

Dec. 14, 1948.

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2,456,159

SHOT CARTRIDGE

Filed Oct. 1, 1945

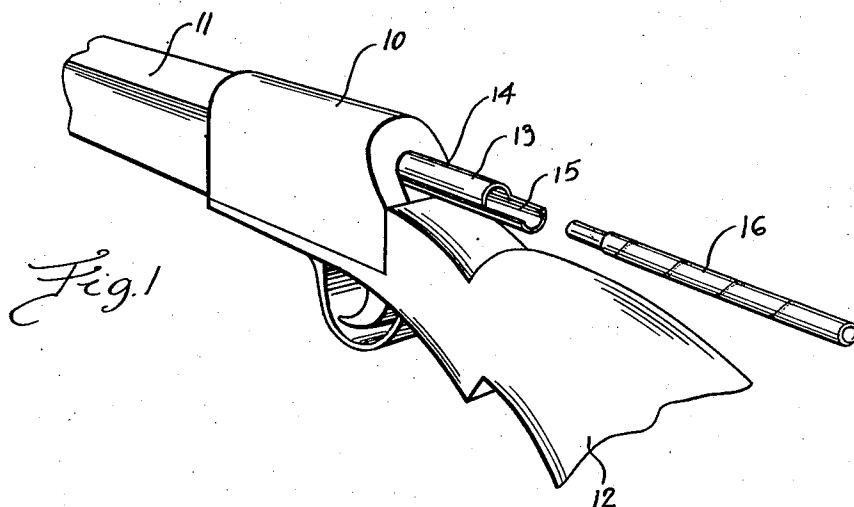
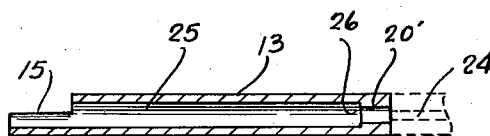


Fig. 2

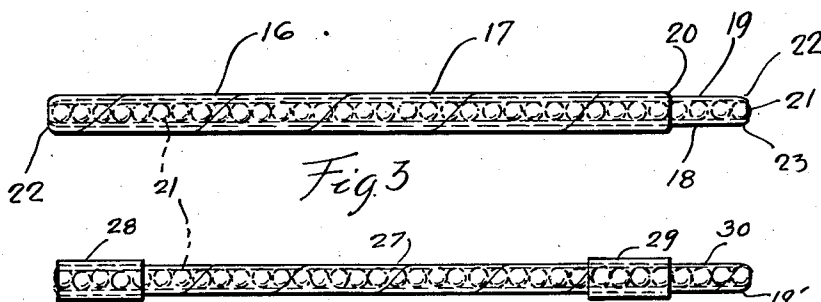


Fig. 4

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UNITED STATES PATENT OFFICE

2,456,159

SHOT CARTRIDGE

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Application October 1, 1945, Serial No. 619,569

1 Claim. (Cl. 124—45)

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This invention relates to certain new and useful improvements in Shot cartridges especially designed for use in connection with pneumatic guns of the type disclosed in United States Patent No. 2,288,891 dated July 7, 1942.

The present invention has for its principal object the provision of a shot tube of the character hereinafter described, which will be highly efficient in use and economical in manufacture.

The shot tube which prior to my invention has been used in connection with the pneumatic rifle as disclosed in the aforesaid patent, is of a construction substantially similar to that disclosed in Letters Patent No. 2,297,947 dated August 17, 1942. While the shot tube of the patent aforesaid possesses many meritorious features and advantages over the shot tube which preceded it, I have found in actual practice that due to the relative thickness and stiffness of the elongated tube portion, the shots often become wedged in the tube or are slow in moving therefrom into the firing tube. It is, therefore, one of the many objects of this invention to provide a shot tube consisting of an inner and outer tube, the inner tube projecting a predetermined distance beyond the outer tube so that the projecting part of the inner tube will present a relatively thin wall encasing the shots therein, and by virtue of this relatively thin wall the shots will be easily and expeditiously projected therefrom, reducing to a minimum the possibilities of the shots becoming clogged in the tube. This expeditious projection of the shots from the tube is due to the fact that the projecting part of the tube, being of a relatively thin wall, when the shots are under forward pressure, will be permitted to expand a sufficient degree to free the shots for projection therefrom. If this projecting part of the inner tube were of a relatively thick wall, as for instance, the combined thickness of the inner and outer tube, the wall would not expand and as a result undue friction would be imposed upon the shots and the shots would be either clogged in the tube or be slow in being ejected therefrom. The present invention overcomes these objections.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings showing the preferred form of construction, and in which:

Fig. 1 is a fragmentary perspective view of a rifle showing a shot tube embodying the present

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invention about to be inserted in the shot tube carriage;

Fig. 2 is a longitudinal sectional detail view of the cartridge carrier of the rifle;

Fig. 3 is a side elevational view of the cartridge; and

Fig. 4 is a side elevational view of a cartridge showing a modified form of construction.

The drawings illustrate the preferred form of construction by which the several objects of my invention are accomplished.

In these drawings, a rifle 10 is fragmentarily illustrated, and this rifle 10 includes the usual barrel 11 and stock 12. Only so much of the rifle is shown as is necessary for an understanding of the application and use of my invention. In this connection, I have shown in connection with the barrel in contracted condition a shot cartridge carriage 13 which comprises a tubular member 14 slidably arranged in the barrel 11 of the gun and provided with an extended portion 15 substantially semicircular in cross section to facilitate the insertion and withdrawal of the cartridge.

My improved cartridge is indicated at 16 and in the preferred form of construction, this cartridge includes an outer tubular member 17 and an inner tubular member 18. The inner tubular member 18 has a tip portion 19 projecting beyond the outer tubular member 17 so as to provide an extension having a relatively thin wall and to provide, together with the outer tubular member 17, a stop shoulder 20. The shots 21 are confined in the cartridge 16 in a manner substantially similar to that disclosed in United States Letters Patent No. 2,339,064 dated January 11, 1944.

In the patent last referred to, it will be noted that the tube has its end portions slightly turned inwardly as at 22, this arrangement functioning to serve as a retaining means for retaining the shots in the cartridge 16. A cartridge constructed in accordance with the foregoing description is mounted in the carriage 13 by projecting the cartridge 16 in the carriage so as to dispose the extended portion 19 within a bore 20', with the end 23 of the extended portion 19 registering with the firing tube 24 of the rifle 10. The tube 17 in its telescopic relation with respect to the tube 18, is arranged within the bore 25 of the carriage 13, and this bore (as shown in Fig. 2) is of a greater diameter than the diameter of the bore 20', thereby to present a shoulder 26 which is adapted to cooperate with the shoulder 20 to limit the insertion of the cartridge in the carriage 13. With

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the cartridge thus mounted in the carriage 13, a portion thereof will be exposed above the semi-circular portion 15, whereby to permit contact with the fingers to facilitate the removal or insertion of the cartridge from the carriage.

In this form of construction, I have described the cartridge 16 as comprising an outer and an inner tubular member, with the inner tubular member having the extended portion 19. It is apparent that the cartridge may be made from a complete paper webbing wound in a manner to provide the extension 19, thus eliminating the employment of two separate tube members.

In Fig. 4, I have illustrated a modified form of construction. In this form of construction there is provided an elongated tube 27 presenting a relatively thin wall and within which the shots are arranged. At one end of the tube 27 is a collar 28 which serves to reinforce this end portion of the tube 27. At the opposite end of the tube 27 there is a second collar 29. This collar 29 is set inwardly from the end or tip portion 30 of the tube 27 whereby to present an extended portion 19' with a relatively thin wall to function in substantially the same manner as the extension 19. The collar 29, when the tube is mounted in the carriage 13, serves as an abutment in engaging the shoulder 26 to limit the insertion of the cartridge in the carriage. This form of carriage is otherwise substantially similar to the cartridge shown in Fig. 3.

From a reading of the foregoing description, it is apparent that I provide a cartridge capable of the hereinbefore stated objects.

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While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I therefore do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claim.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent is:

A cartridge for a pneumatic rifle comprising a tubular member formed of flexible material having a shoulder at one end portion and a tip extending beyond the shoulder, the wall of the tip being relatively thin with respect to the wall of the tube member whereby when shots are projected through the tube said tip will expand to reduce restraining friction between the shots and the wall of the tip.

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REFERENCES CITED

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

UNITED STATES PATENTS

Number	Name	Date
2,288,891	Dreyer	July 7, 1942
2,297,947	Dreyer	Dec. 28, 1940