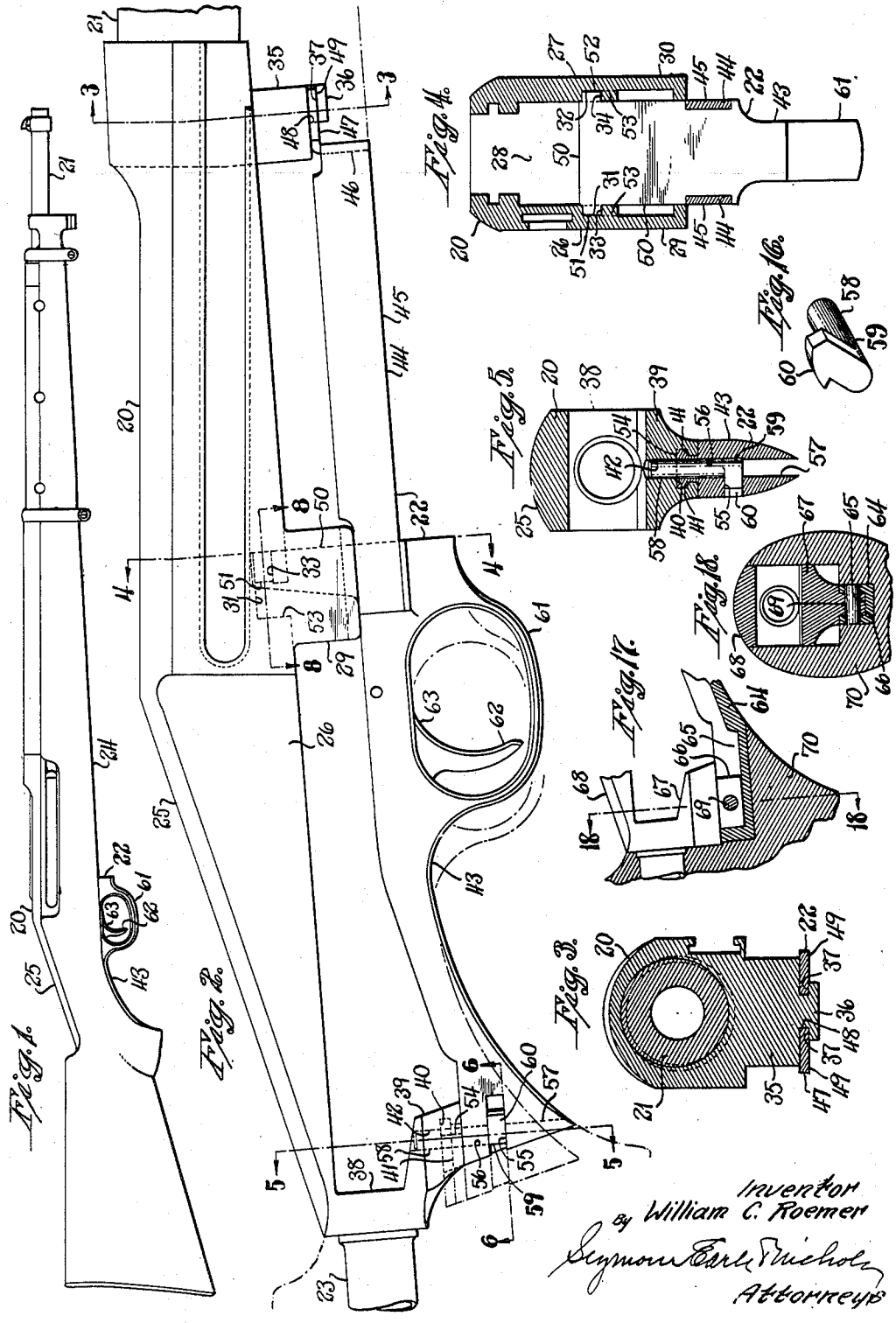
Nov. 17, 1942. W. C. ROEMER 2,302,059

RECEIVER AND TRIGGER-PLATE ASSEMBLIES FOR FIREARMS

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Fig. 6.

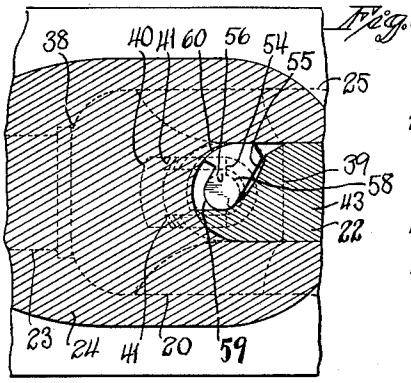


Fig. 8.

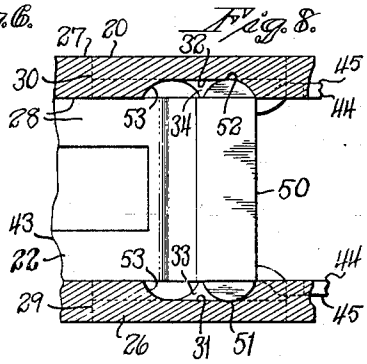


Fig. 12.

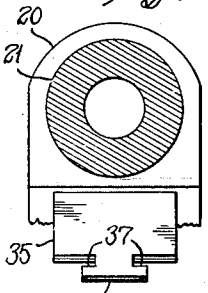


Fig. 9.

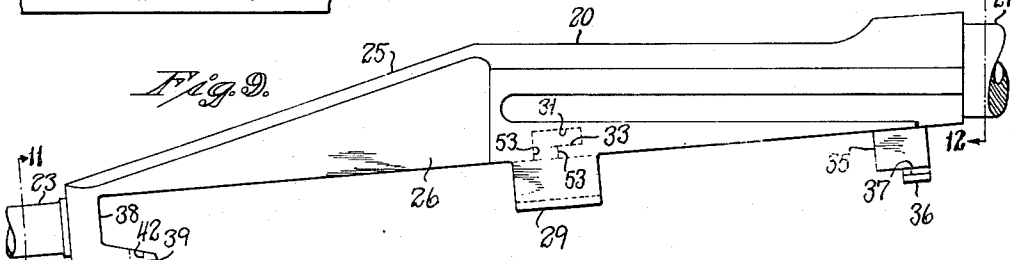


Fig. 10.

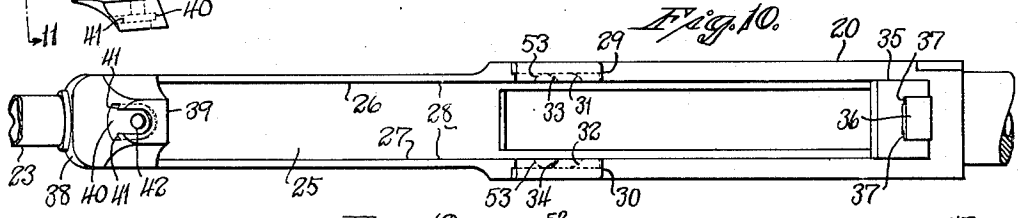


Fig. 13.

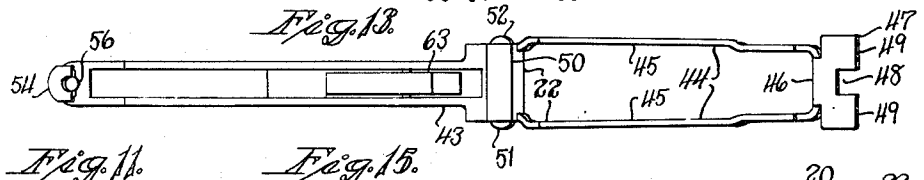


Fig. 11.

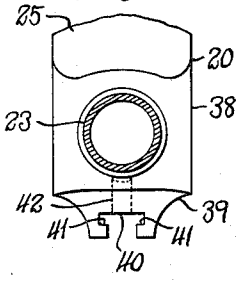


Fig. 15.

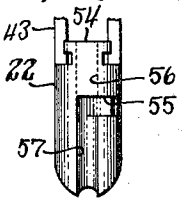


Fig. 7.

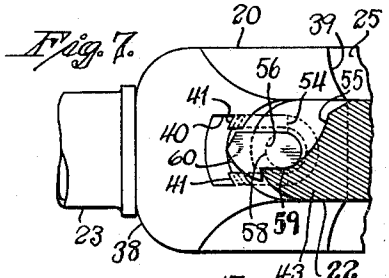
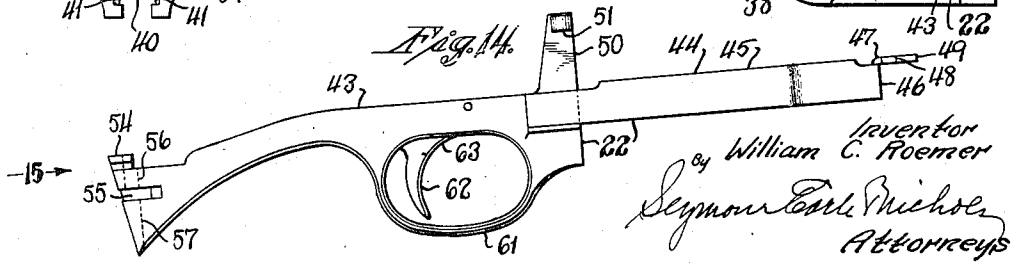


Fig. 14.



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Patented Nov. 17, 1942 2,302,059

UNITED STATES PATENT OFFICE

2,302,059

RECEIVER AND TRIGGER-PLATE ASSEMBLY FOR FIREARMS

William C. Roemer, New Haven, Conn., assignor to Western Cartridge Company, New Haven, Conn., a corporation of Delaware

Application August 30, 1939, Serial No. 292,646

2 Claims. (Cl. 42—16)

This invention relates to improvements in receiver and trigger-plate assemblies for firearms in which a receiver-unit and a trigger-plate unit are readily separable one from the other to facilitate inspection, cleaning, repair, etc. of the firearm mechanism.

One of the objects of the present invention is to provide a superior receiver and trigger-plate assembly for firearms in which the receiver-unit and trigger-plate unit are secured together by quickly-releasable means which, under normal conditions, firmly and rigidly hold the said units in interlocked relationship.

Another object of the present invention is to provide a receiver and trigger-plate assembly wherein the receiver-unit and the trigger-plate unit act to mutually stiffen and reinforce each other.

A further object is to provide a firearm construction having a relatively-long and slender trigger-plate unit detachably secured by quickly-releasable means to the receiver-unit, in such manner as to afford rigid and firm support for the said trigger-plate unit.

A still further object of the present invention is to provide a superior firmarm construction in which a receiver-unit and a trigger-plate unit are detachably secured together by means of such character as may be released without requiring the use of a screw driver or like special tools, but which may be released by the manipulation of the point of a cartridge.

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

Fig. 1 is a view in side elevation of a firearm embodying the present invention;

Fig. 2 is a broken view in side elevation of the receiver-unit and the trigger-plate unit organized together and stripped of the stock and the major portion of the mechanism, and showing also a portion of the barrel and a portion of a receiver-extension;

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

Fig. 4 is a similar view but taken on the line 4—4 of Fig. 2;

Fig. 5 is a transverse sectional view taken on the line 5—5 of Fig. 2;

Fig. 6 is a broken detail sectional view in horizontal section taken on the line 6—6 of Fig. 2, but including also the adjacent portion of the stock;

Fig. 7 is a view corresponding to Fig. 6 save that the stock is removed and the keeper is swung into position for removal from the assembly;

Fig. 8 is a broken detail sectional view taken on the line 8—8 of Fig. 2;

Fig. 9 is a view in side elevation of the receiver-unit together with a portion of the barrel and the receiver-extension;

Fig. 10 is a underside view thereof;

Fig. 11 is a broken transverse sectional view taken on the line 11—11 of Fig. 9;

Fig. 12 is a similar view taken on the line 12—12 of Fig. 9;

Fig. 13 is a top or plan view of the trigger-plate unit;

Fig. 14 is a view thereof in side elevation;

Fig. 15 is a view thereof looking in the direction of the arrow 15 of Fig. 14;

Fig. 16 is a perspective view of the keeper;

Fig. 17 is a broken view partly in side elevation and partly in vertical central-longitudinal section of a modified or alternative form of one feature of the present invention; and

Fig. 18 is a transverse sectional view taken on the line 18—18 of Fig. 17.

The firearm herein chosen for illustration in Figs. 1 to 16 inclusive of the accompanying drawings, comprises in the main, a receiver 20, a barrel 21, a trigger-plate unit generally designated by the reference character 22, a receiver-extension 23, and a stock 24. The barrel 21 extends forwardly from the front end of the receiver 20 in the usual manner of firearms, and the receiver-extension 23 extends rearwardly from the said receiver as a means of securing the assembly firmly to the stock 24 which latter extends along the underside of the barrel 21 and covers the major portion of both the receiver 20 and the trigger-plate unit 22.

The receiver 20 includes a top-wall 25 from each of the respective opposite sides of which depend one of two integral laterally spaced-apart side-walls 26 and 27. The top-wall 25 and the complemental side-walls 26 and 27 of the receiver 20 provide a bolt-receiving chamber 28 which is adapted to receive a breech-bolt together with other customary features of the mechanism of the firearm (not shown).

About midway the length of the receiver 20 the respective side-walls 26 and 27 thereof are formed with depending-arms 29 and 30 and also

are formed respectively immediately above the said arms 29 and 30 with one of two opposed inwardly-opening substantially-horizontal grooves 31 and 32, the respective bottom-walls of which grooves provide upwardly-facing coupling-abutments 33 and 34.

The forward portion of the receiver 20 is formed with an integral downwardly-extending lug 35 which in turn is formed with an integral depending T-shaped extension 36 providing on each of the respective opposite sides of its longitudinal center one of two upwardly-facing coupling-abutments 37—37 for the purpose as will hereinafter appear.

At its rear end the receiver 20 is formed with a downwardly-extending arm 38 from the rear face of which the receiver-extension 23, before referred to, projects. Formed integral with and forwardly extending from the lower portion of the vertical arm 38 just referred to, is a forwardly-extending finger 39 formed centrally with a downwardly-opening longitudinal T-shaped groove 40 (Fig. 5) providing on its respective opposite sides one of two similar upwardly-facing coupling-abutments 41—41. Centrally of the forwardly-extending finger 39 of the receiver 20 is a substantially-vertical cylindrically-contoured bore 42 intersecting the upper face of the said finger 39 and also intersecting at its lower end the T-shaped groove 40.

The trigger-plate unit 22, before referred to, comprises in the main, a trigger-plate proper 43 and a U-shaped trigger-plate extension 44. The trigger-plate proper 43 is preferably formed of a steel forging and has welded, brazed or otherwise rigidly secured to its respective opposite faces at its forward end, the rear ends of the side-arms 45—45 of the U-shaped receiver-extension 44 which latter is preferably formed of sheet metal. The transverse front-wall 46 of the trigger-plate extension 44 is formed integral with the forward end of the side-arms 45—45 and has bent forwardly from its upper edge, a coupling-tongue 47. The said coupling-tongue 47 is formed centrally in its forward edge with a notch 48 dividing the said coupling-arm into two laterally-spaced-apart coupling-fingers 49—49 respectively adapted to slidably rest upon the upwardly-facing coupling-abutment 37—37 formed in the opposite sides of the T-shaped extension 36 of the lug 35 at the forward end of the receiver 20.

At its forward end, the trigger-plate proper 43 is formed with an upstanding coupling-lug 50 which is of a width sufficient to closely fit between the respective opposite side-walls 26 and 27 of the receiver 20 with a free sliding fit. At its upper end, the coupling-lug 50 is formed on each of its respective opposite sides with one of two oppositely-projecting coupling-fingers 51—52 respectively adapted to slidably enter the grooves 31 and 32 in the respective opposite side-walls 26 and 27 of the receiver 20. The respective under faces of the coupling-fingers 51 and 52 normally rest, as is shown particularly well in Fig. 4, upon the upwardly-facing coupling-abutments 33 and 34 before referred to. Leading downwardly from the rear ends of each of the substantially-horizontal grooves 31 and 32 respectively is one of two substantially-vertical clearance-grooves 53—53 intersecting at their lower ends the lower edges of the respective side-walls 26 and 27 of the receiver 20 in line with the respective arms 29 and 30 of the latter. The clearance-grooves 53—53 just referred to, are positioned and sized to provide clearance for the coupling-fingers 51 and 52 of the trigger-plate unit 22 to permit their being moved vertically into and out of longitudinal registration respectively with the longitudinal grooves 31 and 32.

At its rear end the trigger-plate proper 43 is provided with an upstanding T-shaped coupling-head 54 which is adapted to be slid longitudinally of the firearm structure into and out of the T-shaped groove 40 in the finger 39 at the rear end of the receiver 20. When entered into the groove 40, the under faces of the wide upper portion of the coupling-head 54 engage with and are retained by the upwardly-facing coupling-abutments 41—41 of the T-shaped groove 40.

Slightly below the upper face of the rear portion of the trigger-plate proper 43, the same is formed with a substantially-horizontal rearwardly-opening locking-notch 55 which also opens laterally through the adjacent portion of the right-hand wall of the trigger-plate proper 43. Leading upwardly from the recess 55, just referred to, is a cylindrically-contoured bore 56 which also extends upwardly and intersects the upper face of the T-shaped coupling-head 54 and when the parts are in their assembled relationships, the said bore is aligned with the bore 42 in the finger 39 at the rear end of the receiver 20. Leading downwardly from the lower wall of the locking-notch 55 and extending to the lower end of the trigger-plate proper 43 is a releasing-groove 57 opening through the rear face of the trigger-plate proper 43 and having a cylindrically-contoured forward wall forming a virtual continuation of the forward wall of the bore 56.

Normally extending upwardly through the bore 56 in the rear end of the trigger-plate proper 43 and into the bore 42 in the rear end of the receiver 20 is the stem 58 of a keeper generally designated by the reference character 59 and including also a radially-offsetting head 60. The head 60 is turnable about the axis of the stem 58 as a center into and out of the locking-notch 55 located in the rear end of the trigger-plate proper 43 intermediate the bore 56 and the releasing-groove 57 therein.

With the trigger-plate unit 22 and the receiver 20 assembled, the keeper 59 serves to prevent relative longitudinal movement therebetween and, as will be seen by reference to Fig. 6 in particular, the head 60 of the keeper 59 is maintained in the locking-notch 55 by the adjacent portion of the stock 24.

As is shown particularly well in Figs. 1, 2 and 14, the trigger-plate proper 43 is formed with a loop-like trigger-guard 61 in which is located the fingerpiece 62 of a trigger 63 which latter may be of any approved construction not requiring detailed description herein.

Should it be desired to dismantle the firearm, the stock 24 is removed thus releasing the head 60 of the keeper 59 from retention in the locking-notch 55. The keeper 59 may now be turned by applying the tip or point of a cartridge to the head 60 of the keeper 59 to effect the turning movement thereof to swing the said head out of the locking-notch 55 and into vertical alignment with the releasing-groove 57. The said keeper 59 may now be pried downwardly by means of the point of a cartridge applied to the upper face of its head 60, and completely separated from both the receiver 20 and the trigger-plate unit 22.

With the keeper 59 removed, as above described,

the entire trigger-plate unit may be slid rearwardly relative to the receiver **20** to thereby retire the coupling-fingers **49—49** at its forward end from engagement with the coupling-abutments **37—37**. The said relative rearward movement of the trigger-plate unit **22** also serves to rearwardly retire the coupling-fingers **51** and **52** rearwardly of the coupling-abutments **33** and **34** and bring them into registration with the vertically-extending clearance-grooves **53—53** respectively. The rearward retiring movement of the trigger-plate unit also concurrently retires the overhanging upper portion of the T-shaped coupling-head **54** from engagement with the coupling-abutments **41—41** in the rear end of the receiver **20**.

When the trigger-plate unit has been unlocked by the removal of the keeper **59** and slid rearwardly, as above described, to release its three points of coupling to the said receiver **20**, the said trigger-plate unit may be completely separated from the said receiver by a downward movement which will cause the coupling-fingers **51** and **52** of its coupling-lug **50** to ride freely downwardly through the clearance-grooves **53—53** in the respective opposite side-walls **26** and **27** of the receiver **20**. To reassemble the firearm, the steps above enumerated may be reversed.

From the foregoing it will be seen that when assembled together the receiver **20** and the trigger-plate unit **22** are held against vertical separation and in precise alignment at three distinct coupling points longitudinally of the firearm. It will also be seen that by the removal of the keeper **59**, or its equivalent, without the aid of special tools, the said receiver **20** and trigger-plate unit **22** may be parted from each other by a simple relative longitudinal movement therebetween followed by a relative lateral movement.

Instead of employing the coupling-means shown in the structure of Figs. 1 to 16 inclusive, to unite the rear ends of a receiver and a trigger-plate unit, a structure such as that illustrated in Figs. 17 and 18 may be employed. In the figures referred to, the rear end of a trigger-plate proper **64** is provided with an upwardly-opening pocket **65** receiving a downwardly-extending coupling-lug **66** depending from the rear portion **67** of a receiver **68** which in other respects may correspond to the receiver **20** before described.

Extending transversely through the rear end of the trigger-plate proper **64** and the coupling-lug **66** of the receiver **68** is a keeper **69** in the form of a simple cylindrical pin. When in place, as is shown particularly well in Fig. 18, the keeper **69** is retained against axial movement by the adjacent surfaces of a stock **70**.

By first removing the stock **70**, the keeper **69** may be pushed endwise and completely removed from the assembly by means of the point of a cartridge whereupon the trigger-plate proper **64** may be slid rearwardly with respect to the receiver **68** to disengage such other coupling-means as may hold the intermediate and forward portions of a trigger-plate unit to a receiver such, for instance, as the coupling features shown and described in connection with the structure of Figs. 1 to 16 inclusive.

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 construction including in combination: a receiver-unit; a trigger-plate unit; one of the said units being formed with a locking-notch; first coupling-means carried by the said receiver-unit; second coupling-means carried by the said trigger-plate unit and constructed and arranged to engage with the said first coupling-means for holding the two said units in assembled relationship, by a sliding movement of one of said units with respect to the other; and a releasable keeper having a shank and a laterally-offsetting locking-head, the shank of the said keeper extending between the two aforesaid units to normally interlock the same against sliding movement, and the locking-head of the said keeper being turnable about the axis of the said shank as a center into and out of the said locking-notch in one of the said units to respectively releasably retain the keeper in place and to permit the removal of the same.

2. A firearm construction including in combination: a receiver-unit having a substantially-vertical bore; a trigger-plate unit also having a substantially-vertical bore normally registering with the similar bore of the said receiver-unit, the said trigger-plate unit being formed below the said bore therein with a laterally-opening locking-notch intersecting the bore therein, and the said trigger-plate unit also being provided with a clearance-groove extending downwardly from the locking-notch referred to; first coupling-means carried by the said receiver-unit; second coupling-means carried by the said trigger-plate unit and constructed and arranged to engage with the said first coupling-means for holding the two said units together, by a sliding movement of one of the said units with repsect to the other in a plane substantially parallel with the longitudinal axis of the firearm-structure; and a releasable keeper having a shank extending through the respective bores in the said units and also having a locking-head extending laterally from the said shank and swingable about the axis of the said shank as a center into and out of the locking-notch in the said trigger-plate unit and into and out of registration with the clearance-groove therein.

WILLIAM C. ROEMER.