No. 789,933. PATENTED MAY 16, 1905.

J. D. PEDERSON.

MAGAZINE FIREARM.

APPLICATION FILED DEC. 18, 1903.

3 SHEETS—SHEET 1.

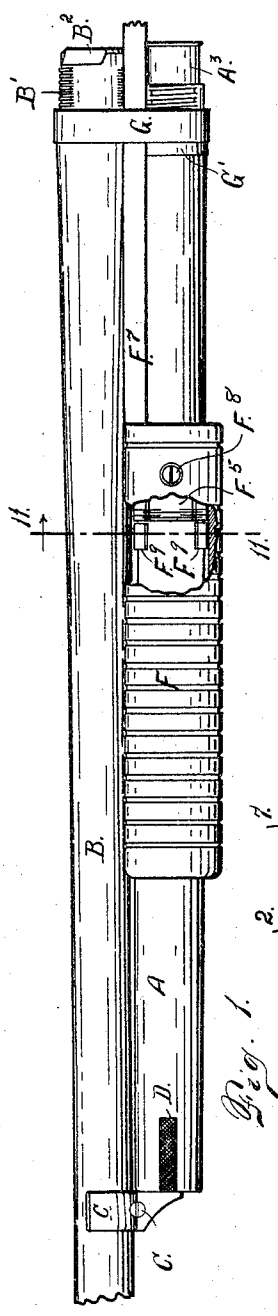


Fig. 1.

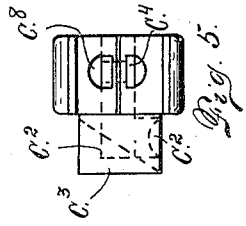


Fig. 5.

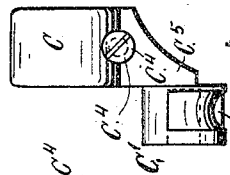


Fig. 9.

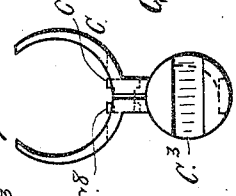


Fig. 8.

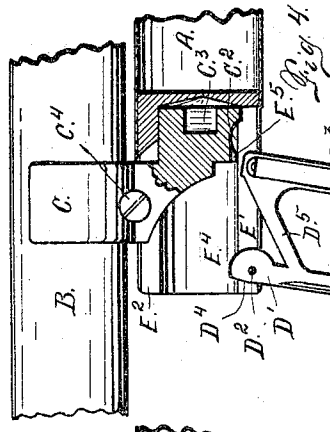


Fig. 4.

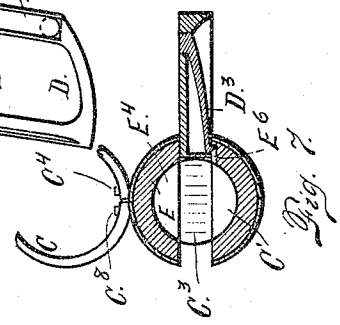


Fig. 7.

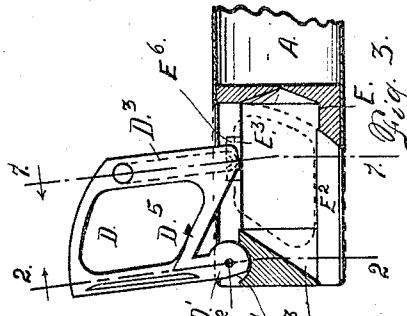


Fig. 3.

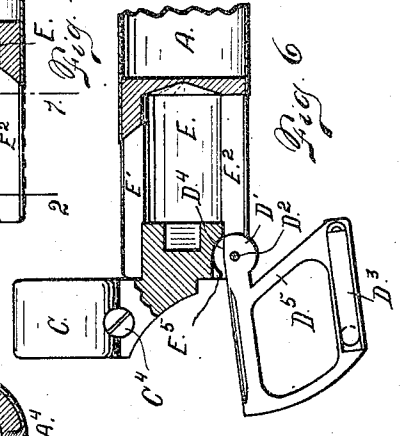


Fig. 6.

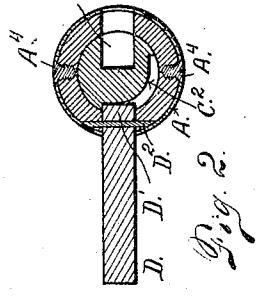


Fig. 2.

Witnesses

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Dena Nelson.

J. D. Pederson.

Inventor

By his Attorney A. W. Bruce

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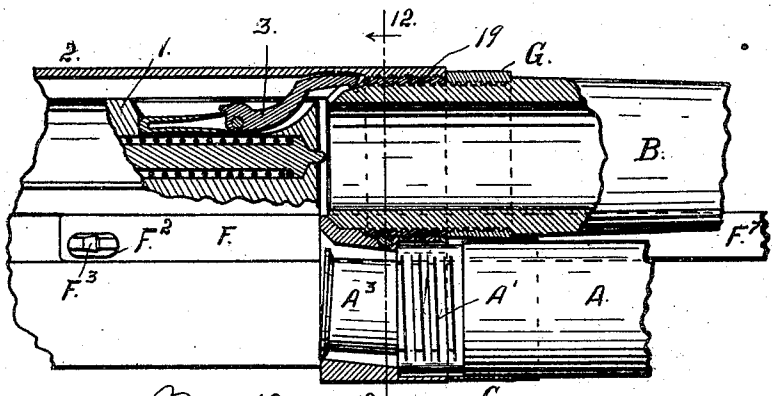


Fig. 10.

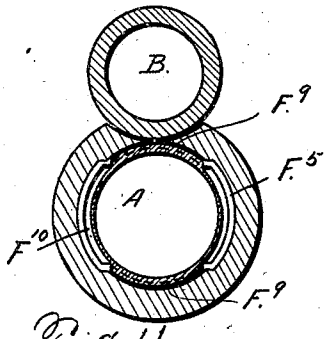


Fig. 11.

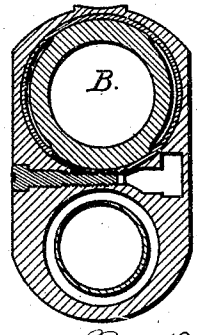


Fig. 12.

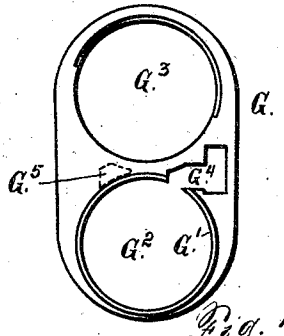


Fig. 13.

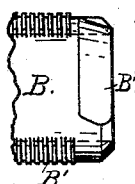


Fig. 14.

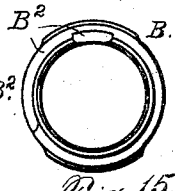


Fig. 15.

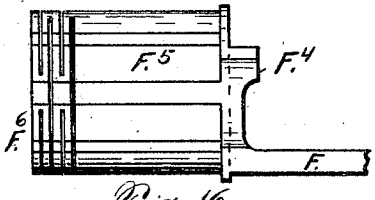


Fig. 16.

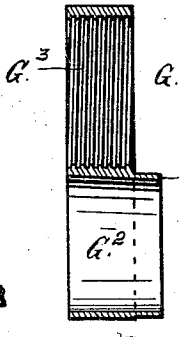


Fig. 17.

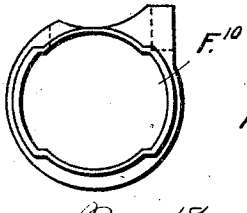


Fig. 18.

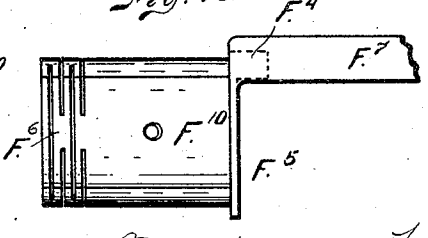


Fig. 19.

J. D. Pederson.

Inventor

Witnesses

Otto E. Hoddick

Dena Nelson.

By Attorney

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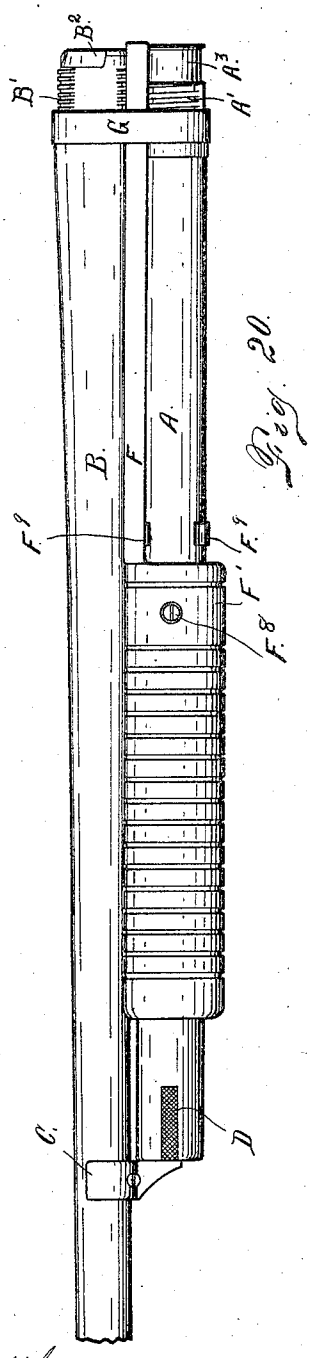


Fig. 20.

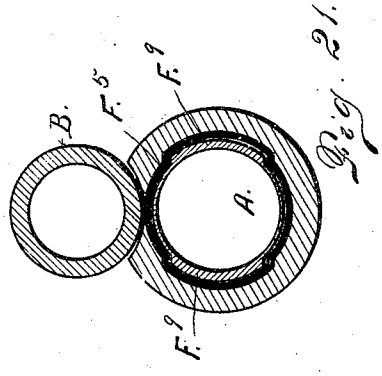


Fig. 21.

Witnesses
Otto E. Hoddick.
Dena Nelson.

J. D. Pederson.
Inventor
By his Attorney

No. 789,933. Patented May 16, 1905.

UNITED STATES PATENT OFFICE.

JOHN D. PEDERSON, OF ILION, NEW YORK.

MAGAZINE-FIREARM.

SPECIFICATION forming part of Letters Patent No. 789,933, dated May 16, 1905.

Original appl cation filed February 11, 1903, Serial No. 142,909. Divided and this application filed December 18, 1903. Serial No. 185,726.

To all whom it may concern:

Be it known that I, JOHN D. PEDERSON, a citizen of the United States of America, residing at Ilion, in the county of Herkimer and State of New York, have invented certain new and useful Improvements in Magazine-Firearms; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates generally to improvements in magazine-firearms, and specifically to what I will term the "take-down" mechanism of guns of this class or the mechanism whereby the barrel and magazine-tube are removed from the receiver and also whereby the barrel and magazine-tube are separated from each other when for any reason it may be necessary or desirable to separate the said parts.

Attention is called to the fact that the subject-matter of this application is divided out of an application filed by me February 11, 1903, Serial No. 142,909, and having the same title as this present application.

The invention will now be described in detail, reference being made to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a side elevation, partly broken away, showing the barrel with the magazine attached, together with the action-bar and handle. Fig. 2 is a cross-section through the front end of the magazine-tube, taken on the line 2 2, Fig. 3, looking in the direction indicated by the arrow. Fig. 3 is a top view of a horizontal section taken through the front end of the magazine-tube. Fig. 4 is a side view of the barrel, showing a vertical longitudinal section of the magazine-tube and the magazine-clamp connection between the forward end of the tube and the barrel. Fig. 5 is a top view of the magazine-clamp or piece which attaches the magazine-tube to the barrel. Fig. 6 is a vertical longitudinal section through the front end of the magazine, showing the magazine-lever in a position to allow the tube to be pulled rearwardly and off of the magazine-clamp. Fig. 7 is a cross-section through the front end of the magazine-tube on the line 7 7, Fig. 3, looking in the direction of the arrow. Fig. 8 is a rear elevation of the magazine-clamp. Fig. 9 is a side elevation of the same. Fig. 10 is a vertical section taken through the front end of the receiver, showing the barrel and magazine attached to the receiver. Fig. 11 is a cross-section taken on the line 11 11, Fig. 1. Fig. 12 is a cross-section taken on the line 12 12, Fig. 10. Fig. 13 is a front elevation of the barrel-yoke or piece which screws onto the rear end of the barrel and which supports the rear end of the magazine-tube. Figs. 14 and 15 are side and rear views, respectively, of the rear or butt end of the barrel. Figs. 16, 18, and 19 are respectively top, front, and side views of the action-bar and the tubular part connected with its forward extremity. As this tubular part of the action-bar is secured to the handle when the gun is in use, in the specification it is considered a part of the handle. Fig. 17 is a vertical section taken through the barrel-yoke. Fig. 20 is a side view of the barrel and magazine with the action-bar in its forward position, the latter being held in this position by the segmental lugs on the magazine-tube. This is the position which the barrel and magazine are thrown into when the gun is to be put in a case. Fig. 21 is a section showing the same mechanism as Fig. 11, the magazine, however, being rotated one-quarter of a turn in order that the action-bar, with its attached wooden handle, can be pulled forward past the segmental lugs on the magazine-tube.

The same reference characters indicate the same parts in all the views.

Let the numeral 1 designate the breech-block, and B the barrel, which is connected with the receiver 2 by interrupted screw-threads engaging corresponding threads of a bushing-sleeve 19, screwed into the receiver.

The interrupted screw-threads of the barrel are designated B'. The rear extremity of the magazine-tube A is provided with interrupted threads A', which coöperate with corresponding threads of the frame forming the connection between the two parts. The barrel is provided with a yoke G, which is made fast thereto just forward of its rear extremity. This yoke is provided with a depending part G^2, open to receive the magazine-tube, which slides freely thereinto. Slidably mounted on the magazine-tube is a handle F, composed of an outer wood part, and the inner short metal tube F^5, formed integral with the action-bar F^7. These two parts are connected by a screw F^8. Immediately forward of the tube F^5 the magazine-tube A is reinforced a portion of the way around on two opposite sides, forming segmental lugs F^9 to form stops limiting the forward movement of the handle when the parts are in their normal position. These stops abut against the forward extremity of the tube F^5 when the handle is moved to its forward position in closing the gun or moving the breech-block forward to throw the cartridge into the chamber thereof at the base or rear extremity of the barrel. In order to cushion the parts or relieve the sudden impact, concussion, or jar incident to the engagement of the tube F^5 with the stops F^9 when the handle reaches its forward limit of movement, I form slots in the forward extremity F^6 of the tube F^5 and adjacent the lugs F^9. These slots allow the metal of the tube F^5 to yield sufficiently for the purpose stated. The tube F^5 is interiorly recessed or grooved longitudinally, as shown at F^{10}, to allow the handle to slide over the lugs F^9 when the magazine-tube is given one-fourth of a revolution, as hereinafter explained.

The barrel B just forward of the magazine-tube rests between the jaws of a device which I will term the "magazine-clamp" C, the same being composed of a split part connected by a binding-screw C^4, having a nut C^8 applied thereto. The said part of the clamp is provided with horizontal openings to receive the screw, and the extremities of these openings are made large enough to allow the head of the screw and the nut to project upwardly slightly above the bottom of the clamp (see Figs. 7 and 8) and enter counterpart recesses formed in the adjacent part of the barrel, whereby the magazine-clamp is prevented from turning on the barrel. This clamp is provided with a depending part C^5, having a rearwardly-projecting cylindrical part or lug C' entering a thimble E, fast in the forward extremity of the magazine-tube. This thimble, together with the tube, is slotted, as shown at E^2, to receive a handle or manipulating-lever D, the latter being pivotally connected with the forward extremity of the tube and thimble at one side, as shown at D^2.

When the gun is in use, the lever D occupies the position indicated by dotted lines in Fig. 3. When in this position, the part D^5 occupies an inclined slot C^3, formed in the cylindrical part C', whereby the magazine-tube is prevented from turning independently of the barrel and is also locked against forward movement longitudinally. When it is desired to take down the gun or detach the barrel and magazine-tube from the receiver, the part D, which is then in the position indicated by the checkered shading in Fig. 1, is pushed outwardly toward the right or to the position shown by full lines in Fig. 3 by pressing laterally on the checkered or milled surface, which is exposed on the left-hand side of the magazine-tube. (See Fig. 1.) When in this position, the pivoted portion D' of the handle still occupies the circular groove C^2, formed in the part C', and prevents the forward movement of the magazine-tube and its thimble, but allows them a limited turning movement. The part D now occupies the position shown in full lines in Fig. 3 and forms a convenient handhold, whereby a downward thrust thereon gives the magazine-tube a quarter of a revolution, throwing the part D to the vertical position or to the position indicated in Fig. 4. When the lever or handle is in this position, it is in line with a slot or longitudinal groove E^5, leading forwardly from the circumferential groove C^2, thus allowing the pivoted part D' of the lever D to pass forwardly out of the circumferential groove C^2 of the part C', whereby the magazine-tube is allowed to move forwardly sufficiently to release it from the frame. The degree of this forward movement is indicated in Fig. 4 of the drawings. During this forward movement the part C^5 of the magazine-clamp occupies the slot in the side of the magazine-tube and thimble originally occupied by the handle or lever part provided with the milled surface, as heretofore explained. It must be understood that by a quarter turn or revolution of the magazine-tube the interrupted threads of the latter have become disengaged from the corresponding threads of the frame, leaving the magazine-tube free to move forwardly. The milled part of the lever or handle D is recessed on one side to receive a leaf-spring D^3, having a hook at one extremity, which hook engages the magazine-tube at one side of the slot in the right-hand side of the tube and prevents the handle from turning farther on its pivot after it has reached the position shown in Fig. 3. When it is desired to detach the magazine-tube from the barrel, the spring D^3 is pressed to release its hook and the handle D is thrown forward to the position shown in Fig. 6, whereby its pivoted end D' is released from the groove C^2 of the magazine-clamp by virtue of a flattened part D^4, with which the pivoted end D' of the handle

is provided, thus permitting the magazine-tube to be moved rearwardly independently of the barrel and be detached from the latter.

The operation of the parts will now be connectedly described.

Assuming that the barrel and magazine are assembled in operative relation with the frame, as shown in Fig. 10, in order to detach the barrel and magazine from the frame the rear end of the magazine-lever D is pushed from the left side through the slot which it occupies in the forward end of the magazine-tube. In order to do this, this lever is rotated on its pin D^2 to the position shown in Fig. 3. This brings the cross-bar D^5 out of the angle-slot cut in the rear end of the cylindrical boss C', formed on the magazine-clamp. When the magazine-lever is in its normal or closed position and the part D^5 occupies this slot, the magazine-tube is prevented from rotating; but when the magazine-lever is rotated on its pivot D^2 to the position shown in Fig. 3 the magazine can be rotated by grasping this lever and pressing downwardly thereon. The pivoted end D^2 of the magazine-lever is now free to move around in the circumferential groove C^2, which is cut one-fourth of the distance around the cylindrical part of the magazine-clamp. The termination of this groove on the lower side of the magazine-clamp stops further rotation of the magazine-tube by blocking the end of the magazine-lever. This circumferential groove opens forwardly on the bottom, so that when in this position it permits the magazine-lever to be pulled forwardly. Also the one side of the slot in the forward end of the magazine-tube which has previously been occupied by the magazine-lever has now been rotated to bring it into line with the flat part C^5 of the magazine-clamp, whereby the latter is allowed to pass through this slot. This rotating of the magazine-tube unscrews the interrupted threads on the rear end of the tube which have previously been screwed into the corresponding interrupted threads in the lower foward end of the frame. The magazine-tube is now free to be pulled forward to free its rear end and the follower A^3 from the frame. The forward end of this tube now occupies the position shown in Fig. 4. The magazine-lever is prevented from further rotation by the spring-catch D^3 striking against the shoulder E^6, as is shown in Figs. 3 and 7 of the drawings. The segmental lugs on the magazine-tube having now been revolved through a predetermined arc brings them into line with the clearance F^{10}, formed in either side of the forward end of the action-bar tube F^5. This clearance is of sufficient size to permit the action-bar, with its attached handle, to be drawn forward of these segmental lugs on the magazine-tube. This forward movement pulls the rear end of the action-bar out of and free from the frame. Now by grasping the barrel and magazine the barrel can be rotated to free its interrupted threads from the corresponding interrupted threads in the front end of the frame. Now in order to place the barrel, with its attached magazine, in the case the action-bar is held in its forward position on the magazine-tube and the latter is pushed backward to its normal position until the pivoted end D' of the magazine-lever strikes the rear wall of the circumferential groove C^2. Then the magazine-tube by means of the lever is rotated one-quarter of a turn and the magazine-lever rotated to its locked position, preventing further rotation of the magazine-tube. This brings the segmental lugs A^2 of the magazine-tube in the rear of the forward tube end of the action-bar, preventing the rearward movement of the latter. Thus the action-bar is prevented from slipping backward and its long rear end from the possibility of being bent by an accidental blow or other means. This position of the parts is shown in Fig. 20 of the drawings.

If it is desired to detach the magazine-tube and action-bar from the barrel to facilitate the wiping or cleaning of the parts, the magazine-lever is rotated on its pivot-pin D^2 to the position shown in Fig. 3, after which the magazine is rotated to the position shown in Fig. 4, and the spring-catch D^3 is then pressed inwardly from engagement with the forward end of the magazine-tube, and the magazine-lever is rotated to the position shown in Fig. 6, thus bringing its pivoted end D' below the wall of the circumferential groove C^2, cut in the magazine-clamp. The magazine can now be pulled rearwardly off of the magazine-clamp. The barrel-yoke, which supports the rear end of the magazine-tube, has its lower part G^2, which is occupied by the magazine-tube, of sufficient size to allow the magazine-tube lateral play. Now the forward end of the magazine-tube can be pulled downward out of line with the magazine-clamp and pulled forward, freeing it from the barrel-yoke. Then the action-bar can be pulled off the magazine-tube, after which the magazine-lever may be rotated to its closed position.

In Figs. 16 and 19, F^4 is a stop formed on the end of the action-bar tube which strikes against the forward face of the barrel-yoke G or against the portion shown by dotted lines in Fig. 13 and designated G^5. This is to limit the rearward movement of the action-bar in operating the mechanism of the gun. The forward end of the action-bar tube is slotted, as is shown in Figs. 16 and 19 and as heretofore explained. In its normal position of rotation the segmental lugs on the magazine-tube are in the path of the forward end of the action-bar, thus limiting its forward movement.

In Figs. 14 and 15 the butt-end of the gun-barrel is shown with a clearance-cut B^2. This

clearance-cut is to accommodate the extractor 3, which is shown on the top side of the breech-block in Fig. 10, and as the barrel is rotated the extractor rides around in this clearance-cut.

Having thus described my invention, what I claim is—

1. The combination of a magazine-tube having segmental stops formed on its outer surface, and a handle having channels to receive said stops when the tube is properly adjusted by giving it a partial rotation, the normal arrangement of the stops being such that they limit the forward movement of the sliding handle.

2. The combination of a magazine-tube having stops thereon, and a handle slidable on the tube and having its forward travel limited by said stops, the handle being slotted to form yielding parts arranged to engage the stops of the tube.

3. The combination of a magazine-tube provided with a stop, a handle slidable on the tube and having a short interiorly-located tube which engages the stop on the magazine-tube and limits the forward travel of the handle, the said tube being slotted near its forward extremity to form a yielding part which engages the stop of the magazine-tube.

4. The combination with a barrel and magazine-tube, of a clamp having jaws embracing the barrel and provided with a depending part located at the forward extremity of the magazine-tube and having a cylindrical part projecting into the forward extremity of the said tube, the tube being slotted on both sides, and a handle or lever part pivoted on the tube and occupying said slot, the said handle having a part engaging the cylindrical part of the magazine-clamp which projects into the tube to lock the tube against relative independent movement, the handle part forming a lever to facilitate the rotation of the tube.

5. The combination of a barrel and magazine-tube, the latter having a pivoted lever or handle entering a slot formed in the tube, a rigid clamp engaging the barrel and having a part engaged by the forward part of the tube to lock the latter against independent movement when the lever is in place in the tube, the lever having rotary and forward movement on its pivot to allow the tube independent rotary and longitudinal movement.

6. The combination with a barrel and magazine-tube, of a handle pivoted to swing in a slot formed in the tube, the barrel having a rigid depending part slotted to receive the handle to prevent independent movement of the tube, the handle being adjustable to allow the tube rotary and longitudinal movement independently of the barrel.

7. The combination of a barrel, a magazine-tube, the barrel having a depending slotted stop entering the front end of the magazine-tube, a handle pivoted to swing in a slot formed in the tube and entering the slot of the depending barrel part to prevent independent rotary movement, the handle having rotary and forward movement on its pivot to allow the tube independent rotary and longitudinal movement.

8. The combination of a barrel, a magazine-tube, the barrel having a depending stop and entering the front of the magazine-tube, the latter being slotted, a handle pivoted in the tube and occupying said slot, the handle engaging the depending barrel part to prevent independent rotary movement, the handle part adjacent the pivot being slightly enlarged, the enlargement entering a circumferential groove formed in the depending barrel part, the last-named part having a groove extending forwardly from the circumferential groove, to permit the handle to move forwardly after the tube is given a partial rotation.

9. The combination of a barrel, a magazine-tube, the barrel being provided with a depending part entering the forward extremity of the tube, the latter being slotted, a handle part pivoted on the tube and occupying the slot, the handle engaging a slot formed in the depending barrel part to prevent independent rotary movement, the handle adjacent its pivot being slightly enlarged to engage a circumferential groove formed on a portion of the depending part within the magazine-tube, the said groove extending only a portion of a circumference, the handle being flattened on one side adjacent its pivot to permit the magazine-tube to be moved rearwardly to detach it from the barrel.

10. The combination with a barrel and a magazine-tube, of a clamp whose jaws embrace the barrel, the latter being provided with a recess in its lower part to engage short projections on the adjacent part of the clamp, and the latter having a depending part entering the forward extremity of the magazine-tube, a handle pivoted on the magazine-tube and swinging in a slot formed in the forward extremity of the tube, the clamp part projecting into the tube being slotted to receive the said handle to prevent the tube from rotating independently of the barrel.

11. The combination of a barrel, a magazine-tube, the barrel having a depending part extending into the said tube, the latter being slotted, a handle pivoted on the tube and occupying said slot, the handle entering a slot formed in a portion of the depending part located within the tube, to prevent independent rotary movement of the latter, the handle being movable on its pivot to permit a partial rotary movement of the magazine.

12. The combination of a barrel, a magazine-tube, the barrel having a depending stop projecting into said tube, the latter being slotted, a handle pivoted on the tube and occupying said slot, the handle engaging the depending barrel part to prevent independent rotary

movement, the handle adjacent the pivot being slightly enlarged, this enlargement engaging a circumferential groove formed in the depending part located in the magazine-tube, the depending barrel part having a groove extending forwardly from the circumferential groove to permit the handle to move forwardly, the handle being flattened on one side adjacent the pivot to permit the magazine-tube to be moved rearwardly to detach it from the barrel.

13. The combination of a barrel and magazine-tube, the barrel having a depending stop located in front of the magazine-tube and having a part projecting into said tube, the latter being slotted, a handle part pivoted on the tube to allow it to swing into and out of the slot at the will of the user, the said handle having a spring to limit the outward swing of the handle.

14. The combination of a barrel and magazine-tube, the barrel having a depending stop located in front of the magazine-tube and having a part projecting rearwardly into said tube, the latter being slotted, and a handle part pivoted on the tube to allow it to swing into and out of the slot at the will of the user, the said handle having a spring secured thereto and provided with a hook to limit the outward swing of the handle, the magazine-tube being provided with a shoulder adapted to engage the hook of the spring for the purpose set forth.

15. A magazine-tube whose forward extremity is slotted, in combination with a handle adapted to occupy the slot of the tube and pivotally connected with the latter to allow it to move out of the slot in the tube.

16. A magazine-tube whose forward extremity is slotted in combination with a handle adapted to occupy the slot of the tube and pivotally connected with the latter near its circumference to allow it to move out of the slot.

17. A magazine-tube whose forward extremity is slotted, in combination with a handle adapted to occupy the slot of the tube and connected therewith to swing on an axis located near the circumference of the tube and extending at right angles to the slot of the tube.

18. A magazine-tube whose forward extremity is slotted, in combination with a handle adapted to occupy the slot of the tube and connected therewith to swing on an axis located near the circumference of the tube and extending at right angles to the said slot, and a part connected with the barrel and extending into the tube, the latter having a circumferential groove extending a portion of the distance around it in the plane of the handle-pivot, the handle adjacent the pivot being enlarged to fit said groove.

19. A magazine-tube whose forward extremity is slotted, in combination with a handle adapted to occupy the slot of the tube and pivotally connected with the latter to allow it to move out of the slot, and means mounted on the handle and engaging a part of the tube to limit the swing of the handle on its pivot.

20. A magazine-tube whose forward extremity is slotted, in combination with a handle adapted to occupy the slot of the tube and pivotally connected with the latter to allow it to move out of the slot, and means mounted on the handle and engaging a part of the tube to limit the swing of the handle on its pivot, the extremities of the groove forming stops to limit the rotation of the tube in both directions.

21. The combination of a magazine-tube having segmental stops formed on its outer surface, and a handle having channels to receive said stops when the tube is properly adjusted by giving it a partial rotation, the normal arrangement of the stops being such that the said lugs limit the forward or rearward movement of the sliding handle according to the position of the latter.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN D. PEDERSON.

Witnesses:
EDWARD BEACH,
EUGENE D. RIVERS.