

— **NEWTON'S DISCOVERIES IN SCIENCE.**—Attraction is that which gives weight to objects; hence it is sometimes called gravitation, which means nearly the same thing as weight. It was Newton who first shed light on this point. He also discovered that all objects whatever have an attraction for each other, and always in proportion to their size and the distance at which they are placed. Thus the moon, though a large globe, is under the attraction of the earth, and the planets are under the attraction of the sun; and it is by attraction they are all made to keep their proper distances from one another. These discoveries have been considered of the greatest importance.

— **GAS LIGHTS.**—The first gas lights may be said to have discovered themselves. The most remarkable natural jets were found at a colliery at Whitehaven and Cumberland. The miners were at work one day, when a gust of air of powerful odor passed by them, and catching fire at their lamps blazed up with such brilliancy that the colliers took to their heels in fright. It was found, however, that the flame, large as it was, burnt quietly and without danger, and the men returned to their work. A curious result then appeared. The flame was entirely put out, but immediately rekindled on the approach of fire, so that the only way to get rid of the gas was to conduct it to the top of the mine. A tube was fixed for this purpose, and the gas being lighter than the air, ascended to the surface. As soon as it appeared there, it burst out once more into a brilliant flame and crowds of people came to look at the extraordinary spectacle. The application of gas to general purposes of illumination was first tried by Mr. Murdock, in Cornwall, in 1792. The first display of gas works was made, at Boulton and Watt's foundry, in Birmingham, on the occasion of the rejoicings for peace in 1802. Gas lights were first introduced into London at Golden Lane, August 16, 1807. They were used for lighting Pall Mall in 1809, and were generally used throughout London in 1814. They were first used in Dublin in 1816, and the streets were generally lighted in October, 1825. The gas pipes in and about London extend about 1200 miles.

— **LARGEST CLOCK IN THE WORLD.**—The dials of the English Parliament clock are twenty-two feet in diameter, and are the largest in the world with the minute hand. Every half minute, the point of the minute hand moves nearly seven inches. The clock will go eight and a half days, and strike only for seven and a half, so as to indicate by its silence any neglect in winding it up. The mere winding of each of the striking parts will take two hours. The pendulum is 15 feet long; the wheels are of cast iron; the hour bell is eight feet high and nine feet in diameter, weighing from fourteen to fifteen tons. The weight of the hammer is four cwt.

— MR. RUSKIN ON THE TURNER DRAWINGS.—Mr. Ruskin writes to the *Times* in reference to the means of arranging and preserving these drawings. "They should," he says, "be enclosed each in a light wooden frame under a glass, the surface of which a raised mount should prevent them from touching. These frames should slide into cases, containing about twelve drawings each, which would be portable to any part of the room where they were to be seen. I think it my duty to state, that I believe no one would treat these drawings with more scrupulous care, or arrange them with greater patience, than I should myself; that I am ready to undertake the task, and enter upon it instantly; that I will furnish, in order to prove the working of the system proposed, 100 of the frames, with their cases, at my own cost; and that, within six weeks of the day on which I am permitted to begin work (illness or accident not interfering), I will have the 100 drawings arranged, framed, accompanied by a printed explanatory catalogue, and ready for public inspection.

— THE RUINS OF CARTHAGE.—Accounts from Tunis announce that Mr. Davis, a gentleman, who a few months ago obtained from the Bey permission to explore the ruins of Carthage under certain conditions, and who has been engaged during the last two months excavating in that locality, under the auspices of the British Government and the Museum, has made some valuable discoveries. An Arab having found a piece of elegant mosaic, Mr. Davis was induced to push his excavations in that spot, and his labors were rewarded by the discovery of the remains of an ancient temple, which is believed to be that of Dido. After cutting through two layers of flooring, which must have been laid down at lengthened intervals, he came on a most splendid piece of mosaic, of many square yards in area, and in which were delineated two heads, each three feet high, supposed to be those of Dido and Juno, besides several graceful Eastern figures, and a number of highly elegant devices and ornaments, equal, it is alleged, to the most beautiful specimens of the art yet brought to light. Mr. Davis has taken every precaution to guard the mosaic from the influence of the weather.

It is supposed that the British Government will despatch a vessel to convey it to England, as well as other objects of interest which he has discovered.

— **ASBESTUS.**—This is one of the most singular productions of nature. Formed of the hardest rock elements—of silicia and magnesia, with an alumina of lime—its texture is such that one would suppose it to consist of vegetable fibre. Its splinters, the facility with which we can separate the filaments, which are extremely delicate, flexible and elastic, can only be compared to lint or white thread of the most beautiful kind. It is sometimes, on the contrary, hard, brittle, and colored in a way to be confounded with fragments of wood broken in splinters. In these two cases it is marked by very opposite characteristics; in one the tenacity and strength of so firm a thread, in the other a wooden texture, and sometimes sufficient hardness even to scratch glass. Now compact and elastic as cork, then in masses of a dirty white, like that of dried paste, and with filaments like locks of hair, it received from mineralogists of old the different names of mountain cork, leather, and fossil paper. Chemists call it a living linen, or salamandrine wood.

Asbestos was esteemed precious by the ancients; they employed it to make tissues which served to envelope the body when it was burned after death, and to preserve its ashes unmingled with those of the fuel by which it was consumed. A large marble urn was discovered in 1792, in a vineyard near Rome, containing a piece of this asbestos cloth more than two yards in length by one and three quarters in width; it resembled cloth made of hemp, but it was soft and glossy as silk. It confined the half-burnt bones and skull of some ancient worthy; it was placed in the library of the Vatican. Obtained from Persia at great expence, the custom of burning the corpse in a tissue of its substance could only be current in the richest families. Pliny considered it in effect reserved for royal sepultures. Superior qualities of it served for cloth for the sacred lamps, and for the table linen of the wealthy; after use it was said to be thrown into the fire by the servants to be cleaned.

Pliny was ignorant of the nature of asbestos; he classed it with vegetable substances, and called it unchangeable line 1. He compared its value to that of fine pearls, and added that it was prepared to sustain the heat of fire by the broiling sun of the India deserts where it grew.

We are surprised to find the ancients giving credit to tales so absurd. Pliny, the Roman naturalist, believed, on the testimony of the sage Anaxilaus, that a tree enveloped in a tissue of asbestos, could stand, without injury, the blows of an axe.

In modern times, some industrious individuals have occupied themselves in spinning asbestos, and have succeeded in making it into cloth by resorting to the expedient of mixing it with cotton or linen, without which the thread has not sufficient strength to be woven. They then put it into the fire and draw it forth a tissue of pure asbestos. This round-about way would probably have been unnecessary if they had known and applied the kind of asbestos best fitted for their object.

Madame Perpentti has succeeded in Italy for some years past in fabricating from it cloths, paper, and even lace. A book was deposited in the French Institute printed entirely upon paper thus manufactured by this lady. The process of manufacture is described as quite simple and not very expensive. This paper is very good either for writing or printing—by employing an ink composed of manganese of iron, the writing will be preserved even after having passed through the fire, and the paper has the great value of securing precious documents from destruction by the flames. asbestos has also been employed in various other useful purposes, of which we have not room to speak.—[Country Gentleman.

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