33-248. OR 1,288,977 SR

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E. S. PALMER.

ADJUSTABLE SCALE SIGHT FOR FIREARMS.

APPLICATION FILED SEPT. 21, 1918.

1,288,977. Patented Dec. 24, 1918.

FIG 1

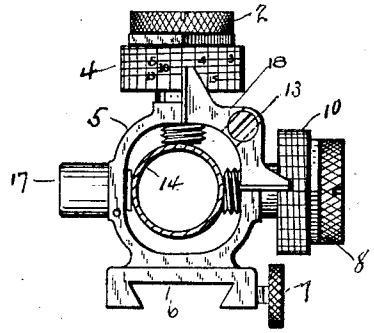


FIG 2

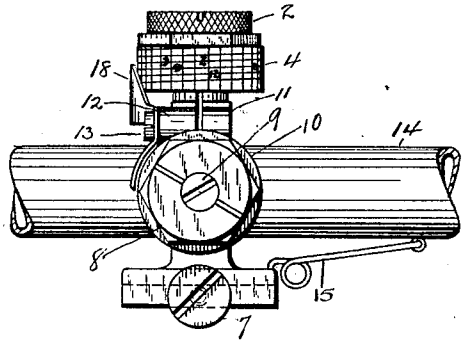


FIG 3

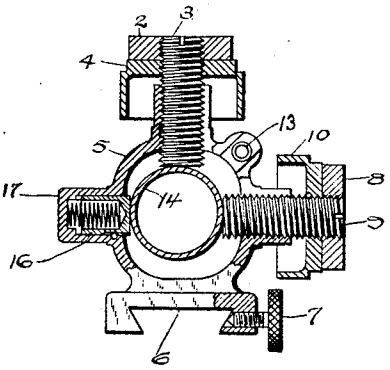
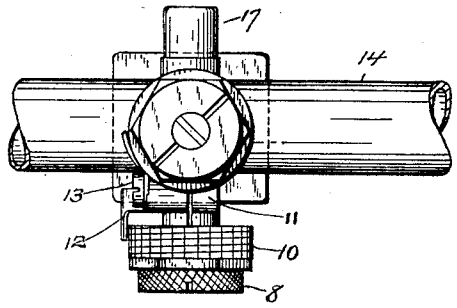
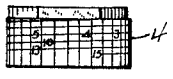


FIG 4



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FIG 5 FIG 6 FIG 7







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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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GEOMETRICAL INSTRUMENTS.
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CRAFTSMAN

UNITED STATES PATENT OFFICE.

ERIK S. PALMER, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO WINCHESTER REPEATING ARMS CO., OF NEW HAVEN, CONNECTICUT, A CORPORATION.

ADJUSTABLE-SCALE SIGHT FOR FIREARMS.

1,288,977. Specification of Letters Patent. **Patented Dec. 24, 1918.**

Application filed September 21, 1918. Serial No. 255,060.

To all whom it may concern:

Be it known that I, ERIK S. PALMER, a citizen of the United States; residing at New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Adjustable-Scale Sights for Firearms; and I do hereby declare the following, when taken in connection with the accompanying drawings and the characters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this application, and represent, in—

Figure 1 a view in rear elevation of an adjustable scale sight for firearms, embodying my invention, and shown as applied to a telescope-sight tube represented in transverse section.

Fig. 2 a view thereof in right hand side elevation.

Fig. 3 a view thereof partly in rear elevation, and partly in vertical transverse section.

Fig. 4 a plan view thereof.

Fig. 5 a detached view in elevation of the graduated elevation-screw sleeve.

Fig. 6 a detached view of the elevation-screw.

Fig. 7 a corresponding view of the elevation-screw lock-nut.

My invention relates to an improved adjustable-scale sight for firearms, the object being to produce a simple, compact and convenient sight of the type in which the scales are made adjustable to permit the sight to be adjusted for use with a given individual rifle, a given type of ammunition, and by a given individual marksman.

With these ends in view, my invention consists in an adjustable-scale sight having certain details of construction as will be hereinafter described and pointed out in the claims.

In carrying out my invention, which, as herein shown, is applied to a telescope rifle-sight, although its use is not so limited, I employ an elevation lock-nut 2 mounted upon the upper end of the elevation-screw 3 and co-acting with a graduated elevation-screw sleeve 4 also mounted upon the said screw which in turn is mounted in the split upper portion of the mounting-frame 5 the lower end of which is formed with an undercut dovetail groove 6 receiving a binding-screw 7 for firmly attaching the mounting-frame to a mounting-rib (not shown) upon the barrel or receiver of a rifle.

I also employ a windage lock-nut 8 mounted upon the outer end of the windage-screw 9 and co-acting with a graduated windage-screw sleeve 10 also mounted upon the said screw which in turn is mounted in the split upper portion of the frame 5 the opposite sides of which are formed with lugs 11 and 12 receiving a clamping-screw 13 by means of which the elevation and windage-screws may be temporarily clamped and held during the adjustment of the sight and then released for being turned in the normal use of the sight.

The tube 14 of the telescope sight passes from rear to front through the mounting-frame and has its upper face maintained in engagement with the lower end of the elevation-screw by means, as herein shown, of a grasshopper spring 15, while the tube is normally held against the inner end of the windage-screw by means of a spring actuated plunger 16 mounted in an offset 17 of the frame 5.

For coaction with the sleeves 4 and 10, I employ a combined elevation and windage indicator 18 secured to the frame 5 by the clamping-screw 13 aforesaid, the respective pointed ends or wings of this indicator being in contact with the said graduated sleeves.

In using my improved adjustable-scale sight as applied to a telescope sight, the rifle is fired at a bull's eye placed at any one of the ranges for which the sight is graduated, but preferably for the shortest range, the elevation and windage screws being adjusted from time to time as found necessary to bring the telescope sight into the position required for hitting the bull's eye at the range chosen. When the sight has in this manner been adjusted to hit the bull's eye, the clamping-screw 13 is turned to draw the two split sides of the frame together so as to virtually clamp the elevation and windage-screws in the positions to which they have been brought as described. The lock-nuts 2 and 8 are now reversed so as to release the sleeves 4 and 10, which are turned until

their graduations corresponding to the given distance, are brought into registration with the respective ends of the indicator 18 after which the lock-nuts 2 and 8 are turned back to bind the screw-sleeves in the said positions. The clamping-screw 13 is then reversed so as to release the elevation and windage-screws 3 and 9. By this cycle of operations, the sight has been adjusted to meet the specific equations presented by the individual rifle, the type of ammunition being used, and the individual marksman. The sight having been thus adjusted, will be used in the same manner as an ordinary sight, the screw-sleeves being turned, and with them the elevation and windage-screws, as required to adjust the sight to different ranges and different conditions of wind.

I claim:—

1. An adjustable-scale sight for firearms, having an adjustable elevation-scale, an adjustable windage-scale, and an indicator common to both scales.

2. An adjustable-scale sight for firearms, having a mounting-frame, an elevation-screw mounted therein, a graduated elevation-screw sleeve mounted on the said screw, and a lock nut for the said sleeve also mounted upon the said screw.

3. An adjustable-scale sight for firearms, having a mounting-frame, an elevation-screw mounted therein, a graduated elevation screw sleeve mounted on the said screw, a lock-nut for the said sleeve also mounted upon the said screw, and means for clamping the screw against rotation during the adjustment of the sight.

4. In an adjustable-scale sight for firearms, the combination with the mounting-frame thereof, of elevation and windage-screws mounted in the said frame, means for temporarily clamping the said screws against rotation in the frame, a graduated-screw sleeve and a lock-nut for each of the said screws, and indicating means for co-action with the said sleeves.

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

ERIK S. PALMER.

Witnesses:
THOMAS C. JOHNSON,
FRANK A. PAUL.

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