

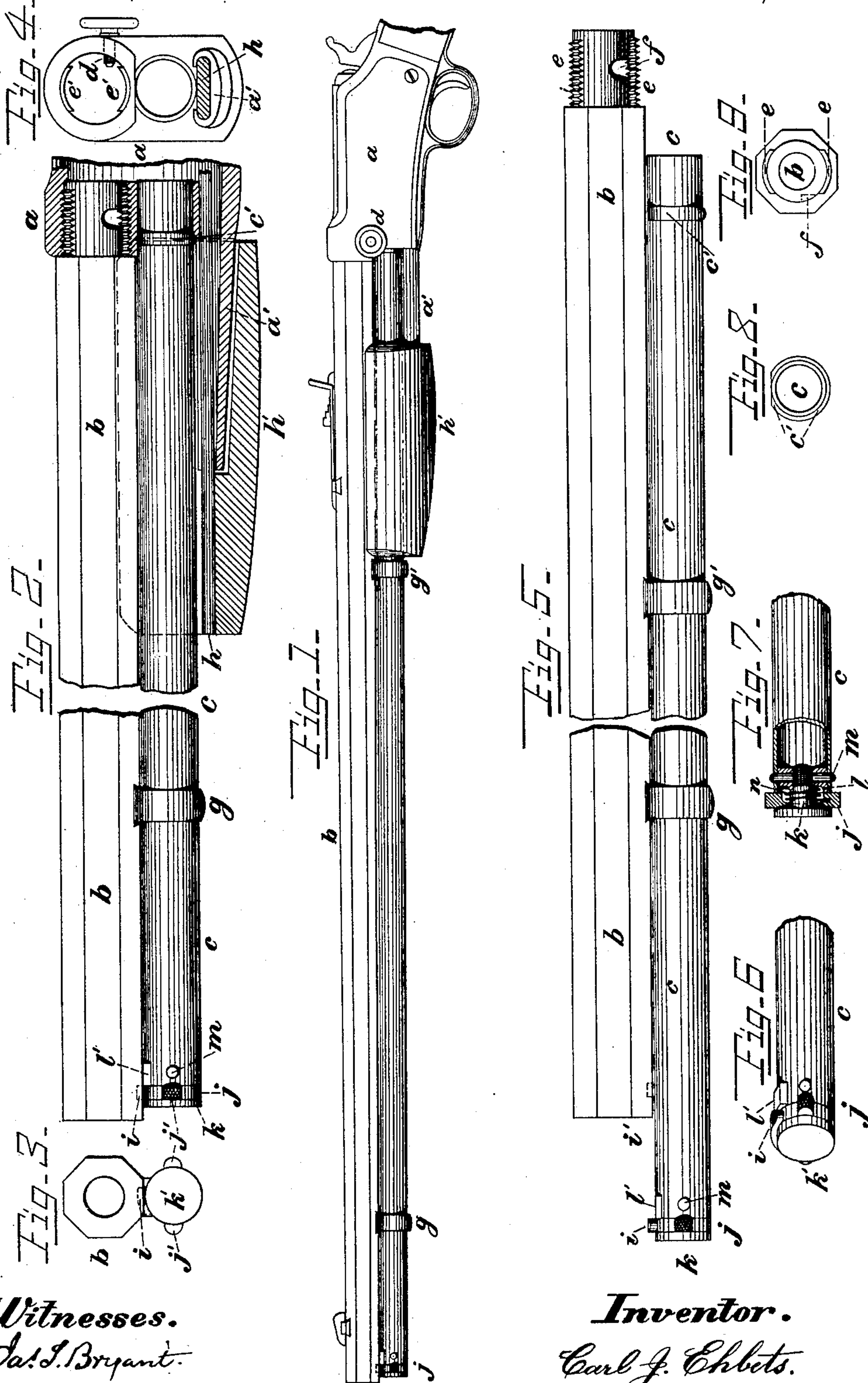
(No Model.)

C. J. EHBETS.

REMOVABLY ATTACHING MAGAZINES TO FIREARMS.

No. 599,835.

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REMOVABLY ATTACHING MAGAZINES TO FIREARMS.

SPECIFICATION forming part of Letters Patent No. 599,835, dated March 1, 1898.

Application filed April 27, 1895. Serial No. 547,358. (No model.)

To all whom it may concern:

Be it known that I, CARL J. EHBETS, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented a new and useful Improvement in Magazine-Firearms, of which the following is a specification.

My invention relates to that class of magazine-firearms in which for convenience in packing or of transportation the barrel is made readily detachable from the frame and in which cartridges are supplied to the frame from a tubular magazine attached to the barrel and one end of which opens into the frame; and it especially relates to those guns of this class in which a part of the magazine-tube is surrounded by parts of the frame and of the breech mechanism.

One of the objects of my improvement is to provide a simple construction by which when the barrel is securely fastened to the frame the magazine may be connected with the latter and firmly locked to the barrel and by which when it is desired to detach the barrel from the frame the magazine may be readily unlocked and moved longitudinally forward, so as to clear the frame and the parts of the breech mechanism surrounding it.

Another object of my improvement is to provide means by which the magazine-tube when thus unlocked, while longitudinally movable along the barrel, will be prevented from becoming entirely detached from the barrel or from being displaced by rotation from its proper position.

Another object is to provide a locking device for securing the magazine-tube longitudinally without diminishing the interior length of the magazine-tube so much as to decrease the number of cartridges capable to be placed therein.

These objects I attain by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a magazine-gun, showing my improvement, the stock being removed. Fig. 2 is a side elevation of the barrel and magazine-tube on a larger scale. The central part of each is removed and a part of the frame and breech mechanism is shown in section. Fig. 3 is a front view of

barrel and magazine. Fig. 4 is a front view of the frame. Fig. 5 is a side elevation of the detached barrel and the magazine-tube unlocked and moved forward. The central part of each is removed. Fig. 6 is a perspective view of the front end of magazine with the locking device. Fig. 7 is a horizontal longitudinal section through the locking device on the magazine. Fig. 8 is a rear end view of the magazine. Fig. 9 is a rear end view of the barrel.

Similar letters refer to similar parts in the several views.

a represents the frame, *b* the barrel, and *c* the magazine-tube. To permit the ready detachment and reattachment of the barrel, the screw-threads *e* on the rear end of the barrel and *e'* in the frame are cut away on the sides, so that there remain sections of threads on top and bottom with threadless sections between them on the sides. The sections of thread correspond in width with the clear spaces, so that a quarter-rotation of the barrel brings the sections of the thread on it to the clear spaces in the frame, and this allows the barrel to be withdrawn from the latter. For reattachment the barrel is inserted in the same manner, its sections of thread entering the clear spaces in the frame, and a quarter-turn is then sufficient to interlock the threads and screw the barrel into position. To prevent any accidental unscrewing of the barrel and to force it always fully home, I employ the set-screw *d*, which, fitted in the side of frame, bears against the barrel below its axis, where a recess *f* has been provided for this purpose. On the outside the screw *d* has a shoulder and means for turning it. While I prefer the sectional thread and the set-screw, as shown, any other suitable devices may be employed which will attach the barrel to the frame by rotation and lock it there.

The magazine-tube *c* is attached to the barrel by two thimbles or bands *g g'* of the usual construction, which allow it to move freely longitudinally. The rear end of the tube *c* enters some distance into the frame, and an annular shoulder *c'* on the tube limits its movements to the rear by bearing against the frame and forward by striking the band *g'*. The top of the shoulder *c'* is flattened, and when

the magazine is moved forward this flattened shoulder prevents rotation of the tube by fitting closely to the barrel. When a round barrel is used, the top of the shoulder is made correspondingly concave. Projecting forward from the frame is the part a' , in which the slide h is arranged, and fastened to the slide is the handle h' , by which the breech mechanism is actuated. While the slide and the handle do not touch the magazine-tube, being entirely supported by the frame, the handle h' , as shown in Figs. 1 and 2, surrounds a part of the magazine-tube and thus prevents the rotation of the barrel for its detachment unless the tube is moved forward so that its rear end clears the handle h' . The band g' is located forward of the handle, and when the latter is in its rearmost position, as in Fig. 2, the rear end of the magazine-tube will be forward and clear of the handle when the shoulder c' rests against the band g' . The rear band g' may be located yet farther forward, so as to provide room between the rear end of the tube and the front of the handle, even when this is in its forward position, or it may be left off entirely and only one band may be used near the muzzle; but for reasons not necessary here to explain I prefer to have the breech open while the barrel is being detached, and by locating the band g' as shown the barrel cannot be rotated enough for detachment unless the handle h' be moved to the rear, and thus the breech be opened.

It will be understood that as the rearmost band g' is located at a considerable distance forward of the frame and as the magazine-tube is from the band rearward unconnected with the barrel its end entering the frame cannot be depended on as a bolt for locking the barrel against partial rotation in the frame. For this reason other means, such as the set-screw d , must be provided for this purpose. To lock the magazine-tube in its normal rearmost position beneath the barrel when this has been attached to or detached from the frame, I provide at the front end of the magazine-tube a rotary spring-catch, a projection i from which enters from one side into a corresponding recess i' in the barrel. This projection is a part of the locking-ring j , which turns upon the bolt k between the head k' of the latter and the nut l . The nut l screws upon the bolt and fits into the front end of the magazine-tube, where it is fixed by a pin m , which, going crosswise through the tube, nut, and bolt, locks these firmly together. On the upper side the tube is cut away and allows a part l' of the nut l to protrude upward, where it fits closely to the barrel, thus preventing the tube from rotating. A part of the interior of the ring j and of the nut l are hollowed out and form a chamber for the spiral spring n , of which one end is fixed in the ring and the other end in the nut. Thus the spring tends to yieldingly hold the locking-ring in the locked position with the projection i in the recess i' . From

the sides of the ring j project ears j' j'' , which are checkered and serve for rotating the ring, and by turning the projection i out of the barrel unlocking the tube. By this construction of the locking-catch its parts may be made of sufficient strength to be effective without decreasing the space in the magazine-tube more than is done by the front plug usually employed for closing the front end of the tube. This will allow the usual number of cartridges to be placed therein.

After the barrel and the tube have been detached from the frame the tube is still prevented from rotation either by the shoulder c' or by the projection l' , as the latter is so located that it bears under the barrel before the shoulder c' can be moved rearwardly so far as to lose its bearing. From becoming entirely separated from the detached barrel the tube is prevented in forward direction by the shoulder c' and rearwardly by the projection l' striking the band. For conveniently packing and transporting the barrel and tube separately from the frame the tube, after the detachment, is returned to its normal position under the barrel and the projection i of the catch is allowed to enter the recess i' . Thus tube and barrel are locked together.

What I claim as my invention, and desire to protect by Letters Patent, is—

1. In a magazine-gun having a frame projecting forward beyond the rear end of the barrel, and having an actuating-slide supported by said frame and projecting part, and a handle attached to said slide and partly embracing the barrel, the combination of a barrel detachable from said frame by rotation, said barrel having no projections within the projecting part of the frame and within said handle to oppose rotation thereof, and a magazine attached to said barrel by one or more bands forward of said frame, slide and handle, but free to move longitudinally, to pass through said handle and to enter into said frame, said magazine provided near its rear end with a projection limiting its longitudinal movement and thereby preventing its detachment from said barrel in the forward direction, said projection having a surface fitting said barrel and preventing said magazine from being by rotation displaced from the proper position to said barrel and for insertion into said frame, and a locking-catch having a fixed projection limiting the longitudinal movement of said magazine in the rearward direction, and preventing rotation of said magazine, and a rotary projection for interlocking said magazine with said barrel, substantially as shown and for the purpose stated.

2. In a magazine-gun, in combination with the barrel and the magazine supported by the barrel, but longitudinally movable, the locking-catch consisting of the body fixed to the said magazine and provided with a projection for preventing rotation of said magazine, of the ring rotary on the body and provided with

a projection for entering a recess in the barrel, and of a spring for yieldingly holding said projection in said recess.

3. In a magazine-gun, in combination with
5 the barrel and the magazine supported by the barrel, but longitudinally movable, and means for preventing rotation of the magazine, the locking-catch, consisting of the body fixed to the magazine and of the ring rotary
10 on the body and provided with a projection

for entering a recess in the barrel, and the spring within the ring for yieldingly holding said projection in said recess.

This specification signed and witnessed this 26th day of April, A. D. 1895.

CARL J. EHBETS.

In presence of—

JAS. S. BRYANT,

A. L. ULRICH.