Oct. 19, 1937. F. F. BURTON ET AL 2,096,028

TUBULAR MAGAZINE REPEATING FIREARM

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Fig. 1.

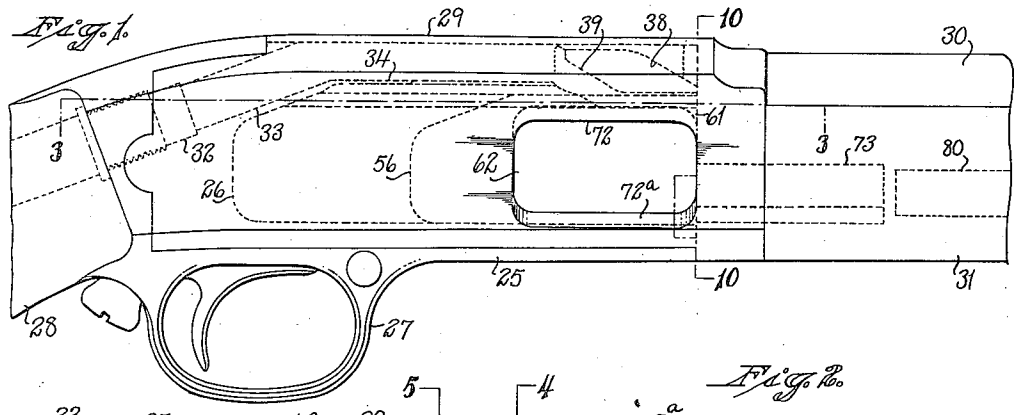



Fig. 2.

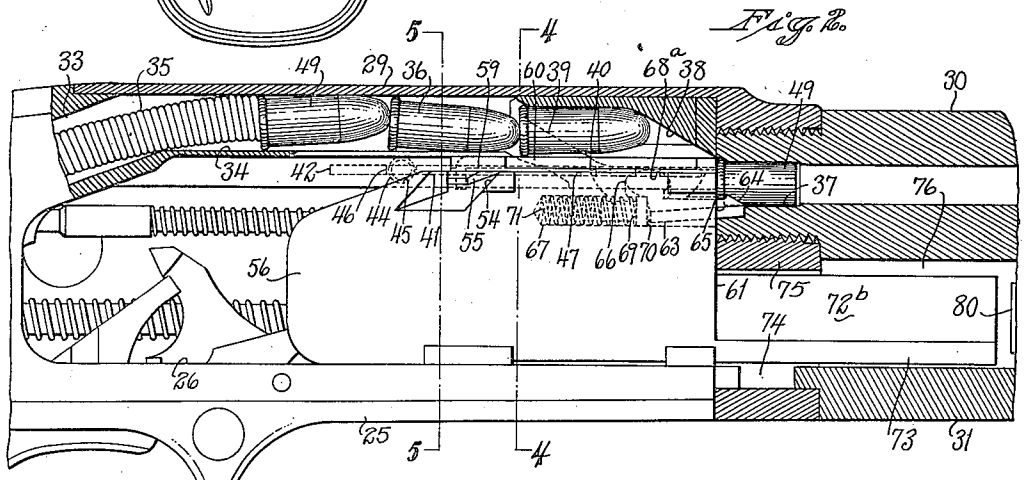
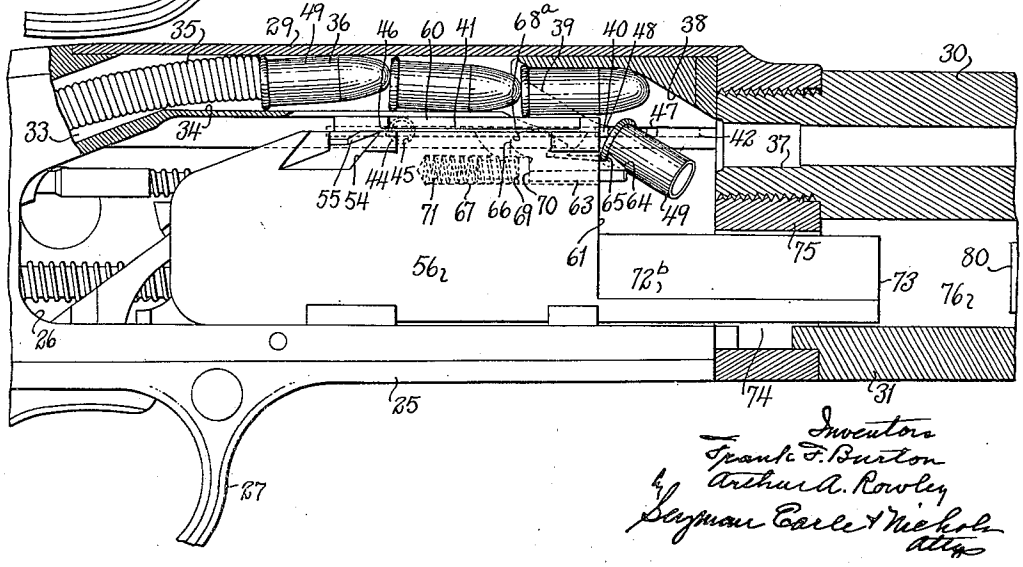



Fig. 6.




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Fig. 8.

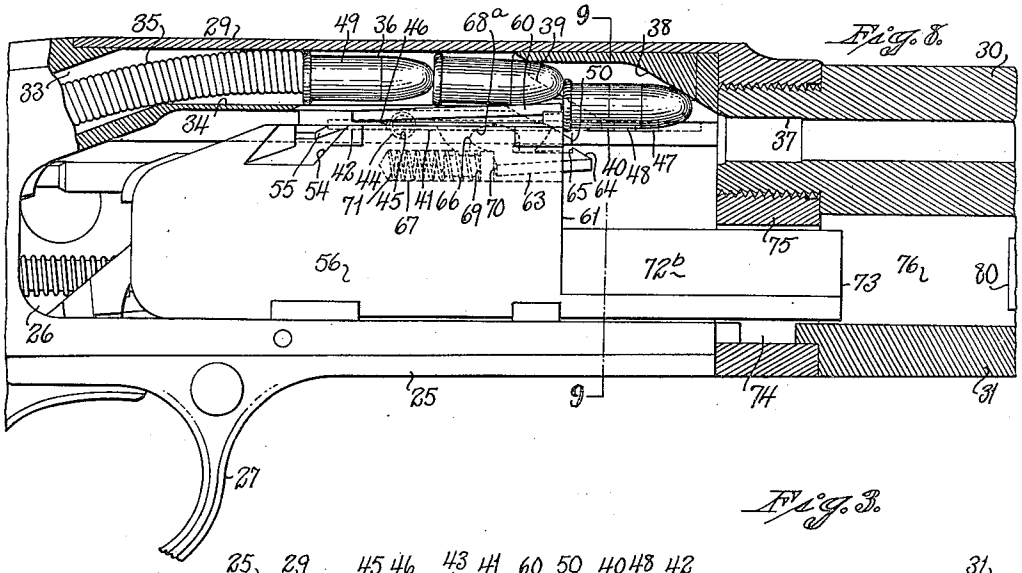



Fig. 3.

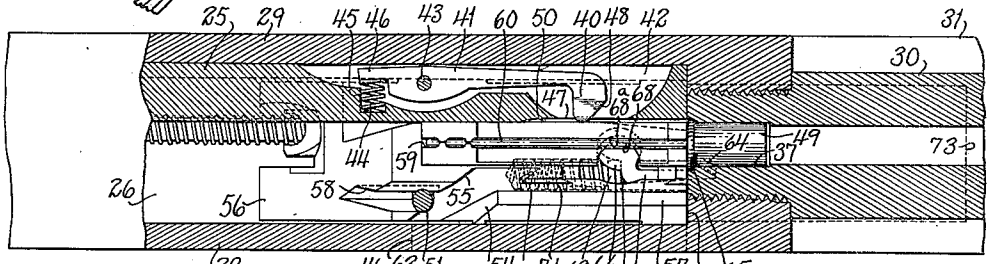



Fig. 7.

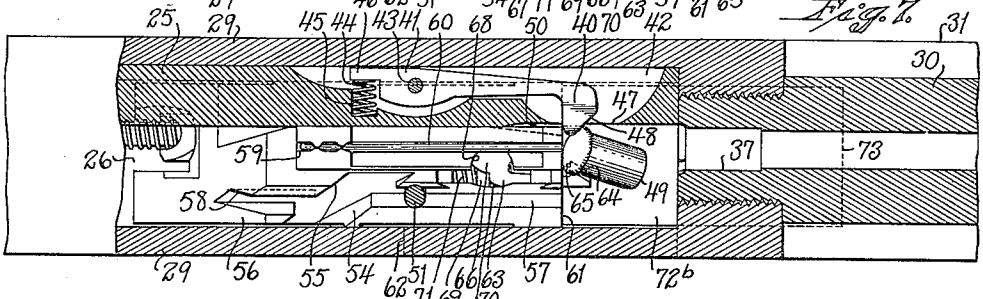



Fig. 4.

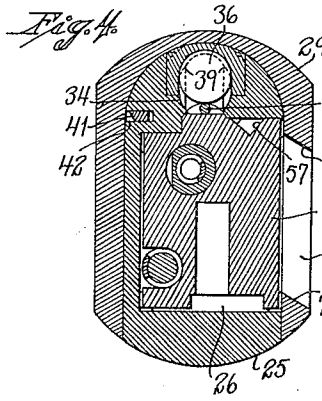



Fig. 5.

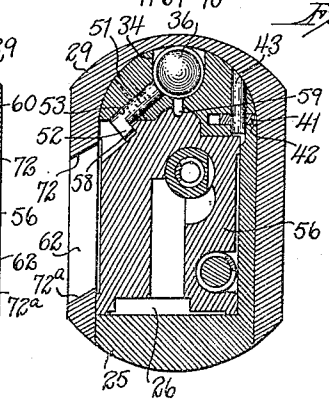
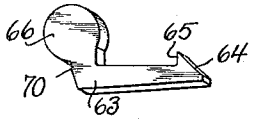



Fig. 10.




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Fig. 9.

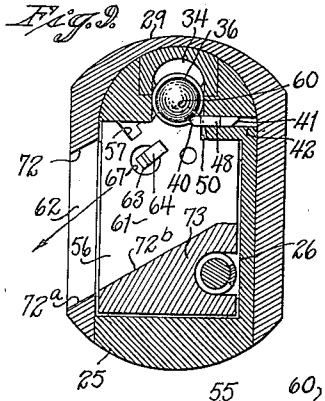



Fig. 13.

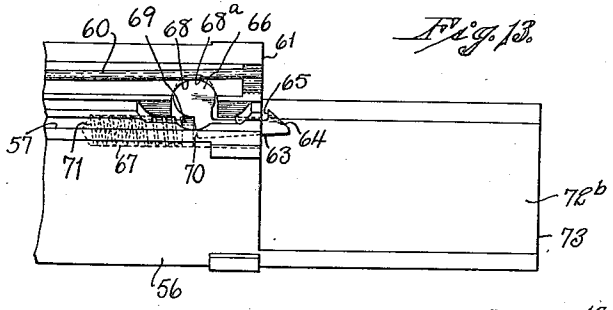



Fig. 12.

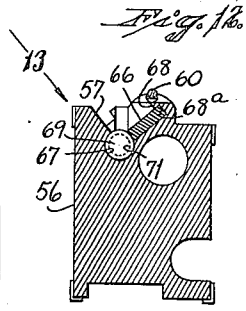



Fig. 11.

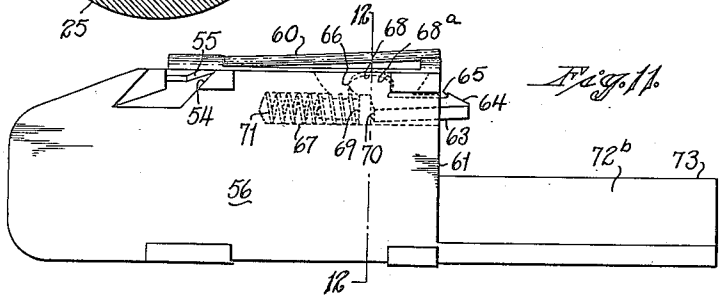



Fig. 14.

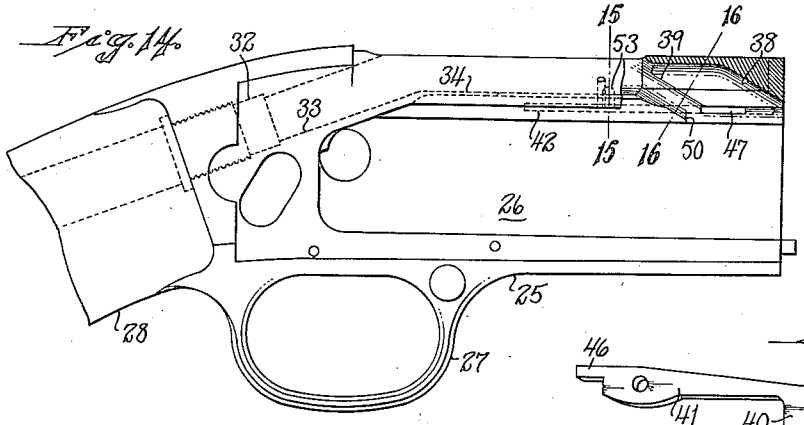



Fig. 17.




Fig. 10.

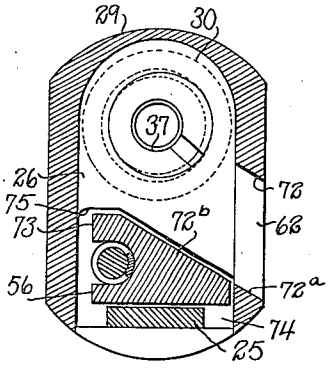



Fig. 16.

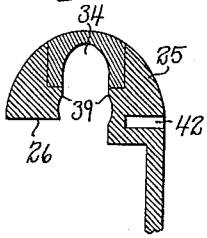



Fig. 15.

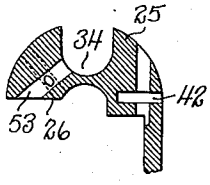
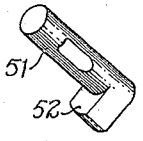



Fig. 18.




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Fig. 20.

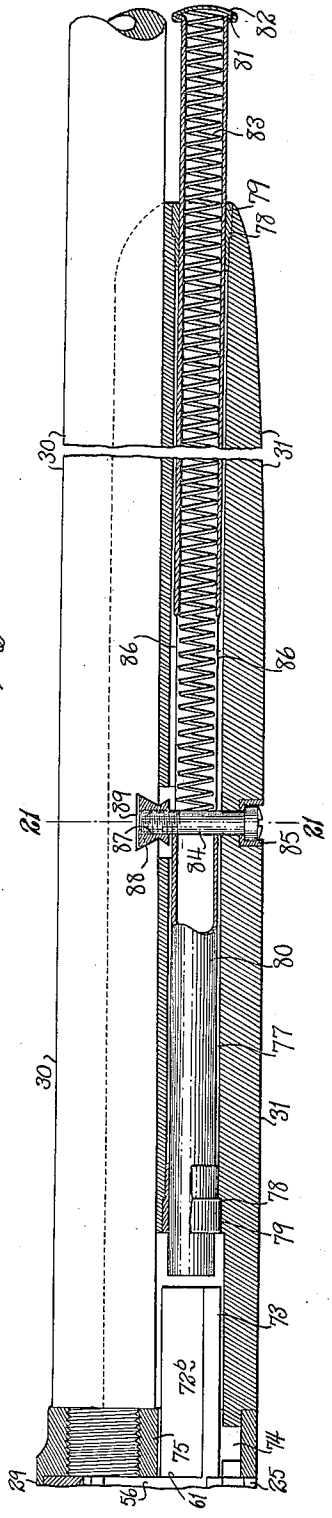


Fig. 21.

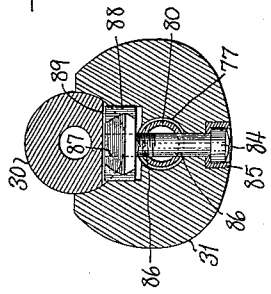
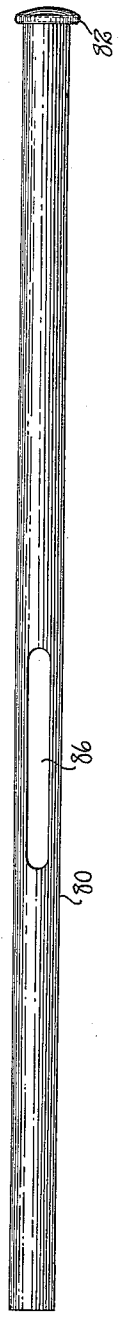


Fig. 22.



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Patented Oct. 19, 1937

2,096,028

# UNITED STATES PATENT OFFICE

2,096,028

## TUBULAR-MAGAZINE REPEATING FIREARM

Frank F. Burton, Mount Carmel, and Arthur A. Rowley, Hamden, Conn., assignors to Winchester Repeating Arms Company, New Haven, Conn., a corporation of Maryland

Application January 6, 1934, Serial No. 705,530

6 Claims. (Cl. 42—17)

This invention relates to an improvement in repeating firearms and particularly to tubular-magazine repeating firearms.

One of the objects of the present invention is to provide a firearm of the type referred to, having a superior construction and arrangement of parts, whereby cartridge-cases are ejected in such manner as to afford minimum annoyance and danger to the user of the arm.

Another object is to provide a convenient and reliable firearm of the type referred to having provision for diverting the burnt-powder material in such direction as to minimize the danger and annoyance to both the user of the arm and bystanders.

A further object is to provide a firearm of the type referred to, having superior means for feeding cartridges from the magazine into the cartridge-chamber.

A still further object is to provide superior means for the extraction and ejection of cartridge-cases from the cartridge-chamber.

Other objects and advantages will appear to those skilled in the art from the following, considered in conjunction with the accompanying drawings and appended claims.

In the accompanying drawings:

Fig. 1 is a broken view in side elevation of one form which a tubular-magazine repeating firearm may assume in accordance with the present invention;

Fig. 2 is a broken view thereof, partly in vertical central-longitudinal section, showing the parts in the positions which they occupy immediately after the firing of the cartridge;

Fig. 3 is a broken view in horizontal section, taken on the line 3—3 of Fig. 1;

Fig. 4 is a transverse sectional view, taken on the line 4—4 of Fig. 2;

Fig. 5 is a similar view, taken on the line 5—5 of Fig. 2;

Fig. 6 is a view corresponding to Fig. 2, but showing the parts in the positions which they assume during the process of ejecting a cartridge-case from the arm;

Fig. 7 is a view in horizontal section, corresponding to Fig. 3 save that the parts are shown in the positions which they have assumed in Fig. 6;

Fig. 8 is a view corresponding to Figs. 2 and 6, but showing the parts in the positions which they assume just prior to the feeding of a fresh cartridge into the cartridge-chamber of the arm;

Fig. 9 is a transverse sectional view, taken on the line 9—9 of Fig. 8;

Fig. 10 is a transverse sectional view, taken on the line 10—10 of Fig. 1;

Fig. 11 is a view in side elevation of the breech-bolt, detached;

Fig. 12 is a transverse sectional view, taken on the line 12—12 of Fig. 11;

Fig. 13 is a broken view in elevation of the breech-bolt, viewing the same from the direction of the arrow 13 in Fig. 12;

Fig. 14 is a view mainly in side elevation and partly in vertical-central section of the frame-body of the arm, together with a portion of the butt-stock;

Fig. 15 is a sectional view, taken on the line 15—15 of Fig. 14;

Fig. 16 is a similar view, taken on the line 16—16 of Fig. 14;

Fig. 17 is a perspective view of the combined cartridge-ejector-and-retainer, detached;

Fig. 18 is a similar view of the cartridge-detent;

Fig. 19 is a corresponding view of the extractor;

Fig. 20 is a broken view in vertical central-longitudinal section of the portion of the firearm adjacent the fore-stock;

Fig. 21 is a transverse sectional view taken on the line 21—21 of Fig. 20; and

Fig. 22 is a top or plan view of the operating-plunger detached.

The embodiment of the present invention herein chosen for illustration includes a frame-body 25 having a mechanism-receiving chamber 26 therein, opening laterally on one side, as clearly indicated in Figs. 4 and 5. The said frame-body is provided with a usual trigger-guard 27 and is secured to the forward end of a butt-stock 28.

Fitting over the frame-body 25, above referred to, and forming together therewith a complete frame for the arm, is a frame-cover 29 of inverted U-shaped form in cross-section, and having attached to its forward end the usual barrel 30 and fore-stock 31.

Extending diagonally forwardly and upwardly through the butt-stock 28 is a tubular-magazine 32 intersecting at its forward end the upwardly-and-forwardly-sloping rear end 33 of a cartridge-delivery passage 34, extending longitudinally of the frame-body 25 and opening for the major portion of its length through the upper surface thereof. The open upper side of the passage 34 is normally closed by the frame-cover 29, before referred to.

Extending through the magazine-tube 32 and on occasion extending into the cartridge-delivery passage 34 of the frame, is a spring-pressed flex-

ible cartridge-follower 35, serving to feed a cartridge-column composed of a series of cartridges 36, forwardly through the cartridge-delivery passage 34 of the frame-body 25 for successive delivery into the cartridge-chamber 37 in the rear end of the barrel 30.

The forward end of the cartridge-delivery passage 34 is provided with a downwardly-and-forwardly-sloping bullet-guide surface 38 serving to deflect the bullet end of each of the cartridges 36 downwardly and forwardly toward the cartridge-chamber 37, before referred to. Complementing the bullet-guide surface 38 and located a suitable distance to the rear thereof, is a pair of rim-guide surfaces 39—39, located on the respective opposite side-walls of the cartridge-delivery passage 34 and preferably formed by boring diagonally through the metal, so as to cause the said rim-guide surfaces to conform substantially in transverse curvature to the rims of the cartridges 36.

Interposed in the downwardly-and-forwardly-sloping path through which each successive cartridge must pass under the guidance of the surfaces 38 and 39, is the nose 40 of a horizontally-arranged plate-like combined cartridge-ejector-and-retainer 41, located in a longitudinal groove 42 formed in the side of the upper portion of the frame-body 25. The member 41, just referred to, is mounted in the groove 42 with capacity for swinging movement laterally of the arm by means of a vertical pivot-pin 43, and is swung laterally by a helical spring 44 seated in an outwardly-opening spring-pocket 45 in the frame-body 25, and bearing at its outer end against a tailpiece 46 offsetting from the said member 41.

The spring 44, just above referred to, serves to swing the combined cartridge-ejector-and-retainer 41 in a direction required to yieldingly extend the nose 40 thereof inwardly through a clearance-passage 47 laterally interconnecting the groove 42 and the forward end of the cartridge-delivery passage 34. The projection of the nose 40 of the member 41, as just described, serves to interpose the sloping cam-like ejecting-surface 48 formed on the said nose 40 into the path of rearward travel of cartridge-cases 49 as the same are extracted from the cartridge-chamber 37 of the barrel 30, in the manner as will be hereinafter described.

By reference to Figs. 8, 9 and 14 in particular, it will be seen that immediately below and to the rear of the clearance 47, the frame-body is formed with a forwardly-facing ejection-abutment 50 for engagement with the rear faces of cartridges in the event that it is desired to remove the same, unfired, from the cartridge-chamber 37.

For the purpose of insuring the one-by-one feeding of the cartridges 36 for movement forwardly and downwardly along the inclined guide-surfaces 38 and 39 and ultimately into the cartridge-chamber 37, a radially-reciprocating cartridge-detent 51 is provided, having its inner end automatically advanced into and retired from the path of travel of the cartridges 36 in the cartridge-delivery passage 34 in the frame-body 25. The said cartridge-detent 51 is of cylindrical form, having at its outer end a laterally-offsetting head 52, and reciprocates in a passage 53 extending through the upper portion of the frame-body 25 in a direction radially downwardly and outwardly with respect to the cartridge-delivery passage 34, as shown in Fig. 5.

The head 52 of the reciprocating cartridge-detent 51 projects beyond the adjacent portion of the frame-body 25 for being alternately engaged by a detent-advancing cam-surface 54 and a complementary inclined detent-retracting cam-surface 55 formed in the upper right-hand corner of a breech-bolt 56 mounted for reciprocation within the mechanism-receiving chamber 26 of the frame-body 25. The cam-surrfaces 54 and 55, just referred to, are parallel and sloped diagonally from front to rear, as clearly shown in Figs. 3 and 7. The detent-advancing cam-surface 54 has extending forwardly from it an upwardly-facing detent-holding surface 57, and the complementary detent-retracting cam-surface 55 has rearwardly extending from it a downwardly-facing detent-holding surface 58, all as clearly shown in Figs. 3 and 7 of the drawings.

Mounted and staked in a longitudinal groove 59 formed in the upper surface of the breech-bolt 56, is a forwardly-and-upwardly-sloping flexible cartridge-pusher 60. The forward end of the said cartridge-pusher 60 is substantially flush with the front- or breech-face 61 of the breech-bolt 56, and is adapted for successive engagement with the rear faces of the cartridges 36 in the cartridge-delivery passage 34 for successively feeding the said cartridges, one for each cycle of movement of the said breech-bolt, into the cartridge-chamber 37.

A plate-like extractor 63 is carried by the breech-bolt 56, for the purpose of removing cartridges 36 and cartridge-cases 49 from the cartridge-chamber 37 of the barrel 30 for ultimate ejection outwardly and downwardly through an ejection-passage 62 leading outwardly and downwardly from the forward end of the chamber 26 and opening through the right side-wall of the frame-cover 29. The extractor 63 has an obliquely-disposed forward end 64 and a rearwardly-facing extracting-hook 65, and is formed at the end thereof, opposite the said extractor-hook, with a cylindrically-contoured pivot-head 66, as clearly shown in Fig. 19. The hooked forward end of the said extractor 63 projects forwardly through a longitudinal bore 67 opening through the forward face 61 of the breech-bolt 56. The rear portion of the bore 67 intersects a shallow transversely-oblique cylindrical bore 68 extending at a right angle to the axis of the said bore 67 and terminating in an undercut 68[a] shaped and sized to conform to the curvature of the cylindrically-contoured pivot-head 66 of the extractor 63 to provide a socket therefor in which the said pivot-head may rock.

For the combined purpose of retaining the said extractor in place in the breech-bolt 56 and of urging its extractor-hook 65 inwardly for successive engagement with cartridge-rims, a headed plunger 69 is mounted in the rear portion of the longitudinal bore 67 in the breech-bolt 56, and is urged into engagement with a rearwardly-facing thrust-shoulder 70 formed on the extractor 63 by means of a helical spring 71 encircling the said plunger and mounted in the rear end of the bore 67, before referred to.

The outwardly-and-downwardly-sloping ejection-passage 62 before referred to has a similarly-sloping ceiling-surface 72 formed in the frame-cover 29 and is complemented by a similarly-sloping floor-surface 72[a] also formed in the said frame-cover. When the breech-bolt 56 is in its retired or partly-retired position, the floor-surface 72[a] just referred to is complemented by a similarly-sloping floor-surface 72[b] constituting the upper surface of a longitudinal tang 73 formed integral with and forwardly projecting from the

breech-face 61 of the breech-bolt 56, and extending forwardly into a longitudinal passage 74 formed in the forward wall 75 of the frame-cover 29, and substantially conforming in transverse form to the transverse form of the said tang, as clearly shown in Fig. 10. When the breech-bolt 56 is in other than its substantially-fully-retired position, the tang 73 of the same extends forwardly beyond the passage 74 in the frame-cover 29 and into a recess 76 formed in the fore-stock 31, as clearly shown in Figs. 2, 6 and 8.

Leading axially forwardly through the fore-stock 31 is a longitudinal passage 77 having axially mounted in each of its respective opposite ends a guide-bushing 78, each of which is provided with a peripherally-serrated portion 79 adapted for a drive-fit in the material from which the fore-stock 31 is made, so as to be rigidly held in place.

Located in the longitudinal passage 77 in the fore-stock 31 is a tubular operating-plunger 80 bearing adjacent its respective opposite ends in the guide-bushings 78—78 and adapted to have its rear end engaged on occasion with the front end of the tang 73 of the breech-bolt 56 for the purpose of manually retiring the said breech-bolt.

The forward end of the operating-plunger 80 normally extends well beyond the forward end of the fore-stock 31 and has its forward end outwardly flanged as at 81 for having crimped over it the edge of a concavo-convex sheet-metal cap 82. The said cap 82 forms an abutment for the forward end of a helical spring 83 housed within the operating-plunger 80 and abutting at its rear end against a screw 84.

The screw 84 has its head seated in an escutcheon 85 mounted in the under face of the fore-stock 31 and extends upwardly through the said fore-stock and through a pair of longitudinal clearance-slots 86—86 respectively formed in the operating-plunger 80 at diametrically-opposite points thereon. The threaded upper end of the screw 84 interengages with a vertically-extending internally-threaded bore 87 formed in a dovetail-shaped retaining-block 88 fitting within a dovetail-groove 89 extending transversely across the under face of the barrel 30.

For the purpose of a clearer understanding of the operation of the firearm herein chosen for illustration, let it be presumed that the breech-bolt 56 is in its forward or closed position and that the firearm has just been fired, as indicated in Fig. 2. Immediately upon the firing of the cartridge, the reaction of the powder gases will force the cartridge-case rearwardly, with the effect of similarly moving the breech-bolt 56 and the parts carried thereby.

It will be noted by reference to Fig. 2 that the extractor-hook 65 of the extractor 63 is at this time hooked over the rim of the cartridge-case 49 shown in the cartridge-chamber 37 of the barrel 30.

When in the concurrent rearward travel of the breech-bolt 56 and the cartridge-case 49, the rim of the latter engages with the cam-like ejecting-surface 48 of the combined cartridge-ejector-and-retainer 41, under ordinary circumstances, the forward end of the said cartridge-case 49 will be swung downwardly and outwardly about the extractor-hook 65 as a pivot, with the result that the said cartridge-case is "flipped," so to speak, in a downwardly-and-outwardly-directed path substantially corresponding to a line drawn between the extractor-hook 65 and the nose 40 of the member 41, as indicated in Fig. 9.

In an automatic firearm of the type herein chosen for illustration, it will be appreciated that a certain amount of powder gases and accompanying ash and other solid matter escapes rearwardly into the forward end of the mechanism-receiving chamber 26 in the frame-body 25 as the forward end of the cartridge-case clears the rear end of the cartridge-chamber 37 in the barrel 30. Such powder gases will expand into the forward end of the chamber 26 and the solid matter carried thereby will be deflected by the surfaces 72, $72^a$ and $72^b$ of the ejection-passage, out from the said passage into a path leading downwardly and laterally outward away from the arm.

Thus, both the cartridge-cases and powder, ash, etc., are discharged from the firearm in such manner as to afford minimum annoyance and danger to the user of the arm.

When the breech-bolt 56 reaches the limit of its rearward travel, which travel is definitely checked by the engagement of the rear end of the said breech-bolt with the rear wall of the mechanism-receiving chamber 26, the forward end of the flexible cartridge-pusher 60, carried by the said bolt, will snap up to a position to engage the rear face of the foremost one of the cartridges 36 in the cartridge-delivery passage 34.

As the breech-bolt 56 moves rearwardly, as above described, the detent-advancing cam-surface 54 thereof will engage with the laterally-offsetting head 52 of the cartridge-detent 51 and move the same so as to project its opposite end into the path of the rim of the second foremost cartridge 36 in the cartridge-delivery passage 34, to thus prevent the said cartridge from being pushed further forward by the spring-pressed cartridge-follower 35. After the movement of the cartridge-detent 51 is effected, as just described, it will be retained in its inwardly-projected position by the detent-holding surface 57.

As soon as the breech-face 61 of the breech-bolt 56 has moved rearwardly of the rear end of the foremost one of the cartridges 36 remaining in the cartridge-delivery passage 34, the spring-pressed flexible follower 35 will, acting through the intermediary of the intervening cartridges, under ordinary circumstances, force the said foremost cartridge diagonally downwardly and forwardly in the path defined by the bullet-guide surface 38 and the rim-guide surfaces 39—39 until such cartridge is arrested by the engagement of its periphery with the nose 40 of the combined cartridge-ejector-and-retainer 41. As thus arrested, the particular cartridge referred to is interposed in the path of forward travel of the breech-face 61 of the breech-bolt 56.

To safeguard against the failure of the spring-pressed follower 35 to position the foremost one of the cartridges 36, as above described, the flexible cartridge-pusher 60 will act, during the forward movement of the breech-bolt, to move the cartridge in question along the guide-surfaces 38 and 39.

After the foremost cartridge has been moved, as above described, the breech-face 61 of the breech-bolt 56 will act, during the remainder of the forward movement of the said breech-bolt, to continue the movement of the said cartridge along the inclined path described, thus causing the cartridge itself to laterally retire and crowd by the inwardly-projecting nose 40 of the combined cartridge-ejector-and-retainer 41. Ulti-

mately, the cartridge will be inserted into the cartridge-chamber **37** of the barrel **30** in readiness for the firing of another shot.

It is to be noted in this connection that the nose **40** of the combined cartridge-ejector-and-retainer **41** is not forced laterally sufficiently to release its restraint upon the downward movement of the cartridge until the bullet end of the cartridge has been partly entered into the cartridge-chamber **37** of the barrel **30**. Thus, the falling of the cartridge into a position too low for ready entry into the said cartridge-chamber **37**, is effectively prevented. It will also be understood that as the cartridge moves downwardly for introduction into the cartridge-chamber **37**, the forward end of the extractor **63** likewise serves to prevent the rim-end of the cartridge from falling downwardly at the same time that the forward end thereof is being supported by the entry of the bullet end into the cartridge-chamber **37**.

As soon, of course, as a cartridge is moved from the forward end of the cartridge-delivery passage **34**, as above described, the next succeeding cartridge moves forwardly to take the place of the cartridge just removed and is arrested in its movement by making contact with the inclined guide-surfaces **38** and **39**, and the upper surface of the breech-bolt **56**. This movement of the next succeeding cartridge, just referred to, is permitted by the retirement of the cartridge-detent **51**, which retirement is effected as the bolt moves into its forward or closed position by the detent-retracting cam-surface **55** on the said bolt and is retained in such retired position by the downwardly-facing detent-holding surface **58**.

In the event that it is desired to remove an unfired cartridge from the cartridge-chamber **37**, this may be accomplished by manually forcing the operating-plunger **80** rearwardly against the tension of its spring **83**, with the effect of engaging the rear end of the said plunger with the forward end of the tang **73** of the breech-bolt **56** to thus move the said breech-bolt and the parts carried thereby rearwardly. The rearward movement of the breech-bolt will cause the extracting-hook **65** of the extractor **63** to withdraw the unfired cartridge from the cartridge-chamber **37**.

As the cartridge moves rearwardly under the pull of the extractor **63**, its rim will engage with the cam-like ejecting-surface **48** of the combined cartridge-ejector-and-retainer **41**, but will be prevented from being flipped outwardly through the ejection-opening **62**, owing to the fact that its bullet end is not as yet fully withdrawn from the cartridge-chamber **37**. The continued rearward movement of the cartridge will cause the rim of the same to slide along the cam-like ejecting-surface **48** of the member **41**, with the effect of laterally retiring the nose **40** thereof against the tension of the spring **44**. The further rearward movement of the breech-bolt and the unfired cartridge will serve to bring the rear face of the latter into engagement with the ejecting-abutment **50**, by which time the bullet end of the cartridge is fully withdrawn from the cartridge-chamber **37**, whereupon the cartridge is flipped downwardly and outwardly through the ejection-passage **62**.

Prior automatic firearms having provision for the upward ejection of the cartridge-cases are open to the very serious objection that not only do the cartridge-cases pass through the line of vision of the user of the arm, but also, there is grave danger of the burnt powder material striking the marksman in the face.

It has also been proposed in the prior art to eject the cartridge-cases horizontally from the arm, and in such a construction, the cartridge cases, while not passing in the line of vision of the shooter, are very apt to strike a bystander. Furthermore, with a horizontally-ejecting firearm, the powder, gas, etc., emerges from the arm at such a height as not only to be disconcerting to the user of the arm, but to afford him actual danger from the burnt powder material.

The prior art also offers examples of firearms which provide for the vertically-downward ejection of the cartridge-cases, but such mode of ejection does not remedy the major defects of the other modes of ejection, above referred to, inasmuch as hot cartridge-cases are very apt to be flipped into the sleeve of the user's arm, then employed in supporting the fore-end of the gun, and the portion of his hands extending below the butt-stock are subjected to burning by the powder gases, etc. Furthermore, the clothing of the shooter is subjected to a vertiable barrage of soiled and greasy cartridge-cases and sooty burnt powder products, accompanied by particles of hot grease removed by the gases from the greased cartridges as well as from portions of the mechanism.

By the particular construction and arrangement of parts shown, the ejection of the cartridge-cases, as well as the burnt powder material, from the arm in a direction least objectionable and dangerous to both the user of the arm and a bystander is insured.

The invention may be carried out in other specific ways than that herein set forth without departing from the spirit and essential characteristics of the invention, and the present embodiment is 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.

We claim:

1. In a tubular-magazine repeating firearm, the combination with a frame having an ejection-passage opening outwardly through its side-wall; of a breech-bolt reciprocating in said frame and provided with a forwardly-projecting tang having its upper surface downwardly and laterally sloping toward the outer terminus of the said ejection-passage and forming a deflecting-surface serving to deflect cartridges therethrough when the said breech-bolt is in its retired position; an extractor; and an ejector; the cartridge-engaging surfaces of both the said extractor and the said ejector cooperating to impinge fired cartridges against the upper surface of the tang of the said breech-bolt for deflection thereby.

2. In a tubular-magazine repeating firearm, the combination with a frame having an ejection-passage opening outwardly through its side-wall; of a breech-bolt reciprocating in said frame and provided with a forwardly-projecting tang having its upper surface downwardly and laterally sloping toward the outer terminus of the said ejection-passage and forming a deflecting-surface serving to deflect cartridges therethrough when the said breech-bolt is in its retired position; an extractor having a yielding extractor-hook engageable with a cartridge in the said cartridge-chamber at a point materially above the horizontal median line of the outer terminus of the said ejection-passage and materially below the level of the axis of the said cartridge-chamber;

and an ejector having an ejecting-surface positioned to engage a cartridge at a point above the point at which the said extractor-hook engages the same; the said extractor-hook and the said ejector serving to impinge fired cartridges against the upper surface of the tang of the said breech-bolt.

3. In a tubular-magazine repeating firearm, the combination with a frame having an ejection-passage opening outwardly through its side-wall; of a breech-bolt reciprocating in said frame and provided with a forwardly-projecting tang having its upper surface downwardly and laterally sloping toward the outer terminus of the said ejection-passage and forming a deflecting-surface serving to deflect cartridges therethrough when the said breech-bolt is in its retired position; a yielding extractor positioned materially above the horizontal median line of the outer terminus of the said ejection-passage and yieldable in a plane obliquely disposed with respect to both the horizontal and vertical planes of the firearm; and ejector-means positioned above the said extractor and engageable with a cartridge at a point substantially-diametrically opposite the outer terminus of the said ejection-passage; the said extractor-hook and the said ejector serving to impinge fired cartridges against the upper surface of the tang of the said breech-bolt.

4. In a tubular-magazine repeating firearm, the combination with the frame thereof; of a breech-bolt reciprocating in the said frame and formed with a cylindrically-contoured extractor-receiving pocket; and a plate-like pivotal extractor having a cylindrically-contoured protuberance offsetting from an edge thereof rocking in the said cylindrically-contoured extractor-receiving pocket in the said breech-bolt.

5. In a tubular-magazine repeating firearm, the combination with the frame thereof; of a breech-bolt reciprocating in the said frame and formed with a cylindrically-contoured extractor-receiving pocket; a pivotal extractor having a cylindrically-contoured protuberance rocking in the said cylindrically-contoured extractor-receiving pocket in the said breech-bolt and also having a rearwardly-facing thrust-shoulder; and a spring-pressed plunger overhanging the cylindrically-contoured protuberance of the said extractor and engageable with the thrust-shoulder thereof to simultaneously retain the said extractor in place in the breech-bolt and swing the same laterally.

6. In a repeating firearm, the combination with a frame having an ejection-passage opening laterally therefrom; of extracting and ejecting means cooperating to effect the ejection of spent cartridges through the said ejection-opening; and a breech-bolt reciprocating in said frame and provided with a forwardly-projecting tang having its upper surface downwardly and laterally sloping toward the outer terminus of the said ejection-passage and forming a cartridge-deflecting surface when the said breech-bolt is in its retired position.

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