LATCH FOR ROTARY MAGAZINES.

APPLICATION FILED DEC. 14, 1908.

1,042,241.

Patented Oct. 22, 1912.

2 SHEETS—SHEET 1.

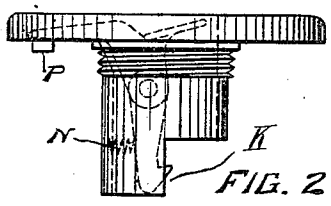

FIG. 2.

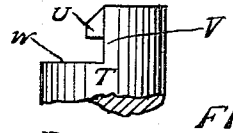

FIG. 3.

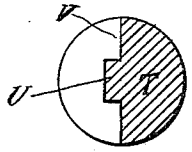

FIG. 4.

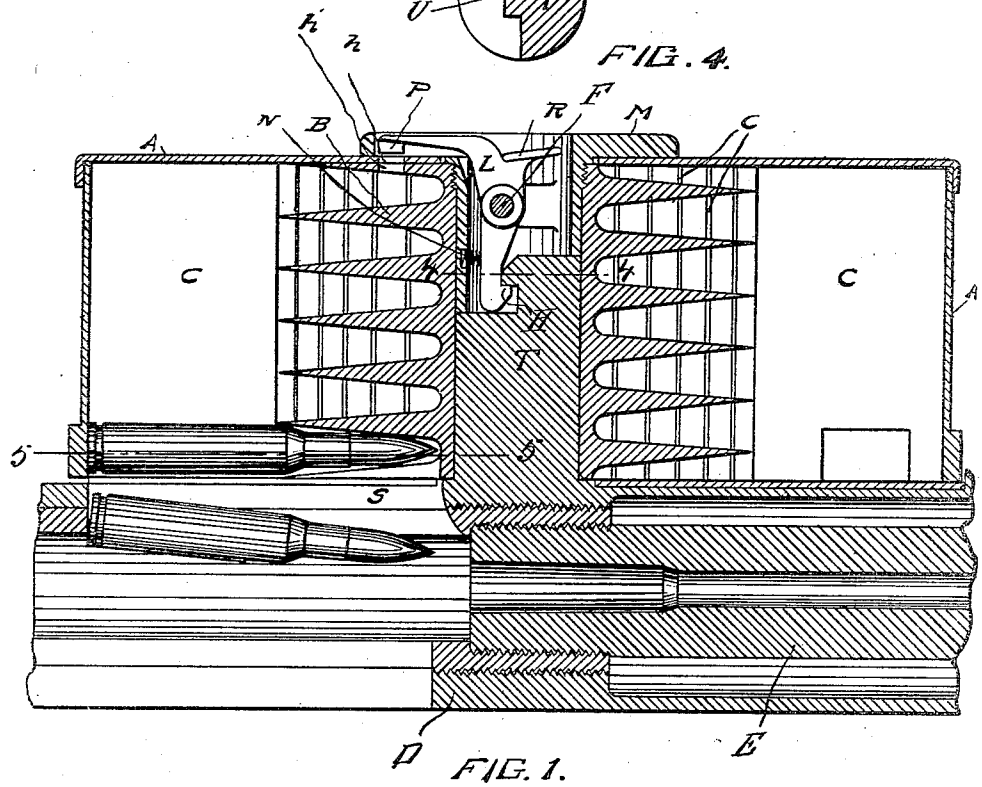

FIG. 1.

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2 SHEETS—SHEET 2.

Fig. 5.

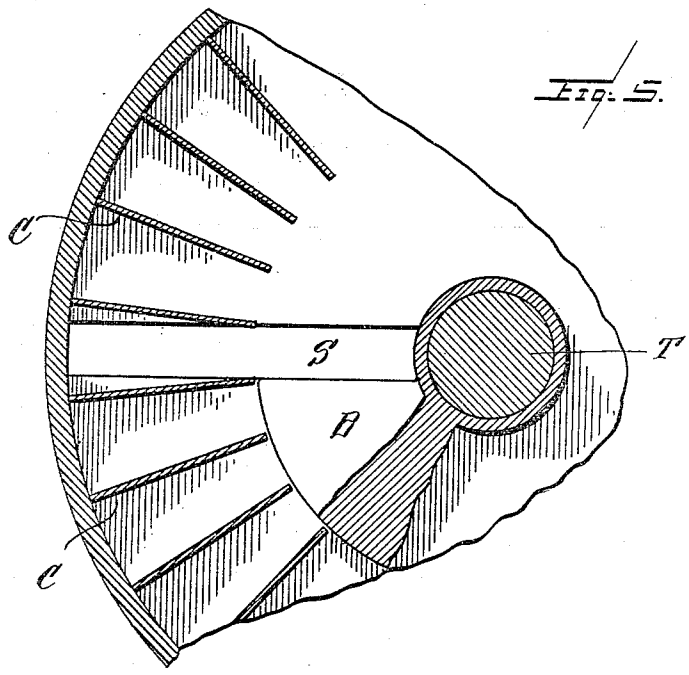
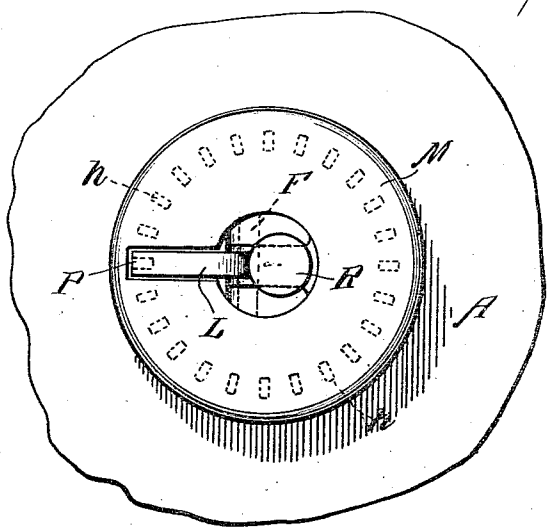


Fig. 6.



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LATCH FOR ROTARY MAGAZINES.

1,042,241. Specification of Letters Patent. Patented Oct. 22, 1912.

Application filed December 14, 1908. Serial No. 467,486.

To all whom it may concern:

Be it known that I, ORMOND M. LISSAK, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga, State of Ohio, have invented certain new and useful Improvements in Latches for Rotary Magazines, of which the following is a description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to an improved latch device designed for use with a rotary cartridge magazine of automatic rapid fire machine guns, and the object thereof is to provide a latch device for holding the magazine in place and which latch also serves as a securing means for preventing the escape of cartridges from the magazine during the transportation thereof or when said magazine is not in place upon the gun.

In the accompanying drawings, Figure 1 is a sectional view taken upon a central vertical plane through a portion of a gun, and showing a rotary cartridge magazine provided with my improved latch device. Fig. 2 is a side elevation of my improved latch device. Fig. 3 is a side elevation of the upper end of a post with which the gun is provided and which serves as a support for the rotary cartridge magazine. Fig. 4 is a section of said post on the line 4—4 Fig. 1. Fig. 5 is a fragmentary sectional view upon the line 5—5, Fig. 1, showing the relation of the end of the helical member B to the opening S through which cartridges pass to the gun; and, Fig. 6 is a plan view of the central portion of a rotary cartridge magazine having my improved latch applied to it.

While I have referred to my device as a latch, thereby perhaps implying a member unrelated to the particular form of the elements of the gun with which it is used, it will be understood from the following that various elements of the magazine mechanism are modified in form as disclosed to a degree sufficient to permit the use of the latch member with them; and it will be understood that my invention includes such modifications of form of the cartridge magazine mechanism as are provided for the purpose of securing coöperation between said mechanism and the latch member considered as a unitary member apart from the magazine mechanism.

In the accompanying drawings, D is a portion of the frame of the gun, and E is a portion of the barrel of the gun.

T is a post extending upward from the frame of the gun and forming a support for the rotary cartridge magazine. The rotary cartridge magazine comprises a stationary helical member B formed like an auger, together with a rotatable cylindrical exterior casing A, and a series of vertical radially extending separating members C attached to and rotatable with said exterior casing A. The lower end of the helical member B terminates adjacent the edge of a vertical slot or passage S, as shown in Fig. 5, through which slot cartridges pass to the breech mechanism of the gun, as will be understood from Fig. 1. The separating members C terminate adjacent the periphery of the helical member B, and rotary motion is transmitted to the exterior casing A by mechanism not disclosed as it forms no part of this invention.

M is a housing in threaded engagement with the upper end of the helical member B, and which housing forms a support for the latch lever L, said member being supported in said housing by means of a pivot F. The latch lever is provided at its lower end with a lug H which passes beneath a lug U formed upon the upper end of the post T when the magazine is secured in place upon a gun. The latch lever L is extended horizontally as shown and is provided at the end of such horizontal portion with a downwardly extending lug P, which lug may pass through any one of a series of holes h provided in the top wall of the exterior casing A, there being as many such holes as there are spaces between adjacent separating elements C, and into a single hole h' formed in the upper end of the helical member B. When the lug P is within one of the holes h and the hole h' it will be seen that it locks the members A and B together, thereby preventing one of said members from moving relatively to the other.

It will be understood that the relation of the lower end of the member B to the slot S must always be as shown in Fig. 5 in order that as the cartridges leave the helical member they may pass downward through the slot; and, in order to insure this definite relationship of the parts, the upper end of the post T has a vertical face at V, and the lower portion of the housing M is prolonged

to form a vertical face or edges at K, and it will be obvious that the cartridge magazine can be lowered into operative position only when its angular position is such that the above mentioned vertical faces may pass one another and assume the position shown in Fig. 1, whereupon the extremity of the helical member will come into its proper position adjacent the slot S.

In the form of magazine illustrated the cartridges are arranged in a continuous helical procession with their bullet ends within the groove of the helical member B, and are divided into columns by the vertical separating members C, which members C move the cartridges around the helical member and downward as the exterior casing A is rotated as above stated. It will be obvious that if the exterior casing A is free to rotate about the helical member when the magazine is off the gun and filled with cartridges, such rotation would work the cartridges out of the magazine. The lug P of the latch lever L is provided for the purpose of locking the casing A and helical member B together when the magazine is off the gun, so that the cartridges cannot escape from the magazine at such times. This function is accomplished by the lug P passing through any one of the holes *h* and into the single hole *h'*, whereby the parts will be locked together.

Referring to Fig. 1, it will be seen that the form of the latch lever L which carries the locking lug P and the lug H whereby the magazine is secured to the gun, is such that when the cartridge magazine is in its normal position upon the gun and the securing lug H in engagement with the lug U formed upon the post T which is shown as integral with the gun frame, the locking lug P will be kept withdrawn from both the holes *h* and *h'*. This will permit the exterior casing A to rotate about the helical member B when the magazine is in place upon the gun and said members are in their unlocked condition. When however the magazine is removed from the gun the lever L will be swung upon its pivot F by the spring N to thereby move the lug P into one of the holes *h* and the hole *h'* to thereby lock the exterior casing A and the helical member B together. The position of the lever L first mentioned is considered the normal position thereof, and it will be seen that the action of said lever to lock the parts of the magazine together takes place automatically as the magazine is removed from the gun.

R is a thumb piece whereby the latch lever L may be operated.

Having thus described my invention and explained the operation thereof, I claim and desire to secure by Letters Patent:—

1. In a device of the class described, a cartridge magazine comprising a rotary and a stationary member; a locking member carried by said magazine for locking said rotary and stationary members together; and means engaged by a part of the gun when attaching the magazine to the gun for operating said locking member to thereby unlock said magazine members.

2. In a device of the class described, a cartridge magazine comprising concentric rotary and stationary members; a locking member carried by said stationary member for locking said members together; and means engaged by a part of the gun when attaching the magazine to the gun for operating said locking member to thereby unlock said magazine members.

3. In a device of the class described, a cartridge magazine comprising an external rotary member and a stationary member within said rotary member and concentric therewith; a locking member carried by said stationary member for locking said members together; a post carried by the gun and whereby said cartridge magazine is supported; and means engaged by said post for operating said locking member to thereby unlock said magazine members.

4. In a device of the class described, a cartridge magazine comprising a rotary and a stationary member, each of said members being provided with a hole; a lever carried by said magazine and provided with a lug adapted to enter the holes aforesaid; and means engaged by a part of the gun for operating said lever to thereby withdraw said lug from said holes.

5. In a device of the class described, a cartridge magazine comprising concentric rotary and stationary members, each of said members being provided with a hole; a lever carried by said stationary member and provided with a lug adapted to enter the holes aforesaid; and means engaged by a part of the gun for operating said lever to thereby withdraw said lug from said holes.

6. In a device of the class described, a cartridge magazine comprising an external rotary member and a stationary member within said rotary member and concentric therewith. each of said members being provided with a hole; a lever carried by said stationary member and provided with a lug adapted to enter the holes aforesaid; a post carried by the gun and whereby said cartridge magazine is supported; and means carried by said post for engaging said lever to thereby withdraw said lug from said holes.

7. In a device of the class described, a cartridge magazine comprising a rotary and a stationary member; and a combined locking and latch member carried by said magazine for locking said rotary and stationary members together and for securing said

magazine in position upon the gun; said combined locking and latch member being adapted to be engaged by a part of the gun when the magazine is in place thereupon to thereby unlock said rotary and stationary members and secure the magazine to the gun.

8. In a device of the class described, a cartridge magazine comprising concentric rotary and stationary members; and a combined locking and latch member carried by said stationary member for locking said members together and for securing said magazine in position upon the gun; said combined locking and latch member being adapted to be engaged by a part of the gun when the magazine is in place thereupon to thereby unlock said rotary and stationary members and secure the magazine to the gun.

9. In a device of the class described, a cartridge magazine comprising an external rotary member and a stationary member within said rotary member and concentric therewith; a combined locking and latch member carried by said stationary member for locking said members together and for securing said magazine in position upon the gun; and a post carried by the gun and whereby said cartridge magazine is supported; said post being provided with a projection adapted to engage and operate said combined locking and latch member to thereby unlock said magazine members and secure said magazine in position upon the gun.

10. In a device of the class described, a cartridge magazine comprising a rotary and a stationary member; means for supporting said magazine in position upon a gun; a latch member for securing said magazine to said support; and means controlled by said latch member and normally inoperative for engaging said rotary and stationary members to thereby lock them together.

11. In a device of the class described, a cartridge magazine comprising an external rotary member and an internal stationary member concentric therewith, said members being provided with holes which register with one another; a housing carried by said stationary member; a lever pivoted intermediate its ends in said housing; a post whereby said magazine is supported; a lug upon the upper end of said post; a lug upon one end of said lever and adapted to engage the lug upon said post to thereby secure the magazine in position upon the gun; and a lug upon the other end of said lever and adapted to enter the holes aforesaid to thereby lock said magazine members together.

12. In a device of the class described, a cartridge magazine comprising an external rotary member having a top wall provided with a series of holes, and an internal stationary member concentric therewith and provided with a single hole capable of registering with any one of the holes in the top wall of said external member; a housing carried by said stationary member and extending over the top wall of said external member so as to cover the holes therein; a bent lever pivoted intermediate its ends in said housing; a post whereby said magazine is supported; a lug upon the upper end of said post; a lug upon one end of said lever and adapted to engage the lug upon said post to thereby secure the magazine in position upon the gun; and a lug upon the other end of said lever and adapted to enter one of the holes in the top wall of said external rotary member and the hole in said internal stationary member to thereby lock said magazine members together.

13. In a device of the class described, a cartridge magazine comprising a helical member; a post whereby said helical member is supported; a housing carried by said helical member; a latch carried by said housing and whereby the cartridge magazine may be secured to the gun; and a lug carried by said post and engaged by said latch.

14. In a device of the class described, a cartridge magazine comprising a helical member; a post whereby said helical member is supported; a housing carried by said helical member; a latch carried by said housing and whereby the cartridge magazine may be secured to the gun; and a lug carried by said post and engaged by said latch, the upper end of said post and the lower end of said housing being formed with vertical faces which contact with one another to thereby determine the angular position of said helical member.

15. In a device of the class described, a cartridge magazine comprising a helical member; a post whereby said helical member is supported; a latch carried by said cartridge magazine and adapted to engage said post to thereby secure the magazine to the gun; and means carried by said magazine and engaging said post for determining the angular position of said helical member.

This specification signed and witnessed this seventh day of December, A. D. 1908.

ORMOND M. LISSAK.

In the presence of—
R. M. CALFEE,
E. R. POULSON.