July 14, 1953 A. J. TALONE 2,645,037

GUN SIGHTING

Filed Dec. 3, 1951 2 Sheets-Sheet 1

Fig. 1

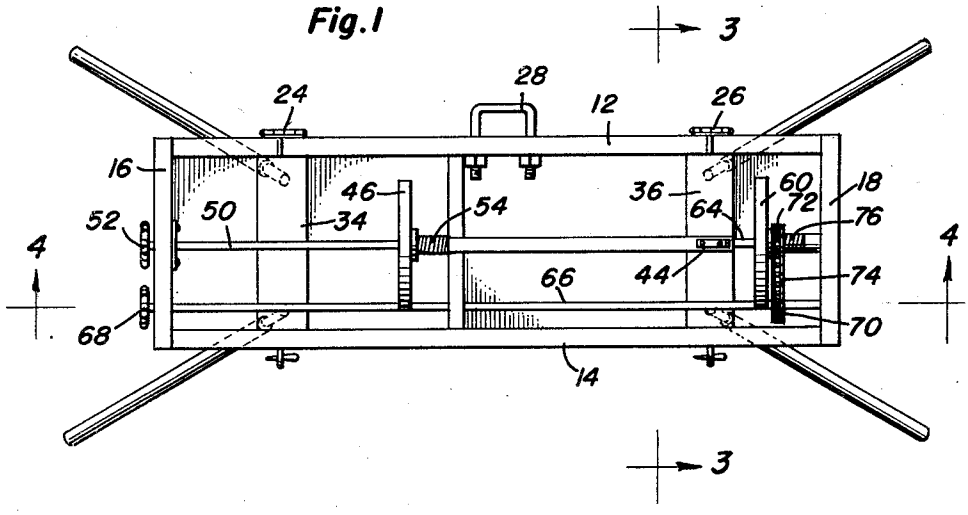


Fig. 2

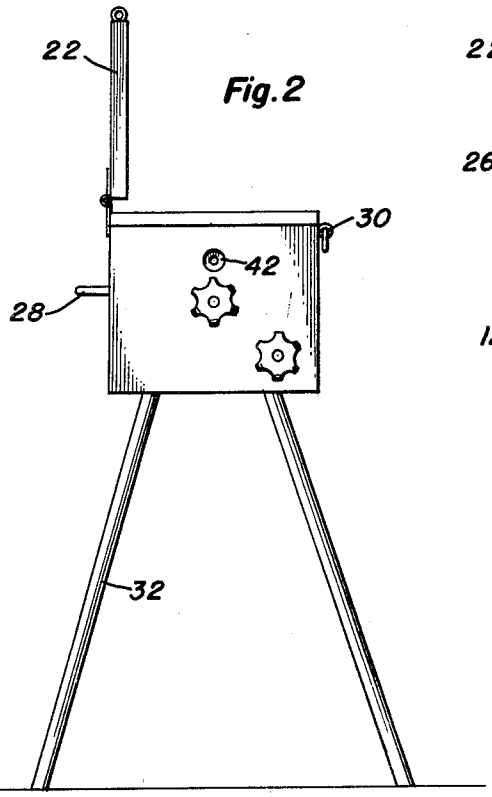
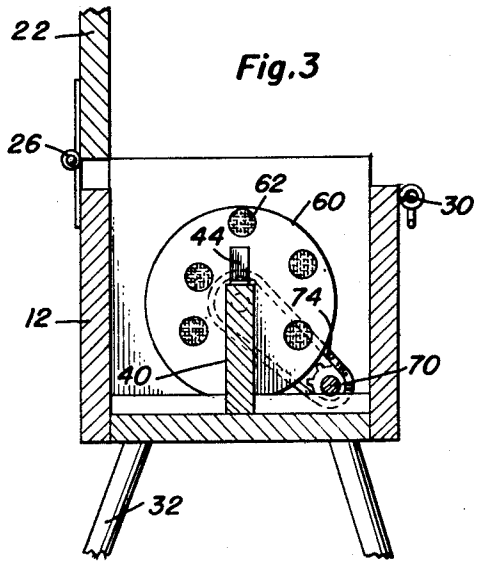


Fig. 3



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July 14, 1953 A. J. TALONE 2,645,037

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Filed Dec. 3, 1951 2 Sheets-Sheet 2

Fig.4

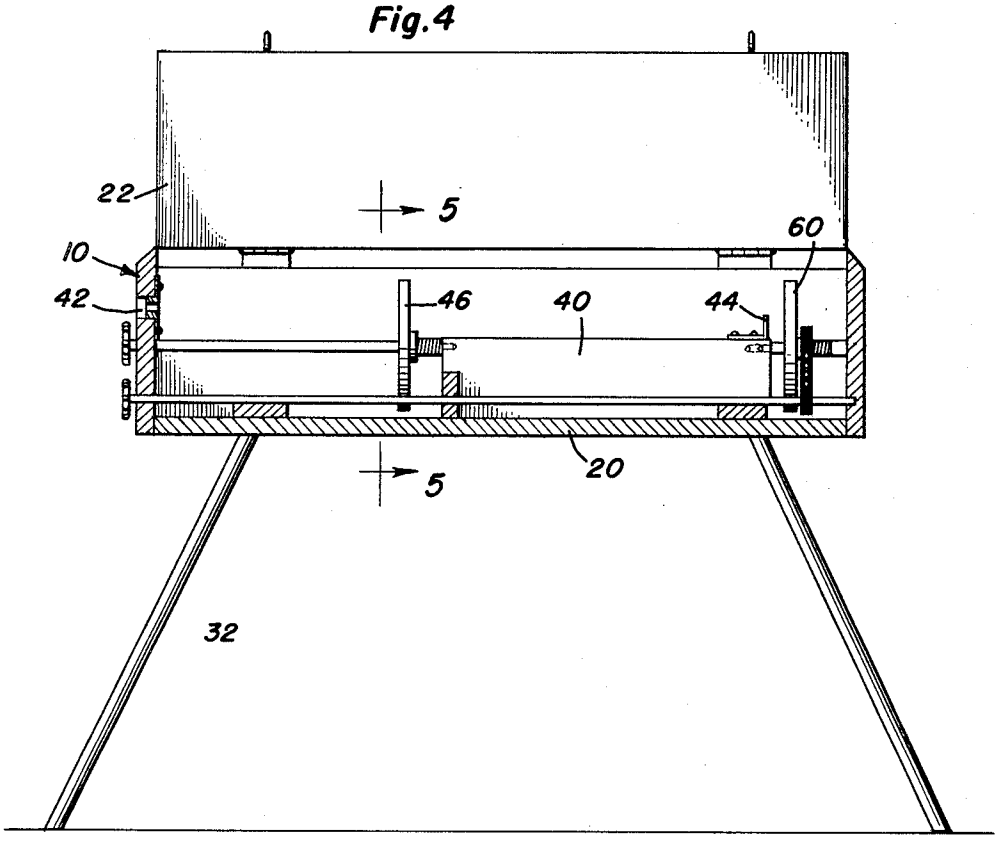


Fig.5

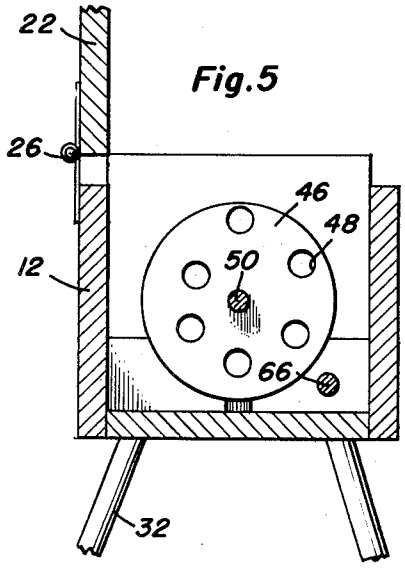


Fig.6

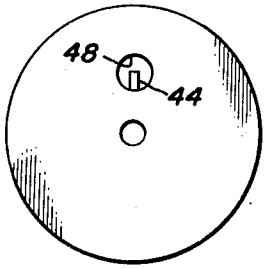
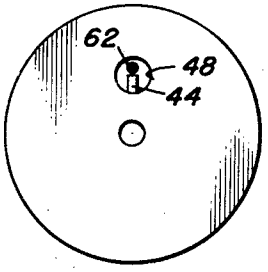


Fig.7



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Patented July 14, 1953

2,645,037

UNITED STATES PATENT OFFICE

2,645,037

GUN SIGHTING

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Application December 3, 1951, Serial No. 259,531

7 Claims. (Cl. 35—25)

1

This invention relates to a sight trainer and particularly to a device for training trainees in the use of small arms.

In sighting small arms it is necessary to bring a sight aperture and a front sight into correct alignment and position with respect to a target in order to secure hits therewith. This machine presents a means for training trainees so that they will learn the proper technique of aligning the rear apertures, the front sight and the target areas.

The present machine provides a frame having a simulated gun barrel therein and an aperture which together with a front sight on the gun barrel presents a line of sight and a plurality of rear sight apertures which may be aligned in the line of sight and a plurality of targets one of which at least can be properly aligned in the line of sight between the rear apertures, the gun sight and the target areas.

It is accordingly an object of this invention to provide an improved sight training device.

It is a further object of this invention to provide a training device to train trainees how to align up the sights of small arms.

It is a further object of this invention to provide a sight training device having a plurality of apertures which may be selectively engaged in line of sight.

It is a further object of this invention to provide a sight training device in which a plurality of apertures may be properly aligned with a sight and a target area.

It is a further object of this invention to provide a training device having a plurality of target areas which may be selectively presented into the line of sight of the device.

Other objects and many of the attendant advantages of this invention will be apparent from the following detailed description, taken in conjunction with the accompanying drawings, in which:

Figure 1 is a top plan view of the sight training device in operative position;

Figure 2 is a front view of the sight training device;

Figure 3 is a cross section taken substantially on the plane indicated by line 3—3 of Figure 1 and showing the target operating mechanism;

Figure 4 is a longitudinal section taken substantially on the plane indicated by line 4—4 of Figure 1 and showing the operating mechanisms for the sight apertures and the target field;

Figure 5 is a cross section taken substantially on the plane indicated by line 5—5 of Figure 4

2

showing the arrangement of the rear sight having a plurality of selectable apertures;

Figure 6 is a view showing the rear sight and front sight in proper location; and

Figure 7 is a view showing sights and targets in proper alignment.

The sight training device according to the invention comprises a frame 10 having side members 12 and 14, end members 16 and 18 herein shown as providing a substantially longitudinal rectangular framework. Obviously, the framework could be of any size and shape and could quite obviously be cylindrical with the working parts contained therein.

The frame is likewise preferably provided with a bottom 20 and a top 22 which is hinged thereto by means of hinge devices 24 and 26 and may be provided with a detachable handle 28 herein shown as being arranged in a side member 12. The top member 22 may be closed onto the framework and locked in position by means of catches 30. Preferably the framework is supported on any suitable mechanism such as a table, bench or other device and is herein shown as being mounted on legs 32. The framework 10 being provided with cross members 34 and 36 to provide reinforced sections into which the tops of the legs 32 may be inserted.

The training device mounted in the case consists of a simulated gun barrel 40, a sight aperture 42 in the framework 10 and a gun sight 44 mounted on the gun barrel 40. The aperture 42 and the gun sight provide a fixed line of sight in the sight training device.

A rear sight member 46 has a plurality of rear sight apertures 48. The rear sight member 46 is mounted on a shaft 50 which is journaled between the end of the gun barrel 40 and an aperture in the end 16 of the frame 10. The shaft 50 extends through the aperture in the member 16 and has a hand operating wheel 52 secured thereon. A resilient element such as a spring 54 is mounted between the sight member 46 and the end of the gun barrel so that there is a pressure tending to lock the sight member 46 in position.

By turning the handwheel 52 the sight member 46 can be turned to present various of the apertures 48 into the line of sight so that the trainee may select one of the apertures which he believes is exactly in the line of sight and coincides therewith. When the rear sight aperture is in proper relation to the line of sight between the aperture and the frame and the front sight 44 the appearance will be as seen in Figure 6 with the gun sight extending exactly centrally of

the aperture and terminating at the exact center thereof.

After the rear sight aperture has been adjusted in what the trainee believes to be the proper location the supervising officer may sight through the device and ascertain that it has been properly selected. The braking mechanism presented by the friction spring 54 effectively preventing dislocation of the sight during the interval of transfer of the trainee from the sighting position.

Obviously many forms of rear sight mechanisms may be utilized. Instead of utilizing a disk rotatable about a shaft it is obviously possible, to use a sliding member having a rack and pinion driving arrangement or any other such device.

In any event the rear sight member will have a plurality of rear sight apertures at least one of which can be brought into proper alignment in the line of sight between the aperture and the frame and the front gun sight.

A target member 60 is arranged between the sight 44 and the rear end 18 of the frame 10. The sight member 60 is provided with a plurality of target devices 62 which can be selectively presented to the line of sight between the aperture 42, the gun sight 44 and the target member. After the trainee has properly aligned the rear sight aperture and the gun sight he then selects the proper target which will be arranged exactly in tangent relation to the top of the gun sight as shown in Figure 7.

The member 60 is herein shown as a disk having a plurality of simulated targets thereon, at least one of said targets being capable of being manipulated into exact coincidence with the line of sight. The disk 60 is mounted on a shaft 64 journaled in the end of a gun barrel 40 and the rear end 18 of the frame. A driving mechanism for the disk 60 provides a shaft 66 journaled in the front end 16 and the rear end 17 of the frame and having a handwheel 68 rigidly mounted thereon. A driving connection between the operating shaft 66 and the shaft 64 comprises a pinion 70 mounted on the shaft 66, a pinion 72 mounted on the shaft 64 and a driving instrument 74 such as a chain mounted on the sprockets 70 and 72. Preferably a spring braking mechanism 76 is mounted between the sprocket 72 and the end 18 of the frame. This spring serves the purpose of acting as a brake mechanism so that the target 60 will be maintained in fixed relation after it has been adjusted.

Obiously, many driving connections other than the sprocket chain arrangement can be utilized. For example, gear teeth could be provided in the rim of the disk 60 and a gear could be mounted meshing therewith, or obviously, any number of mechanical connections other than the rotating type could be utilized. In any event a target member will be provided with a plurality of simulated targets any one of which can be approached to the line of sight and at least one of which can be made to completely coincide with the line of sight to establish a proper sighting arrangement.

The device as shown is constructed of opaque material and the lid 22 should be raised during the sighting interval. However it is quite obvious that the lid 22 could be made of light transmitting material in which case it would be unnecessary to lift the lid 22.

While for purpose of exemplification a particular embodiment of the invention has been shown, and described according to the best present understanding thereof, it will be apparent to those skilled in the art, that many changes and modifications can be made therein without departing from the true spirit of the invention.

Having described the invention, what is claimed as new is:

1. A sight trainer comprising a case, a simulated gun barrel rigidly mounted in said case, a front sight on said barrel, a sighting aperture in said case in alignment with said barrel and said front sight, a rear sight disk rotatably mounted adjacent the rear of said barrel, a plurality of rear sight apertures in said rear sight disk, means for rotating said disk to selectively position said rear sight apertures in proximity to the line of sight between said sighting aperture and said front sight, one of said apertures being capable of correct alignment in said line of sight, a target disk adjacent the front of said barrel, a plurality of targets on said target disk, means for rotating said target disk to selectively position said targets in proximity to said line of sight, one of said targets being capable of correct alignment in said line of sight.

2. A sight trainer comprising a case, a simulated gun barrel rigidly mounted in said case, a front sight on said barrel, a sighting aperture in said case in alignment with said barrel and said front sight, a rear sight disk rotatably mounted adjacent the rear of said barrel, a plurality of rear sight apertures in said rear sight disk, means for rotating said disk to selectively position said rear sight apertures in proximity to the line of sight between said sighting aperture and said front sight, one of said apertures being capable of correct alignment in said line of sight, a target disk adjacent the front of said barrel, a plurality of targets on said target disk, means for rotating said target disk to selectively position said targets in proximity to said line of sight, one of said targets being capable of correct alignment in said line of sight, resilient means for holding said sight disk and said target disk in selected position.

3. A sight trainer comprising a frame, a simulated gun barrel mounted in said frame, a front gun sight supported by said barrel, a sighting aperture in said frame, a shaft journaled in said frame and said simulated gun barrel, a hand wheel mounted on said shaft exterior of said frame, a rear sight operatively connected to said shaft, a plurality of rear sight apertures in said rear sight, said shaft being operable by said hand wheel to selectively move said rear sight apertures into the line of sight between the frame aperture and said front sight, one of said rear sight apertures being capable of proper alignment in said line of sight.

4. A sight trainer comprising a frame, a simulated gun barrel mounted in said frame, a front gun sight supported on said barrel, a sighting aperture in said frame, a shaft journaled in said frame and said simulated gun barrel, a hand wheel mounted on said shaft exterior of said frame, a rear sight operatively connected to said shaft, a plurality of rear sight apertures in said rear sight, said shaft being operable by said hand wheel to selectively move said rear sight apertures into the line of sight between the frame aperture and said front sight, one of said rear sight apertures being capable of proper alignment in said line of a sight, a target member mounted in front of said front sight, a plurality of targets on said target member, a second shaft journaled in said frame, a hand wheel on said second shaft exterior of said frame, said target member being operatively connected to said sec-

ond shaft, said second shaft being operable to selectively move said targets into said line of sight, one of said targets being capable of proper alignment in said line of sight.

5. A sight trainer comprising a frame, a simulated gun barrel mounted in said frame, a front gun sight mounted on said barrel, a sighting aperture in said frame, a shaft journaled in said frame and said gun barrel, a hand wheel mounted on said shaft exterior of said frame, a rear sight operatively connected to said shaft, a plurality of rear sight apertures in said rear sight, said shaft being operable by said hand wheel to selectively move said rear sight apertures into the line of sight between the frame aperture and said front sight, one of said rear sight apertures being capable of proper alignment in said line of sight, a plurality of targets, means for selectively moving said targets into said line of sight, one of said targets being capable of proper alignment in said line of sight.

6. A sight trainer comprising a frame, a front gun sight mounted in said frame, an aperture in said frame, a plurality of rear sight apertures, means for selectively moving said rear sight apertures into the line of sight between said frame aperture and said gun sight, one of said rear sight apertures being capable of correct alignment with said line of sight, a target member mounted in front of said front sight, a plurality of targets on said target member, a second shaft journaled in said frame, a hand wheel on said second shaft exterior of said frame, said target member being operatively connected to said second shaft, said second shaft being operable to selectively move said targets into said line of sight, one of said targets being capable of proper alignment in said line of sight.

7. A sight trainer comprising a frame, a simulated gun barrel mounted in said frame, a front gun sight mounted on said barrel, a sighting aperture in said frame, a shaft journaled in said frame and said simulated gun barrel, a hand wheel mounted on said shaft exterior of said frame, a rear sight operatively connected to said shaft, a plurality of rear sight apertures in said rear sight, said shaft being operable by said hand wheel to selectively move said rear sight apertures into the line of sight between the frame aperture and said front sight, one of said rear sight apertures being capable of proper alignment in said line of sight, a second shaft journaled in said frame and said simulated gun barrel, a target secured on said second shaft, an operating shaft journaled in said frame, a hand wheel on said operating shaft, a driving connection between said operating shaft and said second shaft whereby said second shaft is operated to selectively present said target in said line of sight.

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