

By means of a photograph it was shown that a bullet drives before it a wave of compressed air, known popularly as the "wind of the shot," to which it was formerly the custom of military surgeons to attribute certain deaths. By experiments, Prof. Horsley showed that the force of the air could not possibly have any destructive effect, and explained that the cases of death attributed to it almost always showed hemorrhage and fracture, which would point to the fact that the body was actually struck by the bullet although the skin escaped uninjured. In one case, occurring in the Crimean war, it is true no such injuries were discovered *post mortem*, but this death may have been due to syncope.

It is frequently stated that a small bullet travelling with great velocity would do comparatively little damage. Prof. Horsley showed, by means of a series of casts, that this idea could not be accepted. The casts were obtained by firing bullets with different velocities into masses of stiff modelling clay, and then filling in the cavities produced with liquid plaster of Paris. When the bullet strikes the clay (or any other substance) particles of the substance are hurried forward in front of the bullet, and so the size of the projectile is gradually increased and the damage similarly added to.

It has always been the custom of scientists to ascribe much of the destructive effect of a bullet to the heat generated when the progress of the projectile is checked. It has been stated that the temperature is so much increased that the bullet is partially fused and deformed. Our observer, however, points out that a deformed bullet may enclose a hair or piece of wood quite unchanged by heat, and another has shown that a bullet passing through dirty clothing may carry with it living microbes, depositing them on the object it strikes so that they will multiply there if the medium is suitable.

The most remarkable of all the effects of bullets is the bursting which is caused in soft substances such as clay, flesh or brain. This peculiar effect was observed in the case of the wounds received by persons fighting in Paris in 1848. In fact, it was believed by some that explosive bullets had been employed, contrary to the received opinions of international comity.

From Prof. Horsley's researches, it appears that the destruction or "bursting" effects increase directly with the fluidity of the particles in the body struck. So wood and iron are pierced with little further damage, while a profound disturbance takes place in the case of brain. For this reason, says Prof. Horsley, experiments with dead bodies of animals are really of no absolute value, for the brain in a state of *rigor mortis* is practically a solid, both protoplasm and blood being coagulated.

Prof. Horsley's researches lead him to the belief that death most usually takes place, after a bullet wound in the head, from the cessation of respiration, and not, as is usually believed, from failure of the heart; and hence, a fatal termination to such an accident might frequently be averted by recourse to artificial respiration.

Notes on Art.

THE NEW GALLERY.

(Second Notice.)

Immediately opposite as you enter the Central hall, across the square of water, with its pretty arrangement of plants and little fountain, is a very striking piece of sculpture, No. 420, *Love's Chalice*, by J. W. Swynnerton. It is full of fanciful poetry and quaint detail, and the bending figure of the maiden has much grace. The whole effect is charming, but it does not in any way equal the splendid fountain now in Mr. Swynnerton's Studio, executed by him. Mr. George Frampton, A.R.A., whose work is always original and attractive, exhibits a bronze statue, No. 447, *Caprice*, a female figure, dainty and aerial, holding in each outstretched hand a branch of thistle-down. A clever study, by Miss Henrietta Montalba, is No. 418, *Venetian Fisher-boy catching a crab*, in bronze—the modelling of the thin boyish figure is very life-like. Not so pleasing is No. 417, by George Simonds, *Goddess Gerd, the Northern Aurora*. A pretty head of a child, by Miss Esther M. Moore, is No. 425, *Daisy*, and very quaintly dainty are the coloured Bas-reliefs in wax, 436 and 437, by Miss Nella Cassella and Miss Ella Casella. The entrance hall is a pleasant place to wander round, leisurely, and very varied are the objects of art in it, including, as it does, Mr. Frampton's *Caprice*, and Miss Alice Chapin's clever studies of cats, in terra-cotta.

The North room has also many features of special interest, among which, perhaps, the most charming is Mr. George Wetherby's *In the Dawn of the Year*, No. 229, a perfectly exquisite picture of a child driving cattle. The simple figure of the child against the sky, the long line of the horizon, the tender colour over everything which suggests the early year, and is, at the same time, so full of atmosphere, make this picture a lovely example of modern landscape painting, and certainly one of the best in the Exhibition. Another excellent example of quite modern work is No. 227, by George Hitchcock, whose painting in the Royal Academy has been so much and so justly praised. This picture, *Mother and Child*, closely resembles the "Mary in the house of Elizabeth" at the Academy. The Mother has the same grave earnest face as the Mary, and she is also in a garden full of light and sunshine. This room is specially rich in beautiful landscapes. Mr. Alfred East's *Morning Sun*, No. 181, and Mr. Arnesby Brown's *Early Morning, the setting Moon*, No. 195, are excellent in their vague mysterious treatment, and it is interesting to turn from these very modern types to older and more cheerful methods of treating landscape such as is shown in the picture 231, *By leaning tree and hanging bough*, by James E. Grace. Leaving, however, the landscapes, don't forget to look at the *Princess and the Frog*, No. 220, by W. R. Symmonds, and No. 199, by E. Matthew Hale, *The Mermaid's Rock*, a somewhat dramatic picture, such as the general public love, of a ship in very green water about to run down some mermaids who seem in no hurry to get out of the way, and gaze at the huge intruder apparently with less fear than is shown by the sailors. The picture is very strongly painted, but not artistically interesting. The portraits are not very interesting.

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