

April 14, 1942.

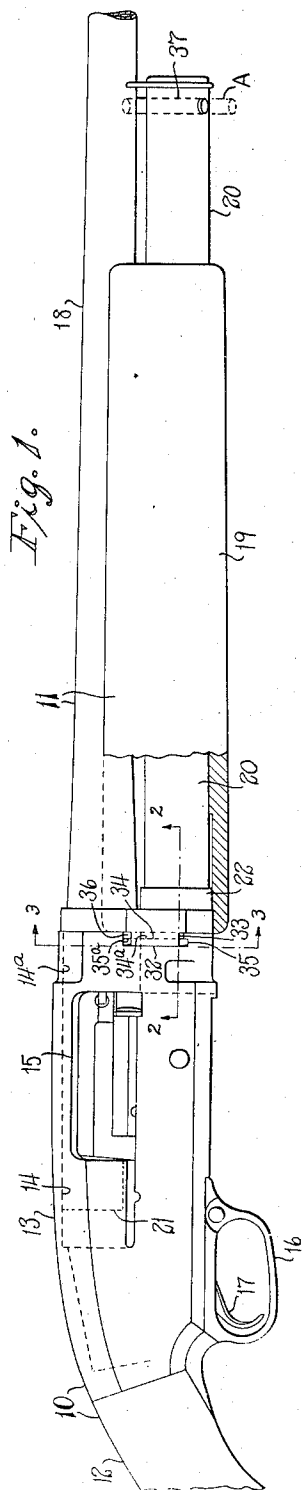
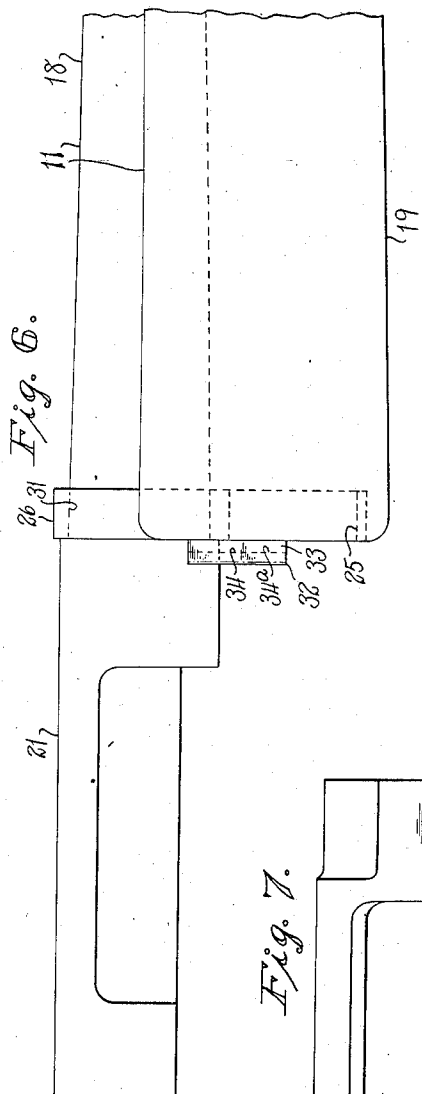
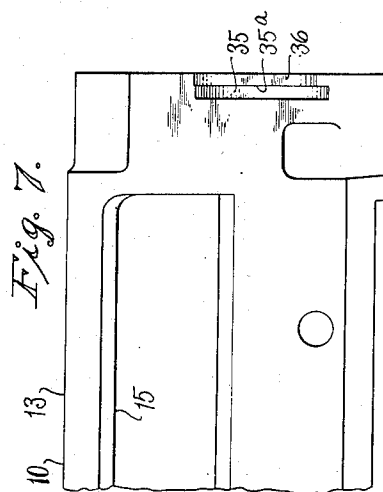
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2,279,931

TAKE-DOWN FIREARM

Filed Dec. 1, 1938

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 2.

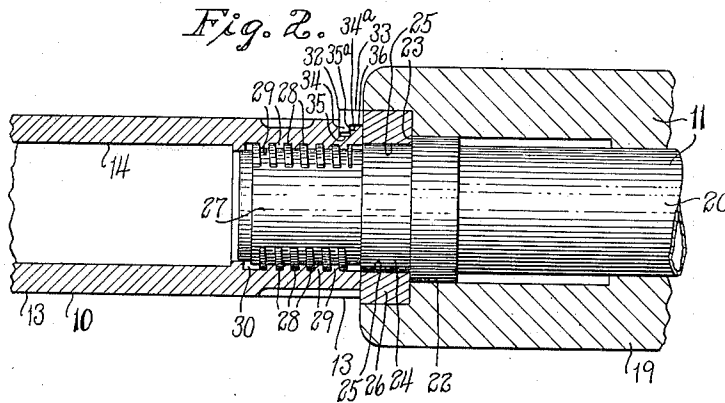


Fig. 3.

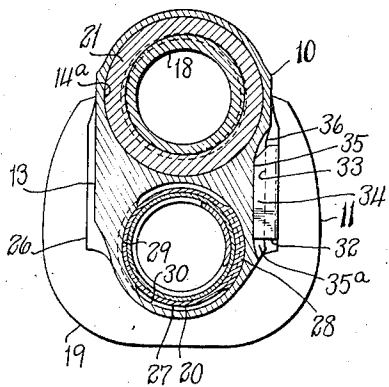


Fig. 4.

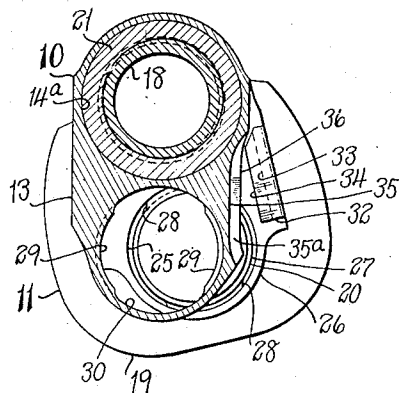
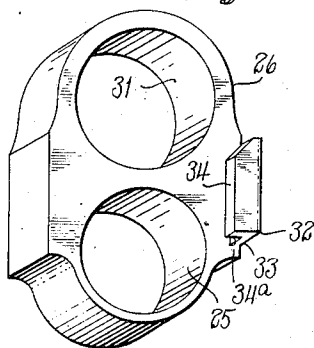


Fig. 5.



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UNITED STATES PATENT OFFICE

2,279,931

TAKEDOWN FIREARM

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mesne assignments, to Western Cartridge Com-
pany, a corporation of Delaware

Application December 1, 1938, Serial No. 243,378

5 Claims. (Cl. 42—75)

This invention relates to improvements in fire-
arms and more particularly to take-down fire-
arms, i. e., firearms comprising separable butt-
units and barrel-units whereby the firearms may
be conveniently disassembled to facilitate trans-
portation.

One of the objects of the present invention is
to provide a take-down firearm having a superior
construction and arrangement of parts whereby a
butt-unit and barrel-unit thereof may be readily
assembled and disassembled.

Another object of the present invention is to
provide a take-down firearm having superior
means whereby the separable units thereof may
be firmly interlocked in assembled relationship
and maintained in such relationship despite vio-
lent shocks incident to the discharge of the fire-
arm and rough usage.

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 cer-
tain modes of carrying out the present invention
are shown for illustrative purposes:

Fig. 1 is a broken view in side-elevation of a
take-down firearm embodying the present inven-
tion and showing a portion of the forestock
broken away and in vertical central-longitudi-
nal section;

Fig. 2 is a broken detail sectional-view taken
on the line 2—2 of Fig. 1, but on a larger scale;

Fig. 3 is a transverse-sectionnal view taken on
the line 3—3 of Fig. 1;

Fig. 4 is a view corresponding to Fig. 3 but
showing the barrel-unit turned with respect to
the butt-unit for the purpose of unlocking the
two said units from each other preparatory to
their axial separation;

Fig. 5 is a perspective view of the coupling-
member viewed mainly from the rear;

Fig. 6 is a view in side-elevation of the rear
portion of the barrel-unit; and

Fig. 7 is a broken-view in side-elevation of
the portion of the butt-unit.

The particular take-down firearm herein
shown for the illustration of the present inven-
tion is of the so-called "automatic" or "self-
loading" type and includes a butt-unit gener-
ally designated by the reference character 10, and
a barrel-unit generally designated by the refer-
ence character 11.

In the main, the butt-unit 10 comprises a butt-

stock 12 rigidly attached at its forward end to
a receiver 13 which latter is provided in its in-
terior with a mechanism-receiving chamber 14
communicating with the right side-face of the
receiver by means of an ejection-opening 15 as
is indicated in Figs. 1 and 7. Depending from
the under side of the receiver 13 of the butt-unit
10 is a trigger-guard 16 into which projects a
trigger 17 by means of which the firearm may
be discharged in the usual manner.

The barrel-unit 11 comprises in the main, a
barrel 18, a forestock 19, a tubular-magazine
20, and a cylindrically-contoured barrel-exten-
sion 21 rigidly united with the rear-end of the
barrel 18 so as to form a part thereof and pro-
jecting rearwardly therefrom through a barrel-
receiving opening 14a in the front of the receiv-
er 13 and into the upper-portion of the mecha-
nism-receiving chamber 14 in the latter, with
freedom for turning movement therein and also
for axial reciprocation therein in the general
manner of automatic or self-loading firearms.

The tubular-magazine 20 is located beneath
the barrel 18 and throughout the major por-
tion of the its length it is enclosed by the fore-
stock 19. Adjacent its rear-end the tubular-
magazine 20 is formed with a broad annular col-
lar or flange 22 extending outwardly therefrom
and having its rear-face constituting a stop-
shoulder or stop-abutment 23 as is clearly shown
in Fig. 2. Immediately to the rear of the an-
nular flange 22 and the stop-shoulder 23, the
tubular-magazine 20 is formed with a cylindrical
portion 24 of lesser diameter than the said
flange or collar 22, and normally located in a
cylindrically-contoured magazine-receiving pas-
sage 25 in a coupling-member 26, with capacity
for both turning and reciprocating movement
therein.

Rearwardly of the cylindrical portion 24 just
above referred to, the tubular-magazine 20 is
provided with a terminal portion 27 formed upon
its periphery at diametrically-opposite points
with sets of interrupted threads 28—28 inter-
fitting with two similar sets of interrupted
threads 29—29 formed in a magazine-receiving
socket 30 forming a feature of the lower front-
portion of the receiver 13 and opening there-
through into the lower-portion of the mecha-
nism-receiving chamber 14 in the said receiver,
in a manner common in tubular-magazine re-
peating firearms.

Directly above and parallel with the magazine-
receiving passage 25, the coupling-member 26 is
formed with a barrel-receiving passage 31

through which the rear portion of the barrel 18 extends. Normally the front edge of the barrel extension 21 abuts against the rear-face of the coupling-member 26 around the barrel-receiving passage 31 therein as is specially well indicated in Fig. 6 of the accompanying drawings.

In the particular take-down firearm herein chosen for illustration the barrel 18 is free to reciprocate through the barrel-receiving passage 31 in the coupling-member 26 though the said coupling-member 26 is held against turning-movement relative to the said barrel in a manner as will hereinafter appear.

About midway of its height the right rear portion of the coupling-member 26 is provided with an L-shaped coupling-lug 32 formed integrally with the said coupling-member and comprising a rearwardly-extending arm 33 and an inwardly-extending arm 34, the front face of which latter constitutes a forwardly-facing coupling-abutment 34a. The inwardly-projecting arm 34 of the coupling-lug 32 is adapted to be entered into and swung out of a vertical coupling-groove 35 (Fig. 7) formed in the right side-wall of the receiver 13 immediately adjacent the forward end thereof and having its front-wall constituting a rearwardly-facing coupling-abutment 35a. When the inwardly-projecting arm 34 of the coupling-lug 32 is located in the coupling-groove 35, the major portion of the rearwardly-extending arm 33 of the said coupling-lug is accommodated in a vertical clearance cut 36 which at its front intersects the forward face of the receiver 13 and which at its rear intersects the coupling-groove 35.

When the butt-unit 10 and the barrel-unit 11 are in their normal assembled relationships as indicated in Figs. 1, 2 and 3, the coupling-lug 32 is accommodated in the coupling-groove 35 and the clearance cut 36 in the receiver 13 so that the said butt-unit and barrel-unit are firmly interlocked against longitudinal separation. To prevent the barrel-unit and hence the coupling-member 26 forming part thereof, from swinging about the center of the barrel 18 as an axis to thus permit the withdrawal of the coupling-lug 32 from the coupling-groove 35, the tubular-magazine 20 is normally projected through the magazine-receiving passage 25 in the said coupling-member 26 and into the magazine-receiving socket 30 in the receiver 13 in which the said tubular-magazine is releasably held by the inter-engagement of the interrupted threads 28—28 and 29—29. To guard against the inadvertent rotation of the tubular-magazine 20 in a direction required to disengage its interrupted threads 28—28 from the interrupted threads 29—29 of the receiver 13, a reciprocating magazine-locking pin 37 is mounted in the extreme forward portion of the tubular-magazine 20, as is indicated in Fig. 1, so as to have one of its ends project into engagement with the barrel 18 in a manner well known in the firearm art.

When it is desired to separate the butt-unit 10 and the barrel-unit 11 from each other for the purpose of packing or transportation, the magazine-locking pin 37 in the forward end of the tubular-magazine 20 is shifted into the position in which it is indicated by the dotted lines A in Fig. 1, to thereby release the tubular-magazine 20 for being turned. The now displaced magazine-locking pin 37 may be employed to turn the tubular-magazine 20 through an arc of movement substantially equal to 90° to thereby

bring the two sets of interrupted threads 28—28 of the said tubular-magazine into registration with the gaps between the two sets of interrupted threads 29—29 in the magazine-receiving socket 30 of the receiver 13. The tubular-magazine 20 may now be moved axially forwardly with respect to the barrel 18 and the remainder of the firearm, until its extreme rear end is brought to a position forwardly of the front edge or face of the receiver 13, whereupon the entire barrel-unit may be swung about the barrel 18 as a center into the position in which it is indicated in Fig. 4.

The described turning movement of the barrel-unit 11 relative to the butt-unit 10 will serve to withdraw the inwardly-extending arm 34 of the L-shaped coupling-lug 32 completely out of the coupling-groove 35 in the side-wall of the receiver 13 and thereby permit the butt-unit 10 and barrel-unit 11 to be axially separated from each other by the complete withdrawal of the barrel extension 21 from the mechanism-receiving chamber 14 in the receiver 13. The separated units will now appear as they are represented in Figs. 6 and 7 respectively in which figures however only the forward portion of the butt-unit 10 and rear portion of the barrel-unit 11 are shown.

In reassembling the buttstock-unit 10 and the barrel-unit 11, the procedure and sequence of steps above recited, is reversed.

From the foregoing considered in conjunction with the accompanying drawings, it will be seen that a take-down firearm is provided which is simple and economical to manufacture but which possesses in its take-down feature the required ruggedness to withstand repeated shocks to which all parts of a firearm are subjected and which is conveniently operable.

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 take-down firearm including in combination: a butt-unit comprising a buttstock and a receiver provided with a barrel-receiving opening; a barrel-unit comprising a forestock and a barrel having a portion extendable into the barrel-receiving opening in the receiver of the said butt-unit; one of the said unit being provided with a coupling-recess opening transversely with respect to the longitudinal axis of the fire arm and the other of said units being provided with an L-shaped coupling-lug having a portion extending transversely thereof and enterable into the coupling-recess in the complemental unit to couple the two said units together against axial separation; both of the said units being turnable with respect to each other about the longitudinal axis of the barrel of the barrel-unit as a center, to respectively effect the engagement of the said coupling-recess and coupling-lug and normally restrain the said units against axial separation and to cause disengagement of the said coupling-means to permit the axial separation of the said units; and releasable-means normally holding the said butt-unit and the said barrel-unit against relative turning movement with respect to each other.

2. A take-down firearm including in combination: a butt-unit comprising a buttstock and a receiver provided with a barrel-receiving opening and with a laterally-opening coupling-recess; a barrel-unit comprising a forestock and a barrel having a portion extendable into the barrel-receiving opening in the receiver of the said butt-unit, the said barrel-unit being provided with an L-shaped coupling-lug having a laterally-extending portion enterable into the laterally-opening coupling-recess in the receiver of the said butt-unit to couple the two said units together against axial separation; the said butt-unit and the said barrel-unit being turnable with respect to each other about the longitudinal axis of the barrel of the said barrel-unit as a center, in opposite directions to respectively cause the engagement of the said coupling-recess and L-shaped coupling-lug and normally restrain the said units against axial separation and to cause disengagement of the said coupling-means to permit the axial separation of the said units; and releasable-means normally holding the said butt-unit and the said barrel-unit against relative turning movement with respect to each other.

3. A take-down firearm including in combination: a butt-unit comprising a buttstock and a receiver provided with a barrel-receiving and a magazine-receiving socket; and a barrel-unit comprising a barrel, a forestock, and a tubular-magazine extending in substantial parallelism with the said barrel and movable axially with respect thereto for the entry into and the withdrawal of its rear-portion from the magazine-receiving socket in the receiver of the said barrel-unit; one of the said units being provided with a coupling-recess opening transversely with respect to the longitudinal axis of the firearm and the other of said units being provided with an L-shaped hook-like coupling-lug having a portion extending transversely thereof and enterable into the coupling-recess in the complementary unit to couple the two said units together against axial separation; the said units being turnable with respect to each other about the longitudinal axis of the barrel of the barrel-unit as a center, in opposite directions to respectively cause the engagement of the said transversely opening coupling-recess and hook-like coupling-lug and normally restrain the said units against axial separation and to cause disengagement of the said coupling-means to permit the axial separation of the said units; the rear-portion of the axially-movable tubular-magazine of the said barrel-unit being retirable from and enterable into the magazine-receiving socket in the receiver of the said butt-unit to respectively unlock and lock the two said units for and against relative turning movement.

4. A take-down firearm including in combination: a butt-unit comprising a buttstock and a receiver provided with a barrel-receiving opening, a magazine-receiving socket, and a laterally-opening coupling-recess; and a barrel-unit comprising a barrel having a portion extendable into the barrel-receiving opening in the receiver of the said butt-unit, a forestock, a coupling-member provided with a hook-like L-shaped

coupling-lug having a laterally-extending portion thereof enterable into the laterally-opening coupling-recess in the receiver of the said butt-unit to couple the two said units together against axial separation, and a tubular-magazine extending in substantial parallelism with the said barrel and movable axially with respect thereto for the entering into and the withdrawal of its rear-portion from the magazine-receiving socket in the receiver of the said barrel-unit; the said butt-unit and the said barrel-unit being turnable with respect to each other about the longitudinal axis of the barrel of the said barrel-unit as a center to respectively cause the L-shaped coupling-lug of the coupling-member of the said barrel-unit to be entered into the laterally-opening coupling-recess in the receiver of the said butt-unit to normally restrain the said units against axial separation, and to be retired to permit the axial separation of the said units when relative rotational movement is effected respectively in opposite directions between them; the rear-portion of the axially-movable tubular-magazine of the said barrel-unit being retirable from and enterable into the magazine-receiving socket in the receiver of the said butt-unit to respectively unlock and lock the two said units for and against relative turning movement.

5. A take-down firearm of the reciprocating-barrel type, including in combination: a butt-unit comprising a buttstock and a receiver provided with a forwardly-opening barrel-receiving passage and a forwardly-opening magazine-receiving socket; and a barrel-unit comprising a forestock, a barrel axially movable with respect to the said forestock and the receiver of the said butt-unit and having a rear-portion extending into the barrel-receiving opening of the said receiver and reciprocating therein with freedom for axial withdrawal therefrom and the said barrel being free of threaded connection with the said receiver, and a tubular magazine extending in substantial parallelism with the said barrel and movable axially with respect thereto to permit the rear-portion of the said tubular magazine to be entered into and withdrawn from the magazine-receiving socket in the receiver of the said butt-unit, and means holding the said barrel and forestock and tubular magazine assembled together; one of the said units being provided exteriorly separate from the said barrel with a coupling-recess opening laterally with respect to the longitudinal axis of the firearm-structure and the other of said units being provided exteriorly separate from the said barrel with a coupling-projection also extending laterally with respect to the longitudinal axis of the firearm-structure and entering the coupling-recess in the other unit to couple the two said units together against axial separation; the two said units being turnable with respect to each other about the longitudinal axis of the barrel of the said barrel-unit as a center to enter the coupling-projection of one of the said units into the coupling-recess of the complementary unit and to withdraw the said coupling-projection from the said coupling-recess.

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