Jan. 30, 1945. W. C. ROEMER 2,368,160

FRONT-BAND CONSTRUCTION FOR FIREARMS

Filed Dec. 4, 1941

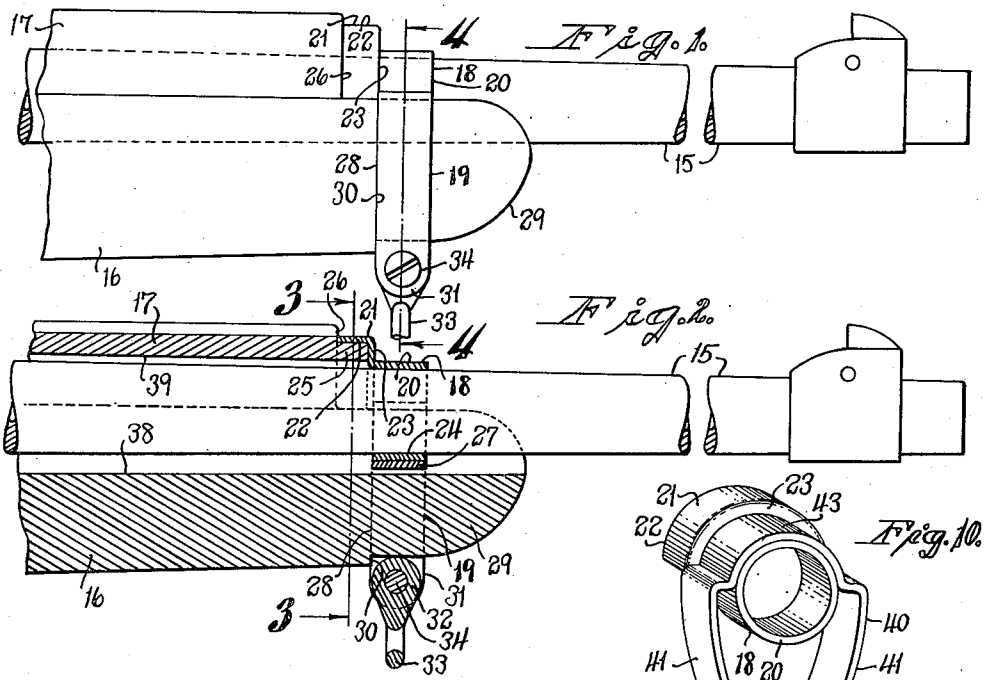



Fig. 1.

Fig. 2.




Fig. 10.

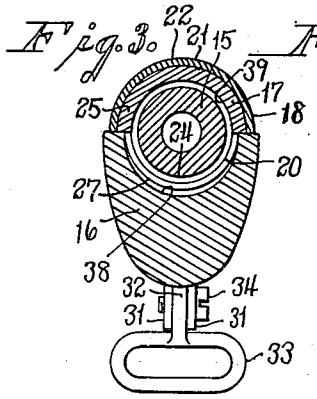



Fig. 3.

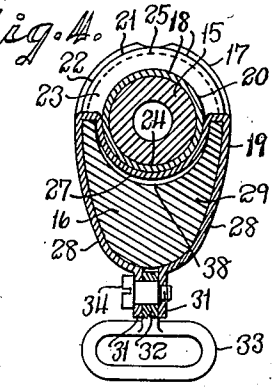



Fig. 4.

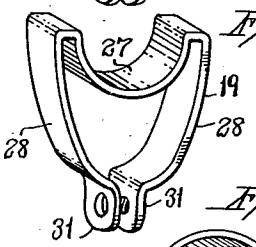



Fig. 8.

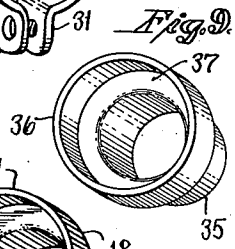



Fig. 9.

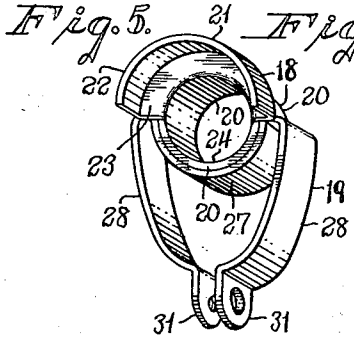



Fig. 5.

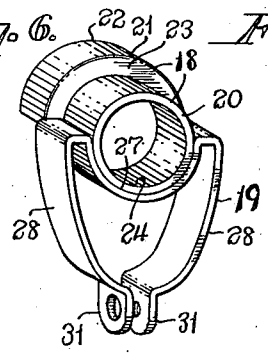



Fig. 6.

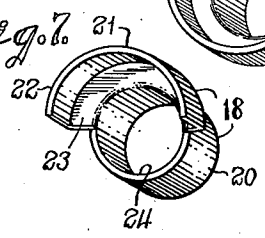



Fig. 7.

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Patented Jan. 30, 1945 2,368,160

# UNITED STATES PATENT OFFICE

2,368,160

## FRONT-BAND CONSTRUCTION FOR FIREARMS

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Application December 4, 1941, Serial No. 421,597

4 Claims. (Cl. 42—75)

The present invention relates to improvements in firearms and relates more particularly to improvements in the construction of the front-bands of firearms which serve to couple the forward portion of the stock of a given firearm to a complemental barrel.

The present invention constitutes an improvement upon the front-band construction shown and described in the co-pending application of Ralph E. Clarkson, Ser. No. 422,217, filed December 9, 1941.

One of the objects of the present invention is to provide a superior front-band construction for firearms which will so definitely locate a stock or its equivalent with respect to a barrel as to minimize the charring of the said stock as a result of heat emanating from the said barrel.

A further object of the present invention is to provide a superior front-band construction of the character referred to which may be produced at a low cost for manufacture.

Another object of the present invention is to provide a superior method whereby a reliable, rugged and effective front-band construction for firearms may be produced from sheet metal and at a low cost.

With the above and other objects in view, as will appear to those skilled in the art from the present disclosure, this invention includes all features in the said disclosure which are novel over the prior art and which are not claimed in any separate application.

In the accompanying drawing, in which certain modes of carrying out the present invention are shown for illustrative purposes:

Fig. 1 is a broken view in side elevation of the forward portion of a firearm having a front-band construction embodying one form of the present invention;

Fig. 2 is a view thereof mainly in vertical central-longitudinal section;

Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 2;

Fig. 4 is a transverse sectional view taken on the line 4—4 of Fig. 1;

Fig. 5 is a perspective view of the front-band unit detached, and viewing the same mainly from the rear;

Fig. 6 is a similar view of the front-band unit, but viewing the same mainly from the front;

Fig. 7 is a perspective view of the locating-band member of the front-band unit detached, and viewed mainly from the rear;

Fig. 8 is a perspective view of the frame or body-member detached;

Fig. 9 is a perspective view of a partly-formed blank from which the locating-band member may be produced; and

Fig. 10 is a perspective view corresponding to Fig. 6 but showing an alternative construction.

The particular firearm-structure herein chosen for purposes of illustrating the present invention in Figs. 1 to 9 inclusive, comprises a barrel 15, a stock 16 extending mainly beneath the said barrel, and a barrel-cover or handguard 17 extending over the upper portion of the said barrel. The said stock 16 and barrel-cover 17 are preferably formed of wood or other heat-insulating material.

For the purposes of locating the respective forward portions of the barrel 15, stock 16 and barrel-cover 17 with respect to each other, and to guard against the undue relative lateral movement thereof, a front-band unit is employed which includes a locating-band member generally designated by the reference character 18 and a frame or body-member generally designated by the reference character 19. The locating-band member 18 includes a cylindrically-contoured forward ring-like portion 20 and a rear hood-like portion 21. The said hood-like portion includes a substantially-semicircular retaining-lip 22 integral with and rearwardly projecting from the outer edge of a radially-extending arcuate end-wall 23 forming an integral part of the forward ring-like portion 20.

The forward ring-like portion 20 of the locating-band member 18 receives with a snug fit the adjacent portion of the barrel 15, and the upper face of the lower reach of the said ring-like portion 20 constitutes an upwardly-facing stop-abutment 24 for purposes as will hereinafter appear. Extending within the hood-like portion 21 of the member 18 and beneath the retaining-lip 22 thereof, is a transversely-curved tenon 25 extending forwardly from the barrel-cover 17. At the junction of its tenon 25 and its main or body-portion, the barrel-cap 17 is formed with a forwardly-facing shoulder 26 against which the rear edge of the retaining-lip 22 of the locating-band member 18 normally abuts.

In the structure of Figs. 1 to 9 inclusive, the forward ring-like portion 20 of the locating-band member 18 rests upon the depressed central portion of the frame or body-member 19 before referred to, and which portion constitutes a saddle-portion 27. The said saddle-portion is of substantially-semicircular form transversely of the firearm and has its upper face sub-

stantially conforming in size and curvature to the size and curvature of the under portion of the ring-like portion 20. The ring-like portion 20 of the locating-band member 18 may be rigidly secured to the saddle-portion 27 of the body-member 19 in any suitable manner such, for instance, as by spot welding, brazing or the like. The metal at the respective upper edges of the saddle-portion 27 is bent outwardly and thence downwardly and inwardly to provide complemental side-arms 28—28 respectively embracing the opposite sides of a tenon 29 formed at the forward end of the stock 16. The respective rear edges of the said sidearms 28—28 normally abut against a forwardly-facing shoulder 30 formed at the junction of the main portion of the stock 16 and its tenon 29. At the lower end of each of the sidearms 28—28, the body-member 19 is formed with one of two apertured depending-ears 31—31 laterally spaced from each other and receiving between them the upwardly-extending integral tang 32 of a loop-like strap-swivel 33. As is shown particularly well in Fig. 4, the strap-swivel 33 is coupled to the body-member 19 with capacity for pivotal movement in a direction lengthwise of the firearm, by a screw-stud 34 extending laterally through the tang 32 of the said strap-swivel 33 and through the complemental ears 31—31 of the said body-member 19.

Preferably, the locating-band member 18, like the body-member 19, is formed of sheet metal. The said locating-band member may be produced by first drawing from sheet steel or the like a blank like that shown in Fig. 9. The blank in question includes a tubular stem 35 of relatively-small diameter and a tubular body-portion 36 of relatively-large diameter and of complete ring-like form. The tubular stem 35 and the tubular body-portion 36 are integrally united by an annular radially-extending wall 37. By means of a suitable trimming operation, substantially half of the body-portion 36 and the corresponding half of the end-wall 37 may be cut away to transform the partially-formed blank of Fig. 9 into the completed locating-band 18 shown particularly well in Fig. 7. The cutting operation referred to transforms the stem 35 of the blank into the ring-like portion 20 of the finished member and, similarly, respectively transforms the body-portion 36 and the wall 37 of the blank into the retaining-lip 22 and the end-wall 23 of the finished locating-band member 18.

The stock 16 is formed in its upper face with an upwardly-opening longitudinal groove 38 of substantially-semicircular form in cross section and having a transverse shape and dimension sufficient to amply clear the under portion of the barrel 15 to provide a longitudinal ventilation-passage preferably opening through the extreme forward end of the tenon 29 of the said stock 16, as is shown particularly well in Fig. 2. The said stock 16 is preferably so dimensioned that its upper edges on each of the respective opposite sides of the barrel 15 are located about midway of the vertical thickness of the said barrel.

The barrel-cover or hand-guard 17 is formed in its under face with a longitudinal groove 39 of substantially-semicircular form in cross section and having a transverse dimension and conformation sufficient to supply a longitudinal ventilation-passage around the upper portion of the barrel 11 and extending completely through the forward end of the tenon 25. As will be seen by reference to Figs. 3 and 4 in particular, the respective lower edges of the barrel-cover 17 normally rest upon the respective upper edges of the stock 16 on each of the respective opposite sides of the barrel 15.

By reference to Figs. 1 to 4 inclusive, it will be apparent that the forward portion of the stock 16 is prevented from moving upwardly with respect to the barrel-cover 17 by the engagement of respective upper side edges of the said stock with the complemental under edges of the barrel-cover 17. Now, since the tenon 25 of the barrel-cover 17 is located beneath the retaining-lip 22 of the locating-band member 18, the said barrel-cover and hence the said stock 16 are both prevented from moving upwardly with respect to the front-band unit comprising the parts 18 and 19.

Conversely, the forward portion of the stock 16 is prevented from moving downwardly with respect to the front-band unit by the side-arms 28—28 of the body-member 19 and hence also the barrel-cover 17 is prevented from moving downwardly also by having its respective opposite edges resting upon the respective opposite upper edges of the said stock 16.

With the stock 16 and the barrel-cover 17 both stabilized against displacement in any lateral direction with respect to the front-band unit, it now remains to stabilize the said front-band unit with respect to the barrel 15, in order to insure the substantial avoidance of the charring of either of the said members 16 and 17. By extending a portion of the front-band unit beneath the lower portion of the barrel 15, the front-band unit is prevented from upward displacement with respect to the said barrel while being prevented from downward or sidewise displacement by having a portion of the unit engaging the top and sides of the barrel. In the structure shown, the forward ring-like portion 20 of the locating-band member 18 extends completely around the barrel 15 in close proximity to the surface thereof or is otherwise shaped to provide the upwardly-facing stop-abutment 24 or its equivalent within the portion 20.

Thus, by providing an upwardly-facing stop-abutment such as 24 or its equivalent, the front-band unit and hence also the stock 16 or its equivalent are prevented from moving upwardly relative to the barrel without requiring that a portion of the said stock 16 or its equivalent be employed as a limiting-means engaging with the said barrel.

In Fig. 10 is shown a slight modification of the front-band unit of the preceding figures in which is employed the same locating-band member 18 in conjunction with a frame or body-member 40 differing slightly in shape from the frame or body-member 19 previously described. The said frame or body-member 40 includes complemental side-arms 41—41 corresponding to the side-arms 28—28 of the body-member 18 and, like the same, provided with perforated depending ears 42—42 corresponding to the ears 31—31.

Instead of having its central upper portion depressed, as in the body-member 19, the central portion of the frame or body-member 40 is arched upwardly to substantially-semicircular form to form a saddle 43 beneath which tightly fits the forward ring-like portion 20 of the locating-band member 18. The locating-band member 18 may be rigidly secured to the frame or body-member

40 in any approved manner such, for instance, as by welding, brazing, or by otherwise securing the ring-like forward portion 20 of the member 18 to the under face of the saddle 43 of the frame or body-member 40.

The invention may be carried out in other specific ways than those herein set forth without departing from the spirit and essential characteristics of the invention, and the present embodiments are, therefore, to be considered in all respects as illustrative and not restrictive, and all changes coming within the meaning and equivalency range of the appended claims are intended to be embraced therein.

I claim:

1. A firearm-structure including in combination: a barrel; a stock adjacent the underside of the said barrel in spaced relationship thereto; a barrel-cover adjacent the upper portion of the said barrel and having the under faces of its respective opposite sides engaged with the upper faces of the respective opposite sides of the said stock; and a front-band unit fitting over the said barrel and also over a portion of the said stock and the said barrel-cover, the said front-band unit comprising a sheet-metal frame-member curved intermediate its respective opposite ends to provide a saddle-portion at its upper end and having opposite side-arms clamping a portion of the said stock, the said front-band unit also including a substantially-tubular locating-band member rigidly secured to the saddle-portion of the said frame-member and fitting over a portion of the said barrel, the said locating-band member being formed with an integral rearwardly-extending retaining-lip engaging with a portion of the said barrel-cover to hold the same in place.

2. A firearm-structure including in combination: a barrel; a stock adjacent the underside of the said barrel in spaced relationship thereto; a barrel-cover adjacent the upper portion of the said barrel and having the under faces of its respective opposite sides engaged with the upper faces of the respective opposite sides of the said stock; and a front-band unit fitting over the said barrel and also over a portion of the said stock and the said barrel-cover, the said front-band unit comprising a sheet-metal frame-member curved intermediate its respective opposite ends to provide a saddle-portion at its upper end and having opposite side-arms clamping a portion of the said stock, the said front-band unit also including a substantially-tubular locating-band member rigidly secured to the saddle-portion of the said frame-member and fitting over a portion of the said barrel, the said locating-band member being formed at its rear with an integral substantially-semicircular radially-extending end wall and with an integral rearwardly-extending substantially-semicircular retaining-lip engaging with a portion of the said barrel-cover to hold the same in place.

3. A firearm-structure including in combination: a barrel; a stock adjacent the underside of the said barrel in spaced relationship thereto; a barrel-cover adjacent the upper portion of the said barrel and having the under faces of its respective opposite sides engaged with the upper faces of the respective opposite sides of the said stock; and a front-band unit fitting over the said barrel and also over a portion of the said stock and the said barrel-cover, the said front-band unit comprising a sheet-metal frame-member curved intermediate its respective opposite ends to provide at its upper end a concave saddle-portion and having opposite side-arms clamping a portion of the said stock, the said front-band unit also including a substantially-tubular locating-band member rigidly secured to the concave saddle-portion of the said frame-member and fitting over a portion of the said barrel, the said locating-band member being formed with an integral rearwardly-extending retaining-lip engaging with a portion of the said barrel-cover to hold the same in place.

4. A front-band unit for firearm-structures including in combination: a sheet-metal frame-member having two laterally-spaced-apart side-arms shaped to embrace a portion of a firearm-stock and having a central upper portion curved to form a saddle-portion; and a separately-formed locating-band member having a substantially-tubular forward portion rigidly secured to the saddle-portion of the said frame-member, the said locating-band member also including a rearwardly-extending retaining-lip for engagement with a portion of a barrel-cover.

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