Aug. 9, 1938. W. C. ROEMER 2,125,956

BREAKDOWN FIREARM

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Fig. 1.

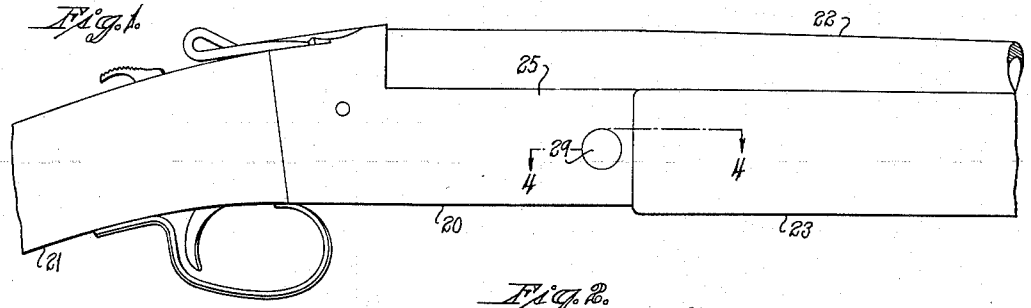


Fig. 2.

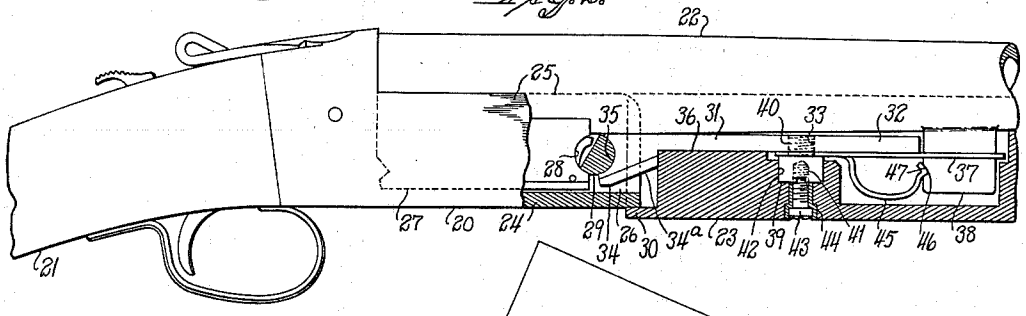
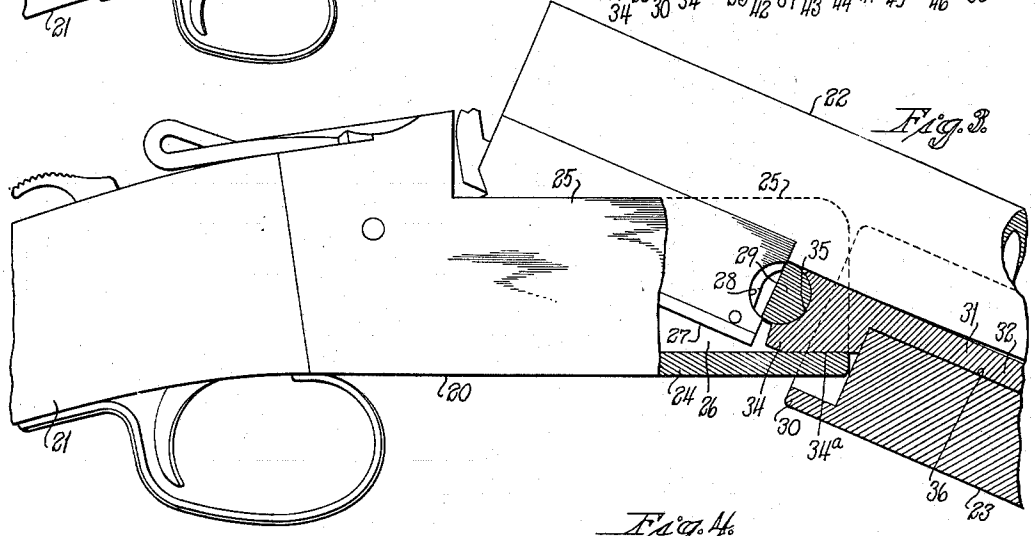


Fig. 3.



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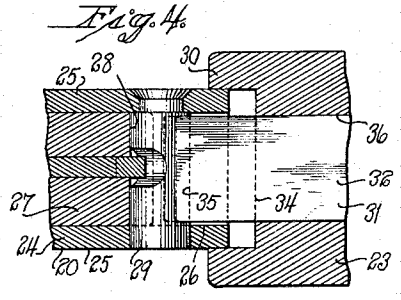

Fig. 5.

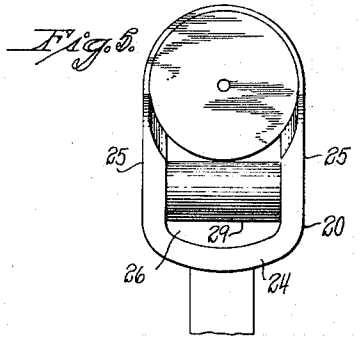

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Fig. 6.

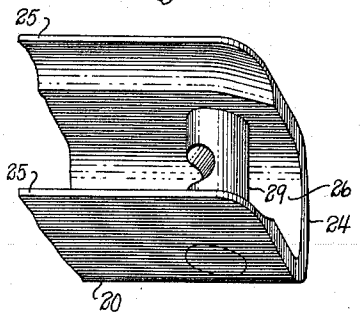


Fig. 7.

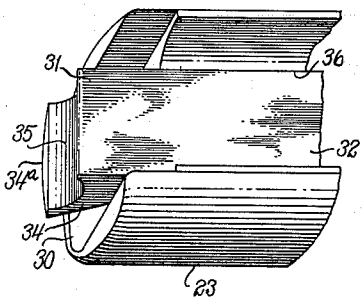


Fig. 9.

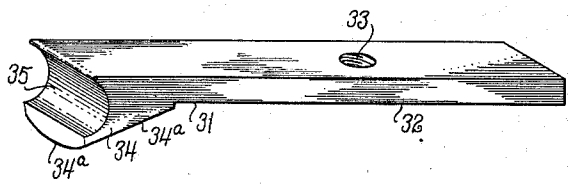


Fig. 8.

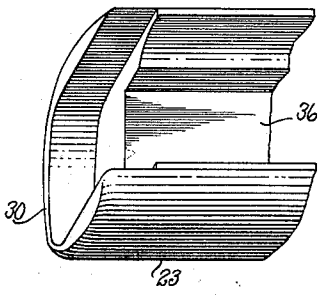
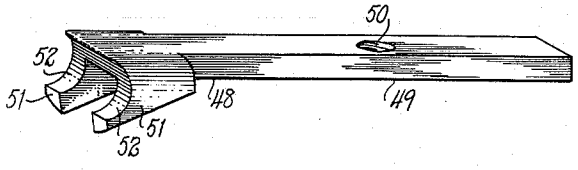


Fig. 10.



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Patented Aug. 9, 1938 2,125,956

UNITED STATES PATENT OFFICE

2,125,956

BREAKDOWN FIREARM

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Application October 17, 1935, Serial No. 45,397

1 Claim. (Cl. 42—40)

This invention relates to an improvement in breakdown firearms, that is to say, that class of firearms in which a barrel-unit and a butt-unit are pivoted together for relative movement to permit the loading and unloading of the arm.

More particularly, the present invention relates to the mode of pivoting the barrel-unit and the butt-unit together, and further to means for limiting the pivotal movement of the two said units in the direction of the breakdown or opening of the firearm.

One of the objects of the present invention is to provide a breakdown firearm having a superior joint construction between its butt-unit and its barrel-unit.

Another object is to provide a simple, reliable and effective breakdown-firearm construction which may be produced at a low cost of manufacture.

A further object is to provide a breakdown firearm with simple, reliable and low-cost means for checking the relative pivotal movement between its two main units in the direction of the breakdown or opening of the firearm.

A still further object of the present invention is to provide a breakdown firearm with a superior mode of pivoting the two main units together, which will require a minimum of space exterior of the frame-unit of the arm.

With the above and other objects in view, as will appear to those skilled in the art from the following, considered in conjunction with the accompanying drawings and appended claim, the present invention includes all features disclosed therein which are novel over the prior art.

In the accompanying drawings:

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

Fig. 2 is a view thereof, partly in side elevation and partly in vertical-longitudinal section, and showing the butt- and barrel-units in their normal relative positions;

Fig. 3 is a broken view, partly in side elevation and partly in vertical-longitudinal section, but showing the barrel-unit in its breakdown position;

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

Fig. 5 is a front-end view of the frame;

Fig. 6 is a broken perspective view of the forward end of the frame;

Fig. 7 is a perspective view of the rear portion of the unit comprising the forestock and forestock-shoe;

Fig. 8 is a perspective view of the rear portion of the forestock;

Fig. 9 is a perspective view of the forestock-shoe; and

Fig. 10 is a perspective view of a modified form of forestock-shoe.

The particular breakdown firearm herein chosen for illustration includes two major units pivoted together for relative movement. The rear unit of the firearm may for convenience of description be designated as the butt-unit and comprises in the main a frame **20** and a butt-stock **21** rigidly secured to the said frame. The complementary front unit of the firearm, designated for convenience of description as the barrel-unit, comprises in the main a barrel **22** and a forestock **23** removably secured to the under-side of the said barrel.

The forward portion of the frame **20** is of substantially trough- or U-shaped form in cross-section and includes a bottom-wall **24** and spaced-apart side-walls **25—25** providing an upwardly-opening recess or pocket **26**. The recess or pocket **26** in the trough-shaped forward portion of the frame **20** is adapted to receive a rectangular barrel-coupling-lug **27** forming a rigid feature of, and depending from, the under-side of the barrel **22** adjacent the rear end of the latter.

The forward edge of the barrel-coupling-lug **27** is formed with a transverse forwardly-opening notch **28**, the forwardly-facing semicircular wall of which engages with and bears upon substantially the entire rear-half of a fulcrum-pin **29** extending transversely of the frame **20** adjacent the forward end of its trough-shaped portion and having its respective opposite ends rigidly supported in the complementary side-walls **25—25** thereof.

The forestock **23** is recessed in its rear end to provide a rearwardly-extending U-shaped lip **30** extending rearwardly over and closely fitting the bottom- and side-walls **24** and **25—25** of the frame.

Bearing against the forward portion of the fulcrum-pin **29**, before referred to, is a forestock-shoe, generally designated by the numeral **31**. The forestock-shoe, just referred to, comprises a forwardly-extending tang **32** having a vertical threaded bore **33** adjacent its forward end and having at its rear end a head **34**. The rear edge of the head **34** of the forestock-shoe **31** is formed with a rearwardly-opening notch **35**, the rearwardly-facing semicircular wall of which conforms in curvature to and bears upon the forward surface of the fulcrum-pin **29**, before re-

ferred to. When the firearm is in its breakdown position, as indicated in Fig. 3, the longitudinally-inclined and transversely-curved under-side 34a of the head 34 is adapted to engage the transversely-curved upper surface of the bottom-wall 24 of the frame 20, and thus serve to check the relative pivotal movement between the barrel-unit and butt-unit.

The upper surface of the forestock 23 is, as shown, transversely shaped to conform to and snugly fit the bottom half of the barrel 22. The central portion of the transversely-curved upper face of the forestock 23 is cut away to provide a longitudinal pocket or recess 36 receiving the tang 32 of the forestock-shoe 31, before referred to. Secured to the under-face of the tang 32 of the said forestock-shoe is a forestock-retainer 37 engaging with a retaining-lug 38 depending from and forming a rigid feature of the barrel 22 at a point forwardly of the barrel-coupling-lug 27 thereof.

The forestock-retainer 37, above referred to, is secured to the under-side of the tang 32 of the forestock-shoe 31 by means of a kerfed stud 39 having a threaded shank 40 threaded into the bore 33 in the tang 32 of the forestock-shoe 31. In its under-face, the stud 39 is provided with a threaded bore 41 and snugly fits within an upwardly-opening pocket 42 formed in the upper face of the forestock 23. Threaded into the bore 41 of the stud 39 is the upper end of a coupling-screw 43 having its head seated in a shouldered bushing or escutcheon 44, which, in turn, is mounted in the under-face of the forestock 23.

The forestock-retainer 37 is provided with a resilient bowed arm 45 having a transversely-extending ridge or hump 46 adjacent its free end, which is adapted to enter a rearwardly-opening retaining-notch 47 formed in the rear edge of the retaining-lug 38. As thus constructed and arranged, the stud 39 not only serves to bind the forestock-retainer to the forestock-shoe 31, but also serves in conjunction with the coupling-screw 43 to secure the said forestock-shoe and forestock-retainer to the forestock 23 itself.

From the foregoing, it will be apparent that the forestock 23 and its associated parts are firmly but releasably secured to the under-side of the barrel 22 and that the resilient arm 45 of the forestock-retainer 37 exerts a constant rearward thrust upon the forestock, so as to insure the engagement of the wall of the notch 35 in the said forestock-shoe with the fulcrum-pin 29.

By engaging the forestock-shoe 31 directly with the fulcrum-pin 29 instead of with a cylindrically-contoured surface upon the forward end of the frame 20, as has been the more general practice, not only is it unnecessary to carefully shape the forward end of the frame 20 so as to present a surface concentric with the fulcrum-pin 29, but the breakdown movement of the arm may be readily checked by the engagement of a portion of the forestock-shoe with the bottom-wall of the said frame. Furthermore, the extension of the forestock-shoe within the interior of the frame permits a very rugged and compact arrangement of parts to be effected.

If desired, a forestock-shoe 48 of the type shown in Fig. 10 may be employed in place of the forestock-shoe before described. This forestock-shoe includes a tang 49 having a vertical threaded bore 50 about midway of its length and having at its rear end, on each of its respective opposite sides, two parallel depending ears 51—51. The forestock-shoe 48 may be conveniently formed of relatively-heavy sheet-metal and the ears 51—51 thereof bent downwardly from a suitably-shaped blank. The rear edge of each of the ears 51—51 is formed with a rearwardly-opening notch 52, the rearwardly-facing semi-circular wall of which conforms in curvature to and is adapted to bear upon the forward surface of a fulcrum-pin such as 29 previously described. The under edge of each of the ears 51—51 slopes forwardly and upwardly, as shown, and is transversely curved to substantially conform to the curvature of the bottom wall 24 of the frame 20 previously described.

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 claim are intended to be embraced therein.

I claim:

A breakdown firearm including in combination: a frame having a forward portion of U-shaped form in cross-section; a fulcrum-pin extending transversely of the said frame at a point wholly to the rear of the forward end thereof; a barrel having a depending-lug engaged with the rear surface of the said fulcrum-pin; a forestock detachably secured to the said barrel and having at its rear end a portion of U-shaped form in cross-section fitting over the U-shaped forward portion of the said frame; and a forestock-shoe carried by and removable with the said forestock and having a portion projecting rearwardly beyond the U-shaped rear portion of the forestock and into the forward end of the U-shaped forward portion of the said frame and pivotally engaged with the forward surface of the said fulcrum-pin therein; the bottom wall of the U-shaped portion of the said frame extending between the U-shaped rear end of the said forestock and the projecting rear portion of the said forestock-shoe.

WILLIAM C. ROEMER.