T. C. JOHNSON.

TUBULAR MAGAZINE FIREARM.

APPLICATION FILED JAN. 23, 1913.

1,068,060.

Patented July 22, 1913.

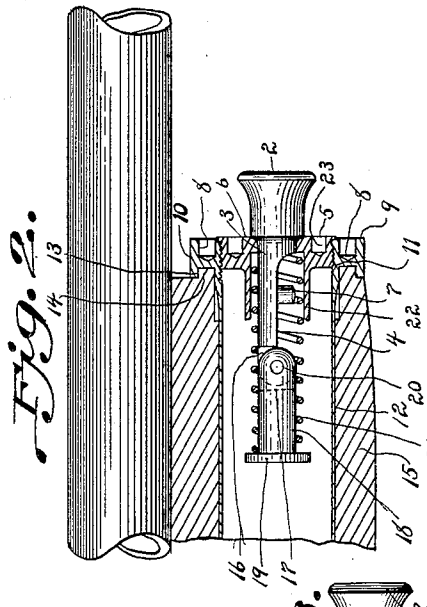


Fig. 2.

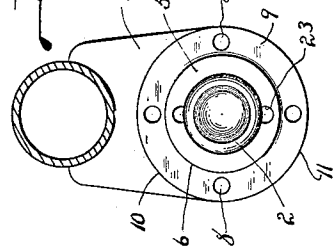


Fig. 4.



Fig. 11.

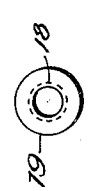


Fig. 12.

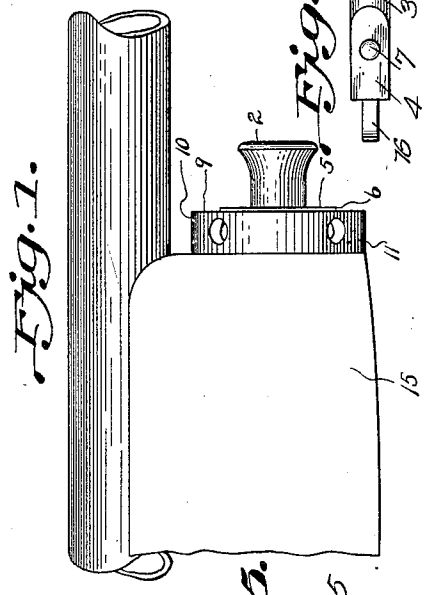


Fig. 1.

Fig. 8.

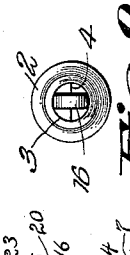


Fig. 9.



Fig. 10.

Fig. 3.

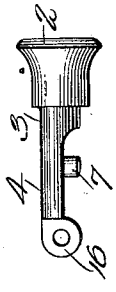


Fig. 7.

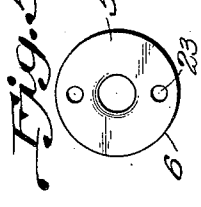


Fig. 5.

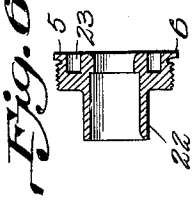


Fig. 6.

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UNITED STATES PATENT OFFICE.

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TUBULAR-MAGAZINE FIREARM.

1,068,060. Specification of Letters Patent. **Patented July 22, 1913.**

Application filed January 23, 1913. Serial No. 743,755.

To all whom it may concern:

Be it known that I, THOMAS C. JOHNSON, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Tubular-Magazine Firearms; and I do hereby declare the following, when taken in connection with the accompanying drawings and the characters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this application, and represent, in—

Figure 1 a broken view in side elevation of a tubular magazine gun the magazine of which is provided at its forward end with one form which my improved wrench may assume. Fig. 2 a similar view with the forearm, the magazine, magazine-tip, and magazine-cap in vertical central section, and with the wrench in its retired position. Fig. 3 a corresponding view with the wrench in its operative position. Fig. 4 a detached view in front elevation showing the magazine-tip, magazine-cap and magazine-wrench, the latter being in its normal or retired position. Fig. 5 a detached view in front elevation of the magazine-cap. Fig. 6 a corresponding view thereof in vertical longitudinal section. Fig. 7 a detached view in side elevation of the magazine-wrench. Fig. 8 a plan view thereof. Fig. 9 a view in elevation of the rear end thereof. Fig. 10 a detached view in side elevation of the wrench-stop. Fig. 11 a plan view thereof. Fig. 12 a view thereof in rear elevation.

My invention relates to an improvement in magazine-wrenches for tubular magazine firearms, the object being to produce a simple, convenient and durable wrench constructed with particular reference to resisting the shocks of recoil to which it is constantly subjected when the arm is fired.

With these ends in view my invention consists in a magazine-wrench yieldingly mounted in a tubular magazine for movement in line therewith.

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

In carrying out my invention as herein shown, I employ a spanner-like magazine-wrench comprising a flaring hollow finger-button or knob 2 formed upon the outer end of a round shank 3, one face of which is partly milled away to form a flat bearing-face 4 adapting the wrench to ride in its operative position, as shown in Fig. 3, upon the flat outer face 5 of the magazine-cap 6. A spanner or clutch-pin 7 projecting from the said face 4 of the shank 3 is adapted in size to be entered into any one of four spanner or clutch-pin holes 8 located at equal distances apart in the front face 9 of the radial flange 10 of the annular magazine-tip 11 formed upon the forward end of the tubular magazine 12 which may be of any approved construction, and is formed, as usual, at its rear end with screw threads by which it is screwed into and unscrewed from the gun-frame or receiver which is not shown, but provided in the usual manner with a threaded socket for the reception of the threaded rear end of the magazine. As shown, the rear face of the annular magazine-tip 11 is formed with an annular recess 13 for the reception of a tenon 14 formed upon the front end of the forearm 15 which houses, as it were, the tubular magazine 12. At its rear end, the shank 3 of the magazine-wrench is milled to form a knuckle 16 which is entered into a longitudinal slot 17 formed in the rounded front end of a cylindrical magazine wrench-stop 18 corresponding in diameter to the shank 3 and having its rear end furnished with a stop-flange 19. The knuckle 16 is pinned into the slot 17 by means of a pin 20, whereby the magazine-wrench is pivotally connected with the magazine wrench-stop 18. The magazine-wrench consisting of the knob 2, shank 3 and stop 18, may be viewed as a pivotal two-part wrench, and will be so referred to in the claims.

A helical buffer-spring 21 encircling the stop 18 and the shank 3 of the magazine-wrench extends at its forward end into a retaining-sleeve 22 arranged concentric with the magazine-cap 5 and extending rearward from the inner face thereof. This sleeve effectually prevents the inner end of the spring 21 from being displaced when the spring is compressed, at which time it would, but for being confined in the said sleeve, tend to be displaced laterally. Normally the buffer-spring 21 holds the maga-

zine-wrench in its retired position in which it is located in line with the tubular magazine 12, and therefore in substantial line with the recoil of the gun at the time of firing, so that the shock of recoil is thrown upon the spring 21 which absorbs it, and thus protects the magazine-wrench from being, as it were, hammered or disfigured or broken. The magazine-cap 5 is formed upon its edge with threads adapting it to be screwed into the threaded forward end of the radial flange 10 of the magazine-tip 11. For the purpose of screwing the cap 5 into the flange 10, the cap 5 is formed with clutch-holes 23 for the reception of the clutch-pins of a spanner wrench of any ordinary construction, and having nothing to do with my present invention.

When it is desired to use the magazine-wrench, the knob 2 thereof is grasped by the fingers and the wrench drawn directly forward against the tension of the buffer-spring 21 which is thus compressed so as to be entirely housed within the sleeve 22, the stop 18 being drawn forward into the sleeve 22 until its retaining-flange 19 has been brought into engagement with the rear edge thereof. The magazine-wrench proper has been brought into position in which it is free to be swung at a right angle to the longitudinal axis of the magazine, and therefore into the position in which it is shown in Fig. 3. Its spanner or clutch-pin 7 is now introduced into one of the four clutch-holes 8 in the magazine-tip 11 after which the wrench may be used as a lever for turning the said magazine-tip and therefore the magazine 12, in either direction according as the magazine-wrench is being used for unscrewing the tubular magazine from the gun-frame or receiver, or screwing it thereinto. At the conclusion of the operation, the wrench proper is swung outward into line with the magazine, at which time the spring 21 immediately reasserts itself to automatically retract the wrench and its stop 18 into their retired or clearance positions, in which they are shown in Figs. 1 and 2.

I claim:—

1. In a tubular magazine firearm, the combination with a tubular magazine, of a wrench mounted therein to yield in line with the axis thereof, whereby the wrench is protected from the shock of recoil.

2. In a tubular magazine firearm, the combination with a tubular magazine, of a wrench mounted in the forward end of the magazine and normally positioned in line with the axis thereof, and a spring applied to the said wrench for normally restoring it to, and holding it in, its said normal position against the shock of recoil at the time of firing the arm.

3. In a tubular magazine firearm, the combination with a tubular magazine, of a cap located in the forward end thereof and provided with a rearwardly extending sleeve, a wrench mounted in the said cap and extending rearwardly through the said sleeve in line with the axis of the magazine, and a spring applied to the wrench and extending at its forward end into the said sleeve which holds it against displacement.

4. In a tubular magazine firearm, the combination with a tubular magazine, of a cap located in the forward end thereof, a wrench mounted in the said cap and normally positioned in line with the said magazine, a wrench-stop pivotally connected with the inner end of the wrench, and a buffer-spring encircling the shank of the wrench and the wrench-stop and operating to retract the wrench into its normal or retired position and to hold it yieldingly therein against the shock of recoil.

5. In a tubular magazine-firearm, the combination with a tubular magazine provided at its forward end with a tip having a radial flange, of a magazine-cap closing the forward end of the magazine, a wrench mounted in the said cap, a wrench-stop pivotally connected with the inner end of the shank of the wrench, a sleeve located upon the rear face of the said cap, and a buffer-spring encircling the shank of the wrench and the wrench-stop, and entered at its forward end into the said sleeve which prevents its displacement when compressed, the wrench being adapted to be engaged with the magazine tip when drawn outward and swung into its operative position at a right angle to the axis of the magazine.

6. In a tubular magazine firearm, the combination with a tubular magazine, of a wrench mounted in the forward end of the said magazine and normally positioned in line with the axis thereof, a stop pivotally connected with the rear end of the wrench and located in the magazine in line with the axis thereof, and a buffer-spring located within the magazine and co-acting with the wrench to yieldingly hold the same in its normal position against the shock of recoil at the time of firing the arm.

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

THOMAS C. JOHNSON.

Witnesses:
FRANK A. PAUL,
DANIEL H. VEADER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."