

No. 711,213.

Patented Oct. 14, 1902.

O. C. HORNEY.

LOCKING CATCH FOR EXTENSIBLE SIGHT BARS.

(Application filed Mar. 3, 1902.)

(No Model.)

Fig. I.

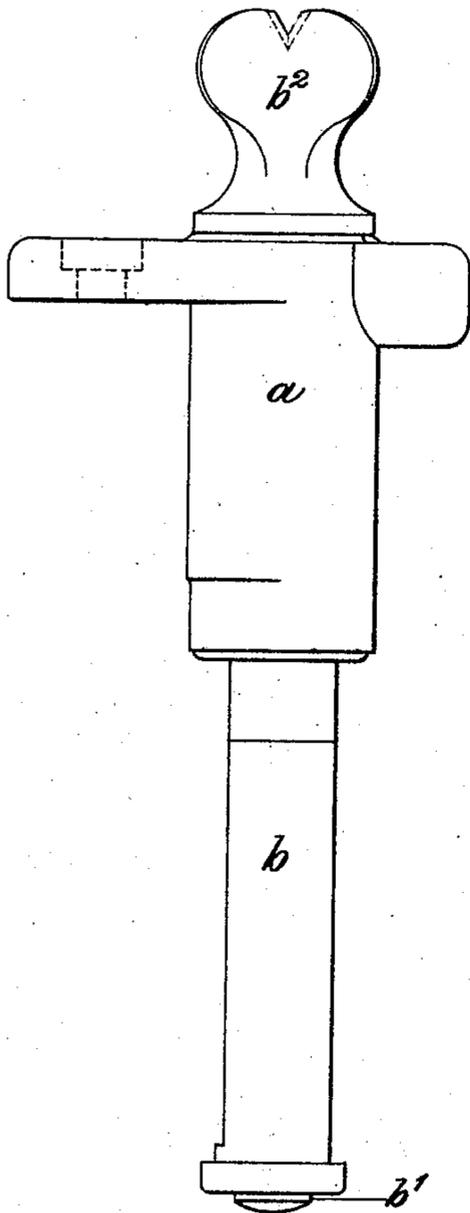


Fig. II.

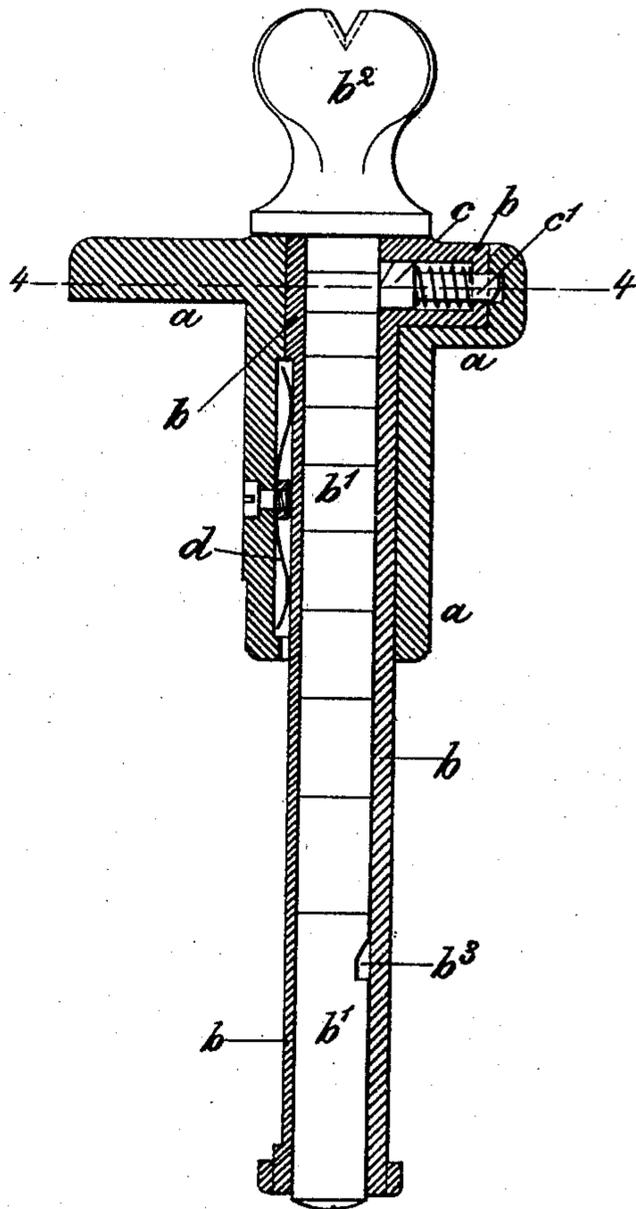


Fig. III.

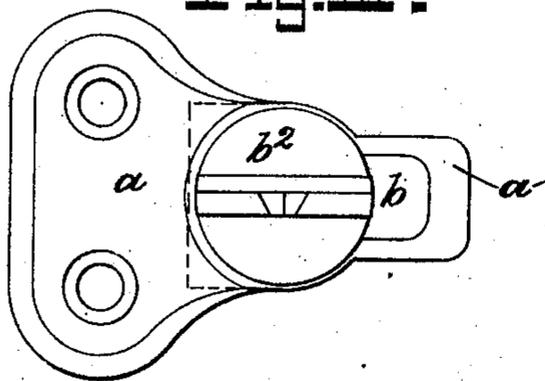
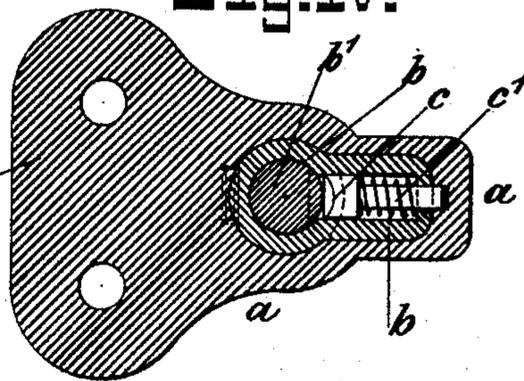


Fig. IV.



Witnesses.

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UNITED STATES PATENT OFFICE.

ODUS C. HORNEY, OF THE UNITED STATES ARMY.

LOCKING-CATCH FOR EXTENDIBLE SIGHT-BARS.

SPECIFICATION forming part of Letters Patent No. 711,213, dated October 14, 1902.

Application filed March 3, 1902. Serial No. 96,521. (No model.)

To all whom it may concern:

Be it known that I, ODUS C. HORNEY, captain in the ordnance department of the United States Army, stationed at Springfield, 5 in the county of Hampden and State of Massachusetts, have invented a new and useful Locking-Catch for Extendible Sight-Bars, of which the following is a specification.

My invention relates to improvements in 10 sight-bars for machine-guns and cannons in which the sight is mounted upon the gun in a position which requires it to be elevated to a considerable height to serve in sighting the gun at long ranges, but where the sight in its 15 inoperative position must have but a limited length.

The objects of my improvement are to provide an extendible graduated sight-bar adapted to be at will elevated to the heights re- 20 quired, to provide means for supporting said sight-bar in its elevated positions, and to provide means for successively bringing into view the graduations on the sight-bar indicating the elevation of the sight and the correspond- 25 ing range of the arm. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a rear elevation of the sight. Fig. 2 is a vertical section of the same. Fig. 30 3 is a top view of the same. Fig. 4 is a horizontal section at the line 4 4 of Fig. 2.

Similar letters refer to similar parts throughout the several views.

The sight represented in the drawings comprises the sight-socket *a*, attachable by suitable means to the breech of a gun, and the sight-bar movably mounted in the vertical tubular seat of the sight-socket. The sight- 35 bar consists in two parts, of which the inner one *b'* is mounted in the outer part *b* to slide therein and carries the projecting top *b*², by which it may be drawn upward or depressed and in which a suitable sighting notch or aperture is provided. The graduations on the 40 two parts *b* and *b'* are so arranged that for the lesser ranges the inner bar *b'* alone requires to be elevated, thereby exposing its graduated scale at the top of the outer bar *b*, and only after the inner bar *b'* has been fully raised 45 should the outer bar *b* be elevated, thereby exposing its scale of graduations at the top of the socket *a*, corresponding to the longer ranges

of the gun. To automatically lock the outer sight-bar *b* in the socket whenever the inner bar *b'* is depressed or only partially raised and 55 to release the outer bar *b* automatically as soon as the inner bar *b'* has been raised to its full extent, a locking-catch *c* is provided. At its top the outer bar *b* has a lateral projection fitted in a corresponding recess in the top of 60 the socket *a*, which limits the downward movement of the bar *b*, while a shoulder at its lower end limits the upward movement thereof. The upper projection contains the horizontal seat for the locking-catch in form of 65 the piston *c*, which rests against the inner sight-bar *b'* and has the stem *c'*, of a reduced diameter, projecting outward through the end of the seat, which is of a correspondingly-reduced diameter. On the stem *c'* a small 70 spiral spring is fitted which serves to press the piston *c* inward toward the sight-bar *b'*, and the length of the stem *c'* is such that when the inner bar *b'* fills its seat in the bar *b* the stem *c'* is forced outward and projects 75 into a recess in the socket *a*, thereby securely locking the outer sight-bar *b* to the sight-socket *a*. Near its lower end the inner bar *b'* has a recess *b*³, which corresponds with the 80 locking-catch when the inner sight-bar *b'* is fully raised and into which the spiral spring will at such time force the piston *c*, thereby interlocking the inner sight-bar *b'* with the 85 outer sight-bar *b*, simultaneously withdrawing the stem *c'* from the socket *a*, and thereby releasing the outer bar *b* from the socket *a*, so that continued effort to raise the inner bar *b'* will draw the outer bar *b* upward in the 90 socket *a*. On pressing the sight-bar *b'* downward the locking-catch will cause the two interlocked sight-bars to move down together until the top projection of the outer bar *b* is seated in the socket *a*. On further downward 95 pressure the beveled upper end of the recess *b*³ acts upon the piston *c*, the upper side of which is correspondingly beveled, and thereby overcoming the inward pressure of the spiral spring forces the locking-catch *c* outward and the stem *c'* into the recess in the 100 socket *a*, thereby again interlocking the outer sight-bar *b* with the socket *a* and releasing the inner bar *b'* from the outer one. In this way the extendible sight-bar can be elevated only so as to first expose to view all the gradua-

tions on the inner bar *b'* and then raise the outer bar *b* to bring into view the graduations thereon, and in lowering the sight the outer bar *b* must be entirely depressed before the inner bar *b'* can be depressed in said outer bar. The pressure of the locking-catch *c* also serves to yieldingly support the inner sight-bar *b'* in any position to which it may be elevated in the outer bar *b*, and in the socket *a* a flat spring *d* is arranged to bear against the bar *b* and yieldingly support the same in any elevation to which it may be raised.

I have herein shown and described my improved locking-catch as adapted to an extendible sight-bar; but it will be evident that the features of my improvement are not restricted to an application thereof to a sight-bar, and I do not intend to restrict the present invention to a sight-bar.

What I claim, and desire to secure by Letters Patent, is—

1. The combination with the socket supporting an extendible double bar, of a spring-actuated locking-catch, adapted to interlock said socket with one part of said extendible bar, and means in the other part of said extendible bar for engaging said locking-catch, thereby releasing said bar from said socket and interlocking the parts of said extendible bar, substantially as and for the purpose specified.

2. The combination with the socket supporting an extendible double bar, of the spring-actuated locking-catch mounted in the outer part of said double bar and interlocking said outer part with said socket, a recess

in the inner part of said double bar for engaging said locking-catch, thereby releasing said outer part from said socket and interlocking the parts of said double bar, and means for supporting the outer part of said double bar when elevated, substantially as and for the purpose described.

3. In a sight for firearms, an extendible double sight-bar, a socket for supporting said sight-bar, a catch for automatically locking the outer part of said sight-bar in said socket, and for automatically releasing said outer part from said socket by elevating the inner part of said sight-bar, whereby said outer part and said inner part are automatically interlocked.

4. In a sight, the combination of a tubular socket, an outer sight-bar movably mounted in said socket, an inner sight-bar movably supported by said outer sight-bar, and a spring-actuated catch carried by said outer sight-bar, recesses in said socket and in said inner sight-bar adapted for engagement by said catch, whereby said catch automatically interlocks said outer sight-bar and said socket when said inner sight-bar is depressed, and automatically releases said outer sight-bar from said socket and interlocks said outer and inner sight-bars when said inner sight-bar is fully elevated.

This specification signed and witnessed this 30th day of January, A. D. 1902.

ODUS C. HORNEY.

In presence of—

JNO. T. THOMPSON,
H. W. BELL.