S. FABER.

GUN MOUNT AND ELEVATING MECHANISM.

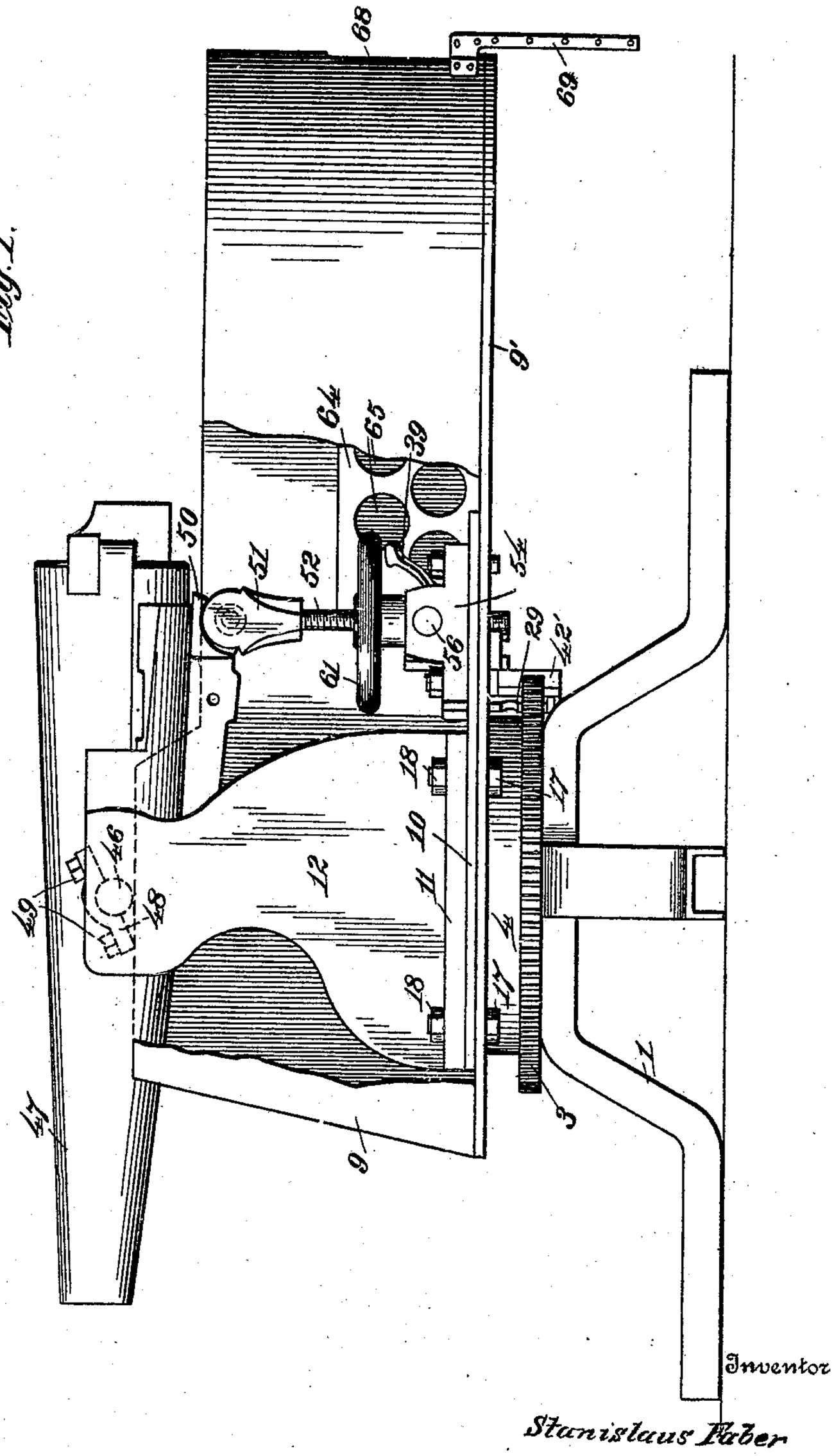
APPLICATION FILED MAY 13, 1909.

934,513.

Patented Sept. 21, 1909.

4 SHEETS—SHEET 1.

Fig. 1.



Witnesses

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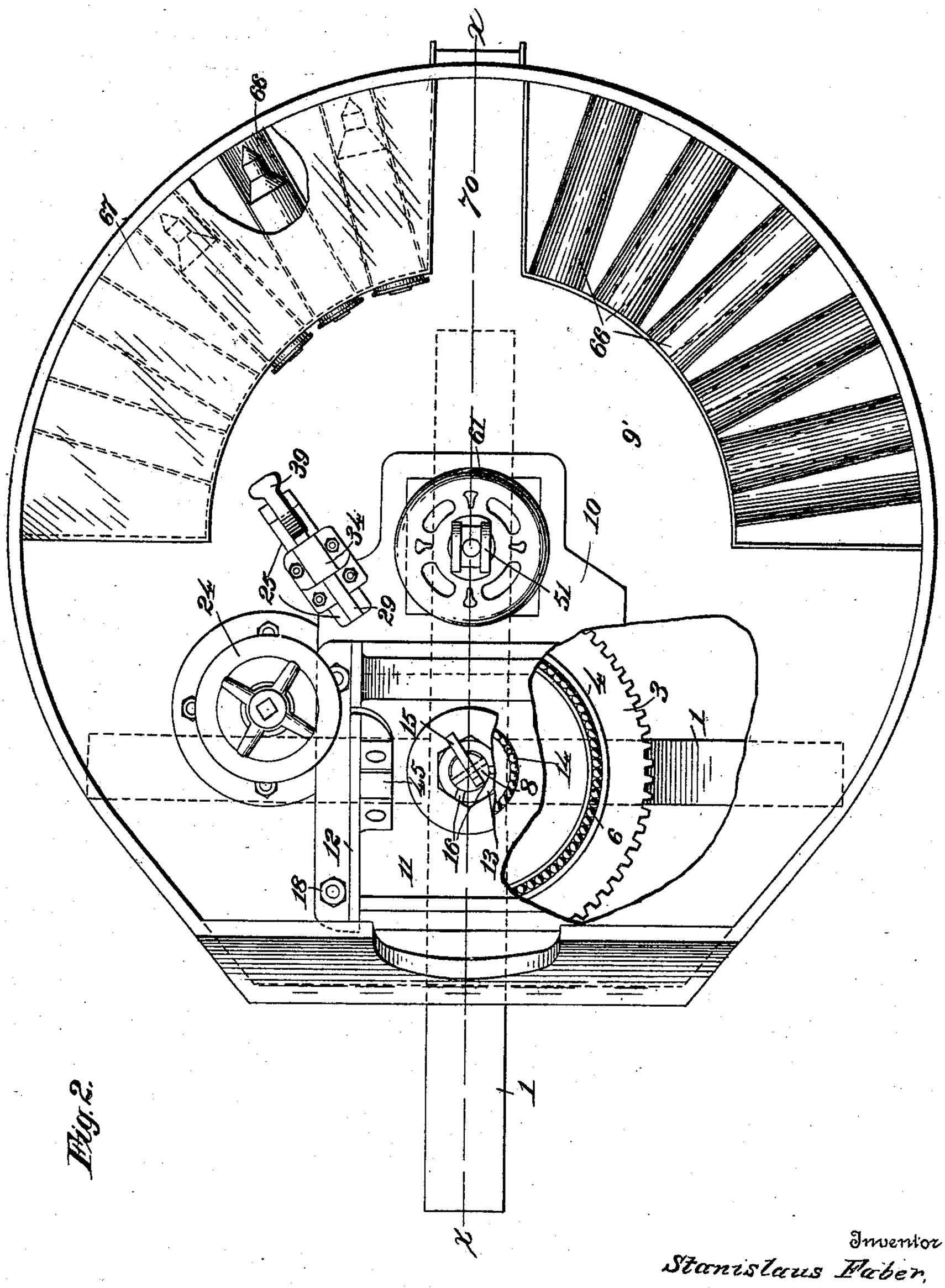

Fig. 2.

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4 SHEETS—SHEET 3.

Fig. 3.

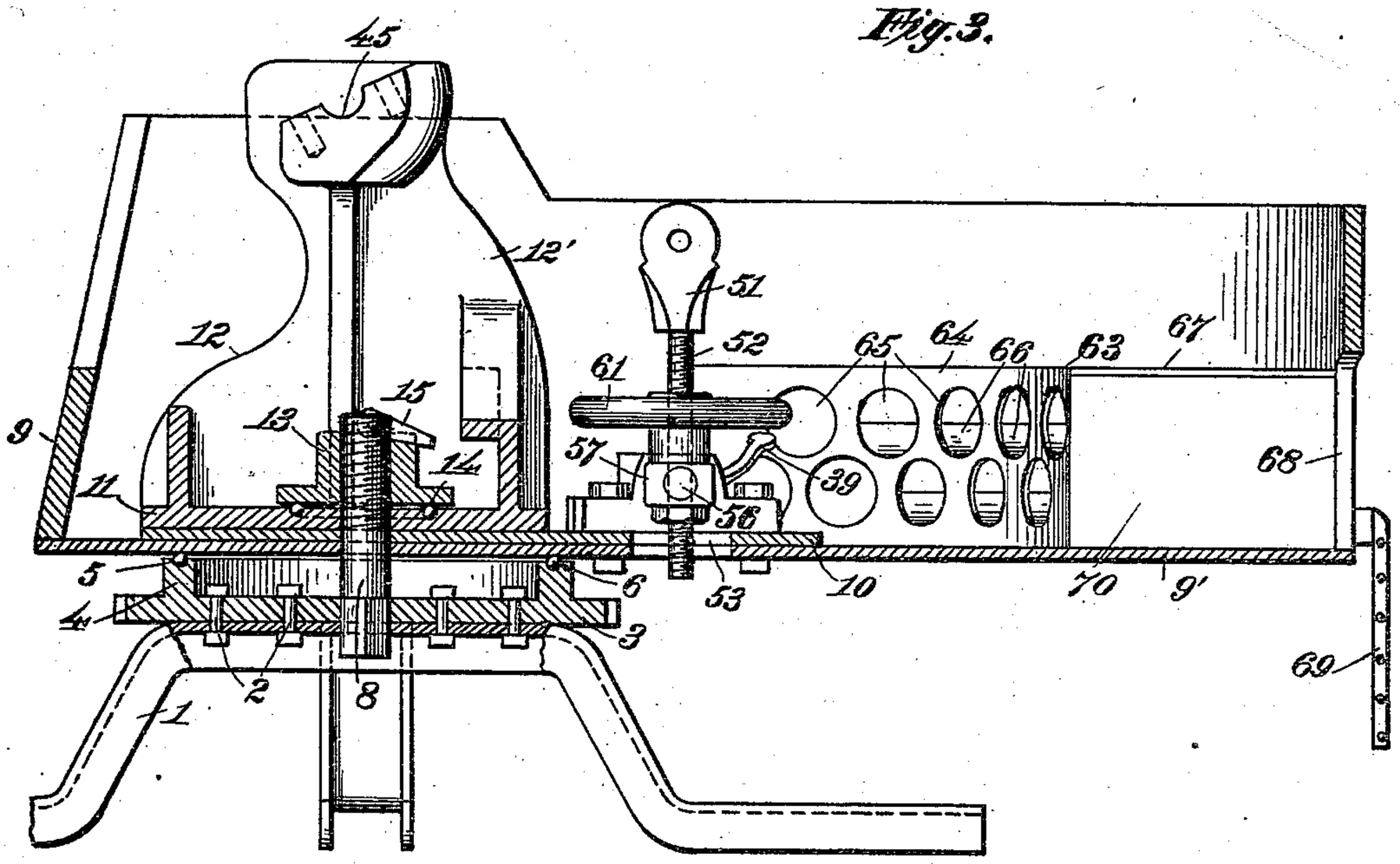
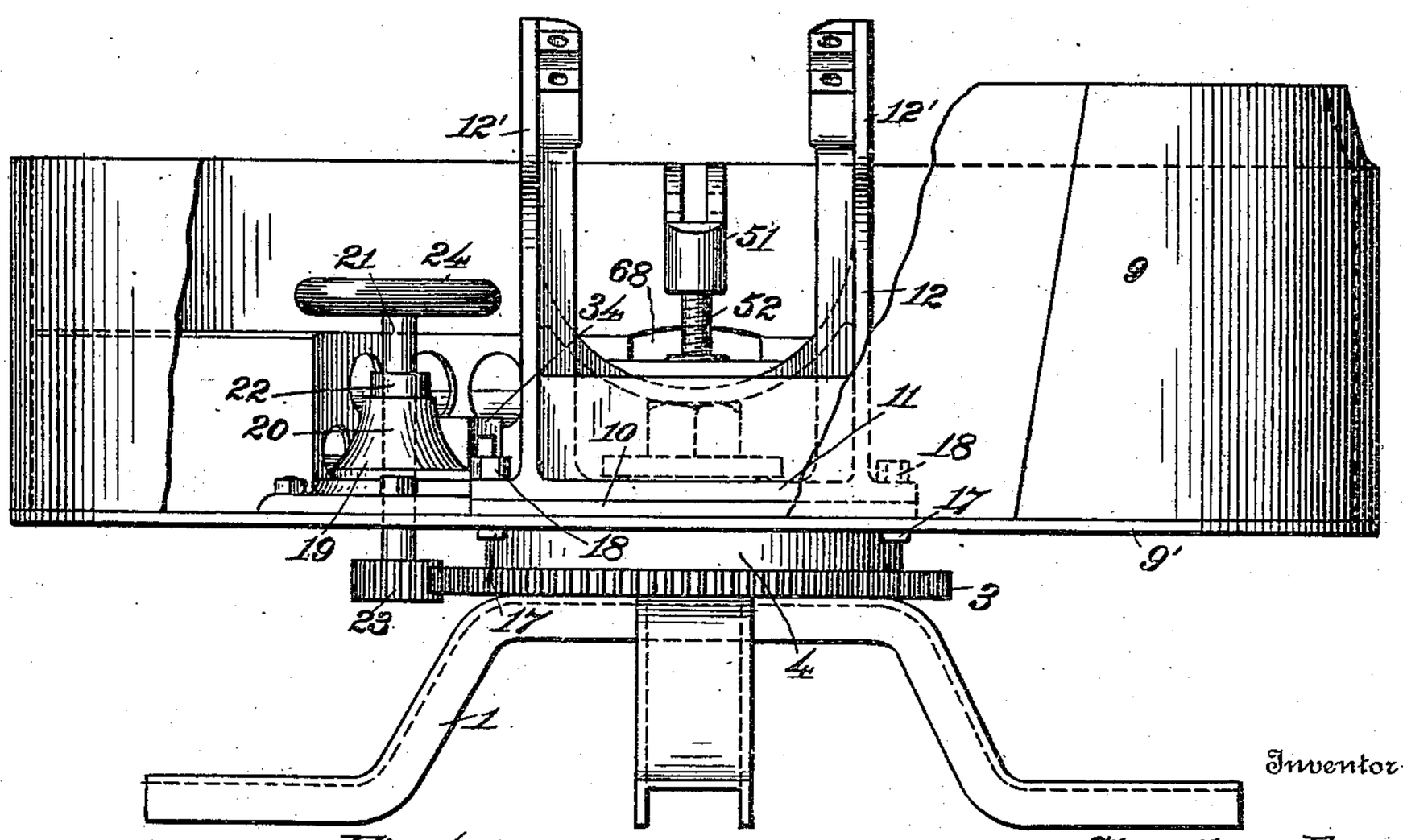


Fig. 4.



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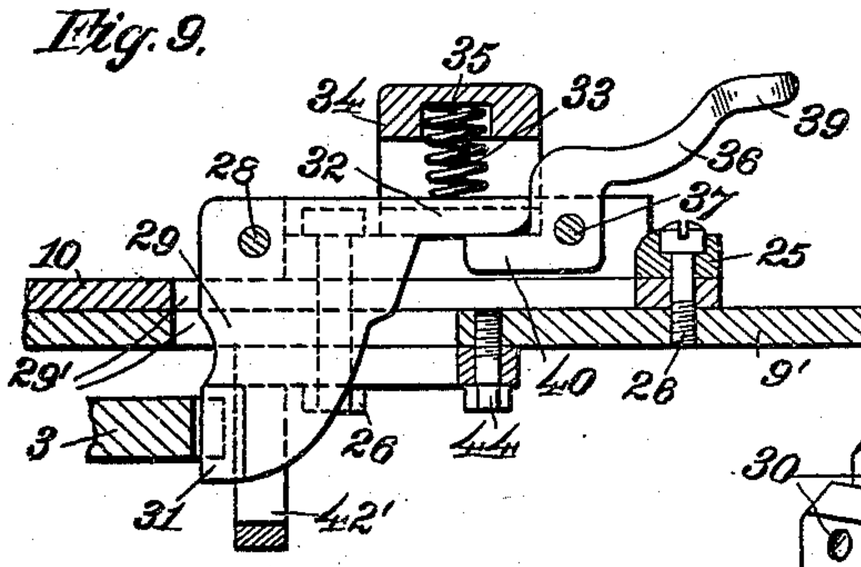
4 SHEETS—SHEET 4.

Fig. 9.



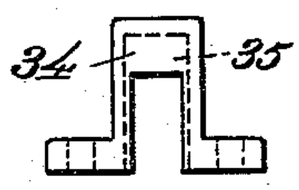


Fig. 10.

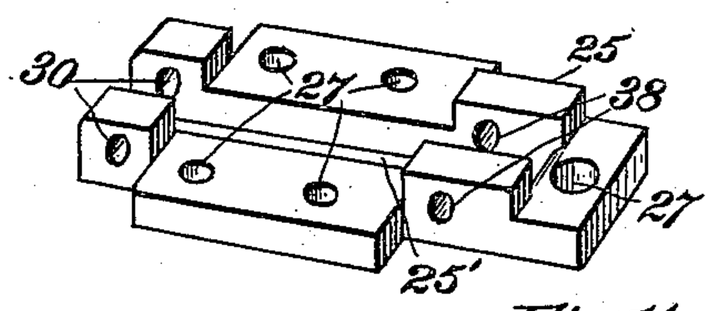


Fig. 11.

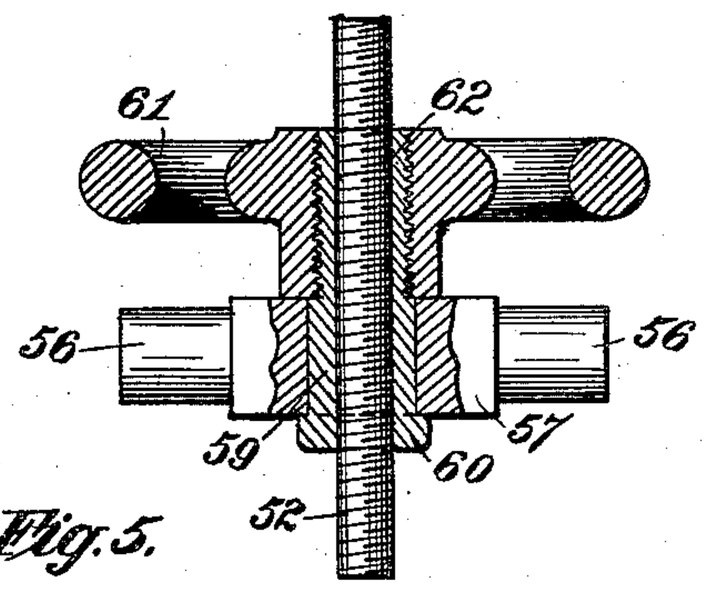


Fig. 5.

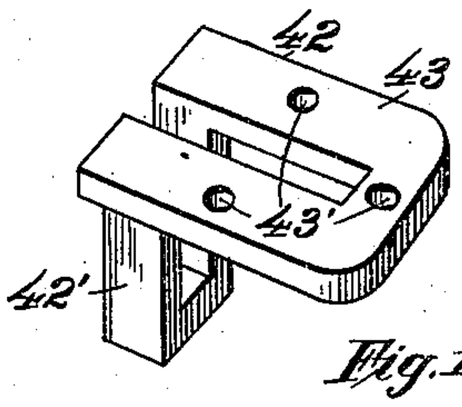


Fig. 12.

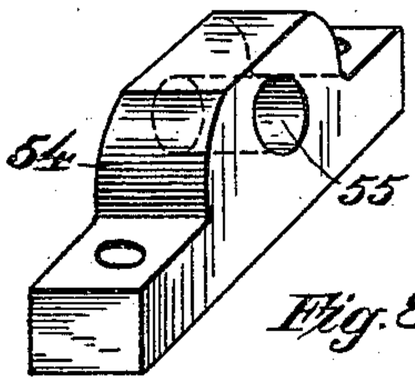


Fig. 8.

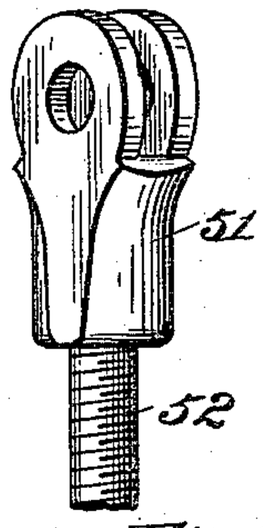


Fig. 6.

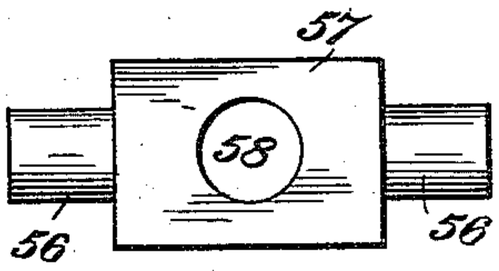


Fig. 7.

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UNITED STATES PATENT OFFICE.

STANISLAUS FABER, OF CHICAGO, ILLINOIS.

GUN MOUNT AND ELEVATING MECHANISM.

934,513. Specification of Letters Patent. Patented Sept. 21, 1909.

Application filed May 13, 1909. Serial No. 495,773.

To all whom it may concern:

Be it known that I, STANISLAUS FABER, a subject of the Emperor of Austria-Hungary, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Gun Mounts and Elevating Mechanism, of which the following is a specification.

My invention relates to ordnance, and particularly to the mounts and elevating mechanism for large guns.

The object of my invention is to provide an improved gun mount for large guns provided with a turret rotatable therewith and equipped with improved means within the turret for rotating the turret and the gun and for elevating the gun.

Other objects will appear hereinafter.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification and in which—

Figure 1 is a side elevation of the gun mount forming the subject of my invention, a portion of the turret being broken away to better illustrate parts of the mechanism, Fig. 2 is a top plan view of the device with the gun removed, a portion of the turret being broken away to expose underlying parts, Fig. 3 is a central vertical longitudinal section taken on substantially the line *x*—*x* of Fig. 2, Fig. 4 is a front elevation of the device, a portion of the same being broken away, Fig. 5 is an enlarged sectional detail of the gun elevating screw, wheel and trunnioned block, Fig. 6 is a detail of the upper end of the gun elevating screw, Fig. 7 is a detail view of the trunnioned block, Fig. 8 is a perspective view of one of the brackets in which the block is trunnioned, Fig. 9 is an enlarged sectional detail of the turret locking mechanism, and Figs. 10, 11, and 12 are detail views of the several parts of said mechanism.

Referring now to the drawings, 1 indicates a pedestal which may be of any ordinary or preferred form. Mounted upon said pedestal and rigidly fixed thereto, preferably by means of bolts 2 is a gear wheel 3, provided with an upwardly extending concentric annular flange 4. The upper surface of said flange is provided with a channel 5 forming a race way for the balls 6. 8 indicates a pivot post having its lower end portion rigidly fixed in the gear 3 and pedestal 1 and extending upwardly therefrom. Pivotally mounted on said post and resting on the balls 6 is a turret 9 formed of heavy metal plate, the same being of any suitable shape but preferably of substantially horseshoe shape. 10 indicates a metal plate or mat resting upon and secured to the floor 9′ of the turret. Resting on said mat is the gun carriage 12, the base 11 of which is perforated to receive the post 8.

Threaded on the upper end of the post 8 is a lock nut 13 between the lower face of which and the base 11 of the turret are interposed ball bearings 14. The upper end of the post is bifurcated and pivotally mounted in the bifurcated end is a latch 15 which is adapted to engage one of a plurality of radially extending slots 16 formed in the upper face of said nut, to lock the same in position. The gun carriage 12 is rigidly fixed to the turret floor and mat 10 by bolts 17 having nuts 18.

Rigidly fixed to the turret floor to one side of the carriage 12 is a member 19 having a vertically disposed bore 20 forming bearings for a vertically disposed shaft 21. The shaft 21 is provided with a collar 22 resting on the upper end of the member 20 and its lower end is provided with a pinion 23 in mesh with the gear wheel 3. The upper end of the shaft 21 is provided with a hand wheel 24. It is obvious that by turning said hand wheel the turret and carriage together with the gun may be readily rotated.

To lock the turret against rotation and in any desired position, I provide a locking mechanism which is illustrated in detail in Figs. 9, 10, 11 and 12, and arrange the same adjacent to the hand wheel 24 in order that it may be readily operated to release the turret when it is desired to turn the same. Said mechanism comprising a substantially U-shaped base member 25 secured to the turret 4 and preferably upon the mat 10 by means of bolts 26 passing through apertures 27 provided in said member. Pivotally mounted in the member 25 on a pivot pin 28 is a dog 29, the ends of the pin 28 resting in apertures 30 provided in said member near the end thereof. The dog 29 depends through slots 29′ provided in the mat and the turret floor, and its lower end 31 is adapted to normally engage the teeth of the gear wheel 3 and hence act as means for locking the turret against rotary movement.

To hold the dog in contact with the gear I provide the dog with a horizontal extension 32 upon which rests a coiled spring 33. Secured to the member 25 and spanning the central opening 25′ thereof and the extension 32 of the dog is a housing 34 provided with a seat 35 to receive the upper end of the spring. To disengage the dog from the gear when desired, I provide a lever 36 pivotally mounted on a pin 27, the ends of said pin resting in perforations 38 provided in the member 25. The lever is provided with a foot piece 39 and an end portion 40 which extends under the extension 32 of the dog. It is obvious that by depressing the foot portion 39 the dog will be disengaged from the gear. An angular member 42 is provided which serves as the reinforcing element for the turret floor and as a guide for the dog 29. This comprises a flat horizonally disposed U-shaped member 43 secured beneath the floor 9′ by means of the bolts 26 and a bolt 44, said member being provided with apertures 43′ to receive the same, and a vertically disposed depending U-shaped member 42′, the latter serving as a guide for the lower end of the dog 29. The upper extremity of the gun carriage arms 12′ are provided with bearings 45 to receive the trunnions 46 of the gun barrel 47. 48 indicates caps secured to the bearings by means of the bolts 49.

The gun barrel is provided with a depending lug 50 at the breech end to which is pivotally connected a bifurcated head 51 provided with a depending screw 52 which extends through an aperture 53 in the mat 10 and floor of the turret. Arranged upon each side of the aperture 53 is a bracket 54, said brackets being provided with alined bearings 55 to receive the trunnions 56 of a block 57. The trunnioned block 57 is provided with a central vertical bore 58 in which is rotatably mounted a sleeve 59. The sleeve 59 is provided at it lower end with an annular flange 60 which bears against the under face of the block 57 and its upper end is provided with a hand wheel 61 fixed thereto and bearing against the upper end of the block. The sleeve 59 is provided with a threaded bore 62 in threaded engagement with the screw 52. It is evident that by turning the hand wheel 61 the sleeve 59 will be rotated and the gun breech raised or lowered.

The rear portion of the turret is provided with an ammunition rack 63. This comprises an inner plate 64 curved to parallel the rear wall of the turret and provided with apertures 65 to receive the shells. Extending inwardly from each aperture 65 to the wall of the turret is a semi-cylindrical sheet metal chamber 66. The ammunition rack is covered by a plate 67. The rear wall of the turret is provided with an opening 68 to admit men or ammunition to the turret and a depending ladder 69 affords access thereto. The ammunition rack is preferably formed in two sections as shown providing a passage wav 70 between them extending inwardly from the opening 68.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. The combination with a pedestal, of a turret pivotally mounted upon said pedestal, a horizontally disposed gear wheel fixed to said pedestal, a vertically disposed shaft journaled in the floor of said turret, a pinion fixed to the lower extremity of said shaft in mesh with said gear-wheel, means for rotating said shaft, means operable from within said turret adapted to engage the teeth of said gear-wheel for locking said turret against rotary movement, a carriage supported in said turret, and a gun trunnioned in bearings provided in said carriage, substantially as described.

2. The combination with a pedestal, of substantially circular turret pivotally mounted upon said pedestal, a horizontally disposed circular member centrally positioned upon and fixed to said pedestal, gear teeth formed in the periphery of said member, a vertically disposed shaft journaled in the floor of said turret, a pinion fixed to the lower end portion of said shaft in mesh with the teeth of said circular member, a handwheel fixed to the upper extremity of said shaft, a dog pivotally secured to and depending through the floor of said turret, said dog being adapted to normally engage the teeth of said circular member, means operable from within said turret the depression of which causes the releasement of said dog, a carriage centrally positioned and supported in said turret, and a gun trunnioned in bearings provided in said carriage, substantially as described.

3. The combination with a pedestal, of a substantially circular turret pivotally mounted thereon, a gear toothed circular disk centrally positioned upon and fixed to said pedestal, an annular upwardly projecting flange formed upon the upper surface of said pedestal, a ball race formed in the upper edge of said flange, balls resting in said race upon which said turret seats, means in mesh with the teeth of said disk for revolving said turret, a carriage centrally positioned in and secured to said turret, and a gun mounted upon said carriage, substantially as described.

4. In combination, a pedestal provided with a horizontally disposed gear toothed circular disk fixed thereto, a cylindrical member fixed to and vertically projecting from said pedestal, a turret rotatable about said cylindrical member, ball bearings for said turret provided upon said circular disk, a

locking member fixed to the upper end portion of said cylindrical member, ball bearings provided upon the floor of said turret upon which said locking member seats, a carriage provided in said turret, a gun trunnioned upon said carriage, means in mesh with the teeth of said circular disk for rotating said turret, and means adapted to engage the teeth of said disk for locking said turret in position relative to said disk, substantially as described.

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

STANISLAUS FABER.

Witnesses:

JOSHUA R. H. POTTS,

JANET E. HOGAN.