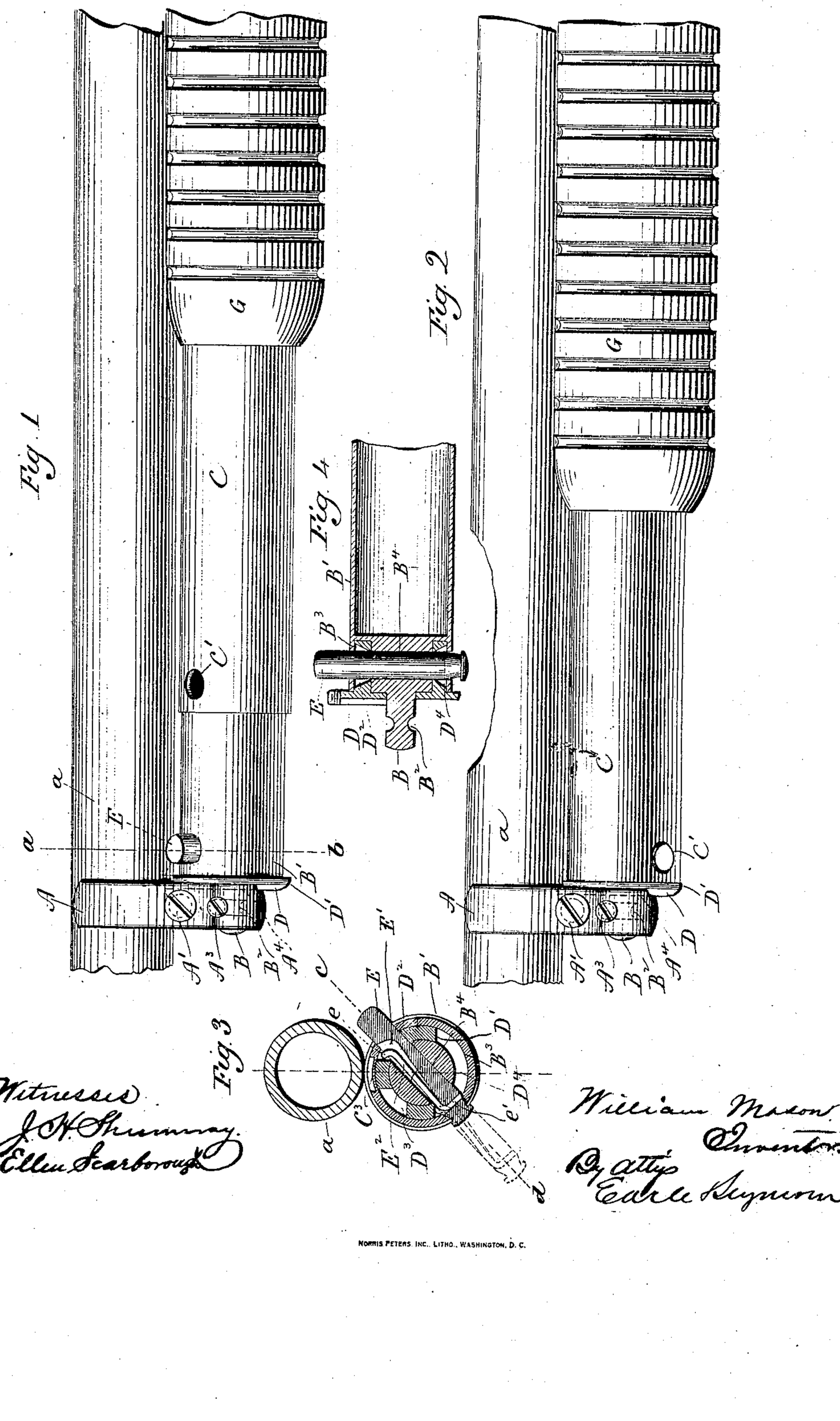
No. 614,482. Patented Nov. 22, 1898.

W. MASON.

MAGAZINE FIREARM.

(Application filed Apr. 4, 1898.)

(No Model.) 3 Sheets—Sheet 1.



Witnesses
J. H. Shumway.
Ellen Scarborough

William Mason
Inventor.
By Atty's
Edwin Seymour

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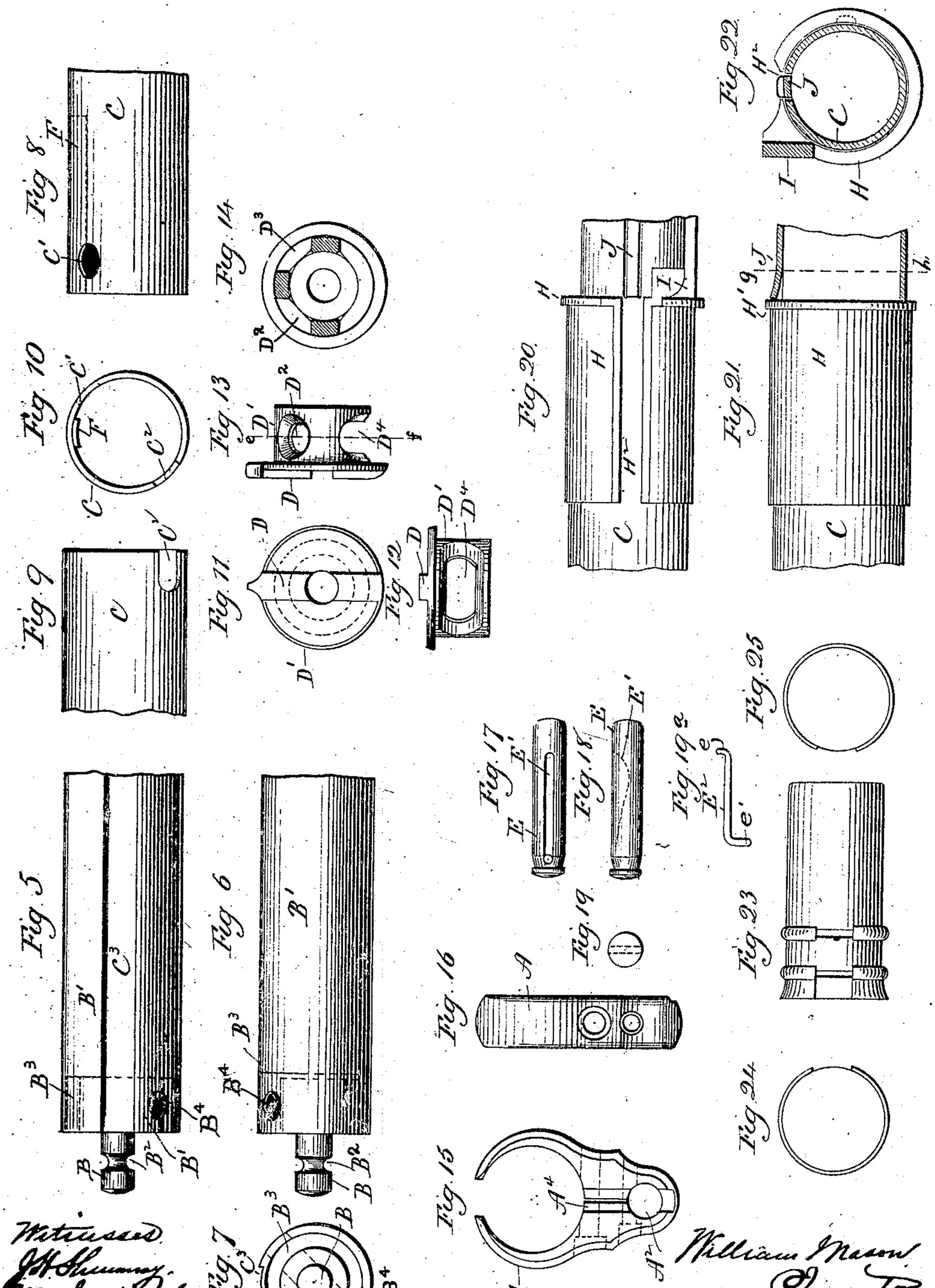
(No Model.) 3 Sheets—Sheet 2.



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MAGAZINE FIREARM.

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(No Model.) 3 Sheets—Sheet 3.

Fig. 27

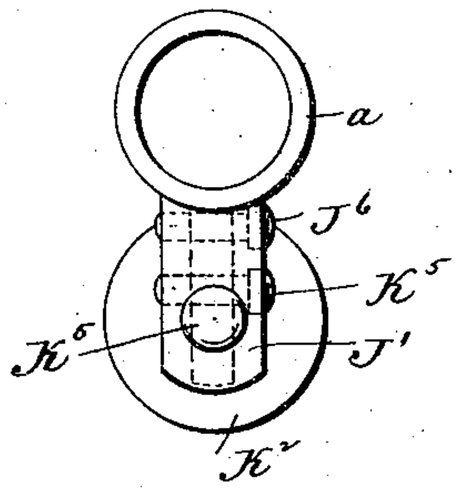


Fig. 26

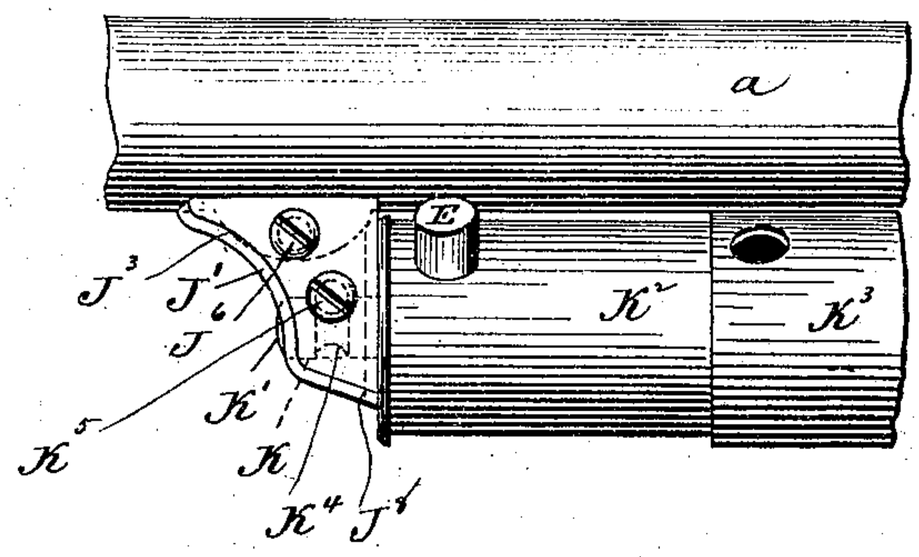


Fig. 29

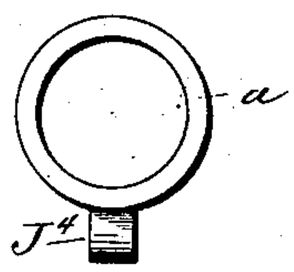


Fig. 28.

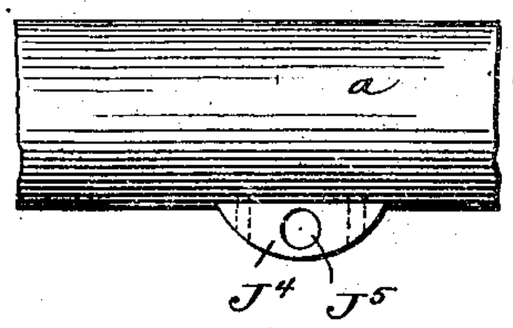


Fig. 30

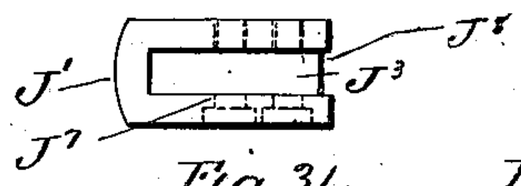


Fig. 31

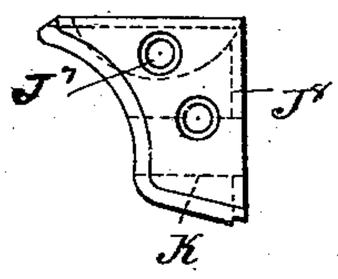
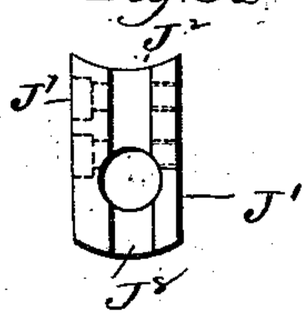


Fig. 32



Witnesses
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William Mason
Inventor.
By attys Earle & Seymour

UNITED STATES PATENT OFFICE.

WILLIAM MASON, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE WINCHESTER REPEATING ARMS COMPANY, OF SAME PLACE.

MAGAZINE-FIREARM.

SPECIFICATION forming part of Letters Patent No. 614,482, dated November 22, 1898.

Application filed April 4, 1898. Serial No. 676,352. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MASON, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Firearms; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a broken view, in side elevation, of the muzzle end of a gun containing my invention, the tubular magazine being shown in its normal position; Fig. 2, a corresponding view with the magazine and operating-handle drawn forward into their retracted or take-down positions; Fig. 3, a view in vertical section on the line *a b* of Fig. 1; Fig. 4, a view of the forward end of the magazine and its associated instrumentalities, shown in vertical longitudinal section on the line *c d* of Fig. 3; Fig. 5, a detached plan view of the magazine-supporting sleeve; Fig. 6, a view in side elevation; Fig. 7, a view thereof in front elevation; Fig. 8, a broken view, in side elevation, of the forward end of the magazine; Fig. 9, a corresponding view of the opposite side thereof; Fig. 10, a view of the magazine in front elevation; Fig. 11, a detached view, in front elevation, of the stop-plug; Fig. 12, a reverse plan view thereof; Fig. 13, a view thereof in side elevation; Fig. 14, a view thereof in vertical section on the line *e f* of Fig. 13; Fig. 15, a detached view, in rear elevation, of the magazine-clip; Fig. 16, a side view thereof; Fig. 17, a detached plan view of the pin-lever; Fig. 18, a view thereof in side elevation; Fig. 19, a view thereof in end elevation; Fig. 19ª, a detached view, in side elevation, of the pin-lever spring; Fig. 20, a detached broken view showing the magazine and the sleeve to which the sliding operating-handle is fastened and from which the action-bar extends rearwardly; Fig. 21, a view showing the sleeve in side elevation and the magazine in section; Fig. 22, a view in transverse section on the line *g h* of Fig. 21 and showing the magazine, the operating-handle sleeve, and the action-bar; Fig. 23, a detached view, in side elevation, of the magazine-follower; Fig. 24, a view thereof in front elevation; Fig. 25, a view thereof in rear elevation; Fig. 26, a broken view, in side elevation, of a gun, showing one of the modified forms which the fastening-clip may assume; Fig. 27, a view of the same gun in front elevation; Fig. 28, a broken view, in side elevation, of a portion of the gun-barrel, showing the fastening-clip lug thereof; Fig. 29, a view thereof in front elevation; Fig. 30, a detached plan view of the fastening-clip; Fig. 31, a view thereof in side elevation; Fig. 32, a view of the clip in rear elevation.

My invention relates to an improvement in tubular-magazine take-down firearms, the object being to provide simple, durable, and convenient means for securing the sliding, supporting, and operating handle of such a gun at the limit of its forward excursion when the gun is taken down and also for securing, if desired, the tubular magazine of such a gun at the limit of its forward movement with respect to the gun-barrel when the gun is taken down, in addition to securing the handle, as above described, whereby the handles and magazines of such guns are prevented from "shucking" back and forth when the guns are taken down.

With these ends in view my invention consists in the combination, in a tubular-magazine take-down firearm, with the gun-frame thereof, of a gun-barrel and a tubular magazine organized together and adapted to be detached from the gun-frame, a sliding handle organized with the said barrel and magazine, and means for holding the handle at the limit of its forward excursion when the barrel and magazine have been detached from the gun-frame.

My invention further consists in the combination, in a tubular-magazine take-down firearm, with the gun-frame thereof, of a gun-barrel detachably connected with the said frame, a tubular magazine organized with the said barrel so as to be movable longitudinally with respect thereto and adapted at its rear end to be detachably connected with the gun-frame, a sliding handle organized with the said barrel and magazine and movable back and forth in line with the longitudinal axis of the barrel and adapted to be connected

with the action mechanism of the gun for the actuation thereof, and means for securing the magazine at the limit of its forward movement with respect to the barrel and for securing the handle at the limit of its forward excursion when the said barrel and magazine are detached from the gun-frame.

My invention further consists in the combination, in a tubular-magazine take-down firearm, with the gun-frame, gun-barrel, and tubular magazine thereof, of a rotable magazine-supporting sleeve applied to the forward end of the magazine, which is movable back and forth with respect to it and coupled for rotation with it and means for supporting the forward end of the said sleeve by the gun-barrel.

My invention further consists in certain details of construction and combination of parts, as will be hereinafter described, and pointed out in the claims.

In the gun which I have chosen for the illustration of my invention I have provided not only for securing the handle at the limit of its forward excursion when the gun is taken down, but also for securing the magazine at the limit of its forward movement with respect to the gun-barrel when the gun is taken down, though it is not essential that the magazine should be so secured.

In carrying out my invention as herein shown I employ a magazine fastening or clip A having the general form and construction of such clips as heretofore made and provided with a transversely-arranged screw A′, by means of which it is firmly clasped upon the gun-barrel *a*. This clip is formed at its lower end with a circular opening A^2, receiving a supporting-stud B, formed integral with and projecting forward from the magazine-supporting sleeve B′, which enters the forward end of the tubular magazine C, which slides or telescopes back and forth over the said sleeve, and is therefore movable back and forth with respect to the gun-barrel with which it is permanently organized. The said sleeve B′ might, indeed, be called a "hollow plug," inasmuch as it does, in fact, plug up or close the forward end of the tubular magazine, which is coupled with the sleeve for rotation therewith, as will be described later on. The said stud B is formed with a circumferential groove B^2, receiving a coupling-pin A^3, mounted in the clip A, the said pin and groove preventing the stud from endwise movement with respect to the clip, but permitting the stud, and hence the magazine-supporting sleeve, to be rotated independently of the clip.

The rear face of the lower portion of the clip, Fig. 15, is formed with a vertical locking-groove A^4, designed to receive a locking-rib D, formed on the forward face of a substantially annular stop-plug D′, which is set into a deep annular groove B^3, formed in the solid forward end of the said sleeve B′. The entrance of the locking-rib D of the plug D′ into the locking-groove A^4 of the clip A locks the plug to the clip and prevents its rotation with the magazine-supporting sleeve, which rotates upon the plug. The said plug is formed in its upper portion with two countersunk holes D^2 D^3, while its lower portion is formed with a clearance-slot D^4, the end walls of which act as stops.

It will be understood that the rear end of the magazine is formed with interrupted threads or adapted in some other way to be attached to and detached from the gun-frame by a rotary movement. I do not show or give a detailed description of the rear end of the magazine, however, as I design to adopt one of the well-known ways of connecting it with the gun-frame. For the purpose of conveniently rotating the magazine for connecting it with and detaching it from the gun-frame I employ a longitudinally-movable pin-lever E, which is radially mounted in the solid forward end of the magazine-supporting sleeve, which is formed for the purpose of receiving it with a transverse pin-hole B^4, intersecting the deep annular groove B^3, before mentioned, and located in the same plane with the openings D^2 and D^3 of the plug D′, as well as the slot D^4 thereof. The said pin-lever E is formed with a longitudinal slot or recess E′ for the reception of a wire spring E^2, by means of which the lever is held in its two projected positions, in one of which its upper end projects in an inclined position above the upper face of the magazine and in the other of which its lower end projects in an inclined position below the lower face of the magazine. One end of the said spring is turned to form a stop-finger *e*, while its other end is bent at a right angle to form a retaining-finger *e*′, which enters the pin, so as to prevent the spring from longitudinal movement with respect thereto. The lower end of the said pin always passes through the clearance-slot D^4 of the plug, while its upper end passes through either one of the two counterbored openings D^2 D^3 thereof, according to the rotated position of the magazine, as will be hereinafter described. The said pin-lever has the function of positively locking the magazine C in its retracted or take-down position, which is the position which it has when its rear end is disconnected from the gun-frame and it is pushed forward to the limit of its telescoping movement over the magazine-supporting sleeve.

To adapt the magazine to be locked, as described, its forward end is formed with a pin-hole C′ for the reception of the upper end of the pin and with an open slot C^2 for the reception of the lower end of the pin.

For the purpose of coupling the magazine for rotation with the sleeve, which is in turn rotated through the instrumentality of the lever-pin, as described, I provide the forward end of the magazine with a longitudinally-arranged inwardly-projecting key F, which enters a corresponding longitudinally-ar-

ranged groove C^3, formed in the exterior surface of the sleeve.

The tubular magazine C supports the sliding, supporting, and operating handle G, which is movable back and forth in a line parallel with the longitudinal axis of the gun-barrel *a*. The said gun-barrel, magazine, and handle are thus organized together so as to retain their organic relations after the gun has been taken down. The said sliding handle is preferably made of wood, although I do not limit myself to that material, and secured to a handle-sleeve II, adapted in size to slide freely back and forth upon the tubular magazine C, and formed at its rear end with a flange II'. The action-bar I is made integral with or rigidly connected to the said handle-sleeve II and extends rearwardly therefrom for operative connection with the action mechanism (which is not shown) of the gun. The said handle-sleeve is formed with a longitudinal clearance-slot II^2, extending throughout its length, and provided for the clearance in the ordinary use of the gun of a handle-stop J, located upon the tubular magazine C. This stop may consist of a small piece of metal secured to the magazine or may be struck outward therefrom. Normally the clearance-slot H^2 of the handle-sleeve and the handle-stop J are located in line, as shown in Fig. 20, so that the stop does not interfere with the free movement of the handle-sleeve back and forth, as the handle itself is reciprocated in operating the gun. However, when the magazine is rotated within the handle G and its sleeve H for taking the gun down the stop J is carried out of alinement with the clearance-slot II^2 and brought into position to engage with the flange II', formed at the rear end of the handle-sleeve, whereby when the gun is taken down the handle is held at the limit of its forward excursion, its action-bar being then drawn out of the way and so as not to project beyond the breech ends of its barrel and magazine.

When the gun is assembled, the pin-lever occupies the position in which it is shown by full lines in Fig. 3, with its upper end projecting out of the pin-hole B^4 in the sleeve B', through the hole D^2 in the plug D'. The pin is normally held in this position by means of the short outwardly-projecting end *e* of its spring E^2, the said end of the pin being engaged with the inclined wall of the hole D^2 in the plug D'. Now preparatory to taking down the gun the pin is shoved downward into the position shown by broken lines in Fig. 3, so that its upper end entirely clears the hole D^2 of the plug D'. When the pin is shoved downward, as described, its spring E^2 is forced inward, its said end *e* riding through the pin-hole B^4 and snapping outward into the slot D^4 in the plug D', when the pin reaches the limit of its downwardly-thrust position, in which it is stopped by the engagement of the stop end *e* of the spring E^2 with a portion of the outer wall of the deep groove B^3, formed in the solid forward end of the sleeve B'. After this the projecting lower end of the pin is used as a lever for turning the sleeve and with it the magazine, which is coupled with the sleeve by means of the key F, the magazine and sleeve being rotated until the projecting lower end of the pin is brought to a stop upon the opposite end of the slot D^4 of the plug D', which, as before described, does not turn with the sleeve on account of being coupled with the magazine fastening or clip A. The turning of the magazine-supporting sleeve and magazine in the manner described disconnects the rear end of the magazine from the frame of the gun, with which it may be connected by sectional threads or any other well-known manner. Prior to turning the magazine as described the handle is pushed forward to the limit of its forward excursion. Then when the magazine is turned within it the stop J upon the magazine moves out of line with the clearance-slot H^2 of the handle-sleeve II and is brought into engagement with the flange II' at the rear end of the said sleeve, whereby the handle is prevented by the stop from moving rearward, but is held against shucking about and at the limit of its forward excursion. The magazine is now taken hold of and drawn forward, whereby its pin-hole C' is brought into registration with the upper end of the pin-hole B^4 in the sleeve and the hole D^4 in the plug. The lower end of the pin-lever is then pushed upward, whereby the upper end of the pin is shot through the hole D^3 in the plug and through the hole C' in the forward end of the magazine, whereby the magazine is positively secured in its forward or retracted position with respect to the sleeve and prevented from shucking back and forth when the gun is taken down, which is now done by rotating the barrel as may be required for the disconnection of its threads from those of the gun-frame. When the pin-lever is pushed upward into its original position, the stop end *e* of its spring rides back through the pin-hole B^4 in the sleeve B' until it is given an opportunity of snapping into the hole D^3 in the plug, after which the spring holds the pin-lever in its locking position. The barrel, magazine, and handle remain organized together when the gun has been taken down, and as the magazine and handle are both secured against shucking about both with respect to the gun-barrel and to each other the said parts are handled virtually as one piece and with obvious convenience. Now when it is desired to assemble the gun again the lever-pin is thrust inward, so as to clear its upper end from the locking-hole C' in the forward end of the magazine and from the bottom of the hole D^3 in the plug. The magazine being thus disengaged from the pin is then pushed back into position for being reëntered into the gun-frame. The projecting lower end of the pin-lever is then employed to turn the magazine-supporting sleeve and magazine, whereby the magazine

is reconnected with the gun-frame, this turning movement of the sleeve and magazine being limited by the engagement of the pin with the opposite end of the slot D^4 in the non-rotatable plug D'. The pin-lever is then pushed upward into its normal position, as shown in Fig. 3 by full lines. The turning of the magazine, as described, releases the sliding handle by bringing the stop J into line with the clearance-slot H^2 in the flange H' of the handle-sleeve H.

In the modified construction shown by Figs. 26 to 32, inclusive, I employ a bracket-like clip J', the upper edge of which is formed with a groove J^2, adapted in curvature to receive the gun-barrel. The upper edge of the clip is also formed with a slot J^3, which receives a fastening-lug J^4, formed independently of the gun-barrel and secured thereto by brazing, or it might be formed integral with the gun-barrel. The said lug J^4 is formed with a transverse hole J^5, which receives a screw J^6, which also passes through a transverse hole J^7, formed in the upper edge of the clip, which is thus secured permanently to the under face of the gun-barrel. The said clip is also formed with an opening K for the reception of the supporting-stud K', which is formed integral with and projects forward from the magazine-supporting sleeve K^2 of the magazine K^3. The said stud is formed with a circumferential groove K^4, which receives a coupling-pin K^5, which prevents the stud from endwise movement with respect to the clip, but permits the stud and the magazine-supporting sleeve to freely rotate. However, the construction now being described is the same as the construction already described with the exception of the clip, and details need not be further gone into, though it may be remarked that the rear edge of the clip is formed with a vertical locking-groove J^8, whereby the plug is held against rotation. This plug is not shown or described, but is like the plug D', before described.

In view of the modification shown and described and of others which may obviously be made I would have it understood that I do not limit myself to the exact construction herein shown and described. Thus the pin-lever may be employed simply to effect the rotation of the magazine-supporting sleeve and magazine without calling upon it to perform the additional function of locking the magazine in its forward or retracted position, in which case the magazine will not be furnished with a slot for clearing the pin and with an opening or hole for receiving the pin. Again, the forward end of the magazine might be arranged to play back and forth within the said magazine-supporting sleeve instead of over it, as shown. If desired, the handle may be made integral with the sleeve and action-bar. Also, if desired, the flange at the rear end of the sleeve may be dispensed with, as it is not imperative. Again, I may even dispense with the magazine-supporting sleeve and employ some other means for connecting the forward end of the magazine with the gun-barrel, my invention broadly comprehending means for securing a sliding handle at the forward end of its excursion when the barrel and magazine are detached from the frame of a take-down gun and also for securing the magazine of such a gun at the limit of its forward movement with respect to the gun-barrel when the barrel and magazine are detached from the gun-frame.

I have before pointed out that it is much more convenient to handle and pack the parts of a take-down gun when provision is made for preventing the magazine and handle (either or both) from shucking about after the gun is taken down.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a tubular-magazine firearm, the combination with the gun-frame, gun-barrel and tubular magazine thereof, of a rotatable magazine-supporting sleeve applied to the forward end of the magazine, which is movable back and forth with respect to it, and coupled for rotation with it, and means for supporting the forward end of the said sleeve by the gun-barrel.

2. In a tubular-magazine firearm, the combination with the gun-frame, gun-barrel and tubular magazine thereof, of a rotatable magazine-supporting sleeve entering the forward end of the magazine, which is movable back and forth over it and coupled for rotation with it, and means for supporting the forward end of the said sleeve by the gun-barrel.

3. In a tubular-magazine firearm, the combination with the gun-frame, gun-barrel and tubular magazine thereof, of a rotatable magazine-supporting sleeve applied to the forward end of the magazine which is coupled for rotation with it, and which is movable back and forth with respect to it when the rear end of the magazine is detached from the gun-frame, means for supporting the forward end of the sleeve, and instrumentalities for rotating the said sleeve and hence the magazine.

4. In a tubular-magazine firearm, the combination with the gun-frame, gun-barrel and tubular magazine thereof, of a rotatable magazine-supporting sleeve applied to the forward end of the magazine which is coupled for rotation with it and which is movable back and forth with respect to it when the rear end of the magazine is detached from the gun-frame, means for supporting the forward end of the said sleeve, and instrumentalities for rotating the said sleeve and hence the magazine, and for locking the magazine in its forward or retracted position.

5. In a tubular-magazine firearm, the combination with the gun-frame, gun-barrel and tubular magazine thereof, of a rotatable magazine-supporting sleeve applied to the forward end of the magazine which is coupled for rotation with it and which is movable back and

forth with respect to it when the rear end of the magazine is detached from the gun-frame, means for supporting the forward end of the said sleeve, a sliding handle mounted upon the magazine, and instrumentalities for rotating the said sleeve and hence the magazine, and for locking the magazine and handle in their forward or retracted positions.

6. In a tubular-magazine firearm, the combination with the gun-frame, the gun-barrel and the tubular magazine thereof, of a magazine-supporting sleeve applied to the forward end of the magazine which is movable back and forth with respect to it, and which is coupled for rotation with it, means for supporting the forward end of the said sleeve by the gun-barrel, and a pin-lever radially mounted in the forward end of the sleeve for the rotation thereof, and adapted to be moved longitudinally.

7. In a tubular-magazine firearm, the combination with the gun-frame, gun-barrel and tubular magazine thereof, of a magazine-supporting sleeve applied to the forward end of the magazine which is movable back and forth with respect to it, and which is coupled for rotation with it, means for supporting the forward end of the said sleeve on the gun-barrel, a non-rotatable plug located in the forward end of the sleeve, and a longitudinally-movable pin-lever radially mounted in the forward end of the sleeve, and coacting with the said plug with which it engages to limit the rotary movement of the sleeve.

8. In a tubular-magazine firearm, the combination with the gun-frame, gun-barrel and magazine thereof, of a rotatable magazine-supporting sleeve applied to the forward end of the magazine which is movable back and forth with respect to it, and which is coupled for rotation with it, means for supporting the forward end of the said sleeve, and a longitudinally-movable pin-lever radially mounted in the forward end of the said sleeve for rotating the same, and for locking the magazine in its retracted or take-down position.

9. In a tubular-magazine firearm, the combination with the gun-frame, gun-barrel and magazine thereof, of a rotatable magazine-supporting sleeve applied to the forward end of the magazine which is movable back and forth with respect to it, and which is coupled for rotation with it, a longitudinally-movable lever-pin radially mounted in the forward end of the sleeve for rotating the same, and a spring mounted in the pin for holding the same in its two projected positions.

10. In a tubular-magazine firearm, the combination with the gun-frame, gun-barrel and tubular magazine thereof, of a rotatable magazine-supporting sleeve applied to the forward end of the magazine which is coupled for rotation with it, and which is movable back and forth with respect to it, a clip connected with the gun-barrel for supporting the forward end of the said sleeve, and a plug located in the forward end of the said sleeve and coupled with the clip, which prevents it from rotating.

11. In a tubular-magazine firearm, the combination with the gun-frame, gun-barrel and tubular magazine thereof, of a rotatable magazine-supporting sleeve applied to the forward end of the magazine which is coupled for rotation with it, and which is movable back and forth with respect to it, a clip connected with the gun-barrel for supporting the forward end of the said sleeve, and a plug located in the forward end of the said sleeve and coupled with the clip which prevents it from rotating, a longitudinally-movable lever-pin radially mounted in the forward end of the sleeve for rotating the same, and coacting with the said plug which limits its swinging movement and hence the rotary movement of the sleeve and magazine.

12. In a magazine-firearm, the combination with the gun-frame, gun-barrel and tubular magazine thereof, of a sliding handle mounted upon the magazine which is rotatable within the handle for the detachment of its rear end from the gun-frame, and a projection on the magazine engaging with the said handle and locking the same, when the magazine is retracted and rotated for its detachment from the gun-frame.

13. In a tubular-magazine firearm, the combination with the gun-frame, gun-barrel and tubular magazine thereof, of a sliding handle mounted upon the magazine, a handle-sleeve located within the said handle and formed with a longitudinal clearance-slot, and a handle-stop on the magazine normally located in line with the said clearance-slot of the sleeve with the rear edge of which it engages and holds the sleeve and hence the handle in its forward or retracted position when the magazine is retracted and rotated for its detachment from the gun-frame.

14. In a tubular-magazine take-down firearm, the combination wth the gun-frame thereof, of a gun-barrel detachably connected with the said frame, a tubular magazine organized with the said barrel, movable longitudinally with respect thereto and adapted at its rear end to be detachably connected with the gun-frame, a sliding handle organized with the said barrel and magazine and movable back and forth in line with the longitudinal axis of the barrel and coöperating with the action mechanism of the gun for the actuation thereof, and means for securing the magazine at the limit of its forward movement with respect to the barrel and for securing the handle at the limit of its excursion when the said barrel and magazine are detached from the gun-frame.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM MASON.

Witnesses:
DANIEL H. VEADER,
THOMAS C. JOHNSON.