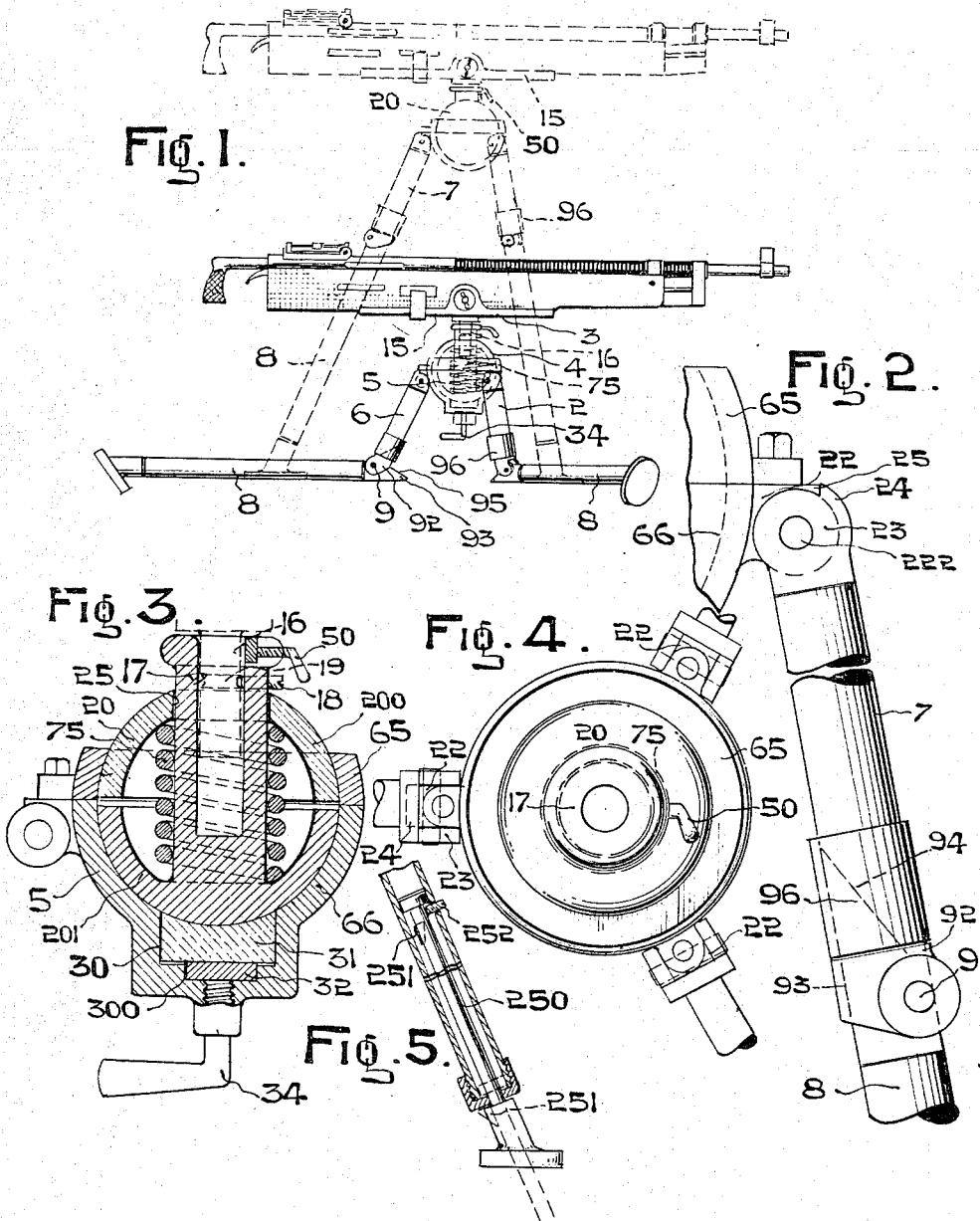


1,280,304.

Patented Oct. 1, 1918.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM A. ROBERTS, OF MONTREAL, QUEBEC, CANADA.

GUN-MOUNT.

1,280,304.

Specification of Letters Patent.

Patented Oct. 1, 1918.

Application filed April 7, 1916. Serial No. 89,594.

To all whom it may concern:

Be it known that I, WILLIAM A. ROBERTS, a subject of the King of Great Britain, and resident of the city of Montreal, in the Province of Quebec, Dominion of Canada, superintendent, have invented certain new and useful Improvements in Gun-Mounts; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates particularly to mounts for machine guns but may also be used in supporting a rifle, carbine or the like in the tuition of shooting.

With machine gun mounts which have been used up to the present time the gun had to be traversed in a plane parallel to the plane of its base, and consequently if a machine gun was positioned on a hillside or embankment and it was desired to traverse in a horizontal plane the supporting member had to be sunk in the ground until the plane of the base corresponded with the desired traversing plane. This has proved very undesirable in many respects and particularly where the hurried positioning or removal of a gun is of vital importance and as very often the nature of the ground prevents the embedding of the supporting member considerable time is wasted in seeking a desirable position.

Then again in the tuition of shooting, the instructors have been seriously hindered in their work owing to lack of a support for the rifle or carbine which will enable the marksman to cant or traverse the firearm at will and yet maintain it in the aimed position in order that the instructor may examine the marksman's effort.

It has been very difficult to obtain these results up to the present time as it has been the practice to place a sandbag upon a suitable support of the required height and the unstable qualities of the sand have proved very unsatisfactory.

The objects of my invention are therefore to produce a mount which when used as a support for a machine gun can be positioned on either an incline or horizontal surface without necessitating the embedding of the supporting members and which will enable the gun to have universal movement thereon; and when used as a support for a rifle or like firearm in the tuition of shooting, will enable the rifle to be canted or traversed at will and the aimed position maintained. More specifically stated the invention may

be said to consist of a gun-mount comprising a base member, a gun carrier, and an intermediate connection capable of universal movement.

For full comprehension, however, of my invention, reference must be had to the accompanying drawings forming part of this specification in which similar reference characters indicate the same parts, and wherein:

Figure 1 is a side elevation of my improved gun mount illustrating two of the positions in which the gun mount may be used;

Fig. 2 is a fragmentary elevation of the upper portion of one of the legs of the tripod;

Fig. 3 is a detail vertical sectional view of the universal hinge drawn to a larger scale;

Fig. 4 is a plan view of the universal hinge; and

Fig. 5 is a detail sectional view of one of the legs of the mount.

My improved gun mount comprises a base member or tripod 2, a gun seat 3 and a ball-and-socket joint 4 effecting a universal connection between the carrier and base member, means offering a yielding resistance to the movement of the ball in the socket and means rigidly maintaining the ball in the socket in any position.

The base member consists of a socket 5 pivotally supported upon preferably three legs 6 each consisting of two parts 7 and 8 joined together at their ends by a pivotal connection 9.

This joint 9 between the upper and lower parts of the legs is adapted to provide an extended foot for the gun when firing with the operator in prone position. The joint consists of a two-part casting with intermeshing knuckles. One of these joint parts 92, is forked to receive the other part 93 between its prongs, the body of the part 92 being chambered to present a beveled face 94 with which the beveled face 95 of the other part engages when the knuckles are hinged together and the leg is extended. In this latter position the engaging parts 94 and 95 are locked by a slidable sleeve 96.

It will be seen that the gun may be operated by a marksman lying prone or kneeling.

The carrier 3 is of the usual construction employed in machine gun mounts and consists of a seat proper 15 having a downward projection 16 upon its underside adapted to

be seated in an axial boring in the upper end of a shank 17. This shank constitutes a part of the ball-and-socket joint 4 effecting a universal connection between the gun carrier and base member or tripod. Relative axial displacement between the projection and shank is prevented by a set-screw 18 in the latter and adapted to enter a circumferential groove 19 in the former. A clamping screw 50 is mounted in the shank and is adapted to bear upon the projection 16 for the purpose of preventing relative movement between the two members.

The universal joint consists of a ball 20 mounted in a spherical chamber in the socket 5 which is also of substantially spherical form and made in two parts 65 and 66 secured rigidly together. The pivotal connection between the legs and the lower member 66 of the socket consists of a series of spaced radially projecting lugs 22 on the lower member, the upper end of each leg being forked as at 23 to straddle the lug 22 and a lug 24 on this forked end of the leg engages a stop 25 on the lug 22. Hinge pins 222 join the legs to the socket. The ball is hollow and formed in halves 201 and 200 the lower half having the lower end of the shank 17 carried therein and formed integrally therewith. From this point the shank projects upwardly through an opening 25 in the upper half 200 of the ball.

In order to offer a yielding resistance to the movement of the ball in the socket for the purpose of yieldingly maintaining the gun or rifle in the aimed position, a helical spring 75 encircling the shank 17 is located between the halves of the ball and it tends to separate them thus producing the desired friction between the ball and the wall of the socket.

To provide means for rigidly maintaining the ball in the socket in the aimed position the lower member is offset downwardly to provide a circular chamber 30. Within the chamber is carried a friction block 31 of fiber or any suitable friction material, having a concaved surface adapted to bear upon the ball. This friction block is caused to bear upon the ball by a bearing disk 32 accommodated in a recess 300 in the bottom of the chamber 30 and acted upon by the screw-threaded shank of a handle 34. The pressure on the ball is varied by the turning of this handle.

It will be seen that with the above universal connection between the tripod or supporting member and the gun, the latter may be canted to either the right or left, traversed in a complete circle or elevated or depressed to an extent of 45° above or below the horizontal plane.

In order to lengthen the legs of the supporting member for the purpose of employing the mount in the tuition of shooting the

lower part of each leg is constructed in sleeve form as indicated in Fig. 5 and a telescopic member 250 slidably mounted therein. This member is maintained in extended position by a gravity pawl 251 and in the telescoped position by a set-screw 252.

What I claim is as follows:

1. A gun-mount consisting of a supporting member, a gun-seat having a downwardly extending shank, a ball-and-socket joint effecting a universal connection between the supporting member and seat, said ball consisting of two members and a helical spring located between the members and adapted to offer a yielding resistance to the movement of the ball in the socket, the said shank providing means for supporting the pivoted gun-seat.

2. A gun-mount consisting of a supporting member, a gun-seat having a downward projection, a ball-and-socket joint effecting a universal connection between the supporting member and seat, said ball consisting of two members one of which has an internal integral shank projecting through a hole in the other member, and a helical spring located between the members and encircling the shank and bearing between the interior surfaces of the said members and adapted to offer a yielding resistance to the movement of the ball in the socket, the said shank providing means for supporting the pivoted gun-seat.

3. A gun-mount consisting of a supporting member, a gun-seat having a downward projection, a ball-and-socket joint effecting a universal connection between the supporting member and seat, said ball consisting of two members one of which has an internal integral shank protruding through a hole in the other member, and a helical spring located between the members and adapted to offer a yielding resistance to the movement of the ball in the socket the said shank being in the form of a socket and receiving the downward projection of the gun-seat.

4. A gun mount consisting of a supporting or base member comprising a socket and a plurality of legs supporting said socket, each of said legs consisting of two parts pivotally connected together at their ends, the lower part being adapted in one position to act as a shoe for the upper part and in another position to act as an extension of the upper part; means for locking the lower part in extended position; and means for limiting outward movement of the leg; a gun seat and a universal connection between the seat and the supporting member.

5. A gun mount consisting of a supporting or base member comprising a socket having a plurality of radially projecting lugs; a plurality of legs supporting said socket each leg consisting of two parts the ends of the upper part being forked and the

upper end thereof straddling and being pivotally connected to one of the radially projecting lugs on the socket; a lug on said forked upper end adapted to engage the
5 lug on the socket for the purpose of limiting outward movement of the upper part, the lower end of the upper part being adapted to straddle the upper end of the lower part and being pivotally connected
10 thereto, such lower part being adapted to act as a shoe for the upper part in one position and as an extension of the latter in another position, the upper end of the lower part and the lower end of the upper
15 part presenting beveled faces adapted to come into contact when the lower member is in extended position, and a collar on the upper part adapted to encircle the overlapping ends for the purpose of preventing
20 relative displacement between the two members.

6. A gun mount consisting of a supporting or base member comprising a socket and a plurality of legs supporting said socket each of said legs consisting of a main member constituted by two parts hingedly connected together, the lower part being of sleeve form and having a telescopic member
25 slidably mounted therein; means for limiting outward movement of the telescopic member; means for rigidly maintaining the said main member in telescoped position;
30 and means for maintaining such member in extended position.

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

WILLIAM A. ROBERTS.

Witnesses:

WILLIAM HEWETSON,
DAVID ROBERGE.