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METAL STOCK AND RECEIVER FOR FIREARMS.
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METAL STOCK AND RECEIVER FOR FIREARMS.


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To all whom it may concern:

Be it known that I, ALBERT K. LOVELL, a citizen of the United States, and resident of New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Metal Stocks and Receivers for Firearms, of which the following is a full, clear, and exact specification.

My invention relates to an improvement in firearms, and it has for its object to provide a metal stock and receiver for firearms, substantially of hollow construction, in substitution of the wooden stock and metal receiver now in common use.

The invention consists in the novel configuration, combination and construction of parts as hereinafter more fully described and claimed.

In the accompanying drawings forming a part of this specification, Figure 1 is a side elevation of a rifle embodying my improved construction of stock and receiver. Figure 2 is a similar elevation of the stock and receiver detached from the barrel. Figure 3 is a perspective view of a double barreled modification of the firearm.

Figure 4 is a plan view of the barrel receiving end of the receiver with the barrel removed. Figure 5 is a central lengthwise vertical section through Figure 4. Figure 6 is a vertical cross section on the line 6, 6, of Figure 5. Figure 7 is a plan view of the lower side of the stock, or view at right angles to that of Figure 2. Figure 8 is a plan view of the blank from which the stock and receiver are formed. Figure 9 is a longitudinal section showing the method of securing the barrel in place. Figure 10 is a horizontal section of one form of the shoulder butt. Figure 11 is a horizontal section of a modified form of the shoulder butt. Figure 12 is a perspective view of the locking strip for securing the edges of the sheet metal of the stock and receiver together.

Referring to the drawings, my improvements are shown to comprise a combination stock and receiver for firearms, formed in integral construction or in continuity as a single part, instead of in separate elements as heretofore commonly used, the same being formed substantially as a hollow shell which may be made from sheet metal, as shown in the figures, or cast if desired. The configuration of parts and method of construction of the stock and receiver when made of sheet metal are as follows: Initially a blank 10 is cut from a metal sheet of the required thickness, of substantially the bilaterally symmetrical form shown in Figure 8. Said blank combines the trigger guard elements 11, having their edges within the guard shaped to form recesses 12 which provide an aperture for the trigger when the edges of the blank are brought together as hereinafter described. Intermediate of said elements 11, in the central lengthwise plane of the blank is a longitudinal aperture 13 for the reception of the hammer 14 and ejector 15. Forward of said aperture are a series of slits 16, 17 and 18 cut transversely of the blank and parallel, and in the present instance numbering three. In the edges of the blank in the plane between the two foremost slits 16 and 18 are the notches 19 for the purpose hereinafter specified. In the further manipulation of the blank, its longitudinal edges are bent over at a right angle to the body of the blank, and the edges of these parts are then bent over at right angles thereto to provide flanges 20 as shown in Figure 6, extending from near the forward end of the blank nearly to the slit 16, when the edges of the blank are brought together. These flanges are for the purpose of receiving a locking strip 21, and the edges from the butt end for a certain distance forward are similarly flanged but not here shown as the construction in no wise differs from that shown in Figure 5. After the formation of said flanges, the blank is to be bent along its central longitudinal plane, bringing its sides toward each other, at the same time shaping them to the proper convex and flat contour, until the flanged edges 20 are brought together, and joined in the relation shown in Figure 6. In that position they are ready to receive the locking strip 21 which are of grooved formation to fit the flanges and are slipped upon the flanges 20 and forced to place from the respective ends of the butt and receiver and serve to secure the edges of the shell rigidly together, as shown in Figures 3, 5 and 6. Said edges may also be brazed or welded together, either with or without the locking strips.

After the formation of the shell from the blank as thus far described, the shell will comprise a loop in cross section along its upper part forward of the hammer, in the field of the slits 16, 17 and 18. The next
Operation is to force all that part of said loop forward of the forward slit 18 downwardly from convex configuration to the reversed or concave contour as shown in Figs. 4 and 5, and to similarly depress the area between the slits 16 and 17, leaving the remaining part between the slits 17 and 18 in the original upwardly curved or over-arching form intermediate of the bed bearings. This provides the lower semicircular bed bearings 25 and 26 and upper arched bearings 27, which are opposed to each other in separate cross planes and together comprise a cylindrical socket or bore for the reception and seating of the gun barrel. Into this socket the barrel may be inserted lengthwise to the plane of the hammer and extractor, and held rigidly in place by a suitable set screw 28 inserted through the receiver screwed through the locking piece 21, with its point engaging a seat in the lower side of the barrel, as shown in Fig. 9. This securely holds the barrel in place. The construction of the sheet metal stock and the receiver with its reversed half bearings together forming a cylindrical bore for the barrel makes it feasible to stamp the part from a substantially flat piece of sheet metal, and provides a structure of great strength, though as light as the wood stocks now used which it is intended to replace, and of far greater durability and less cost.

The butt of the stock may be formed by a construction which essentially involves the principles employed for securing the edges of the stock blank, that is, by the formation of a flange upon each end edge of the blank at the butt, and securing these together by a locking piece 29 which forms the shoulder butt of the gun as shown in Fig. 11. Said butt plate is usually made of hard rubber for sporting arms and of metal for military arms. The preferred construction is shown in Fig. 10 in which the butt of the stock is left open and receives a butt plate 30 inserted into the shell of the stock. Said butt plate is preferably formed with a groove 31 around its circumference, and after being entered a suitable distance into the butt end of the stock the metal of the stock is cramped down into said groove, thus firmly holding the butt plate in place and providing a water tight joint. This butt plate can be made plain instead of grooved and be inserted into the stock and secured by any other suitable means. The hole in the receiver for the insertion of the set screw 28 is provided by the formation of notches 19 in the edges of the blank as shown in Fig. 8, or it may be drilled after the formation of the stock.

The term receiver as employed in this specification is intended to designate the portion of the gun stock which receives the limb work and the barrel.

Fig. 3 shows the construction employed for double-barreled firearms, which is essentially similar to that hereinafore described, except that the bed bearings 33, and over arch 34 are doubled cross sectionally, as shown, to receive two barrels 35 instead of one; the barrels being positioned laterally also by a cradle strip 36 in the usual and well known manner for holding gun barrels together. Said figure also shows the construction of joint adapted for being brazed or welded, in which the locking strip may be dispensed with if desired, and also the flanges 20 of the edges of the blank.

I claim as my invention and desire to secure by Letters Patent:

1. In firearms, a combined stock, and receiver formed as a continuous metal shell provided with bed bearings fitting the barrel, and a reversed over arched bearing intermediate of the bed bearings and in combination therewith forming a bore for the reception of the barrel.

2. A stock and receiver for firearms formed with bed bearings for seating the barrel, in combination with a reversed over arched bearing intermediate of the bed bearings and comprising therewith a bore for the reception of the barrel.

3. A combined stock and receiver for firearms comprising a metal blank arched centrally along its length from the butt to the barrel seat, and provided with oppositely curved arches forming the bore of the barrel seat, with the edges of the blank abutting and secured together.

4. A combined stock and receiver for firearms, comprising a metal blank arched centrally along its length from the butt to the barrel seat, and provided with oppositely curved arches forming the bore of the barrel seat, with the edges of the blank provided with flanges, and grooved locking pieces embracing the flanges to secure them together.

5. In firearm mechanism the combination with a gun barrel and its stock of a barrel holder attached to and connected with the gun stock, comprising opposing bearings in separate cross planes fitting the semi-circular circumference of the barrel on opposite sides thereof, the bearings together forming a bore for receiving and holding a gun barrel.

Signed at New Haven, Connecticut, this 18th day of August 1915.

ALBERT K. LOVEL.