

Insects and Pestilence.—The Cholera and Yellow Fever.

Some time since there was placed in our possession the manuscript copy of an interesting treatise on the cause of cholera, by J. Franklin Reigart, Esq., of Lancaster, Pa., for which we have not had space for publication, but as he has just sent us a new fact bearing on his theory, connected with the yellow fever at Norfolk, Va., we deem it a proper time to present the substance of his observations and conclusions with other remarks.

He attributes cholera to a small poisonous fly, and considers lime water a certain antidote. Lancaster is a limestone region, and has never had over ten cases of cholera in it, although it had daily communications with Philadelphia and Baltimore (only 65 miles distant) during the time when this terrible disease prevailed in those cities in 1832 and 1852, and also in other places nearer hand. Early in the morning on July 30th, 1852, he noticed that the wooden spout of the hydrant in his yard was covered with numerous small, dead insects of a dust color, the destruction of which he attributed to the lime water deposit on the hydrant spout. This was the first time his attention was directed to this being the cause of cholera. He examined these insects with a small object glass, to satisfy himself that they were not small red ants. In cholera seasons he believes they fill the atmosphere in great swarms, but are not readily observed, owing to their dust color, and that they carry disease into every place they visit by being inhaled by persons while breathing, and also by being taken unnoticed in food and drink. Since the date mentioned, when he first entertained the idea of insects being the cause of cholera, he has gathered up many facts which have strengthened his convictions. In 1853, a year very free from cholera in the eastern cities, he was not able to obtain the account of a single one of these flies. In the year about the 1st of July, when the cholera raged in New York and Philadelphia, he discovered great numbers, and he believes that for weeks the atmosphere in many places was filled with them. On the evening of Sept. 4th, 1854, during a long, dry, and warm period, he noticed at the setting of the sun that the atmosphere had a yellow brownish tint, and that the rays of light seemed moving like the aurora borealis. He was led to believe that this was caused by myriads of these insects in the air, and that they were settling down along the Susquehanna river. On the next day a south-west wind arose and blew for three days, and he concluded that if his insect theory were true, it would blow them from the river shore into the houses on the east side of the Susquehanna and develop the cholera there. This actually took place, and the cholera raged with violence in the Borough of Columbia, while Lancaster, so near to it, was healthy. Mr. Reigart believes that the pure limestone water of Lancaster is the cause of its immunity from this disease.

The following is the fact which he has sent us bearing upon his theory in relation to the yellow fever:

"The Norfolk correspondent of the Petersburg Express, speaking of the 'plague fly,' says:

"Its body is about the size of our common fly, of a yellowish color, with long delicate porous wings, of a texture as fine as the softest silk. They fly together in swarms, and may be seen in large numbers on the fig trees; but their great point of attraction seems to be the coffins, in which repose the ill-fated victims of 'Yellow Jack.' We took a stroll out to that Golgotha of burial grounds, Potters' Field, yesterday, and were intensely horrified at seeing many of the coffins that lay on the ground scattered around, awaiting interment, literally black with these loathsome little insects, that squirmed themselves upon one another so thick as to exclude the coffin entirely from sight. It was the most disgusting spectacle we ever beheld, having an oily, wormy significance of the last poor mortality about it that was absolutely sickening!"

In reference to these flies, Dr. Gideon B. Smith, of Baltimore, who is well known to our readers, states his belief that they were a large species of winged ants which sometimes swarm in myriads and immigrate. Large bodies of

these winged ants have visited Baltimore and other places recently. Mr. Reigart, however, sent some specimens of his cholera insects last year to Dr. J. G. Morris, of Baltimore, a famous entomologist, who found them to be genuine flies, of the genus *musca*, and a species entirely new to him, and which have never been described nor published by any naturalist in the United States. The conclusion at which Mr. Reigart has arrived respecting this cholera insect is, that it came from Asia, and that the cholera can be traced in its course from that part of the world down through Russia, the Baltic Provinces, across the North Sea to the Cromarty Firth—being first seen there in the form of a yellow cloud, terrifying the inhabitants—then spreading through Britain, crossing the Atlantic to the United States, and carrying death and terror to the distant Rocky Mountains. He states that during cholera seasons the sky has always a yellowish appearance caused by clouds of insects in the air, and that they are the real scourge of man in the form of the cholera. This is an important question, as the cholera has apparently, within the past few years, become a permanent disease among us, afflicting some part of our extensive country during every month of the year. The insect theory of cholera is by no means new, but Mr. Reigart brings forth new facts to support it; still we must say that it is not conclusive.

Recent Foreign Inventions.

GRAINERIES.—L. Salaville, of Paris, has taken out a patent for constructing grain store houses by having an air chamber under the floor of the grain room, and by having the floor on which the grain is laid pierced with small holes, through which currents of air are to be forced by a blowing machine.

FISH BLUBBER SOAP.—R. Johnston, of Aberdeen, North Britain, has taken out a patent for manufacturing soap with blubber. He allows fish or blubber for some hours, then lets the contents in the boiler settle, and takes all but the deposit at the bottom, which is thrown out and composted to make manure. He then strains the liquor through a coarse bag, which is put into a press and all the loose matter pressed out. That which is left in the bag is put into the soap kettle with one-fourth its weight of tallow and boiled with caustic soda or potash for seven hours. The soap thus made is stated to be without smell, and of good quality.

PURIFYING WHALE OIL.—Peter Arkell, of Stockwell, Surrey, England, has taken out a patent for purifying whale oil as follows: He puts common whale oil in an iron still with one ounce of salammoniac and a pint of turpentine to each gallon, and applies heat to the still. The still is stirred by a rod passing tight into it during the period distillation is going on. The oil that is distilled over is stated to be peculiar in its character, and of a superior quality. A quantity of black pitch is left behind in the still.

STEERING VESSELS.—Sir James Anderson, of Fermoy, Ireland, has obtained a patent for steering ships, by using steam pressure to act upon pistons for operating the rudder.

This is the baronet, we believe, who did so much to introduce steam carriages on common roads, but all his efforts failed of success. He is, however, a very ingenious and enterprising gentleman.

BEAUTIFUL UMBRELLA AND KNIFE HANDLES.—B. Samuel, of Sheffield, England, has taken out a patent for manufacturing the above-named articles, having the transparency of solid tortoise shell, by first molding them of horn, then encasing them in tortoise shell by means of heat and pressure. This hint may be of great benefit to our manufacturers of knife handles.

MANUFACTURE OF SUPERPHOSPHATE OF LIME.—C. F. Bernard, of Plymouth, England, has taken out a patent for the manufacture of dry phosphate of lime, suitable for agricultural purposes as a manure, by submitting calcined bones, or animal charcoal, to the action of sulphuric acid in a reverberatory furnace. The mass thus obtained is then dissolved in water, and that which is soluble is taken up, but the insoluble is not. It is concentrated by boiling to drive off the water, so as to produce a granular mass of high fertilizing power.

Insuring the Lives of Railroad Engineers.

A correspondent in the Philadelphia *Ledger* suggests to the railroad companies the wisdom and humanity of insuring the lives of their engineers. He says: "Let railroad companies think of this suggestion. They are pained to see a faithful engineer fall at his post in the discharge of his duty, and leave a young family to the charities of a cold world. They feel that they must do something to alleviate their wants, and as in the present instance an annual appropriation is made for that purpose. But, far better would it be for railroad companies to insure the lives of all their faithful engineers, that in the event of their falling at their post, the companies may be saved the unpleasant feelings always accompanying the fact that their poor families are unprovided for. Five hundred dollars a year would insure the lives of ten engineers for \$2000 each during their entire lives, beginning at the age of twenty-five. It is the very best means a company can employ to provide for the families of those in their employ who may, at any moment, be bereft of husband and father by such an event as the one which made a widow and orphans of the wife and children of poor Holland, who was killed recently on the Camden and Amboy Railroad, and but for whose intrepidity the accident would have been more disastrous.

"It is less than a year since the writer was an actor in a scene in a neighboring State similar to that just referred to. The poor engineer was the only victim, and his last words were, 'O, what will become of my poor wife and children?' How different would have been his feelings had he known to a certainty that those he so tenderly loved would not be thrown upon charity for support. Like poor Holland he was the best engineer in the employ of the company, and like him, was compelled to close his eyes without knowing what would be the fate of the dearest objects of his earthly love."

The compensation which engineers receive precludes the possibility of their paying insurance on their own lives, or of their laying by anything for their families. Their lives are in constant peril for others' good and others' gain. They may be stricken down in a moment, and their wives and children left comparative beggars.

Men and Machines.

Let us compare a little the two modes of cutting grass. Day laborers, hired at one dollar per day, will probably mow in medium grass one and a half acres to the hand; that is, it will cost five or six dollars to mow eight acres, and twenty-five cents each hand for boarding will be one dollar and fifty cents more, which, added to five dollars and fifty cents, makes seven dollars for mowing eight acres. Now, hire a man with a span of horses and a machine to cut the eight acres at fifty cents per acre, and he will cut it in a day; four dollars, and one dollar more will pay their boarding, making in all five dollars, and the grass will be spread better for curing than a man will spread it after the five hands, which, in the estimate, will make three dollars advantage to the mower. At that rate, the machine will pay for itself in forty days' mowing, besides saving so much hard labor. But just here steps in Mr. Foggy, of the firm of Foggy, Doubt & Co., and says if the Mowing Machines do as much as eight men it will throw eight men out of work. No such thing. Mowing Machines increase the demand for labor by quadrupling the size of our farms. A few years ago a twenty-acre meadow was considered "some grass." We have meadows now of a hundred acres, while in Illinois there are meadows of five hundred acres. But there is another proof that these machines have not lessened the demand for labor, and that is shown by the fact that during the present harvest, farm hands have received from \$1.50 to \$2.50 per day. Did Mr. Foggy ever know such wages to be paid to such workmen before the introduction of "these cursed machines?" We think not. Still we should like to hear from Foggy and find out for certain.

[The above is from the Albany (N. Y.), *Knickerbocker*, and if its sentences are not finely rounded they are pithy, clear, and to the point exactly. The complaint is often made by thoughtless workmen that new machinery throws people out of employment, and thus

tends to injure a portion of the community. Machinery, no doubt, supersedes hand labor, but it does not destroy the demand for laborers. On the contrary, it increases the demand for all kinds of skilled labor, and thus exerts a wholesome influence in raising men above mere drudgery, to become more intelligent and skillful.

No class of operatives have been so much benefitted by machinery as the very ones who have made the greatest efforts to resist its introduction. But the days of mobs to break machinery has gone past forever. All those who desire the good of themselves and their neighbors of every degree, if they are intelligent, cannot but rejoice at the success of every new machine.

A Big Gun for the Russians.

We are informed that a cannon is in process of construction in this city, which, if it realizes the design of its projectors, will make no little noise in the world, and do considerable damage to the ships and armies of the Allies. It is to be made on new principles, or rather it will be an adaptation of several old models, and will combine the peculiarities of the Paixhan gun, the Minie rifle, and the grooved musket. In addition, a new detonating powder has been discovered of two and a half to three times the explosive power of ordinary gunpowder, and the inventor claims that they will be enabled to throw their shot from twelve to fifteen miles, at an angle of not more than two inches above the level. One of our English exchanges states a gun has been invented that will throw ten miles, but then it must be elevated to a great angle to reach that distance, thereby losing much force. This new American gun, when finished, and if proved successful, is to be presented to the Czar of Russia to be used by him against the Allies. A few guns of this description, if properly aimed, would do immense damage to shipping, and would be of great use in the Baltic and the Black Sea.—[New York Herald.]

[Munchausen is abroad again! We published, not long ago, an account of a ten mile gun, invented in Nantucket. This same invention appears to have been on a traveling tour ever since among the newspapers. Like a snow ball, its dimensions have been augmented by progress; it has picked up and attached to itself a curious medley of fighting materials; it has become a perfect hydra.

The wonders of this "Big Gun" are not half stated in the above description. It is a law in gunnery, that for the first few degrees of elevation in the muzzle of a cannon, the range will increase in part proportion to the angle of altitude. Thus, if the above "Big Gun" will shoot 15 miles with its mouth elevated 2 inches, it will carry nearly 30 miles on an angle of ten inches, &c. Surely Sevastopol cannot hold out much longer!

P. S. It has been taken without the "Big Gun."

Intellect and Enjoyment.

There is no greater or more prevalent mistake than the supposition that the intellectual development is inconsistent with a keen sense of enjoyment. There are, it is true, a considerable number of grave, dull, would-be sages, moving at a snail's pace, with a snail's gravity, through society—looking, as Oken says in his transcendental philosophy, like so many prophesying goddesses seated on tripods. But nine out of ten of them maintain a philosophic fame only on the credit of an ominous and unbroken silence; the tenth on the strength of supporting some incomprehensible paradox, which neither he nor the stupid people who listen to him comprehend. Your real philosopher is neither uncommunicative nor dogmatic; he utters his words of wisdom at the right time and place, but on ordinary occasions is like other men, and enjoys himself, perhaps even more intensely, when enjoyment is afloat.

Dressing Circular Saws.

Contrary to the opinions expressed by two or three correspondents in our last volume, respecting the impracticability of using circular saws sharpened with sheet iron, Phillip Strickler, of Timberville Mills, Timberville, Va., states that he will not abandon the plan as long as he can cut steel with sheet iron. He trims his saw teeth in a peculiar manner, and states that there should be only 24 teeth in a four foot saw