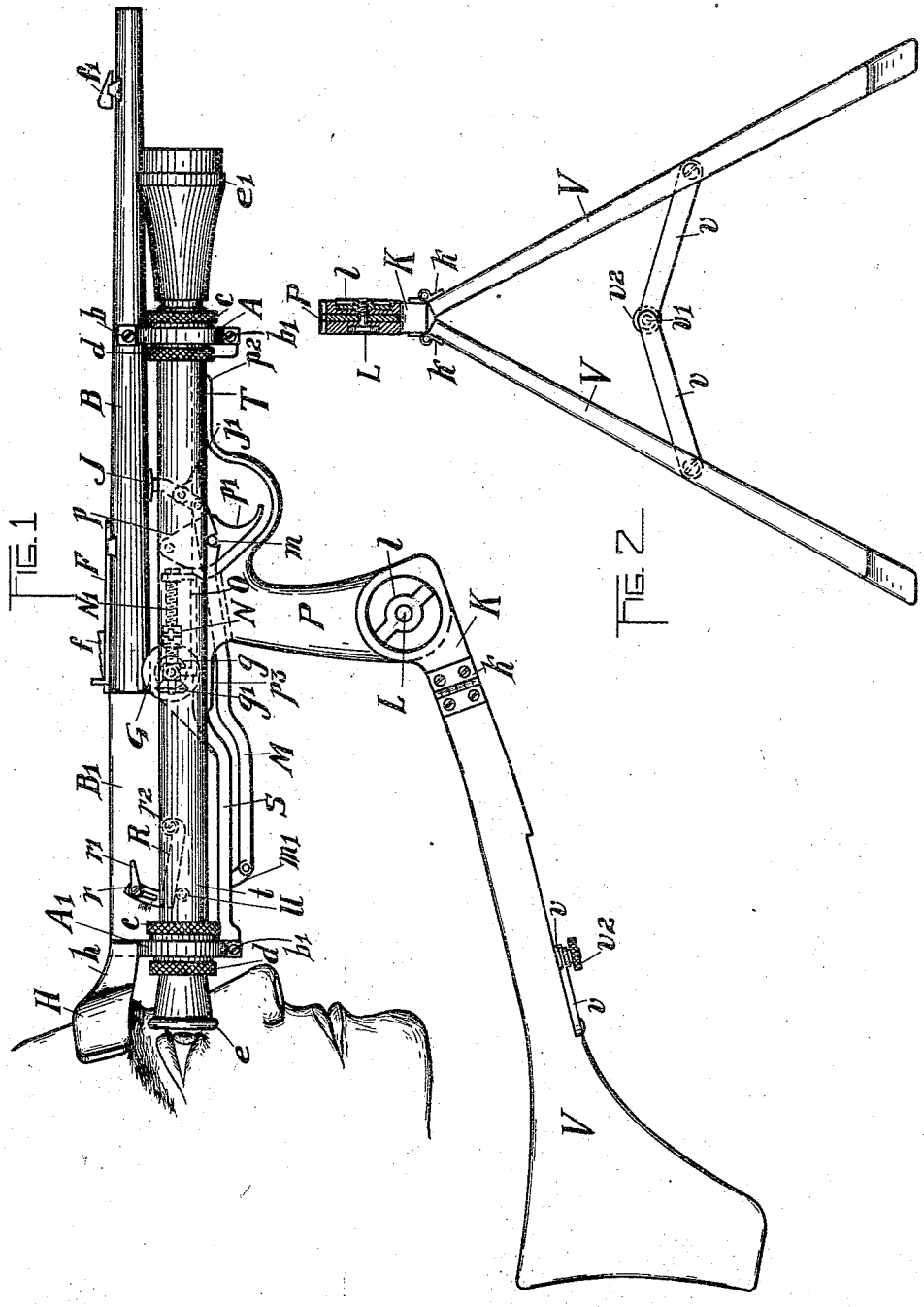


FIG. 1

FIG. 2

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2 SHEETS—SHEET 2.

FIG. 3

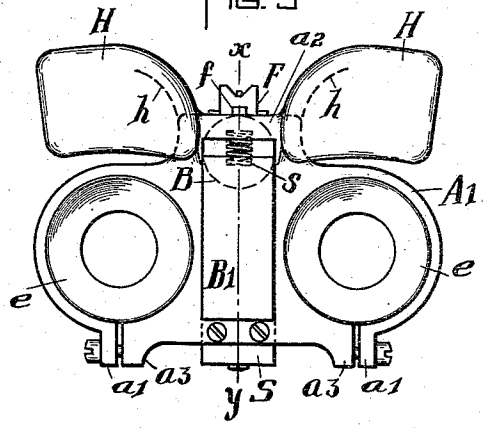


FIG. 4

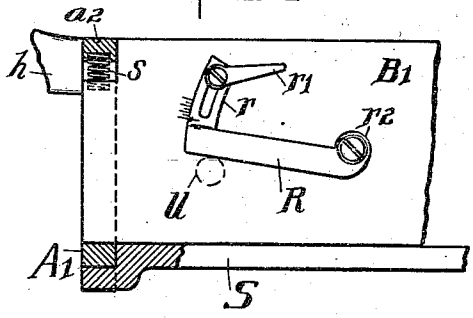


FIG. 5

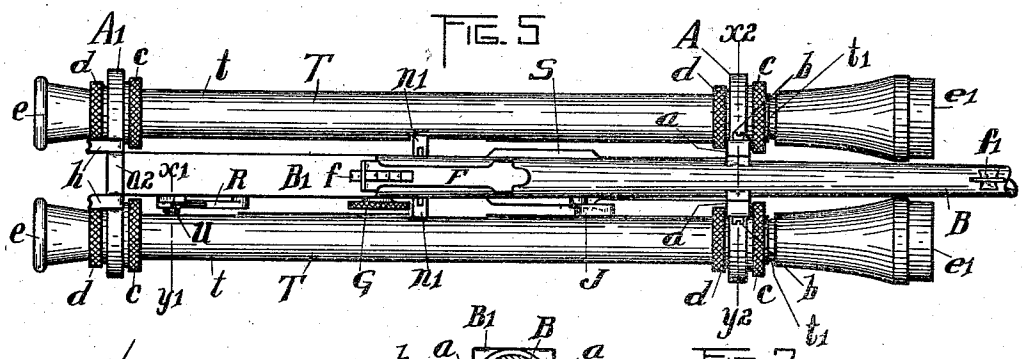


FIG. 6

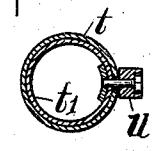


FIG. 7

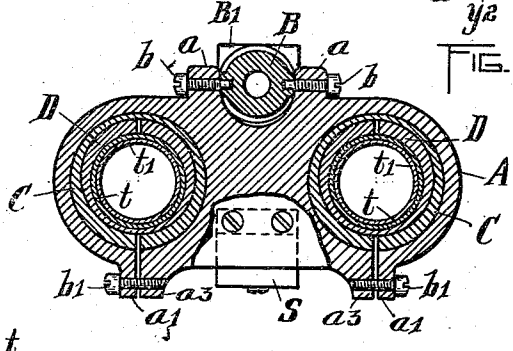
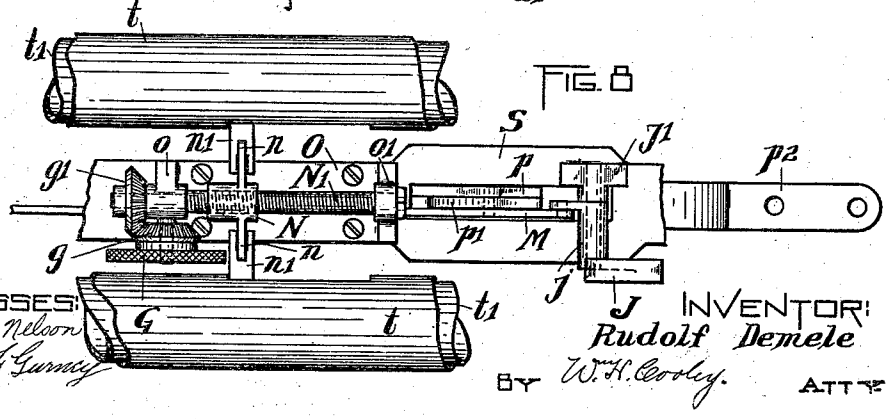


FIG. 8



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UNITED STATES PATENT OFFICE.

RUDOLF DEMELE, OF ROCHESTER, NEW YORK.

GUN.

1,084,848. Specification of Letters Patent. Patented Jan. 20, 1914.

Application filed November 21, 1910. Serial No. 593,311.

To all whom it may concern:

Be it known that I, RUDOLF DEMELE, a subject of the Emperor of Austria-Hungary, and a resident of Rochester, in the county of Monroe and State of New York, have invented a new and Improved Gun, of which the following is a specification.

The purpose of my invention is to provide a gun with a binocular telescopic sight, with a rear support adapted to engage against the body of the user of the gun at a point removed a minimum distance from the axis of the barrel, that is at the forehead, to provide an additional but removable stock bifurcated so as to adapt it to engage against each shoulder of the user in order to provide three supports against the body of the user for the rear of the gun and with the members of such bifurcated stock adapted to be folded together to comprise in effect a single stock to which there is pivotally connected a forward portion comprising substantially a pistol grip. The entire stock may preferably also be detachably connected to the gun.

Another object is to provide means whereby the binocular telescopes are adjustable to the different distances between the eyes of different users and in which also the mechanism for regulating the angle of the elevation of the gun for distances is controlled by the focusing screw of the telescope.

In guns as usually heretofore constructed there is provided a stock comprising a shoulder piece adapted to rest against the shoulder of the user to steady and support the gun in use and to transmit the recoil of the gun to the shoulder of the user. I have found this method of construction objectionable on account of the slight swinging of the gun at the recoil, the axis of the gun and the line of direction of the recoil being considerably removed from the point of support of the gun at the shoulder.

I have found that, in a properly proportioned gun fired with the proper charge, the recoil resulting from the firing of the gun may be sustained at the forehead and just above the eyes of the user, thus reducing to a minimum the distance between the point sustaining the recoil and the axis of the gun.

As usually constructed guns with telescopic sights are provided with a single telescope for use with one eye only so located as to require the user of the gun to assume an unnatural position in the act of firing the gun. I have found that this objectionable feature may be overcome by providing two telescopes or what is called a binocular telescope located slightly beneath the barrel of the gun and adapted to line up opposite the eyes of the user of the gun and along the line of vision in sighting the gun and in connection therewith I employ means whereby upon the operation of the focusing screw of the telescopes the elevation of the gun is automatically adjusted to the proper range for which the telescopes are focused.

Another feature of my present invention comprises an auxiliary stock for the gun which is bifurcated and adapted to engage against each shoulder of the user at substantially the usual point thus providing three points of support for the gun and affording increased steadiness in the act of firing. I provide means whereby the bifurcated shoulder rest or stock may be folded together so as to present one or a single stock to facilitate carrying and transportation and also to adapt the gun to use at short range and I also provide for such short range use a pivotal connection between the pistol grip forming part of the stock and the rear portion of the stock whereby the angle of the direction of the barrel relative to the main direction of the stock may be readily adjusted within a moderate range.

The accompanying drawings illustrating a preferred embodiment of my invention are as follows:

Figure 1 is a right hand side view of the gun showing therefore only the right hand forehead engaging piece and telescope as they are arranged for use and with the forehead piece in engagement with the forehead of a supposed user of the gun. Fig. 2 is a plan view of the detachable stock showing the parts thereof pivotally connecting the same to the grip of the gun in horizontal section. Fig. 3 is an enlarged view of the gun from the rear but with the grip member and the stock removed, while Fig. 4 shows in a similarly enlarged view, the rear telescope and gun supporting member A^1 in vertical section taken along the line x—y of Fig. 3, and a part of the connecting member S is also shown in section. The breech of the gun is shown in this figure in side view, while in this figure the members for engaging the forehead are

removed. Fig. 5 is a plan view of the gun with the stock removed. Fig. 6 is an enlarged transverse sectional view of one of the telescope members taken along the line x^1—y^1 of Fig. 5, while Fig. 7 is a similarly enlarged transverse sectional view of the parts taken along the line x^2—y^2 of Fig. 5 as viewed from the right. Fig. 8 is an enlarged plan view of the central part of the gun showing the focusing mechanism and the trigger support and actuating mechanism and, in this figure, a part of the connecting bar S is also seen comprising the support for the above mentioned mechanisms.

Similar parts are designated by similar reference characters throughout the several figures of the drawings.

Referring to the drawings. For coöperatively connecting the telescopes T and body, comprising the breech and barrel, of the gun I provide front and rear supporting or bracket members A and A^1 respectively, connected by a longitudinally extending cross piece S secured thereto as indicated in Figs. 1, 3, 4, 5 and 7. This connecting piece S is curved downwardly toward its rear end as indicated in Fig. 1 and is widened out beneath the fulcrum of the trigger of the gun as seen. The forward bracket A, as seen in Fig. 7, has a U shaped opening at its upper edge to provide a pivotal support for the barrel of the gun, the barrel of the gun B being pivotally supported therein upon the screws *b* threaded through the lugs *a*. The breech B^1 of the gun, as seen in Figs. 3 and 4, is shouldered and in the upper side of the short rearward extension formed at the shoulder there is seated a coiled spring *s*, the upper end of which is seated in a recess in the cross piece a^2 of the rear bracket A^1, the operation of the spring *s* tending normally to hold the breech of the gun downwardly in its lowermost position against the bottom of the opening therefor in the bracket A^1.

The body of the gun is therefore pivotally mounted in a frame comprising the brackets A and A^1 and the connecting bar S. Through each of these brackets A and A^1 there are formed circular openings for receiving the split or opened eccentrics C all exactly alike and each provided with a knurled head *c* and each rotatable in the corresponding opening in the brackets A and A^1. Through these brackets beneath the openings for the eccentrics C are provided openings extending downwardly and bounded by lugs a^1 and a^3 through which suitable set screws b^1 extend for clamping, in the manner clearly indicated, the eccentrics C in any desired position of angular adjustment. Through each of these eccentrics C there is eccentrically bored a hole for receiving similar eccentrics D, each of which is also provided with a knurled head *d* to facilitate their angular adjustment. The eccentricities of the eccentrics C and D are made equal.

The inner eccentric rings D are bored out eccentrically for receiving the outer telescope tubes *t* carrying the eye pieces *e*. Within these tubes *t* inner tubes t^1 are made to slide freely but not loosely, such tubes t^1 carrying the enlargements e^1 containing the usual object glasses.

Any suitable construction may be made use of for preventing a longitudinal movement of the tubes *t* through the cam rings D and also for preventing a similar movement of the cam rings D within the cam rings C and also of the rings C within the brackets A and A^1, such, for instance, as a grooved construction, of one of each pair of such coöperating members adapted to receive a corresponding ridge or tongue on the other member, such constructions being well known in the art no further description thereof is believed to be necessary herein.

The connecting bar S carries a plate O having a bracket *o* within which there is revolubly mounted the rear bearing of a screw N^1 the other end of which is supported in a bearing o^1 carried by the plate O while these bearings *o* and o^1 are such as to prevent endwise movement of the screw N^1. On the rear end of the screw N^1 is seen a beveled gear g^1 meshing with a similar beveled gear *g* carried by the hub of the focusing screw G which latter is revolubly supported on a stud extending laterally, to the right, with reference to the user of the gun, from the bracket *o*. The brackets *o* and o^1 may be cast integrally with the plate O which is secured to the upper side of the connecting bar S. Threaded over this screw N^1 is seen a nut N having laterally extending bifurcated ears *n* engaging into the bifurcated lugs or ears n^1 carried by the inner tubes t^1 of the telescopes, the construction being such as clearly shown as to permit of the adjustment to and from each other of the telescopes without effecting the longitudinal adjustment of the tube *t*. The ears or lugs n^1 are carried on arms secured to the inner tubes t^1 extending outwardly through suitable longitudinally extending slots therefor in the outer tubes *t*. By the operation of the milled head G the focusing of the telescope is effected in the usual manner while the adjustment of the distances between the telescopes to compensate for the different distances between the eyes of different users is effected by operating the eccentrics C and D in opposite directions by means of the milled heads thereon *c* and *d*, after, of course, having first unscrewed the screws b^1 engaging through the lugs a^1 and a^3.

On the breech piece B^1, on the right hand

side thereof, is pivotally supported at r^2, an adjustable arm R held in any desired position of adjustment by means of the thumb screw r^1 threaded into the breach B^1 and engaging through a slot therefor in an upwardly turned arm r formed on the rear end of the lever R while coöperating with this lever R there is seen a roller U revolubly mounted on a stud on the inner edge of the right hand telescope tube t^1 and near its rearward end and extending outwardly through a slot therefor in the outer tube t, the action being such that the movement to the rear of the tube t^1 permits the spring s to force the breech of the gun downwardly while a forward movement of such tube t^1 operates to raise the breech of the gun against the action of the spring s.

From the construction thus far explained, it will be readily understood that the focusing of the telescope actuates the mechanism for raising and lowering the gun for different ranges in accordance with the focus in the telescope and I have found it desirable to provide an adjustable relation between these mechanisms as already explained by means of the pivotally supported lever R and the means described for securing the same in any desired position of angular adjustment.

At m^1 is seen a substitute for the usual trigger of the gun engaging through an opening therefor in the plate S and at its lower end articulating with the link M, the forward end of which articulates with the lower end of the auxiliary trigger J pivotally supported upon a stud secured in the bracket j^1 carried by the plate S as seen in Fig. 8, such stud engaging through the barrel or body j located at the center of the trigger J.

I have sometimes found it desirable to provide a pistol grip, such as seen in Fig. 1 at P, having forwardly and rearwardly extending members p^2 and p^3 adapted to be secured to the under side of the connecting bar S and provided with an upwardly extending ear p formed integrally therewith and upon which is pivotally supported a second trigger member p^1 provided with a laterally extending pin m engaging in a slot therefor in the under side of the connecting link M and near its forward end whereby the gun may be fired by either the operation of the trigger J or the operation of the trigger p^1.

The rear bracket A^1 carries laterally extending arms h on its upper edge terminating in curved plates H adapted to engage against the forehead of the user of the gun just above the eyes. These members H may be provided with suitable pads to engage against the forehead.

I have sometimes found it desirable to provide additional support for steadying the gun comprising a bifurcated stock piece consisting of two main members V hinged as seen at k to a common connecting piece K which is bifurcated to engage over the extension of the pistol grip P at its lower end and is pivotally secured thereto by means of the screw L provided with a thumb nut l to permit of any desired angular adjustment, within a moderate range, of the members V and the pistol grip P. To each member V, and on its under side, is pivotally connected one end of a link v such links being pivotally connected at their other ends by means of a bolt v^1 and having a thumb nut v^2 to permit of the angular adjustment of the members V and the securing of them in any desired position of such adjustment to provide for different widths between the shoulders of the users of the gun. The pivotal connection between the grip member P and the member K provides for different adjustments of the gun for different distances between the eye and shoulder of the user and by this means provision is also made, when the members V are folded together, for quick firing at short range at objects considerably above or below the eye of the user of the gun without necessitating that the user assume an unnatural position in the firing of the gun.

In using my gun the telescopes are adjusted to the distances between the eyes in the manner already described, by operating the milled heads c and d and the proper adjustment is given to the lever R then by focusing the telescope by means of the milled head G, the desired elevation of the gun is given simultaneously with the focusing of the telescopes upon the mark or object aimed at and the gun may be held by the hands of the user against the forehead, in a position substantially such as indicated in Fig. 1, without the use of either the pistol grip or the detachable stock pivotally connected thereto the firing being effected by the operation of the trigger J in the manner already explained; when, however, it is desired to make use of the auxiliary stock and the pistol grip the same is attached and adjustment made in the manner already described and the gun may then be fired by the trigger p^1.

The usual front sight f^1 and rear sight F and adjusting plate therefor f may be provided also and to permit of their use the forehead pieces H are spaced apart as seen in Fig. 3.

It is believed from the foregoing description of the operation of the several features of my gun that the method of using the same is sufficiently clear to call for no further explanation herein. I may mention, however, that when the gun is used without a stock it may be readily held and sighted by holding the outer tubes of the telescope and focusing the gun very much as is done in

the use of a field glass and after properly focusing the gun may be fired in the manner already described.

What I claim is:

1. A rifle or like firearm provided with binocular refracting telescopic sighting means wherein the eye piece of each telescope is the relatively fixed and the object glass the relatively movable member for adjustment in focusing, the telescopes adjustable to different distances between the eyes of different users, independent of variations in the focusing means or the elevation determining means of the rifle and provided also with means for determining the elevation of the rifle under the control of the telescopic focusing means.

2. A rifle or like firearm provided with binocular refracting telescopic sighting means wherein the eye piece of each telescope is the relatively fixed and the object glass the relatively movable member for adjustment in focusing, the telescopes adjustable to different distances between the eyes of different users, independent of variations in the focusing means or the elevation determining means of the rifle and provided also with means for adjustably determining the elevation of the rifle under the control of the telescopic focusing means.

3. A rifle or like firearm provided with binocular refracting telescopic sighting means wherein the eye piece of each telescope is the relatively fixed and the object glass the relatively movable member for adjustment in focusing, the telescopes adjustable to different distances between the eyes of different users, independent of variations in the focusing means or the elevation determining means of the rifle and provided also with means for determining the elevation of the rifle under the control of the telescopic focusing means and having a member adapted to bear a substantially fixed relation to the eye piece and to engage against the forehead of the user to steady the gun and oppose the recoil thereof.

4. A rifle or like firearm provided with binocular refracting telescopic sighting means wherein the eye piece of each telescope is the relatively fixed and the object glass the relatively movable member for adjustment in focusing, the telescopes adjustable to different distances between the eyes of different users, independent of variations in the focusing means or the elevation determining means of the rifle and provided also with means for adjustably determining the elevation of the rifle under the control of the telescopic focusing means and having a member adapted to bear a substantially fixed relation to the eye piece and to engage against the forehead of the user to steady the gun and oppose the recoil thereof.

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