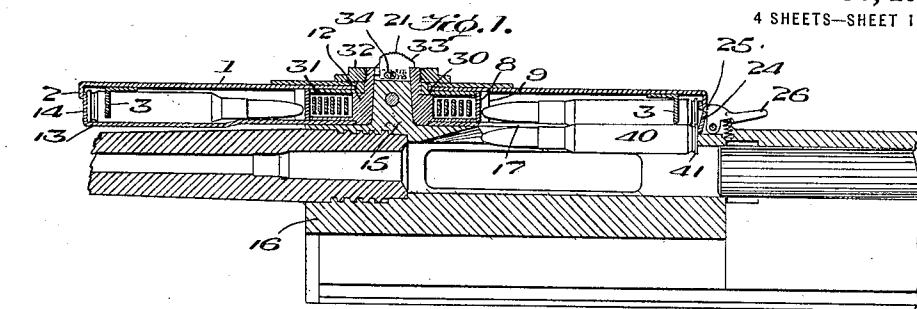
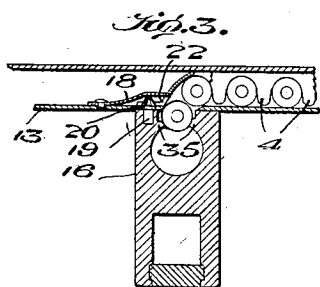
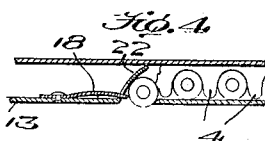
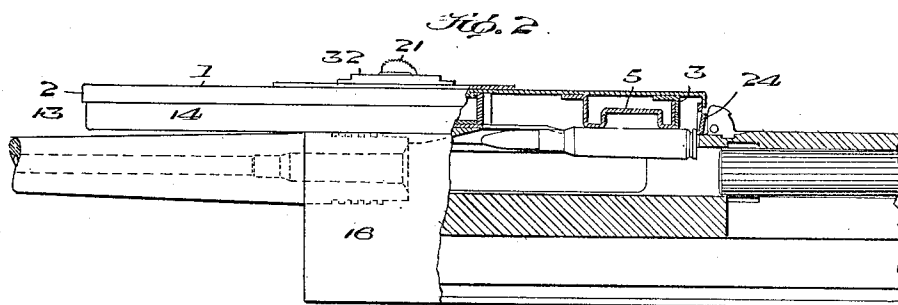
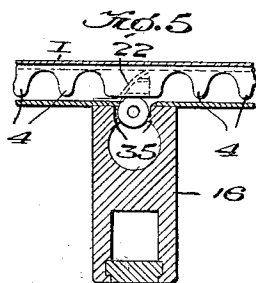


A. H. FOX AND W. J. RICE.
MAGAZINE OR CARTRIDGE FEEDING DEVICE FOR AUTOMATIC MACHINE GUNS.
APPLICATION FILED APR. 9, 1917.

1,335,677.

Patented Mar. 30, 1920.

4 SHEETS—SHEET 1.



Inventors.
Ansley H. Fox & Walter J. Rice
By their Attorney Jas. L. Skidmore.

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Fig. 6.

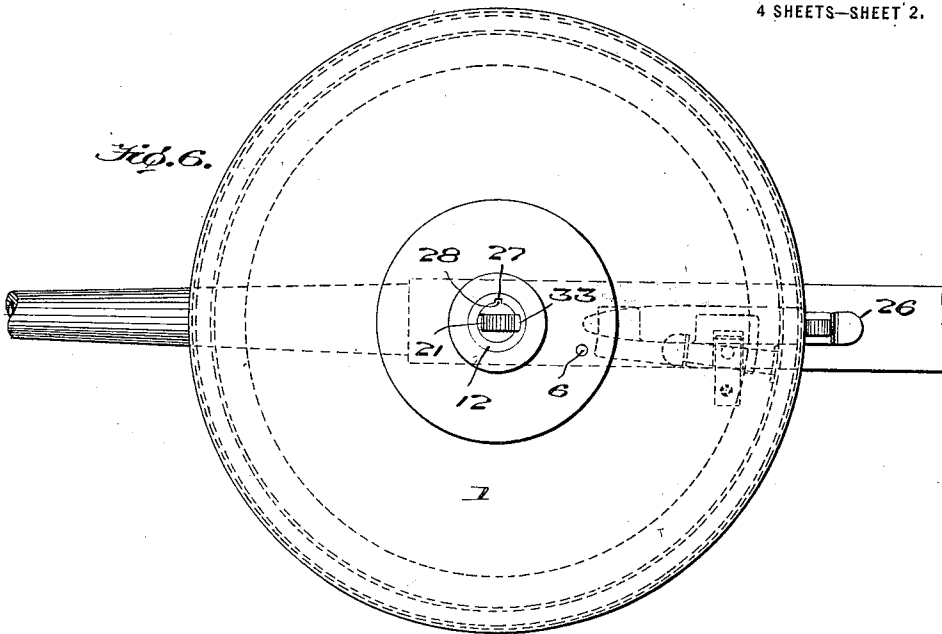
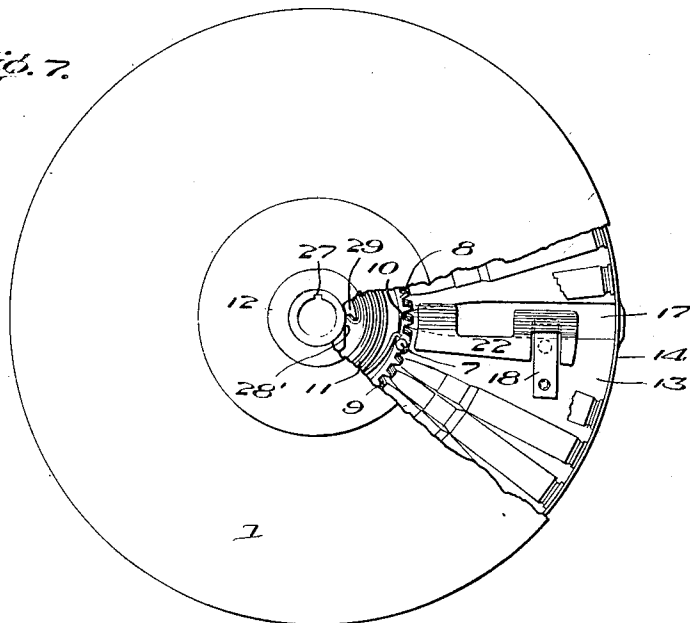


Fig. 7.



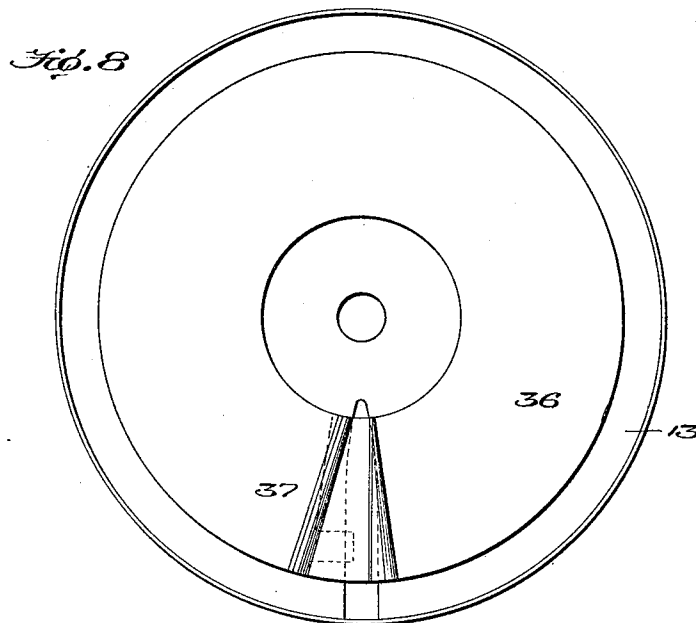
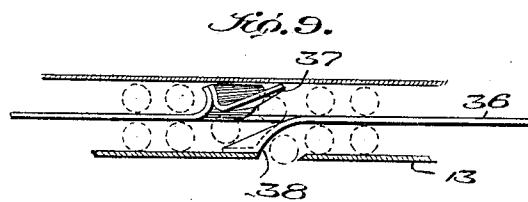
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4 SHEETS—SHEET 3.



Ansley H. Fox & Walter J. Rice Inventors.
By their Attorney *Joe L. Skidmore*

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4 SHEETS—SHEET 4.

Fig. 11.

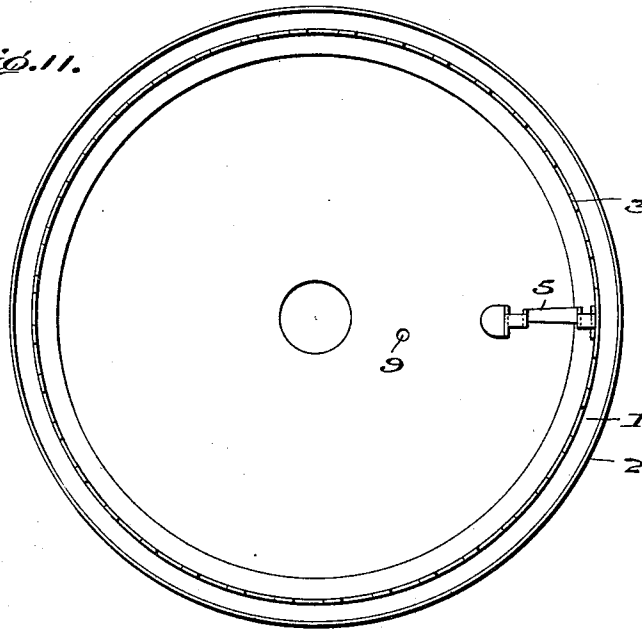
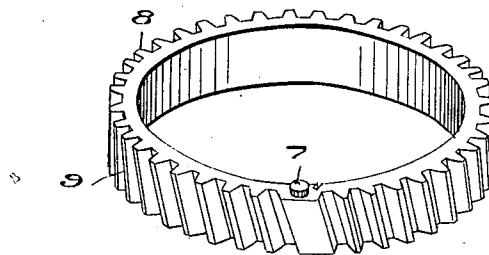


Fig. 12.



Ansley H. Fox & Walter J. Rice, Inventors.
By their Attorney, Jas. L. Schwab.

UNITED STATES PATENT OFFICE.

ANSLEY H. FOX AND WALTER J. RICE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS
TO ANSLEY H. FOX COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION
OF DELAWARE.

MAGAZINE OR CARTRIDGE FEEDING DEVICE FOR AUTOMATIC MACHINE-GUNS.

1,335,677.

Specification of Letters Patent. Patented Mar. 30, 1920.

Application filed April 9, 1917. Serial No. 160,740.

To all whom it may concern:

Be it known that we, ANSLEY H. FOX and
WALTER J. RICE, citizens of the United
States, residing at Philadelphia, in the
5 county of Philadelphia and State of Penn-
sylvania, have invented certain new and
useful Improvements in Magazine or Car-
tridge Feeding Devices for Automatic Ma-
chine-Guns, of which the following is a
10 specification.

Our invention relates to a magazine or
cartridge feeding device for automatically
operated machine guns.

The prime object of this invention is to
15 provide a cartridge feeding device so con-
structed that it will be certain to feed the car-
tridges to the gun regardless of the position
of the gun, and will also feed regularly
without regard to the consecutive or proper
20 filling of the magazine.

A further object of the invention is to pro-
vide a novel, simple, strong, durable and
efficient magazine for feeding cartridges to
a machine gun which may be readily and
25 quickly attached or detached from the gun
frame.

Another object of this invention is to
construct a portable and convenient car-
tridge container which may be readily as-
30 sembled and disassembled without the use
of any special tool or accessories.

A still further object of the invention is
to so construct the magazine that it may be
readily attached and detached from the
35 gun by the use of but one hand of the oper-
ator.

The foregoing and such other objects as
may appear from the ensuing description
are attained by the novel features of con-
40 struction, combination, location and ar-
rangement of parts hereinafter more fully
described, illustrated in the accompanying
drawings and particularly pointed out in the
claims appended hereto, it being under-
45 stood that slight changes in the form, pro-
portions, and minor details of the construc-
tion may be resorted to without departing
from the spirit or sacrificing any of the
advantages of the invention.

50 In the accompanying drawings which
form a part of this specification it will be
seen that:—

Figure 1, is a sectional elevation of the
cartridge magazine or feeding device at-
tached to a machine gun.

Fig. 2, is a side elevation of the magazine
attached to a machine gun, showing a part
of the magazine in section and one of the
cartridges being fed into the gun receiver.

Fig. 3, is a detail sectional view of a por- 60
tion of the magazine secured to a machine
gun.

Fig. 4, is a detail sectional view of a por-
tion of the magazine detached from the gun.

Fig. 5, is a detail sectional view of a por- 65
tion of a magazine resting on a machine
gun.

Fig. 6, is a plan view of the magazine se-
cured to a machine gun.

Fig. 7, is a plan view showing a part of 70
the magazine broken away, the magazine
being detached from the gun.

Fig. 8, is a plan view of the bottom plate
of the magazine, showing a slightly modi-
fied form of magazine. 75

Fig. 9, is a sectional view of a portion
of the modified form of magazine and show-
ing a portion of the top and bottom plate
and a division guide plate.

Fig. 10, is a side elevation of a dummy 80
cartridge used in feeding the cartridges out
of the magazine and to serve as a stop for
the magazine.

Fig. 11, is an inverted plan view of the
magazine cover or top, and 85

Fig. 12, is a detail perspective view show-
ing a separating ring provided with spacing
teeth for the bullet end of the cartridges.

Similar numerals of reference are em-
ployed to designate corresponding parts 90
throughout the several figures of the draw-
ings.

In the embodiment of this invention as
illustrated and which shows a preferred con-
struction, the numeral 1 designates the ro- 95
tatable top plate of the cartridge magazine
or feeding device which consists of a cir-
cular disk provided with a control opening
therethrough and a downwardly extended
flange 2 on its outer edge, and rigidly se- 100
cured to the inner surface of said top plate
or disk 1 near its outer peripheral portion
is an annular separating ring 3, provided
with a series of depending teeth 4 which
serves the purpose of spacing the cartridges 105
uniformly apart at the headed end of each
cartridge, and rigidly secured to the inner
surface of said top plate or disk is a de-
pending stop 5 which serves to limit the
movement of the top plate and to force the 110

last cartridge out of the magazine. There is also an opening 6 formed through the top plate for the engagement of the upwardly projecting pin 7, formed on the bullet separating ring 8, which latter consists of a circular ring provided with teeth like projections 9, which project laterally therefrom entirely around the ring and serving to space the bullet end of each cartridge, and on the inside of the said ring 8, is formed a recess 10 adapted to receive one end of the convolute magazine operating spring 11, the other end of said spring being suitably secured to the upright central hub member 12 of the magazine.

The stationary bottom plate 13 is composed of a circular metal disk provided with an upwardly projecting rim portion 14, the central portion thereof having an opening therethrough to engage with the upwardly tapered magazine securing post or stud 15 formed on the gun frame 16, as shown in Fig. 1. The said bottom plate is also provided with a radial slot or opening 17 through which the magazine is loaded with cartridges, and out of which opening each cartridge is fed to the gun. To the inner surface of the bottom plate is fixedly secured the cartridge spring latch 18 adapted to retain the cartridges within the magazine, but said spring latch is pushed back by a pin 19 carried by the gun frame, which pin projects through the hole 20, formed in the bottom plate; thus when the magazine is secured to the gun frame the projecting pin 19 serves to raise the said latch 18 and thereby permits the cartridges to be properly fed to the gun, at the same time the latch serves to exert an upward pressure on the magazine and assists in the removal of the magazine from the gun when the securing button 21 is properly manipulated.

To the inner surface of the bottom plate at one side of the radial slot or opening 17 is fixedly secured a guide chute 22, which is adapted to guide the cartridges out of the magazine through the said opening 17.

The upwardly projecting rim portion 14, of the stationary bottom plate 13 is provided on its outside at 23 with a projecting portion or extension 24, which projection or extension is engaged by the projecting catch portion 25 of a pivoted spring operated lever 26 carried by the gun frame whereby the magazine is safely and properly secured to the gun, in connection with the securing latch or button 21 carried by the tapered securing post or stud 15.

The hub member 12 is fixedly secured to the stationary bottom plate 13, and is provided with a key-way 27 adapted to register with the key 28 formed on the magazine securing post or stud 15, and thereby properly mount the magazine in its proper position on the gun. The said member 12, is also

provided at 28' with a recessed portion and an extension 29 to engage the inner hooked end portion of the convolute operating spring 11, so as to prevent the breaking of the spring should it get beyond control while assembling or disassembling the magazine, and a shoulder 30 is formed thereon which serves as a seat for the cover 31 of the spring, the latter serving to cover the spring, and as a bearing for the rotatable top plate. The upper end portion of the member 12 is screw-threaded to receive a securing nut 32 which may be provided with any suitable means for unscrewing or removing said nut, and the upper end of said member 12 passes through the central opening formed in the top plate.

To the upper portion of the post or stud 15 is secured the knurled spring operated latch or catch button 21, provided with a lateral extension 33, adapted to engage the upper surface of the hub-member 12, for securing the cartridge magazine on the said stud or post, said catch button being secured to the stud or post by a pin 34 which passes therethrough and into recesses formed in the post.

It will be readily perceived that the convolute magazine spring exerts a continuous pressure on each cartridge to hold them in definite position on the retaining shelf formed on the gun frame or receiver, until the cartridge is pushed off the shelf and into the chamber within the gun-barrel by the forward motion of the bolt.

The magazine is loaded against the action of the magazine spring by rotating the top plate against the tension of the spring and forcing the cartridges through the cartridge opening and into the spaces furnished by the cartridge separating ring and the toothed bullet end spacing ring, the cartridge latch-spring retaining the cartridges within the magazine while it is off the gun.

The magazine may be loaded by hand or by a machine. When the magazine is mounted on the gun, the cartridge latch spring is raised by contact with the projecting pin on the gun frame and cartridges are pushed out of the cartridge opening by the action of the magazine spring and are forced into the feed slot of the gun and down upon the retaining shelf 35, formed on same, and are thus held in the path of the bolt ready for the forward movement of the bolt to feed them into the chamber of the gun, the action of the magazine spring being such that it continually feeds cartridges out of the magazine down upon the shelf in the gun, and thus into position to be fed into chamber of the gun as long as there are any cartridges in the magazine, the action of the spring causing the magazine to feed continuously even though there be skipped spaces in the magazine.

By reference to Figs. 8, 9 and 10, it will be

seen that we provide for two layers or substantially double the number of cartridges carried by the magazine by providing a division guide plate 36 secured to the stationary bottom plate, and having a projecting guide portion 37 inclined upwardly, and a downwardly curved portion 38 secured to the inner surface of the bottom plate thereby furnishing a guideway for both the filling and the discharge of the cartridges, and in connection with this modified form of construction we use a dummy cartridge 40 provided with an annular projecting bead or rib 41 near each end thereof, the said dummy cartridge serving to force the last cartridge out of the magazine, but will be prevented from passing out of the magazine by the said projecting ribs 41.

It will be understood that the separating or spacing rings for both the head and bullet portion of the cartridges will be suitably enlarged in order to feed and discharge a plurality of rows or layers of cartridges.

It will be obvious that the construction and operation of our improved magazine will be readily understood by any one skilled in the art from the foregoing description.

Having thus described our invention, what we claim and desire to secure by Letters Patent is:—

1. A cartridge feeding device comprising a spring-operated rotatable top cover plate carrying a toothed depending separating ring, secured to the inner surface of said plate near its outer peripheral portion, and a spring latch secured to the inner surface of said bottom plate.

2. A cartridge feeding device, comprising a stationary lower plate, a spring-actuated rotatable top cover plate, a toothed depending separating ring fixedly secured to the inner surface of said upper plate near its outer peripheral portion, and a spring latch fixedly secured to the inner surface of said bottom plate.

3. A cartridge feeding device, comprising a stationary lower plate, a spring actuated rotatable top cover plate, a toothed depending ring fixedly secured to said top cover plate on its inner surface and near its outer peripheral portion adapted to separate the headed end of each cartridge, a toothed rotatable ring for spacing the bullet end of each cartridge, and a spring latch rigidly secured to the inner surface of said bottom plate adapted to be engaged by a pin carried by the gun frame.

4. A cartridge feeding device, comprising a stationary lower plate having an upright hub fixedly secured thereto, a spring-actuated rotatable upper plate having a cartridge head separating ring depending therefrom, a bullet end spacing ring, a convolute spring connected to said hub and bullet spacing ring, and a cover plate for

said spring seated on a shoulder formed on said hub.

5. A cartridge feeding device, comprising a stationary lower plate having an upright hub fixedly secured thereto and threaded at its upper end, a spring-actuated rotatable upper plate having a cartridge head separating ring depending therefrom, a bullet end spacing ring, a convolute spring removably secured to said hub and bullet spacing ring, a cover plate for said spring, and a nut secured to the screw-threaded upper end of said hub.

6. A cartridge feeding device, comprising a stationary lower plate having an upright hub fixedly secured thereto, a spring-actuated rotatable upper plate having a toothed depending cartridge head separating ring fixedly secured to the inner surface of said plate near its outer peripheral portion, a bullet end spacing ring provided with a series of radially projected teeth and an upward projection adapted to be fitted within an opening in said upper plate, a convolute spring removably secured to said hub and bullet spacing ring, and a spring latch fixedly secured to the inner surface portion of said bottom plate.

7. A cartridge feeding magazine, comprising a stationary lower plate having an upright hub fixedly secured thereto, a spring-actuated rotatable upper plate provided with a cartridge head separating ring, a bullet end spacing ring, a convolute spring secured to said hub and bullet end spacing ring, and a member fixedly secured to the said upper plate to push the last cartridge out and to stop further movement of the magazine.

8. A cartridge feeding magazine, comprising a stationary lower plate having a radial opening formed therethrough and a projecting guide chute fixedly secured thereto adapted to guide the cartridge out of said opening, a rotatable spring-actuated upper plate having a toothed projecting cartridge head separating ring fixedly secured to the inner surface and near the outer peripheral portion of said upper plate, a bullet end spacing ring, and a spring latch fixedly secured to the inner surface of said bottom plate for engagement with a pin carried by the gun frame.

9. A cartridge feeding magazine, comprising a stationary lower plate having a radial opening therethrough, a guide chute fixedly secured thereto, a spring latch rigidly secured to said plate, a spring-actuated rotatable upper plate, and projecting stud carried by the gun frame at one side of said radial opening adapted to be fitted into an opening formed in the bottom plate and contact with said spring latch and raise it out of the path of each cartridge as it is fed to the gun.

10. A cartridge feeding magazine, comprising a stationary bottom plate having a radial opening therethrough, a guide plate fixedly secured thereto, a spring latch rigidly secured to said plate, a spring actuated rotatable upper plate carrying a projecting cartridge head separating ring, a bullet end spacing ring, and a stud projected from the gun frame at one side of said radial opening adapted to be fitted in an opening in the bottom plate and contact with said spring latch to raise it out of the path of the cartridge feed and assist in removing the magazine when it is unlatched.

11. A cartridge feeding magazine, comprising a stationary bottom plate having an upright tapered hub fixedly secured thereto, a spring-actuated rotatable top plate, a tapered stud fixedly secured to the gun frame for receiving said hub, a spring-pressed button for fastening the magazine to said stud, and pivoted spring-operated latch secured to the gun frame for locking the peripheral portion of the magazine to the gun.

12. In a device of the class described, a spring-actuated rotatable cartridge feeding magazine, provided with a projecting stop and cartridge feed member, and a stationary bottom plate provided with an opening adapted to receive a projecting stud carried by the gun frame near the peripheral portion of said bottom plate.

13. In a device of the character described, a stationary bottom plate, a spring-actuated rotatable top plate, the said bottom plate having a radial opening therethrough, and a spring latch fixedly secured to the bottom plate at one side of said opening adapted to prevent the feed of cartridges when not desired and to lift the magazine when its fastening catches are removed.

14. In a device of the character described, a stationary bottom plate, a division guide plate fixedly secured to said bottom plate, a spring-actuated rotatable top plate having a projecting cartridge head separating ring fixedly secured thereto, a bullet end spacing ring, and a convolute spring secured at one end to said bullet end separating ring.

15. In a device of the character described, a stationary bottom plate, a spring-actuated

rotatable top cover plate, a bullet end cartridge spacing ring, a convolute mainspring connected to said spacing ring, and a spring latch fixedly secured to the inner surface portion of said bottom plate for engagement with a pin carried by the gun frame.

16. In a device of the character described, a stationary bottom plate having a radial opening therethrough, a spring-actuated rotatable top cover plate, a division guide plate rigidly secured to said bottom plate and a dummy cartridge provided with means which permits the dummy to be fed into said opening but prevents its escape from the magazine.

17. A cartridge feeding magazine, comprising a stationary bottom plate having a radial opening therethrough, a spring-actuated rotatable top cover plate, a division guide plate fixedly secured to said bottom plate, and a dummy cartridge adapted to force the last cartridge out but prevented from passing out of the magazine.

18. A cartridge feeding magazine, comprising a spring-actuated top cover plate, a stationary bottom plate provided with an upwardly projecting tapered hub, a bullet end spacing ring having an upward projecting stud fitted in an opening in said top cover plate, and a depending member secured to said cover plate adapted to push the last cartridge out and stop its further rotation.

19. A cartridge feeding magazine, comprising a spring-actuated top cover plate, a stationary bottom plate provided with an upwardly projecting tapered hub, a tapered stud carried by the gun frame adapted to be fitted within said hub, a spring latch secured to the bottom plate and a stud carried by the gun frame adapted to engage said spring latch.

20. A cartridge feeding magazine, comprising a spring-actuated top cover plate, a stationary bottom plate provided with an upwardly projecting tapered hub, a tapered stud carried by the gun frame fitted within said stud, means for securing the magazine to the said stud and gun frame, and a spring latch secured to the bottom plate adapted to engage a stud carried by the gun frame.

ANSLEY H. FOX.
WALTER J. RICE.