Extraordinary Case---Trial of Manslaughter in Treating for Burning.

One of the most extraordinary trials that we ever heard of took place in Swansea, Wales, (Britain) on the first of March. The defendant was Charles Henry Ackerly, a returned Lieut. of the British Navy, a man of wealth, and related to some of the noble aristocrats of England. There had been an explosion of a coal mine whereby a number of men were severely burned, and one of them named Mathew Tingle came to his death by the treatment of the defendant. On the 12th of last December, he went to the house at Aberdare Valley, where Tingle was, and said he was authorized to treat the sufferer medically, Tingle was lying on a bed, covered with plaster, which, by his directions, was removed, in this manner exposing the raw surface of the burns. He then moved the arms and legs of the sufferer violently about. He placed a lighted lamp under the man's nostrils, and thrust a feather down his throat. Shortly afterwards the man died. For this he was indicted, and he acted as his own counsel, and made a most singular defence, one which is a scientific curiosity, of the most remarkable kind.

The prisoner, after producing and arranging several folio and quarto volumes, apparently of some antiquity, entered on his defence, of which the following is a brief outline. He spoke for nearly an hour with great readiness and fluency, giving evidence throughout of an enthusiastic belief in the virtue of his lamp, and the originality and usefullness of his medical discoveries. "Persons who, like myself, introduce new systems and discoveries in philosophy, systems totally opposed to the generally received opinions, must expect to endure the position in which I am now placed; but it is for the benefit of future generations that such trials should be endured by inventors. I do not shrink from mine; I stand here fearlessly to abide the result. The medical man admits that nature abhors a vacuum. That is my ground. The steam engine works on that principle; and if the testament on which the witnesses have been sworn is handed to me, I will show that my system of treatment is based on doctrines laid down in that holy book." He then referred to a bull of Pope Clement, and cited passages from the Aristotelian philosophy, which he said is now called the Platonic philosophy. The philosophy, he said, "shows that the T P., coming before an *ablative* case in Greek (*sic*), is based on the principle of a vacuum." He traced the descent of this principle through various mythical and some historical personages (amongst the former was a son of Boadicea by King Arthur,) down to the present time, stating that it had been locked up till he revived it in old books. He said this principle had been recognised by William the Conquerer, and in several statutes in the reigns of subsequent sovereigns. He quoted a passage from an old book:—"Plato affirmeth that there is no emptiness without or within the world; but whoever undertakes to prove this must prove a negative." Having done this, he resumed—"I was acquitted before the coroner and allowed to depart; but they took me and detained me in a cell—and such a cell—so horrible, having the sulphurous gas which I inhaled from the dying man in me; it entered my lungs, passed down one hemisphere and up the other, festering and breaking out in my finger; and this is what I have got for my humanity, to say nothing of the loss of my pocket. But in the first book "of vacuity," Aristotle says, "There is voidness." We have, however, lost sight of the true principles of nature; and if it were not for old books we should be still in the dark. Here you see a man arrayed against a million. [He handed up to the judge "Plutarch's Moral Philosophy," with reference to page 801.] The soul of vacuity is in the wing, as shown in a feather [Here he held up a feather, and ingeniously suggested that a small integument in the quill connected by strings with the muscles of the body by a valvular action exhausted the hollow of the quill when the bird expanded the wing for flight, so as to facilitate its rising from the ground.] He said it was observing that circumstance which led him to his discovery. He saw the vacuum in the quill, and how it was produced. The question was, where was the vacuum in the man? At length he perceived that the vacuum in man was between the periosteum and the bone, and that in instances of shock by railway trains, or in cases of burning by fire-damp, he, by means of his lamp, the constituents of which are similar to the components of the sun's light, could give relief.

The ancients gave the name of periosteum to the membrane enveloping the bones, on the true principle; for *peri* means about, and *osteum* means the bones. This skin is mentioned in the Psalms of David. Psalms cii., v. 5. It is there said, "By reason of my groaning"—that is, the groanings like the rattles of Matthew Tingle's throat. He went on referring to the Molucca Islands inhabited by curious birds; to the circumstance of kangaroos carrying their young in a pouch or skin, and eagles theirs upon their backs. He then referred to an book called "The French Academie." On being asked if he was prepared with witnesses, he said, "I found a difficulty of getting witnesses. My lawyer ran a large bill, and I determined to defend myself. I work at night. Reason loses herself in the day, but she works at night. The 2d chapter of Genesis shows that the breath of life is in the nostrils, therefore I introduce warm air to counteract the atmospheric pressure, for if they breathe cold air, the natural caustic of the cold air injures the patient. I do not drink wine or spirits, though I order them when I go to the inn. I do this to keep a roof over my head, but when the waiter is gone I throw it out of the window." He said he was a lieutenant in the navy, "one of the old school not one of the flinches." He named the noble families through which he had descended, including Prince Llewellyn and Owen Tudor, and those to whom he is related, and concluded with an earnest appeal to the jury to do him justice.

The justice summed up with great care, directing the jury that it was sufficient to maintain the indictment if it were made out to their satisfaction that the deceased died earlier from the treatment he had received than otherwise he would.

The jury, after ten minutes' consultation, returned a verdict of Not Guilty. The finding was received with loud applause, which was immediately suppressed.

If this case had occurred in America, Lieut. Ackerly would have been set down as mad and placed in the lunatic asylum, but because he is a rich man and of noble descent in England, he is a Magistrate of the realm (just imagine a crazy man being a magistrate in America), and when to all appearance he has hastened on the death of a fellow being by his crazy philanthropy, a jury can be found to render the verdict of "not guilty?" He may now go on and commit a hundred of such acts. What is to hinder him, when he can floor the judge and jury by such a mass of crazy nonsense as he uttered in his defence.

The Roc's Eggs.

We noticed some time since the account of an alleged discovery in the island of Madagascar of certain enormous fossil eggs. Full conformation of the statement has been received by the recent arrival in France of three of the eggs, with some bones of a gigantic bird, which is not doubted to have hatched them, or been hatched from one of them. These extraordinary remains have been made the subject of a formal report to the *Academie des Sciences* by M. Isidor Geoffroy St. Hilaire, a distinguished naturalist, who pronounces them to be those of a bird which he has named Epiornis. It is classed along with the gigantic fossil birds of New Zealand, which were wingless, or non-flying. The discovery of the eggs was made by a curious kind of accident. The captain of a merchant vessel trading to Madagascar, being one day on shore, noticed a native using one of them for domestic purposes as a vase; and, struck by its remarkable appearance, and resemblance, in all respects except size, to an ordinary egg-shell, he questioned its possessor; who told him it came from the interior of the island, where many such were to be found. This led to a search, which was successful, a number of specimens being found, along with the bones alluded to. It begins to be evident that all the wonders of the antediluvian era have not yet been rescued from the earth, in which they have been so long hidden away from human eyes.

Ventilation.

Many years ago I was a member of the Legislature of Massachusetts and had my seat in the pit, the floor of which was much lower than the surrounding parts; it formed a basin and retained the heavy gases generated by digestion. After a few hours session the air became very bad and caused a general coughing; while the occupants of the gallery were not so affected. I was appointed on a committee to devise a remedy. Having ascertained that the air of the pit was heavier than in other places, I proposed to tap the floor for an issue, but this natural process was not adopted, and ventilation was sought by tapping the cornice, which did succeed. Some time before this I had proposed to a neighboring distiller to take the carbonic acid gas from his vats with a pump, which I made for him out of smooth pine boards, one foot in the section; the boxes were of pasteboard; the moving one was surrounded with soft fur; the rod was a thin lath, which, with the box, did not weigh half a pound, this box was worked with the thumb and finger; in about one minute all the gas of a very large vat was removed.

Now as much mortality is caused on shipboard by bad air too heavy to evaporate,—air constantly generating by the stomachs of the crew, and by the decomposition of the ropes, wood, and other vegetable substances, it must be removed forcibly. Working one or more pumps with a thumb and finger is no great labor, and it is not improbable that the passengers in the immigrant ships would take a turn at this labor any time for the sake of pure air, which would certainly take the place of that pumped out. Perhaps my plan is too simple and cheap. But the latter objection may be remedied, and makes the pump to answer upon an emergency another important purpose, viz., pumping water. In this case, the pump must be stronger, and had better be cylindrical. To reduce friction the water may be taken by a valved box and pulley, at which several men could work with separate ropes; this would be more dipping, but the friction would be saved.

Atmospheric air cannot be deprived of its 22 parts of oxygen without being unfit for respiration. The crews and passengers sicken most in bad weather when kept below. The air of ships is always worse in the night, for during the day the constant going up and down pumps up, in some degree, the heavy gas. Bacon tells us that in 1567 the mortality occasioned by bad air in the court was frightful, 300 died at the Oxon Assizes, and 200 sickened and died in other places, four judges out of a bench of six died, with numerous other officers and lawyers.

Dr. Lynd says, that the Typhus Fever is often generated by the healthy animal exhalation in crowded and ill ventilated places. Dr. Chisholm, says, that the effluvia of healthy persons in a state of morbid concentration will generate a principle similar to that produced by infectious and pestilential effluvia. Dr. Hunter says that new diseases are continually produced among the poor in great cities, from the want of pure air and cleanliness. Dr. Fordice says that other animals are subject to Typhus when crowded and ill ventilated. W. F.

Boston, 10 April, 1851.

Steam versus Stame.

Messrs. Editors—Your remarks on this subject, page 213, Vol. 6, have induced me to to apply to you for information in relation to it.

Is *stame* any other than what has been long known as "Unsaturated Steam?" Is it not formed in the same way, *i. e.*, by the direct action of heat upon steam? In absorbing heat, does it loose or decrease in elasticity or expansive power? When acting alone or unmixed with steam, does it give double expansive force as well as "volume," for every four degrees of heat?

You may ask, why these questions. We answer that we have believe, and do still believe, that these two terms are synonimous,—that the same laws govern both.

The properties of unsaturated steam may be found on page 85 of the Report made to Congress, by a Committee of the Franklin Institute, in 1848. And so far as we have been informed upon the subject *stame* possesses the same qualities. If this be true, what then? Look on page 211, Vol. 6, Scientific American, and you will there find a theory of the cause of explosions; and permit us here to say, that with all the information we have been able to procure (and unfortunately, during the last winter, explosions have been rather too frequent), we have had no cause to change our belief as there expressed, but, on the contrary, have been much strengthened in it. Will not some of our scientific men take up this matter and give it a thorough investigation.

Steam increases in temperature and elastic force uniformly, and, to certain degrees of heat, will give out a certain expansive and effective force. Unsaturated steam increases in heat, but *decreases* in expansive force to such an extent, that 533° of heat give but 6 atmospheres, or 90 lbs. pressure per square inch. These propositions, we believe are established beyond dispute, and the only question is, does the mixture of steam with unsaturated steam, restore to it an expansive and effective force commensurate with its heat? If it does, the cause of explosions will be satisfactorily accounted for. B.

Galena, Ill., April 2, 1851.

[The experiments of Mr. Frost have been investigated by Dr. Haycraft, of London. We will present a condensed view of his researches next week. They agree with the opinions of our correspondent. Ed.

Influence of Carbonate and Phosphate of Lime upon Grains.

It has been ascertained by analysis that the best grains are those which contain the greatest proportion of carbonate and phosphate of lime. The absorption of these salts could be explained in no other way but by supposing them dissolved by the water falling on the ground, and carried down to the roots of the plants. A direct experiment has been made which proved the truth of this assertion. Some grains of wheat were placed in pure silex sand. The water used for half of them contained only carbonic acid, and for the other half, the same water was used with the addition of carbonate and phosphate of lime.

Result.—Water with the aid of carbonic acid, can dissolve a certain portion of the above named salts, contained in the bones, making part of the manure.

Second—This solution is favorable to the germination of grains, by feeding them with the inorganic parts so essential to their perfection. The grain produced by the two plants raised under the above circumstances, was compared by weight—the one produced by carbonic acid alone was 80; the other produced by carbonic acid, carbonate, and phosphate of lime, was 120. The ashes of the last kind of grain were found to be five times heavier than those of the other kind, and contained a part of the salts dissolved in the water used to rinse them.

These facts explain how calcareous matters, contained in manure, act upon the growth of plants, and how the plants appropriate to themselves the parts of the soil the most suitable to their nourishment, by a proper assimilation of minerals into their *vegetal* organization.—[Translated from "*Le Moniteur Agriculture*" for the Scientific American. E. B.

Page's Electro-Magnetic Locomotive.

Professor Page's electro magnetic locomotive was exhibited last Saturday, the 19th, on the Washington Railroad, in the presence of a large concourse of spectators. The experiment was partially successful, a power equal to five horses being obtained, but the car ran very slowly. Its self-moving appearance on the track was unique, and created much wonderment.