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J. J. LUCIANETTI ETAL

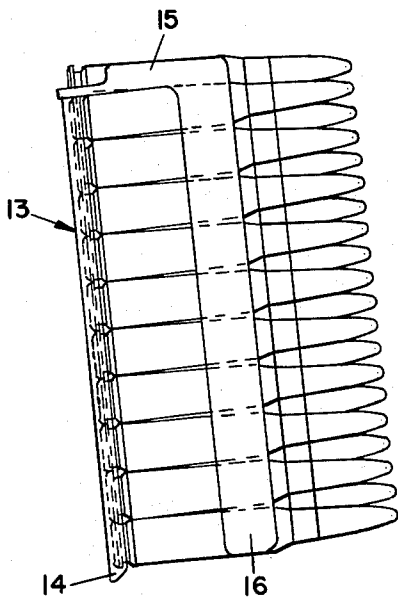
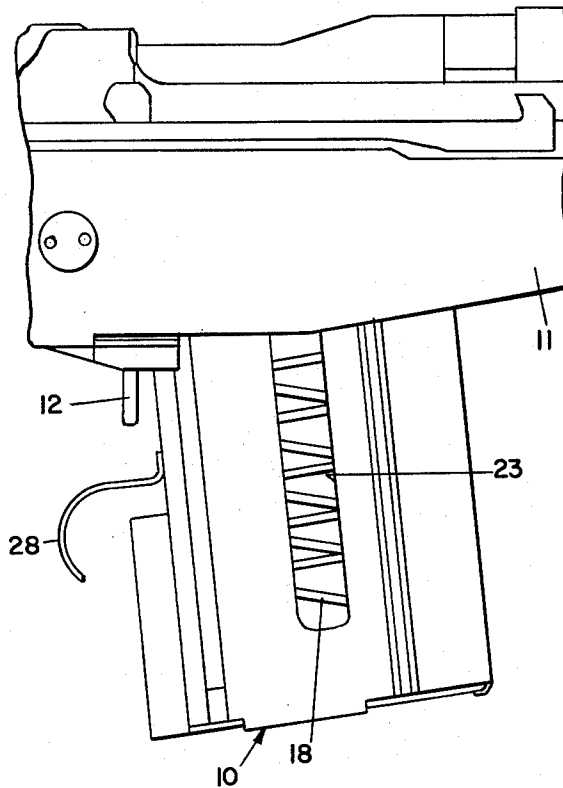
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RIFLE MAGAZINE ASSEMBLY

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2 Sheets-Sheet 1

**Fig. 1**



**Fig. 2**

INVENTORS.  
WILLIAM J. ROSE  
EDWARD R. HIRSEKORN  
HERBERT R. BURGESS, JR.  
JOHN J. LUCIANETTI

BY: *Harry M. Saragovitz,*  
*Edward J. Kelly, Herbert Paul*  
*et B. P. P. P.* ATTORNEYS.

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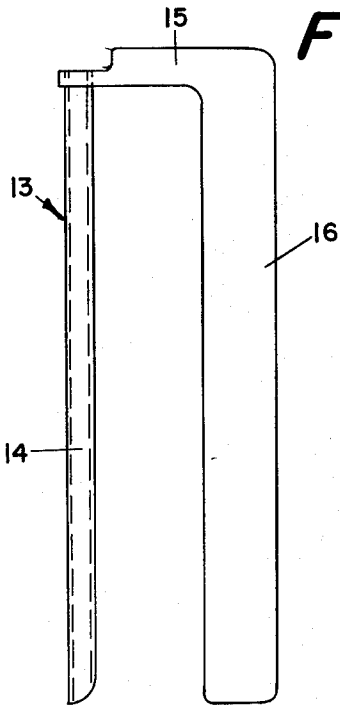
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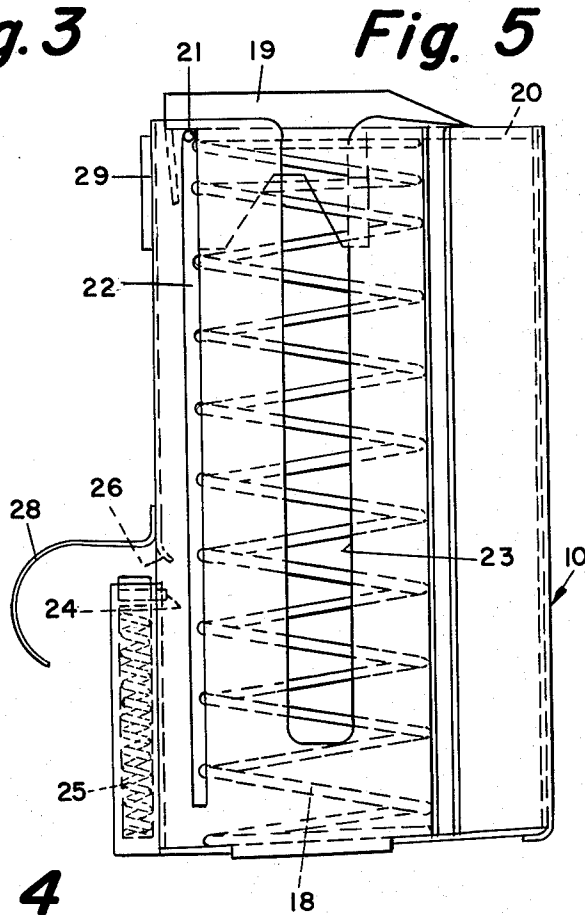
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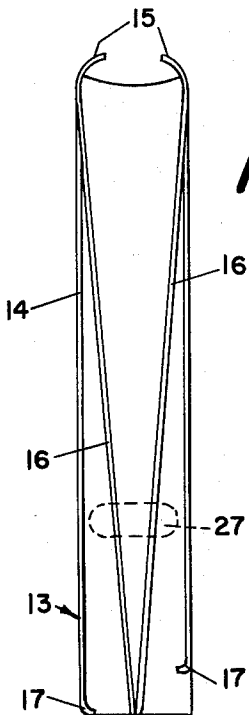
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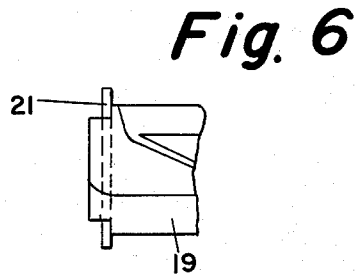
**Fig. 3**



**Fig. 5**



**Fig. 4**



**Fig. 6**

INVENTORS.  
WILLIAM J. ROSE  
EDWARD R. HIRSEKORN  
HERBERT R. BURGESS, JR.  
JOHN J. LUCIANETTI  
BY: Harry M. Saragovitz,  
Edward J. Kelly,  
Herbert Beil & S. Schubert ATTORNEYS.

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3,143,820

**RIFLE MAGAZINE ASSEMBLY**

John J. Lucianetti, Edward R. Hirsekorn, and Herbert R. Burgess, Jr., Philadelphia, Pa., and William J. Rose, Cumberland, Md., assignors to the United States of America as represented by the Secretary of the Army  
Filed June 14, 1963, Ser. No. 288,059

1 Claim. (Cl. 42-50)

(Granted under Title 35, U.S. Code (1952), sec. 266)

The invention described herein may be manufactured and used by or for the Government for governmental purposes without the payment to us of any royalty thereon.

This invention relates to rifle magazine assemblies. It provides an improved magazine assembly which is capable of being loaded by a single cartridge clip instead of the plurality of cartridge clips heretofore utilized for this purpose.

Currently, ammunition is supplied to the rifleman in five-round clips which he manually loads into a 20-round capacity magazine issued with the weapon. This magazine may be filled while attached to the weapon, or by means of a magazine filler while detached from the weapon. This method of operation requires a rifleman to divert his attention during time of stress from his primary function to the time consuming magazine reloading function. This difficulty is avoided by the present invention which provides a factory loaded, expandable, 20-round cartridge clip which can be manually inserted into a modified version of the present rifle magazine. As will appear, such insertion of the 20-round cartridge clip may be made when the modified magazine is either attached to or detached from the weapon.

The invention will be better understood from the following description when considered with the accompanying drawings and its scope is indicated by the appended claim.

Referring to the drawings:

FIG. 1 indicates the relation between the modified magazine and the breech end of the rifle barrel,

FIG. 2 illustrates the 20-round cartridge clip as fully loaded and ready for insertion into the modified magazine from the top thereof,

FIGS. 3 and 4 are side and bottom views of the expandable, 20-round cartridge clip,

FIG. 5 illustrates the various features of the modified magazine, and

FIG. 6 shows a detail of the magazine illustrated by FIG. 5.

The magazine 10 of FIG. 1 is designed to be locked in the breech end of a rifle barrel 11 in a conventional manner. It is released therefrom by movement of a member 12. Insertable into the magazine 10 from the top of the rifle barrel 11 is the clip 13 which is shown in FIG. 2 as containing twenty cartridges. The clip 13 has a base 14 which is grooved or recessed at its opposite sides to receive and retain the base flanges of the cartridges. The base 14 has at one end a pair of cartridge retaining lips 15 and at the other end a pair of cartridge retaining ears 17 (FIG. 4). Cartridge alignment bars 16 are supported by the lips 15.

The magazine 10 includes a follower spring 18 and a follower 19 which is biased to the position illustrated by FIG. 5 by the spring 18. Outward movement of the follower 19 is limited by a pair of inwardly extending flanges 20 at the upper front end of the magazine and rear

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positioning rod 21 which moves in slots 22 as the follower spring 18 is compressed.

The clip 13 of FIGS. 2, 3 and 4 is forced into the magazine 10 of FIG. 1 against the tension of the follower spring 18. As the clip moves into the magazine, the spring is compressed and the cartridge alignment bars 16 move into the slots 23 at the opposite sides of the magazine. As the clip approaches the end of its travel, the inner end of the base 14 engages a pin 24 of a clip ejecting device thereby compressing a clip ejecting spring 25 (FIG. 5). At the end of the clip's travel a spring biased lock member 26 slips into a recess 27 (FIG. 4) on the rear side of the base 14 of the clip 13. This locks the clip 13 in the magazine 10. It is manually releasable therefrom by pulling an unlock member 28 (FIGS. 1 and 5). The magazine is locked in the gun by means of a raised part 29 (FIG. 5) which registers with a recessed member (not shown and is releasable from the part 29 by means of the member 12 (FIG. 1)).

In the operation of the above-described magazine assembly, the modified magazine becomes a semi-permanent part of the weapon, being readily detachable therefrom and usable with the previously available mechanism of the weapon. This magazine is carried empty with the follower spring 18 extended either on or off the weapon until a firing mission is to be executed. This has the important advantage that the spring is prevented from taking a permanent set. With the magazine locked into the weapon, the 20-round clip 13 is manually inserted into the magazine by depressing the follower spring with the bottom row of cartridges. This insertion is completed when the lock member 26 mates with the recess 27. Prior to mating of the lock members 26 and 27, the clip ejecting spring 25 is compressed by the pin 24 which is fixed to it and rides rear against the lower rear end of the clip. When the clip is unlocked, the spring 25 forces it upward out of the weapon receiver to permit easy grasping and discarding.

Important advantages of the above-described magazine assembly are that (1) it provides a factory packed expandable 20-round cartridge clip and (2) it permits the follower spring of the magazine to be maintained in an unstressed condition at times other than when a firing mission is under way. Obviously the reduction in the number of clips from four to one greatly reduces the time required for reloading the weapon. The fact that the follower spring is normally unstressed prevents it from taking a permanent set and becoming unreliable with the lapse of time. Other advantages of the magazine assembly are understandable by those skilled in the art.

We claim:

- 1. In a rifle magazine assembly, the combination of
  - a magazine having first pair of slots extending its opposite sides and closed at both their ends, a second pair of slots extending along said opposite sides and open at one of the ends, a follower spring contractable and expandable between and along said pairs of slots, a follower movable inwardly of said magazine against the tension of said spring, and stop means movable in and along said first pair of slots and fixed to said follower for limiting the outward movement thereof,
  - a cartridge clip insertable into said magazine and having a base recessed along its opposite side to receive

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a plurality of cartridge base flanges and having at one end a pair of cartridge retaining ears, a pair of cartridge retaining lips fixed to the other end of said recessed base, and a pair of cartridge alinement bars supported upon said lips and extensible into said second pair of slots upon the insertion of said clip into said magazine, means for interlocking said clip and said magazine upon the completion of said insertion, and

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means for ejecting said clip upon its release from said magazine.

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