

## A GUN ROOM CAUSERIE

A SHORT CARTRIDGE WANTED

TO the sportsman possessing scientific instinct there is something very irritating in the dominance of the ordinary standard cartridge. Eley and Daw, two enterprising manufacturers of long ago, brought it from France, and by adopting its size for their own wares, created the standard cartridge case. Mathematically, it is not what it ought to be. Its dimensions are wrong both in relation to its contents and the capacity of the barrel in which it is fired. Still, it persists. The conveniences arising from extensive use are greater than the advantages expected from a change. The extra long cartridge did little to threaten the supremacy of the standard length. It remains to be seen whether the short cartridge will prove a serious rival.

Time was when, given a gun of a certain calibre, the right load was found for it, and adopted. Now, if there is any one rule that governs the general construction of 'shot-guns, it is that each gun is built of such dimensions as will best serve to shoot a given charge. In old days one measured the charge by the number of fingers' breadth the ramrod projected from the muzzle; with the early breechloaders the maximum load was determined by the length of the standard cartridge case. A quarter of a century ago choke-boring was adopted, and the shooting of guns improved; new explosives, hard shot, accurate loading and many things of less importance all contributed to a better performance at targets and game. The cartridge case remained of the same size. Adherence to the standard cramped gun-makers and hindered the development of sporting explosives. Pigeon shooters broke away from the bonds by using extra long cases in special weapons; but their requirements were of a special kind, and the lengthening of the case was much the same sort of thing as yacht designers resort to in order to get the greatest advantage with a certain rule of measurement. Their efforts have had but little practical effect upon ship-building, and pigeon guns and cartridges are not generally used for game shooting.

WITH guns and explosives the tendency is towards concentration. Guns are made lighter, shorter and handier; modern explosives increase in strength as they diminish in bulk, and loads are smaller than they were. A cartridge case of the standard length is not required in order to obtain the best shooting with the standard charge and load. No advantage is derived from filling up with wadding; the cartridge case ought to be shorter, and the chamber shorter, too. Guns specially built for short cartridges would meet all the ordinary requirements of sportsmen. Without sacrificing the shooting qualities, the barrels might be shorter, the gun, therefore, handier and better balanced: and, possibly, other advantages developed which at present are not apparent.

Every one who has used the two-inch cartridges in ordinary guns has found the advantage of the shorter case. The cartridges are lighter, they extract better and they are cheaper. On the other hand, there is the risk—a slight one, certainly—that the shot may ball occasionally. That risk would be avoided if the guns were specially chambered for the short cases, but the short chamber in the gun of ordinary dimensions would not be so advantageous as a gun built throughout to use a short cartridge and no other. It is this last that is specially recommended to sportsmen and gunmakers. Apparently, the short cartridges perform well in the ordinary gun, choke-bored or cylinder.

IT does not follow that the cartridge good enough for shooting early in the season will prove effective when birds are wild and heavily feathered. Whether the short cartridges are good enough all round or not in nowise affects the contention that they are all-sufficient for early shooting. The man who of necessity carries a good all-round gun on every occasion will not deny that sometimes he has too much gun; and if the short cartridge did no more than lessen our burden when the days are long and the weather hot, sportsmen would be grateful. For those sportsmen who specialize, a gun for the two-inch cartridge will become as indispensable for September shooting as a trout-rod is to the flyfisher. The full advantages are not to be had in any other way. It will not do to choose a smaller bore as being the equal of the larger bore with the shorter cartridge; for the smaller bore, whether 16 or 20, is equally with the 12 burdened with a cartridge too long for the best shooting that can be obtained with it when using the best modern ammunition. Some day, doubtless, two-inch cartridges will be procurable in these gauges also.

Cartridges are very much better made than they used to be. They are of better material, and improved processes of manufacture have increased the strength, uniformity and finish; but they are not perfect. Cases wholly of metal have their advantages even as paper ones have. Possibly the right material has not yet been found. Celluloid has been mentioned, and it may ultimately be made efficient. It is stiff, light, elastic, and has a good surface; its present difficulties are liability to combustibility, and it is pervious to water. Whatever material is next tried, and there have been many futile essays during the past decade, the object should be to provide a shorter and lighter cartridge case than any at present in use. Whether it can be easily loaded by sportsmen is not now a matter of much importance; and as to the cost, that even is of less moment than it was, for sportsmen are always ready to purchase anything which is really advantageous.

WIRT GIRRARE.