

## "The Cartridge"

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**I**N MY previous article,\* I outlined in a brief and, I am afraid, altogether too cursory a manner, the early history of propellants and the hand weapon. I will now try to strike a more modern note and tell you about the present day cartridge. Authorities on the subject write chapters on modern ammunition manufacture, so I am not for one minute assuming that I can fully describe the process in a few hundred words, but I will try to outline the principal features and leave you with a better understanding of what you are handling when loading either the .45 or .455 revolver or the S.M.L.E. .303 rifle, the present day arms of our service.

Not so long ago I met a man who was surprised when he discovered that .45 ammunition could not be used in a .455 revolver, but that vice versa things seemed to fit. As a matter of fact, if the head space is correct, there is no reason why in an emergency the .455 cartridge should not be used in place of the .45 (which was originally a black powder cartridge, carrying a charge of twenty-eight grains, hence the length). If you are really up against it and you have only .455 ammunition and the .45 gun, a copper wire ring round the cartridge just in front of the shell base will make up for the comparatively shallow base of this shorter cartridge in the cylinder. Compare the bases of these cartridges. The difference is not great, but quite apparent. Of course if you are keen on having interchangeable gear it is quite possible to have both types of cylinders for the one gun, there is not sufficient difference in the bore to matter. But why do this, in the first place the Quartermaster will raise ructions, and secondly, if you like shooting and cannot make up your mind which of the two cartridges gives you best results, then get a gun for each, there will be no question of alignment of cylinder and no mental hazard—no alibi.

What I am about to write will be old news to the man who "reloads his own" and to the "gun-crank". This effort is primarily in the interests of the novice or the uninitiated. It is quite possible I will be going over ground covered in musketry and ballistics lectures, but there is always something new and I hope the younger tyros will find some use for certain of the data in this article.

Before going further let us look up the Encyclopaedia Britannica and see how we come to get the word "cartridge". We find it is a corruption of the French word "cartouche" and means a case, of brass or other metal, cardboard, silk, flannel, etc., containing an explosive charge and usually the projectile also, for small arms and ordnance. The word "cartouche" is adopted from the Italian "carticcio" a roll of paper. As for "bullet", the word is derived from the French "boulet", diminutive of "boule", a ball. The original meaning has, since the end of the sixteenth century, been narrowed down to the actual projectile used with small arms of all kinds, irrespective of size or shape.

The present day cartridge comprises a shell, the projectile, propellant and a primer, all varying in size and weight according to the type of weapon

\*See "Powder and Ball"—October 1937, R.C.M. Police Quarterly Magazine.