(No Model.)

E. JONES & R. TOWNSEND.

EXTENSION GUN STOCK AND CUSHION PLATE.

No. 480,587. Patented Aug. 9, 1892.

Fig. 1.

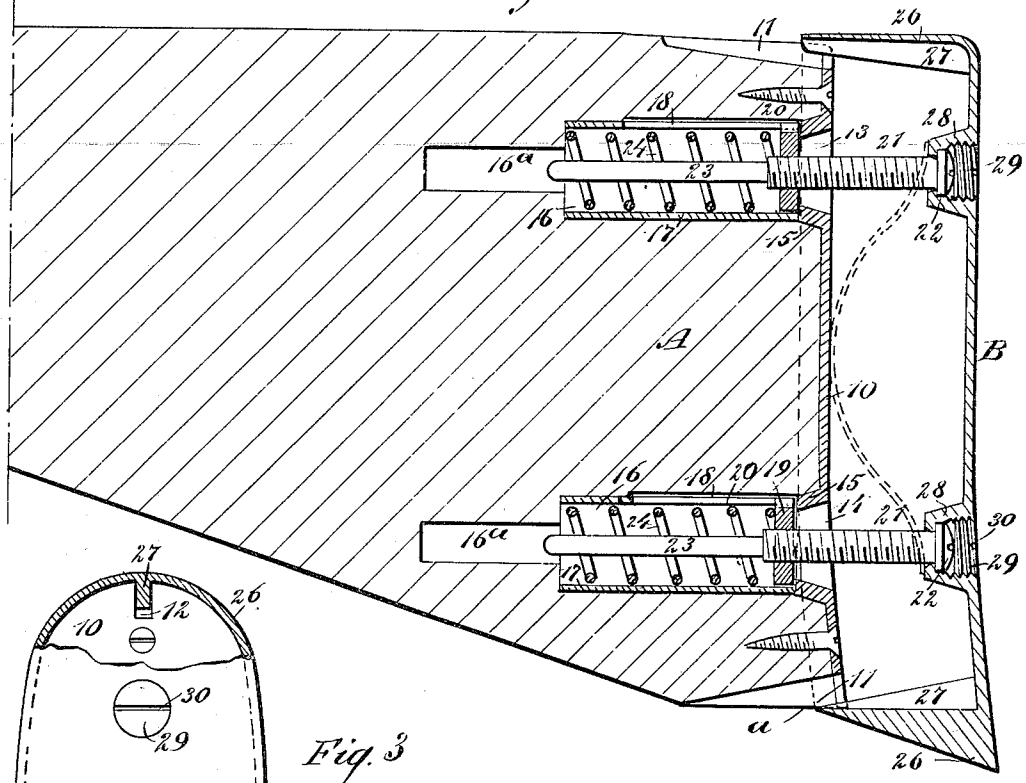


Fig. 3

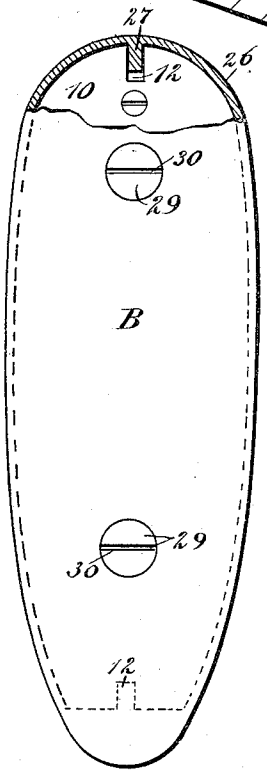


Fig. 2

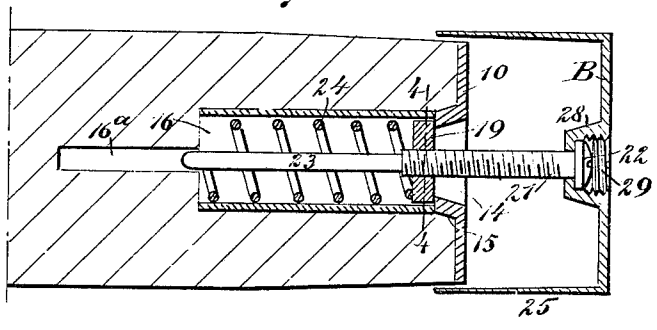


Fig. 4.

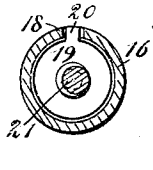
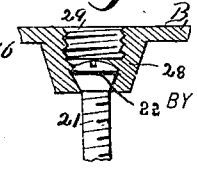


Fig. 5.



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ERASTUS JONES AND RALPH TOWNSEND, OF NEW YORK, N. Y.

EXTENSION GUN-STOCK AND CUSHION-PLATE.

SPECIFICATION forming part of Letters Patent No. 480,587, dated August 9, 1892.

Application filed June 3, 1891. Serial No. 394,924. (No model.)

To all whom it may concern:

Be it known that we, ERASTUS JONES and RALPH TOWNSEND, of New York city, in the county and State of New York, have invented a new and Improved Extension Gun-Stock and Cushion-Plate, of which the following is a full, clear, and exact description.

Our invention relates to an extension gun-stock and cushion-plate for the stock, and has for its object to so construct the back plate and the stock that said plate may be carried to and from the end of the stock to form an extension thereof.

Another object of the invention is to provide between the stock and its plate a spring-cushion, and to so connect the plate with the stock that the latter may be inclined or canted in a direction to cause the end plate to conveniently adjust itself to the marksman's shoulder.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a vertical section through the stock and the plate. Fig. 2 is a transverse section through the stock and the plate. Fig. 3 is an end view of the plate, illustrating a portion thereof as broken away and the end of the stock as defined by dotted lines. Fig. 4 is a section taken practically on the line 4 4 of Fig. 2. Fig. 5 is a detail view of a modification of one of the adjusting-screws and its seat in the back plate.

The end of the gun-stock A is covered by a metal plate 10, and the lower end of the stock at its beveled side is slightly flattened, as illustrated at *a*. Both the upper and lower sides of the stock at the ends are provided with, preferably, wedge-shaped grooves or channels 11, corresponding channels 12 being produced in the plate 10 of the stock. The plate 10 of the stock is secured thereto by screws or by suitable locking devices, and the plate is preferably provided with two openings 13 and 14, surrounded by annular flanges 15, which extend from the back of the plate 10, the diameter of the flanges at their inner ends being preferably less than at their connection with the openings 13 and 14, whereby the flanges partake of the appearance of the frustum of a cone. These flanges extend within channels 16, produced longitudinally in the stock. These channels are preferably circular and are made in two diameters, the smaller diameter being located at the inner ends of the channels, constituting extensions 16^a of the main body.

Within each channel 16 a casing 17 is fitted. The casings are usually located only in the larger or body portions of the channels, but may be carried also into the extensions 16^a, if so desired. The upper ends of the casings 17 engage with the inner ends of the plate-flanges 15, and each casing is provided with a longitudinal slot 18, which may extend from the outer to the inner end, if desired.

Within each casing 17 a nut 19 is located, said nuts being loosely fitted in the casings, and each of the nuts is provided with a feather 20, adapted to enter and slide in the grooves 18 of the channel-casings 17. The outer faces of the nuts engage with the inner ends of the plate-flanges 15, and by this means the nuts are prevented from leaving their casings.

Through the threaded apertures of each nut a screw 21 is passed, the said screws being provided with oval heads 22. The screws are not threaded their entire length, as the lower ends of the screws are plain and preferably reduced in diameter, as illustrated at 23; but the screw may be threaded throughout its length, if found desirable. The lower portions of the screws are surrounded by springs 24, contained in the casing, which springs have a bearing against the inner faces of the nuts 19 and against the bottom portion of the body-channels 16. The body portion 16 of the channel and the casing contained therein are preferably round in cross-section, and the extensions 16^a of the channels are ordinarily made somewhat oblong or elliptical in cross-section.

The back plate B of the stock is provided with side and end flanges 25 and 26, which flanges are adapted to slide over the outer face of the stock at the rear end thereof. The back plate of the stock is usually slightly concave, as is ordinarily the case, and the end flanges are each provided with a tongue 27, preferably wedge-shaped and adapted to travel in the grooves 11 of the stock and the recesses 12 of the stock-plate 10. By this means the back plate of the stock is guided in its movements.

The back plate is provided with two wells 28, and through apertures in the bottom of the wells the screws 21 are passed before they are entered into the nuts 19, the heads of the screws having a bearing upon the bottoms of the wells. The spaces between the outer face of the plate and the heads of the screws are filled by plugs 29, as illustrated in Figs. 1 and 2, the said plugs being exteriorly threaded and provided with slots 30 in their outer faces for the reception of the screw-driver or equivalent tool. The end faces of the plugs 29 are straight and bear directly upon the circular heads 22 of the screws.

In operation when the plugs 29 are removed by manipulating the screws 21 the back plate B may be carried outward a desired distance from the stock to lengthen the same, or may be carried inward as near to the stock-plate 10 as desired, thus shortening the stock; but the back plate B is never brought into engagement with the stock-plate 10. It will be observed that when the back plate has been adjusted and the plugs placed in position the back plate is provided with a spring-cushion adapted to counteract the rearward force exerted by the discharge of the gun.

The back plate may be canted inward or outward at the extremities to suit the shoulder of the marksman, as the adjusting-screws 21 may be rocked in their sockets through the medium of their heads, and the screws may also be canted in their bearings throughout their length, sufficient play being provided to accomplish this result, and to that end, also, the extensions 16^a of the channels in the stock are made oval in cross-section, or practically so, to admit of the necessary inclination of the inner ends of the screws, and, as shown in Fig. 5, the heads of the adjusting-screws may be made cylindric at top and bottom and their seats in the end plate more or less concave.

It will be observed that the springs 24 serve the purpose of cushions only, and that the stock is lengthened or shortened by the manipulation of the adjusting-screws only. In the event of the tension of the springs 24 being too great or not sufficiently strong for the party using the gun, the springs are removed and substituted by other springs of a proper or desired tension.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination, with a gun-stock, of a canting end or back-plate movable to and from the end of the stock, whereby the stock may be lengthened and accommodated to the shoulder of a marksman, as set forth.

2. In a gun-stock, an extension-plate provided with an adjusting mechanism for regulating the length of the stock, and a cushion in engagement therewith, said cushion being unaffected by the adjustment of said mechanism, as and for the purpose set forth.

3. The combination, with a gun-stock having channels formed at top and bottom of its end surfaces, of an end or back plate held to slide upon the end portion of the stock, provided with tongues entering grooves in the stock, adjusting-screws carried by the stock and having their heads seated in the end or back plate, said heads having a rocking connection with said plate, and springs intervening the end or back plate and the stock engaging with the adjusting-screws, yet independent of the same in their action, substantially as shown and described.

4. The combination, with a gun-stock provided with longitudinal bores containing casings, said casings being provided with longitudinal slots, a plate secured to the end of the stock having openings therein over the bores, and annular flanges surrounding said openings and extending downward over the mouths of the bores, nuts located in the casings provided with feathers held to travel in the casing-slots, and springs located in the casing below the nuts, of an end plate held to slide upon the stock over its attached plate, the said end plate being provided with apertured wells or sockets interiorly threaded, screws having their heads seated in the wells or sockets of the end plate, the said heads being circular, the body of the screw being passed through the nuts in the casings in the stock and through the springs, and plugs screwed in the wells or sockets to an engagement with the heads of the screws, as and for the purpose specified.

5. The combination, with the stock having longitudinal bores in its butt, sliding nuts in the bores, and springs pressing the nuts outward, of the extensible plate having screws swiveled to it and extending through the nuts, whereby the plate may be adjusted in or out by turning the screws without changing the tension of the springs, substantially as set forth.

6. The combination, with the stock having longitudinal bores in its butt, sliding nuts in the bores, and springs pressing the nuts outwardly, of the extensible plate having two threaded wells, two screws passed loosely through apertures in the bases of the wells and through said nuts, and threaded plugs closing the wells, substantially as set forth.

7. The combination, with the gun-stock and the nuts in its butt, of an extensible back plate having two threaded wells, two adjusting-screws extended freely through apertures in the bases of the wells and through the nuts,

and plugs screwed into the wells and concealing the screw-heads.

8. The combination, with the stock, its heel-plate 10, provided, respectively, with slots 11 11 and 12 12 in the stock and plate, of the cushioned back plate B, inclosing the butt of the stock and provided at its ends with internal ribs or flanges 27 27, sliding in the ways formed by the said slots, substantially as set forth.

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