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Insecurity of Buildings.

Again and again have we called attention to the notorious fact, that the buildings in this city are generally inefficiently constructed, and that a strong and powerful remedy should be applied to make them more secure; in other words, that no buildings should be allowed to stand, that did not embrace the safety of their walls without leaving a single doubt on the subject. In vain has the public press uttered its denunciations against the legalized murders by falling walls and tottering ballustrades in our city. Scarcely a week passes over our heads without some terrible accident, by which many wives are left husbandless, and children left orphans.

Last week we noticed the death of two men and the severe injury of two others, by the falling of the walls of a brewery, in this city. The catastrophe was a melancholy one, although it paled in comparison with the lamentable destruction of the forty-three little children, in Ward School No. 26, as noticed by us in our last number. But had the falling of the wall spoken of taken place a few minutes earlier, when nearly twenty persons were in the building, there can be no doubt but the majority of them would now be slumbering with the clods of the valley. Can nothing be done to prevent such calamities? Are we still to go on chronicling accident after accident of this nature to the dull cold ear of unfeeling or weak administrators of executive justice? It appears so. It was once said by the London Times that "nothing would prevent railroad accidents in that country excepting the death of a Bishop." It may be that it will require the death of a President, a Judge, a noted Minister, Mayor, or some such influential and conspicuous citizen, before anything will be done—efficiently done, to stop such accidents. There can be no doubt but the guilt of many persons, in the eyes of community, has been clearly established in respect to the deaths of a number of people, by such accidents. No, we will not call them accidents—we call them crimes; and yet who has been punished—who will lay his finger on the guilty culprit now justly suffering for his misdeeds? Not one. Do not the ashes of those who perished by the Hague street explosion look up to heaven, with silent but sure intercession for justice upon those whose culpable recklessness immolated them beneath the crumbling walls and scoria of that flaming death-pyre?

On the twenty-second day of last January, six buildings in the course of erection in 21st street, this city, fell with a sudden crash, instantly killing five men, and wounding, more or less seriously, nineteen others. The Coroner's inquest developed the most astounding recklessness on the part of those engaged in their superintendence and construction. The width of the foundation was only fourteen inches; miserable mortar was used, and, worse than all, there was but one man employed on the party wall who could carry up a chimney. Has any thing been done to the guilty in that case? We believe not; we never heard there was. It is our opinion that there are more miserable workmen (or else they are very immoral in respect to executing good work), among our bricklayers (masons) than any other trade in our city. The majority of them seem to be boys of such years, that unless they are superintended by an honest and proficient mason, they are sure to make bad work. But the majority of superintendents—the bosses—are to blame, for they should not allow a bad piece of work to leave the hands of any of their men. They do not seem to care, however; they have an eye rather to the dollar than honest duty. There is scarcely a brick wall in any house in this city—an obscured one—but is made with joints through which Tom Thumb might play at "hide-and-go-seek." The bricks of inside chimneys are thrown together as with a pitchfork, and the mortar appears to have been valued, weight for weight, with California old dust. These things are a disgrace to the trade; bad work of any kind is a disgrace to any trade to which it belongs. There should be a reform, and a speedy one.

We feel sensitive on such a subject as this, for the honor of our workingmen is involved, in a great measure, in it, and whenever that is the case, we feel ashamed and humbled for our country and fellow men.

Amorphous Phosphorus.

It is well known that phosphorous is one of the most useful articles, as employed, in friction matches, which are now so indispensable to our comfort. Hitherto, to labor with this substance involved fearful diseases to those who, from necessity or interest, devoted themselves to work with it. It was also very difficult to transport, and its storage was a serious consideration, as it ignited at a summer temperature. All these difficulties respecting phosphorous are now removed by the splendid discovery of rendering it amorphous, which strips it of all its dangerous qualities, but deprives it of none of its useful properties. This effect is produced by a simple change in the arrangement of its atoms, and is a phenomena equally new and important to chemical science. Some friction matches made with amorphous phosphorous were exhibited at the Great Exhibition. The discoverer is Prof. Schrotter, of Vienna, and he is not without strong hopes of resolving some of the other elementary crystallized substances into a similar state. Liebig, in the last edition of his letters, ventures to suggest, upon the strength of this discovery, that many of the minerals composing the crust of this earth, may be but crystallizations of one and the same body.

Discoveries.

The discovery of a "perpetual motion" has long been a hobby with many men. Many have deluded themselves in pursuit of this phantom, for it is nothing else, and many knowingly have deluded others. An ignorance of principles—excepting by chance, as it were—always involves the certainty of making mistakes. A man thoroughly versed in the philosophy of mechanics never will spend a moment of time in inventing a machine, which, in any condition or under any circumstances, is to give out more mechanical power than the amount of force which propels it. This is an established law, for if a machine could give out more power than that which impels it, then that machine could move itself without the aid of any other power, which is impossible.

It is a great anomaly in our Patent Laws, that while they protect the application of a principle in mechanics, they afford no protection to the discoverer of a philosophic principle.

The inventor of the Electro Magnetic Telegraph did not discover a single philosophical principle of its operation, and yet its whole action and operation depends upon philosophical principles. When we look back only a few years, and see that Galvanism, Electro-Magnetism, Electrotyping, and the Daguerreotype, have been discovered, who can doubt, but that many other discoveries, equally as important and wonderful, will yet be made.

Whitelaw & Stirratt's Water Wheel---the Overshot at a Discount.

One of Whitelaw & Stirrat's water-wheels, manufactured at Cold Spring, N. Y., by Mr. Findlay, and embracing his improvement, was shipped from this city, last week, to Vera Cruz, from whence it is to go up the mountains to Miraflores, to the cotton factory there, of which Mr. Robertson, is agent. It is to take the place of a thirty-foot overshot. One of these wheels has been tried for the past six months, and so satisfactory has its performance been, that the second over-shot is to be removed, in order that the new wheel may take its place. The falls in Mexico are high, and the supply of water during some parts of the year, is very small; this re-action wheel is better adapted to meet these conditions, it seems, than the old over-shot.

The Woodworth Patent---Its Extension.

We understand that great efforts are to be made, during the coming session of Congress, to get this patent extended by another special act. It is our opinion that this cannot be; a most determined resistance and influence will be exerted against it; and, as we learn, the influence against it will be stronger than for it.

Gutta Percha Pens.

Among the most recent inventions, says an English paper, are gutta percha pens, which are stated to be far more durable than goose quills, and more available than the metallic materials. This appears to us to be a rational improvement. No metal pen can equal the goose quill except in retaining the writing point longer. Gutta percha pens will no doubt have the soft flexibility of the goose quill.

We would call attention again to the desirable invention of a pencil that would altogether answer the purpose of pen and ink; this would be one of the grandest discoveries of the age, because one of the most useful, and it would no doubt make the fortune of the inventor. We know a gentleman who pursued this subject for a long time, and on one occasion hit the mark, but he never was able to do so a second time. That it was done once is an evidence that it can be done again. Inventors, here is a subject for you.

Verdict of the Jury in the Greenwich Avenue Calamity.

Last Friday the Coroner's Jury closed its inquiry into the causes of the late calamity in Greenwich Avenue school. They condemned the construction of the stairs, that is, their plan, also the plan of having the doors open inwards. They attach no blame to the teachers, and but a shadow of blame to the constructors of the stairs. The verdict says, the children became suddenly alarmed by the illness of Miss. A. Harrison, got excited—unaccountably excited, by an impression that the house was on fire, and rushed out of doors. This, no doubt, was the primary cause of the mournful calamity. Respecting the stairs, the jurors' opinion—not verdict—is as follows:

"We would be understood then, not as condemning the good intentions or honest purposes of those designing the work, but the design itself, the structure as it left the hands of the master-mechanics, we do, in the most unqualified terms, pronounce to have been unsuited to the purposes designed, bad in their arrangement, at all times insecure and dangerous, and never properly and thoroughly secured by the builder. We regret most deeply the necessity of this latter remark."

Gas Light in Factories.

There are several manufacturing establishments in this country, which are illuminated in the evening by gas, made on the premises. This is without doubt more economical and far more convenient than any other mode of lighting, and would be more generally adopted but for indistinct notions of its use in cities, where its explosions and bad odors are common themes of remark. This, probably, is one reason why so few trouble themselves to inquire into the process of its manufacture or the practicability of its use on the small scale.

I am inclined to believe that the luxury of gas might easily be enjoyed in many of our country villages, especially in factory villages. In large establishments, particularly where steam power is used, what is to prevent the facile manufacture of coal gas enough for the concern and for the village around, with but little increase in the consumption of fuel? With an ordinary cast-iron gas retort, about 3,500 cubic feet of gas can be made per day—a quantity sufficient for a large factory and a small village. Could not the retort be arranged inside the fire place of the boiler, without any inconvience or increased consumption of fuel? Perhaps the employment of one extra hand in the fire room would be necessary. The amount of English coal required per annum would be small, while the refuse coke would be useful in making steam. In point of economy, is not coal gas about three times cheaper than oil or tallow? Mr. Editor, just ask some of your enterprising and ingenious readers to investigate this subject.

JOHN GO-AHEAD.

[A number of factories with which we are acquainted, and which a few years ago used oil exclusively, now use coal gas made on the premises. In coversation with an agent of a factory, about a month after the introduction of the coal gas, he said, "I am surprised that we used the dirty oil lamps so long, they were more troublesome, dangerous, and expensive than gas by fifty per cent at least." It would not be possible to arrange the retort in the boiler furnace, as suggested above, nor would it be so convenient for changing the same. It is best to use two retorts, and we like the fire-clay kind the best; but these cannot be obtained at present, we believe. We hope those factories and villages which are yet revelling in the *darkness* of oil *light* will give attention to friend "Go-ahead."

The Proposed Exhibition at New York.

The proposal for holding an Industrial and Fine Arts Exhibition at New York, in the spring of next year, to which we have previously referred, appears to realize the best expectations of the projectors. Although no steps have yet been taken for ascertaining the number of persons in the United States who may wish to avil themselves of the opportunity of displaying the varied products of their industry, upward of one thousand applicants for space have already been received by the agents in this country, mainly from British and foreign exhibitors in the late Great Exhibition. We are informed that among the intending exhibitors are His Royal Highness Prince Albert, who has signified his intention of forwarding some of his farm produce, and the Duke of Devonshire, who contemplates sending various articles from his extensive collection of works of art. Baron Marochetti has engaged to execute an equestrian statue of General Washington; Mr. Carew a colossal statue of Daniel Webster, M. Monti is engaged in the production of one of his veiled figures, and Mr. Manning has consented to send his Prometheus, a statue of Her Majesty and Prince Albert, and several other articles of sculpture. The building in which the exhibition is to be held will, it is stated, cover an area of seven acres, and Sir Joseph Paxton is at present engaged in the preparation of a design which he intends to submit to the promoters of the undertaking. The 1st of February is the last day for receiving applications for space, and the Exhibition is expected to open on the 15th of April. Mr. Riddle, the American Commissioner, has returned to New York, where the experience which he has obtained in the management of affairs connected with the Great Exhibition will, no doubt, be brought to bear in making the necessary arrangements for the proposed transatlantic Exhibition.—[European Times.

[The above is something in which the European Times is far ahead of the American Times. The good people of New York are entirely in the dark about this new Crystal Palace. Some of our folk have been pulling the wool over the eyes of the people on the other side of the water. Nevertheless we would like to see such an exhibition, but we don't want one unless it is capable of cutting a figure.

Great Rat Trap.

Mr. J. H. Chester, of the city of Cincinnati, has taken measures to secure a patent for a very ingenious "rat trap." It is so constructed that when Mr. Rat enters and reaches forth to snatch the bait, his weight acts upon a spring trap door, which suddenly opens and precipitates him into a dark chamber, in which he can see only one speck of light, for that he rushes into another chamber, and by doing so sets the spring of the trap door by touching a lever, and in this manner the trap is re-set and kept set for any length of time by the animals themselves, so that without any trouble but to the rats, a whole box full may be caught.

Improved Stove.

Mr. Giles F. Filley, of St. Louis., Mo., has taken measures to secure a valuable improvement in Cooking Stoves, which consists in placing a chamber at the back and bottom of the fire grate, said chamber communicating with a flue underneath the oven. The object of the chamber is to equalize the heat around the oven, and this is done effectually by it, as the heat of the chamber passes into the flue under the oven, and the oven at that point, in ordinary stoves is the least heated, while the oven directly behind the grate is over-heated.

Geo. Peabody, Esq., the eminent American banker in London, has given $1,000 to the Maryland Institute, which is to be appropriated to the establishment of a chemical library and school.