United States Patent [19]

Musgrave

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[54] MAGAZINE LOADING GUIDE

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[52] **U.S. Cl.** **42/87**

[51] **Int. Cl.** **F42b 39/06**

[58] **Field of Search** 42/87, 50

[56] **References Cited**

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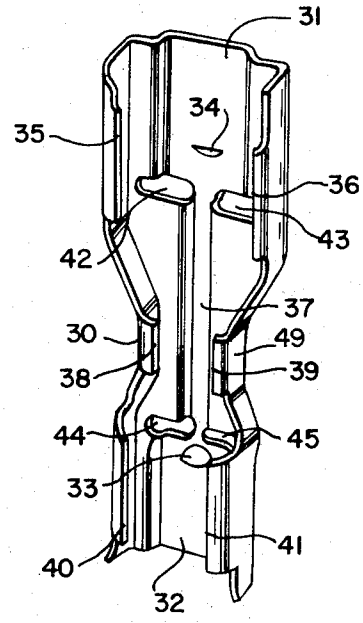
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Assistant Examiner—C. T. Jordan

[57] **ABSTRACT**

A loading guide is provided for attachment to the casing of a cartridge magazine so that a clip of cartridges can be correctly positioned for stripping into the mount of said magazine. In order that the guide may be useable with different models of magazines, which might differ in shape or dimensions, different means for attaching the guide to a magazine are provided at each end of the guide.

4 Claims, 4 Drawing Figures



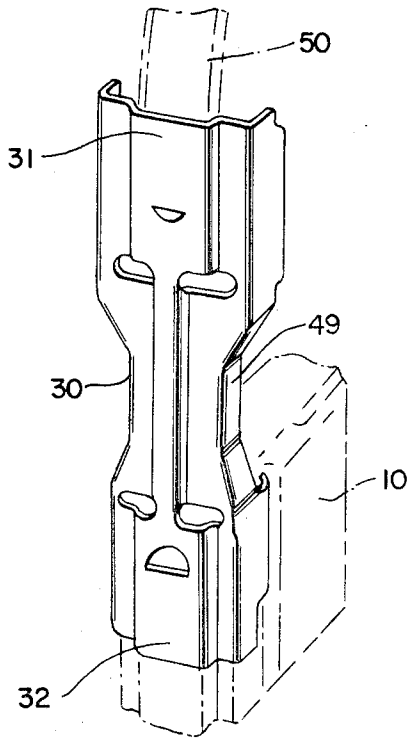


FIG. 4

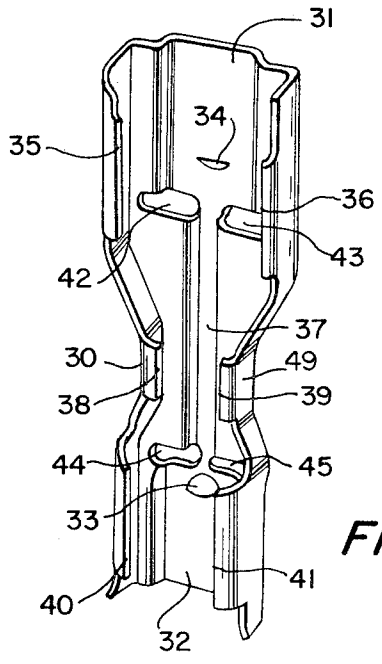


FIG. 3

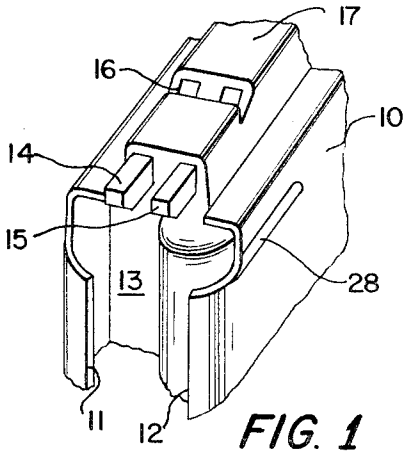


FIG. 1

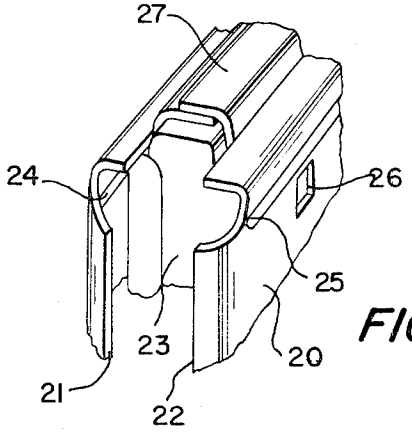


FIG. 2

MAGAZINE LOADING GUIDE

The detachable box magazine has become the dominant type for military rifles throughout the world. The term box magazine is a broad one, for it includes several geometric variations, such as curved box magazines. The variation is in details, rather than in the general principle of operation. The dominant type today holds the cartridges in two staggered rows, and the cartridges advance to the feed position, under spring pressure, as a group. Feeding takes place alternately from the left and the right feed lip of the magazine. The space between the lips is greater than the maximum diameter of a cartridge, thus allowing convenient filling of the magazine.

It is the common practice to issue cartridges on stripper clips, holding some convenient number such as five or ten. The cartridges are easily stripped from the clips, but some means must be provided to position the clip in a correct location relative to the space between the lips of the magazine. It is the common practice to issue with the stripper clips of cartridges a simple mechanical guide which attaches to the magazine and supports the clip during filling of the magazine. The described practice has developed over a long period of time, and is efficient and convenient.

In a few rifles using detachable box magazines a clip guide is built into the rifle, to permit refilling the magazine without detaching it. With such a rifle, the detachable box magazine can be filled with cartridges either while attached to, or detached from, the rifle. But the common practice in military forces today is to fill the magazines while detached from the rifle. The present invention relates to the filling of magazines while detached from the firearm. It is not intended to limit the invention to any particular class of firearm, and the discussion of rifles as examples should not be considered limiting.

Another common practice today is the use of interchangeable cartridges by several or even many nations. This simplifies supply, particularly among nations participating in joint military operations. Standardization of cartridges may be followed by standardization of stripper clips, but there has been a definite tendency toward a diversification of magazines. This is because the magazine is considered part of the rifle and its design will reflect the likes and dislikes of the designer. To use the standardized stripper clips of interchangeable cartridges with diverse magazines it becomes necessary to provide a diversity of loading guides. If a suitable guide is not available, the cartridges must first be removed from the stripper clip and then placed in the magazine by hand, one at a time. In some instances, magazines differ only slightly and a loading guide can be designed to fit two or more different magazines.

But it is usually not possible to make a simple guide to fit all the magazines in use for the same cartridge. This is the situation for example, with the 5.56 × 45 mm cartridge now used in the U.S. Rifle M16. Rifles firing this cartridge have appeared in Belgium, Germany, Italy, and Switzerland. Their magazines differ from each other and from that of the M16.

As a result of the aforementioned situation the advantages of the standardized stripper clips for refilling various magazines can only be fully utilized by supplying several different loading guides with every shipment of ammunition. Such an arrangement is obviously inefficient.

The principal object of this invention is to provide a magazine loading guide for stripper clips which will be useable with two or more different magazines.

Another object is to provide such a guide which will be simple and economical to fabricate.

These and other objects of the present invention will be apparent upon reference to the following specification, taken in connection with the accompanying drawing, wherein:

FIG. 1 shows details of the top rear portions of a typical detachable box magazine. This is the portion to which a loading guide is usually affixed.

FIG. 2 shows details of the top rear portion of another typical detachable box magazine, differing slightly in shape and dimensions from the magazine shown in FIG. 1.

FIG. 3 shows a perspective view of a magazine loading guide which is an embodiment of this invention.

FIG. 4 shows the same magazine loading guide as FIG. 3 but it is affixed to a magazine and is supporting a stripper clip.

Referring now to the drawings in detail, FIG. 1 shows a portion of a magazine casing **10**, having feed lips **11** and **12** and a cartridge follower **13**. Attached to and moveable with the follower are last round stops **14** and **15** which cooperate with a mechanism in the firearm (not shown) to indicate to the user that the magazine is empty. The casing has a rear rib **17** in which is formed notch **16** which cooperates with a latch on the firearm (not shown) to retain the magazine on the firearm. A groove **28** is formed in casing **10** as a means for affixing a loading guide as will be described later.

FIG. 2 shows a portion of a magazine casing **20**, having feed lips **21** and **22** and a cartridge follower **23**. Grooves **24** and **25** are formed in the sidewalls of the casing as means for affixing a loading guide as will be described later. Also in one wall of the casing is formed a hole **26** which cooperates with a latch on the firearm (not shown) to retain the magazine on the firearm. A rib **27** is formed on the rear of the casing.

The two magazines are illustrated only as examples of the state of the art. The selection of the examples is merely to indicate differences in typical magazines. It is not intended to limit the invention to any particular magazine or magazines. Nor is it intended to be limited to any particular cartridge or clip. This invention will be useful with various combinations of magazines, clips, and cartridges.

FIG. 3 shows a magazine loading guide **30**, having a first end portion **31** and a second dissimilar end portion **32**. The first and shape of the details of each end portion will depend on the configuration of the particular magazine or magazines it is to be used with. Each end of the guide is provided with means for engaging a magazine. Associated with end portion **31** are tounges **35** and **36** which can engage grooves on a magazine such as grooves **24** and **25** on FIG. 2. Associated with end portion **32** are tounges **40** and **41** which can engage grooves on a magazine.

Still referring to FIG. 3, the guide has stops **33** and **34** which limit the extent to which it can engage with a magazine, by contact with some portion of the magazine. A stiffening rib **37** is formed in the guide which also has holes **42**, **43**, **44** and **45** which are used to allow changes in cross section of the guide. Approximately half way between ends **31** and **32** the guide has a

narrow channel portion **49**, with lips **38** and **39**, which constitutes a support for a typical stripper clip. The stripper clip is not shown in FIG. **3**.

Stripper clips sometimes have small projecting stops which are intended to limit the extent to which the clips can be inserted into a support such as channel portion **49**. In making a loading guide for clips with such stops, it will be necessary to so select dimensions that the clip will be positioned a proper distance from he mouth of the magazine.

FIG. **4** shows the method of using the guide **30** to fill a magazine, the casing of which is indicated by numeral **10**. End portion **32** has been engaged with the magazine and a stripper clip **50** has been inserted into guide **30** at end portion **31** so as to engage lips **38** and **39** which are not visible in FIG. **4**. The clip is thus correctly positioned for stripping cartridges into the magazine.

It will readily be apparent that for some suitable magazine the guide could be installed so that end **31** would engage the magazine while the clip would be inserted into the guide at end portion **32**. This permits a simple guide to be employed with two completely dissimilar magazines.

The embodiment of this invention shown in the drawings is merely for illustration. To adapt the principle to various lips and magazines changes may be made in details.

What I claim is:

1. A magazine loading guide comprising: first end means for attaching said guide to a magazine; second end means for attaching said guide to a magazine, said second means being disposed oppositely to said first means on said guide; and support means positionally adapted for retaining a cartridge clip in a loading position relative to a magazine when said guide is attached to said magazine.

2. The guide claimed in claim **1** further characterized by said first end means being dissimilar from said second end means.

3. The guide claimed in claim **1** further characterized by said first end means, said second end means, and said support means being integral.

4. The guide claimed in claim **1** further characterized by said support means being located substantially midway between said first and said second end means for attaching said guide to a magazine.

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