

## THE MODERN BULLET, ITS EFFECTS AND THEIR TREATMENT.

BY

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The paper which I shall read this evening, is a summary of facts concerning the modern bullet and its effects which I have gathered from the reports of military surgeons and correspondents in Cuba, South Africa and the Phillipines, and of the treatment as carried out by them and advised by authorities at home.

At the very start let me impress upon you that there is a great difference in the modern bullet, as we see it in civil life, and the bullet with which the soldier makes acquaintance. So there are differences in its effects, and their treatment, but granted this, much can be learned from the experience of military surgeons on the battle field that will be of great value in civil practice.

First, to consider the bullet, and in so doing attention might be drawn to the rifle. It is somewhat extraordinary that the development of the rifle as an instrument of carrying the missile long distances, does not correspond with its destructive powers, because, although a great improvement, it does not destroy or disable as many men as the old ones, the point which in war is held to be the test for a good rifle. The bore of the rifle is small and rifled so as to give rotation to the ball in its long axis. A Mauser has a complete turn in every 22 inches, Lee Metford in every 10, and Martini Henry  $8\frac{1}{2}$  inches. The great object is to get a flat trajectory as this means greater accuracy in shooting, harder hitting, and increases the size of the danger zone. That is, a Martini Henry, sighted for 2000 yards, will have to rise 357 feet, so there is an immense area where a man could walk between the target and rifle. The Lee-Metford rises 194 feet. The muzzle velocity of the Lee-Metford is 2000 feet per second, of Mauser 2,300 feet. Cordite is the explosive used by the British. It is made from nitroglycerine and looks like strings of gelatine. Tommy Atkins has been known to dig it out of the cartridges and eat it as it is a mild stimulant. Smokeless powder is used, it is black and coarse resembling bits of charcoal.

"The power of the bullet to overcome resistance is directly proportional to its weight and inversely proportional to its cross section," is