Nov. 8, 1949 J. J. BILODEAU 2,487,040

CARTRIDGE HANDLING DEVICE

Filed Jan. 3, 1946

Fig. 1.

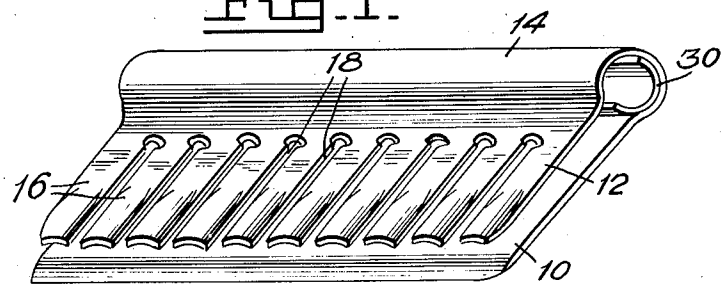


Fig. 2.

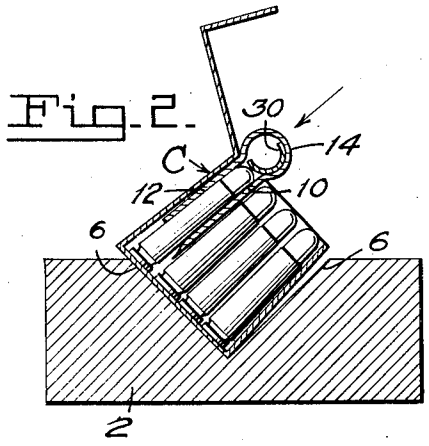


Fig. 3.

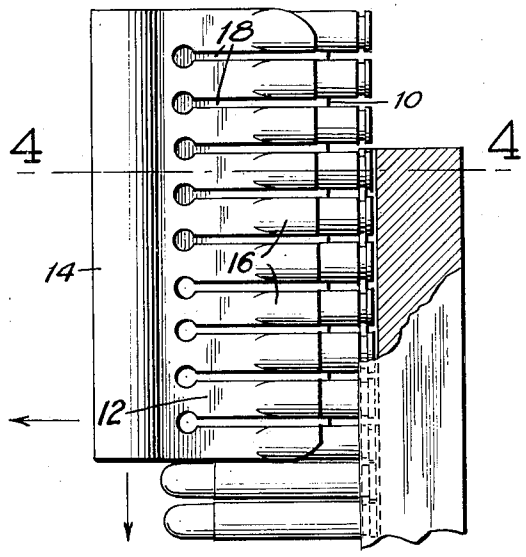
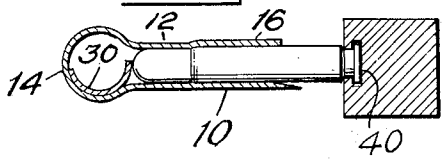


Fig. 4.



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UNITED STATES PATENT OFFICE

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CARTRIDGE HANDLING DEVICE

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6 Claims. (Cl. 294—87)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

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

This invention relates to improvements in cartridge-handling devices and is more particularly adapted to facilitate the handling of small-arms ammunition so that the same may be then loaded into magazines or clips as by means of any one of a number of well-known magazine or clip-loading apparatuses.

As is well known, it is common for the manufacturer of small-arms ammunition to pack the same in layers in cardboard containers and in order to use such cartridges in automatic weapons they must first be removed from such cartons and loaded into metallic magazines or clips for feeding into the weapon. As will be obvious, it is desirable that this loading operation be rendered easy and rapid, especially in the field, and the old practice of picking up the cartridges singly from the cartons between the fingers and forcing them into the magazines is clearly slow, tedious, and inefficient.

Accordingly, it is a principal object of this invention to provide a novel device to facilitate the handling of such ammunition so the same may be both easily removed from the boxes and loaded into magazines or clips. Various apparatuses have been devised for filling the containers themselves otherwise than by hand but such apparatuses have always hitherto themselves been required to have the cartridges fed thereinto singly by hand.

By means of the novel features of this invention, however, it is possible to feed a plurality of cartridges into a loading apparatus all at one time. This means that the device is adapted to cooperate with these loading apparatuses so that the whole operation of getting ammunition from cartons into the magazines is greatly expedited.

While it is to be understood that the device of the invention is not intended to be restricted to application thereto, for purposes of clear understanding of the unique features and advantages of the invention, two such apparatuses may be referred to. One is such as is shown in my copending application Serial No. 633,253, filed December 6, 1945, and directed to a Magazine loader, and another is that shown in U. S. Letters Patent No. 2,345,593 of April 4, 1944, to John C. Garand, and entitled Clip loading machine.

The specific nature of the invention as well as other objects and advantages thereof will clearly appear from a description of a preferred embodiment as shown in the accompanying drawings in which:

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Fig. 1 is a perspective view of the cartridge handling device;

Fig. 2 is a cross sectional view showing the method of supporting a box of cartridges while removing a single row of cartridges with the cartridge handling device;

Fig. 3 illustrates the device as used to insert a row of cartridges into a loading device; and

Fig. 4 is a cross sectional view taken along the line 4—4 of Fig. 3.

Small arms ammunition of some manufacturers is contained in cardboard boxes of tapered construction and with the cartridges disposed in neat layers or rows with their bullet ends all facing in the same direction. The device of this invention is particularly adapted for the handling of such ammunition.

In practice, there is provided a supporting block such as shown in Fig. 2. This may merely consist of a block of wood 2 for resting on a flat surface and has a V-shaped groove or slot in its upper side providing inclined surfaces 6 at substantially right angles to one another.

The carton or box of cartridges C is opened at its top so that the noses or bullet ends of the ammunition are exposed and the carton is laid on the block 2 with one of its side walls resting on one of the surfaces 6 and its bottom wall abutting the other surface 6, all as shown. Thus the cartridges lie in parallel layers which are inclined at an angle to the horizontal.

The device itself, which is essentially clip-like in construction, will now be described.

According to the preferred embodiment, the main body of the device is formed from a single sheet of resilient metal. This body comprises on one side a substantially flat supporting plate 10, more or less rectangular in shape and having a forward free edge for facilitating the sliding of the carrying plate 10 in under the topmost layer of cartridges in the box.

The sheet is bent transversely in its mid-portion so that its other side portion 12 extends in substantial parallelism with plate 10 but spaced thereabove. The mid-portion or part of the sheet which connects the parts 10 and 12 is shaped to provide a hand-gripping part 14 at the rear side of the device. This grip portion 14 is preferably formed to be curved so as to be somewhat enlarged and substantially tube-like, as shown, and makes for easier handling.

The part 12 is arranged to serve as a cartridge-engaging portion and, as stated, it overlies the

plate portion 10 at a distance from but parallel therewith. This cartridge-engaging portion is formed to have a plurality of resilient fingers 16 which may be readily provided by cutting a series of spaced slots 18 therein which extend rearwardly from the forward marginal edge of the portion to a point short of the hand-grip 14.

The forward end portions of the fingers 16 are preferably somewhat curved in cross-section, as shown, so as to conform to the round surfaces of the cartridges. The slots 18 are so arranged that said forward end portions, at least, are resilient so that as the device is inserted into the cartridge carton, the noses readily become disposed thereunder and continued forward movement of the device causes the cartridges to become seated securely but releasably between the parallel portions 10 and 12.

Preferably there is a stop 30 at the rear ends of the plate and finger portions 10 and 16 and this may take any desired form. In the drawings, this stop 30 consists of a transverse strip of metal spot-welded to the device at the forward side of the hand-grip and it serves to prevent the cartridges from being forced too far forwardly between the cartridge carrying and engaging parts.

After the device has been used in the manner described so as to hold the proper number of cartridges, the same may be held in the hand in a vertical position and disposed so that the rims of the cartridges, which project beyond the free edge of the plate 10 as well as beyond the extremities of the fingers 16, become engaged in the feedway 40 of the loading apparatuses mentioned. Then the device may be moved outwardly away from the feedway whereupon the cartridges readily are withdrawn from the device and the latter again used to extract more cartridges from the cartons thereof.

I claim:

1. A handling device for a plurality of cartridges comprising, a lower plate member having a forward free edge for engaging under a layer of adjacently-disposed cartridges, an upper plate member spaced above said lower member and in substantial parallelism therewith, said upper member being provided with a plurality of spaced slots which extend rearwardly therein from the forward edge thereof and provide a plurality of resilient fingers, a hand-grip part connecting the rear edges of said upper and lower members, and means for the individual longitudinal engagement of a cartridge by each of said fingers.

2. A cartridge-handling device of the class described comprising, a unitary sheet of resilient metal bent to have upper and lower parts held in spaced and in substantial parallel relationship by a hand-grip portion extending between the rear sides of said parts, one of said parts being provided with a plurality of spaced slots therein which extend rearwardly from the forward side thereof so as to provide a plurality of resilient fingers, the opposite sides of said fingers being curved downwardly.

3. A handling device for a plurality of cartridges comprising, a lower plate member having a forward free edge for engaging under a layer of adjacently-disposed cartridges, an upper member spaced above but substantially parallel with the lower member, said upper member being provided with a plurality of spaced slots which extend rearwardly therein from the forward edge thereof and provide resilient finger-like portions, said finger-like portions having their opposite sides curved downwardly, and a hand-grip part which is rounded outwardly and connects the rear edges of said upper and lower members.

4. A cartridge handling device of the class described comprising, a unitary sheet of resilient metal bent to have upper and lower parts held in spaced and in substantial parallel relationship by a hand grip portion extending between the rear sides of said parts, said upper part being provided with a plurality of resilient fingers, the opposite sides of said fingers being curved downwardly to form pockets for holding the cartridges spaced apart, and means for positioning the cartridges in said fingers.

5. A cartridge handling device of the class described comprising, a unitary sheet of resilient metal bent to have upper and lower parts held in spaced and in substantial parallel relationship by a hand grip portion extending between the rear sides of said parts, said upper part being provided with a plurality of spaced slots therein which extend rearwardly from the forward side thereof so as to provide a plurality of resilient fingers, the opposite sides of said fingers being curved downwardly to form pockets for holding the cartridges spaced apart, and a stop member in said grip portion for positioning the cartridges in said fingers.

6. A handling device for a plurality of cartridges comprising, a lower plate member having a forward free edge for engaging under a layer of adjacently disposed cartridges, an upper plate member spaced above but substantially parallel with said lower member, said upper member being provided with a plurality of spaced slots which extend rearwardly therein from the forward edge thereof and provide resilient finger-like portions, said finger-like portions having their opposite sides curved downwardly, said upper member and said lower member being connected at their rear edges by a hand grip part which is rounded outwardly, and a stop member fixedly secured in said hand grip part comprising a substantially semi-cylindrical channel-like member arranged to partially block the opening between said upper and lower members whereby the cartridges are longitudinally positioned in said handling device.

JOSEPH J. BILODEAU.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
934,196	Manbeck	Sept. 14, 1909