Phenomena of Death:

SOME PECULIAR INSTANCES.

To be shot dead is one of the easiest modes of terminating life; yet, rapid as it is, the body has leisure to feel and time to reflect On the first attempt by one of the frantic adherents of Spain to assassinate William, Prince of Orange, who took the lead in the revolt of the Netherlands, the ball passed through the bones of his face, and brought him to the ground. In the instant that preceded stupefaction, he was able to frame the notion that the ceiling of the room had fallen and crushed him. The cannon-shot which plunged into the brain of Charles XII. did not prevent him from seizing his sword by the hilt. The idea of an attack, and the necessity for defence, was impressed upon him by a blow which we should have supposed too tremendous to leave an interval for thought.

But it by no means follows that the infliction of fatal violence is accompanied by a pang. From what is known of the first effect of gunshot wounds, it is probable that the impression is rather stunning than acute. Unless death be immediate, the pain is as varied as the nature of the injuries, and these are past counting up But there is nothing singular in the dying sensations, though Lord Byron remarked the physiological peculiarity that the expression is invariably that of languor, while in death from a stab the countenance reflects the traits of natural character, of gentleness or ferocity, to the last breath.

Some of these cases are of interest, to show with what slight disturbance life may go on under a mortal wound, till it uddenly comes to a final stop. A foot soldier at Waterloo, ierced by a musket-ball in the hip, begged water from a ooper who chanced to possess a canteen of beer. The ounded man drank, returned his heartiest thanks, menioned that his regiment was nearly exterminated, and having roceeded a dozen yards in this way to the rear, fell to the earth, and with one convulsive movement of his limbs concluded his career. "Yet his voice," says the trooper, who himself told the story, "gave scarcely the smallest sign of weakness."

Captain Basil Hall, who in his early youth was present at the battle of Corunna, has singled out, from the confusion which consigns to oblivion the woes and gallantry of war, another instance, extremely similar, which occurred on that occasion. An old officer who was shot in the head, arrived pale and faint at the temporary hospital, and begged the surgeon to look at his wound, which was pronounced to be mortal.

"Indeed, I feared so," he responded, with impeded utterance, "and yet I should like very much to live a little longer if it were possible."

He laid his sword upon a stone at his side, "as gently," says Hall, "as if its steel had been turned to glass, and almost immediately sank dead upon the turf."

A remarkable use is being made of potatoes. The cleaned and peeled tubers are macerated in dilute sulphuric acid. The result is dried between sheets of blotting paper, and then pressed. Of this all manner of small articles are made, from combs to collars, and even billiard balls, for which the brilliantly white and hard material is well fitted.

To show that the idea of the Telephone Church is not wholly impracticable, we note the following item: "Recently, two gentlemen, one living at Elizabeth, N. J., and the other at Yonders, N. Y., both twenty miles from Brooklyn, had a a temporary sounding board placed over the platform of Mr. Beecher's church. To this they had wires attached, stretching to their respective homes. By means of the telephone they were able to hear Mr. Beecher's sermon, and services. They could even hear Mr. Beecher's steps as he walked upon the platform."

Letters have lately been received from points in the far East perforated by a sharp instrument. On investigation it has been learned that the perforation was performed at an Italian port of debarkation, in obedience to sanitary regulations requiring the fumigation of all mail matter received from the Eastern countries.

Power of the Microscope.

The magnifying power of the microscope has been brought by modern improvements to about one hundred thousand diameters. There is a difficulty in determining the exact degree of magnifying power exerted, the only method of comparison, as stated by one of the speakers, being "the apparently barbarous one of placing one eye to the instrument and looking at a finely graduated plate of known dimensions, and looking with the other eye at a common foot-rule at a proper distance for ordinary sight, and with practice bringing the objects together in the field of view."

It has been found that in microscopic observations the use of the electric light makes it possible to illumine at least 500 times stronger than with gas, and that in other important respects the new light is far superior to the old. By what is known as Clevalier's method, the light is separated by its difference in refrangibility so that the heat rays are nearly excluded, and only the luminous rays thrown on the objects to be examined.

Bold as the attempt may seem, microscopists have undertaken, by means of the extremely minute observations they are now able to make, to estimate the size of the ultimate elemental particles or atoms of which all matter is composed. This measurement has not as yet, it is true, been made with exactness; but it is claimed to be well ascertained that these ultimate particles cannot be over one twenty-millionth of an inch in diameter. The startling belief is expressed that the common house-fly is able to see and distinctly recognize these inconceivably minute particles, its eye having been found equipped with a peculiar circular muscle, unknown to early entomologists, which enables it to so change its focus and apply its lenses as to attain this incredible visual power.

The most skillful microscopists, with their most effective instruments, are able to examine the forms, colors, and nature of monades one hundred-thousandth of an inch in diameter, which is a long way off from the delicate precision above indicated, but still can hardly be called a coarse or clumsy way of investigating material phenomena. The best of human eyes, without artificial aid, can see no objects much smaller than one three-hundredth of an inch in diameter.—*Mechanical News.*

Spontaneous Combustion.

A French scientist has lately experimented with greasy rags, to ascertain the degree of their inflammability under certain conditions. He took for this purpose a quantity of cotton rags, saturated them with boiled linseed oil, wrung them out, and placed them, together with dry cotton, in a box about eighteen inches long, eight inches wide, and two feet high, in which he put a thermometer in order to watch the increase of temperature. The room in which the experiment was made, kept under a temperature of 170° Fahrenheit. The mercury soon began to rise, and showed within an hour and a quarter 340°; smoke commenced to come through the fissures, and as soon as air was let in, the flames burst out. In another experiment, made under the same temperature, cotton, saturated with linseed oil, ignited within five or six hours. Rapeseed oil caused ignition after ten hours. In another room, where the temperature was left at 120° Fahrenheit, cotton, mixed with a little olive oil, and put in a paper, burnt after six hours; castor oil required more than twenty-four hours; whale oil only four hours, and fish oil two hours. Spermaceti oil, free of glycerine, did not ignite at all, neither did heavy tar, coal-tar or slate oils. These experiments show very clearly the necessity for a scrupulous watching of oily rags, which are often too carelessly left around, after cleaning machinery.

LIQUOR DRINKING IN ENGLAND.—The quantity of French wine consumed in England was in 1859 659,000 gallons, while in 1880 the consumption amounted to 6,986,000 gallons. England is still in the main inhabited by a population of beer and spirit drinkers. Eleven hundred and ten million gallons of beer and 40,000,000 of spirits are annually consumed in the United Kingdom, while simultaneously the yearly consumption of wines of every kind hardly exceeds 16,000,000 gallons. The annual consumption of beer in England is twenty-five gallons per head of the population.