

only an unimportant increase (or none at all) of the aperture of entry, may result in the production of an "explosive" exit aperture of the extreme type when no bone has been touched and the resistance of the soft parts of the body is alone met with.

INSTABILITY OF FLIGHT OF THE POINTED BULLET.

That these wounds are not caused by bullets deformed by ricochet is obvious from the characters of the aperture of entry. On this point it may be added that seriously deformed bullets are seldom extracted, which may depend on the fact that in the recent fighting a large number of the deflected bullets have struck either trees or the soft earth at the margin of the trenches. The more serious ricochets, those from the walls of houses, have been far less abundant. Again, in any case the general outline of the bullet renders it more liable to deflection than to serious deformation unless it meets the opposing object at a very narrow angle.

The ease with which the pointed bullet may be deflected cannot be more aptly illustrated than by examining a number of cases of injury to the head and observing the very great preponderance of gutter wounds over that of tracks traversing the skull, which preponderance (if it existed), was certainly far smaller with the older forms of bullet of small calibre.

The serious nature of the wounds limited to the soft parts can only be attributed to the fact that the instability of flight of the bullet in its long axis is so great that, unless impact with the body takes place by almost the exact tip, a rapid revolution of the bullet on its transverse axis occurs, so that the only slightly diminished force is exerted by the whole lateral area of the bullet on the tissues in the distal portion of the canal and the aperture of exit. If the "remaining velocity" is great this half turn only is probably made; if less the revolution may be complete or even repeated; if the bullet is nearly "spent" it is often retained in a reversed position. The latter is often the case with retained bullets, or their position may be vertical to the course of the wound. The soldiers assert that the enemy sometimes draw out the bullet and reverse its position before firing the cartridge, but even if this be the case it is difficult to believe either that the bullet would travel properly, or that it could account for the many cases of reversed retained bullets met with.

ILLUSTRATIVE EXAMPLES.

Evidence of this instability of flight is offered by the appearance of some of the entry wounds; thus, rarely wounds are seen