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SHOT SHELL

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3 Claims. (Cl. 91—68)

This invention relates to fixed ammunition and more particularly to shot shells for sporting purposes.

It has been the practice generally in the manufacture of shot shells to construct the cartridge cases of paper tubing that has been treated with a water-proofing material so as to resist exposure to moisture. The water-proofing material has usually consisted of paraffin or like compositions which is applied to the paper by dipping, spraying, or otherwise coating so as to make the paper tubes soft and pliable.

It has also been proposed to remove some of the paraffin wax adhering to the outer portions of the tube and coat and tubes with a cellulose lacquer. It is not always possible to obtain a satisfactory cohesion, however, of the lacquer with a paper surface that has been impregnated with paraffin.

To overcome this disadvantage I purpose to first apply a cellulose ether composition to the surface of the paper and then impregnate the inner portion of the treated paper with a water-proofing composition such as paraffin. In order to obtain proper penetration of the paraffin it has been found desirable to first construct the shot shell of the desired length of a paper material suitable for this purpose that has first been treated with the cellulose ether composition, or the shot shell may first be formed and then the surface of the paper tube treated with the cellulose ether. In either case the subsequent dipping of the shells in a paraffin bath will result in the absorption into the inner portions of the paper shells of sufficient paraffin to produce a water-proofing effect, capable of withstanding exposure to moisture. The paraffin may also be forced into the paper between the surfaces that have been treated by means of pressure.

Either the benzyl or ethyl ethers of cellulose may be used. Also a mixture of these ethers will be suitable for my purpose.

After the paper has been treated according to my invention the shot shells may be made up into the usual form.

I claim:

1. In the process of making paper shot shells, the steps which comprise first coating the paper with a cellulose ether composition, forming the paper into a tube, and then impregnating the interior of the tube with a paraffin composition.

2. The process of claim 1 in which the ether is ethyl ether of cellulose.

3. A shot shell having the surface of the paper container coated with ethyl ether of cellulose and the inner portions of the paper between the surfaces impregnated with a paraffin composition.

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