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NEW YORK, SATURDAY, DECEMBER 17, 1887.


The year 1887 is drawing to a close, and if those subscribers to this paper—and there are several thousand of them—whose term ends with the year will remit for a continuance of the paper before the year closes, it will save the removal of a large number of names from our subscription list, and insure the continuance of the paper without interruption. By so doing the subscriber will be benefited and our subscription clerks greatly relieved.

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**For the Week Ending December 17, 1887.**

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### ONE EFFECT OF SHAM BATTLES.

The sham battle afloat and ashore, while undoubtedly of great value in schooling officers and men in alertness and precision, can scarcely be made sufficiently realistic to even approach the real thing. Those who know what the torpedo and torpedo boat have done in war must often have been surprised to learn how small a part they are made to take in the sham battle, and will find it hard to understand why, in all the sham engagements of recent years, the torpedo attack has been gravely set down as beaten off. In the sham battle, it seems only to be necessary to pick up a torpedo boat out of the darkness at long range with an electric light to have it counted out of the fight; but it is certain that in war you can't destroy a torpedo boat with a flash from a voltaic arc light. It would keep right on in its course for the ship, and if several were advancing from different directions, there would be far more call for gunners than light tenders. Indeed, if only one got close aboard and discharged its projectile, life preservers would, like enough, be in greater demand even than gunners.

Our French contemporary, *Revue de Cavalerie*, cites one instance of the fatal effect sham battle exercise has upon cavalry. At the battle of Worth (Franco-Prussian campaign), a small body of the 8th Cuirassiers and 6th Lancers, while in retreat from Morsbroun, came suddenly upon the 13th Uhlans (Prussian), supported at a short distance by more cavalry. A captain of the 8th promptly formed up his men, the charge sounded, and the Frenchmen dashed forward. But the Prussian cavalry did not move, as if determined to receive the shock at a standstill. This was so unexpected that the French horse, as if remembering the order of sham fight, drew up their horses at pistol shot range. Neither side did anything. Had a single man rushed forward with the standard at this point, it were certain a *melee* would have followed. As it was, both sides emptied revolvers and carbines, and the Frenchmen, discovering they were vastly outnumbered, and that there was nothing to be gained by fighting, turned and fled.

### THE CHANGE IN THE PANAMA CANAL.

The proposal made by M. De Lesseps in his letter to Premier Rouvier will not fail to interest those who have followed the progress of his scheme for an interocean canal at Panama. After an expenditure of nearly three times the sum originally estimated by him as sufficient to build a surface level canal, he now asks the French government to authorize him to raise $113,000,000 additional by a public lottery, to enable him to construct a lifting lock canal, holding out the hope that eventually the original tide level scheme will be realized. "It now rests with the government," he says, "to insure definitely the execution of our programme by authorizing the company to issue lottery obligations."

It would seem from this that unless the French people subscribe a sum which, with what has been expended, will raise the cost of the canal to the extraordinary total of nearly $500,000,000, the project of a canal at Panama must be abandoned.

Up to the present, M. De Lesseps has strongly opposed the use of lifting locks along the line of the proposed canal, and stoutly denied that such a plan was afoot, though fully a twelvemonth ago Lieutenant Kimball, of our navy, on his return from the Isthmus, declared it was then under serious consideration by the canal's engineers. The present change in plan seems to have been induced by the report of skillful engineers sent to the Isthmus by the department of Ponts et Chaussées, who, after a careful examination of the formidable Culebra section, where the iron backbone of the Cordillera crosses the line with an elevation of nearly three hundred feet, decided as impracticable the scheme of a cut or a tunnel for ships. They found that because of the extraordinary rainfall and consequent floods, such a cut, even if made, could not be kept free from turbulent, devastating waters; in fact, that it would but become a huge reservoir, into which the mountainous region in its vicinity would pour—the starting point whence the sections of canal on either side would be fiercely beset. They suggested that lifting locks be built on either side this elevation, and ships in transit be taken over instead of through its flinty sides. This serves to make the Panama scheme similar to that proposed at Nicaragua, but, as this latter is much farther northeastward, and consequently offers a shorter voyage over the great commercial lanes, it is easily seen that it could not compete with it, even leaving aside the probable difference in cost of construction, which, doubtless, would be greatly in favor of Nicaragua. But the route of the proposed ship railway at Tehuantepec is hundreds of miles north and east even of Nicaragua, and, aside from other advantages which it possesses, would be vastly more advantageous to commerce, considered from a geographical standpoint.

A WOODEN case containing a complete set of surgical instruments, many of which are similar to those used at the present day, was a recent discovery at Pompeii.

### The Calumet and Hecla Mine Fire.

The boom in the price of Lake copper, which is now selling here at 16 cents a pound, and of Chili bars in London, which has reached £67 15s. per ton, as against £39 5s. at the corresponding date a year ago, and Best Selected, the brand most nearly approaching our Lake copper, which is now quoted £68 10s. as against £45 December, 1886, though not originally due to the Calumet and Hecla fire, has been greatly intensified by this unfortunate accident.

This expected rise, instead of commencing a year ago, and moving gradually in accordance with the statistical and technical conditions of the industry, has come suddenly and has bounded upward with an energy that must soon bring on a relapse, not, of course, to the old ten cent basis, but to a degree that may tend to demoralization. Copper is now higher than it should be, even considering the immense help the market is receiving from the Calumet and Hecla fire. This is, under the circumstances, a very important matter, and we have sought to obtain from disinterested sources the fullest information possible concerning it.

From good sources we learn that the fire now burning had gained much greater headway before the shafts were battened down than that which preceded it, and it would seem that the fire has come nearer the surface. Presumably, then, the damage to No. 1 shaft will be greater than to No. 2.

How the fire originated is a puzzle to everybody, and it is consequently generally concluded that it was of incendiary origin.

It is stated now that the fire in No. 2 shaft some months ago, which was accounted for by "a boy with oily waste thawing out the pump exhaust," must have been set, for when the platform on which the pump is set was reached, since work was resumed, it was found that the fire had not come near it.

The closing of shafts at once checks combustion, and the forcing of carbonic acid gas into the mine will, of course, help to extinguish the fire; but when the burning material will be so cooled off that it will not reignite on the access of fresh air is pretty much a matter of guess, which can only be settled when the mine is reopened.

A gas pipe, the outer end of which is plugged, leads from the surface to a few feet below the shaft collar. At stated times a thermometer is dropped down, and the temperature noted. One day it gets hotter and the next colder, presumably as the underground currents vary. This and an analysis of the gas which comes through the pipe are the indications on which to guess at the condition of the fire.

The remains of the old fire about No. 2 shaft were still smouldering when this took place, but it would seem scarcely possible that this fire should come from that.

The indications are that it will continue to burn longer than the former fire, and that the mine cannot be reopened during the remainder of this month, and possibly not for a much longer time.

The loss to the company must be very heavy, but it is so rich it could afford it, and would only have to cut off one or two of its dear little extravagances to make up for this unexpected expense. To the thousands of workmen it will be a very severe blow, for the other mines are full-handed, and the stoppage of work at many of the iron mines of Michigan increases the difficulty of getting work elsewhere.—*Engineering and Mining Journal.*

GEORGE SCHNEIZER, the young man who was killed on October 22, in the Harlem Electric Light Company's building, 244 East 122d street, was an inspector of lamps for the company. He received his death stroke from a defectively insulated lamp which hung in the cellar of the building. It was an arc light of the familiar street light pattern. It hung in front of a big dynamo machine in the cellar. Two men were working about the dynamo, and Schneizer came down to look at them. As he leaned forward, his hat struck the lamp and set it swinging. Without a thought of danger he caught hold of the round, brass-finished tube which holds the bottom carbon. With a spasmodic shiver he fell to the ground. The men raised him up, and one of them ran across the street for Dr. T. H. Hay. It was not more than five minutes after the shock that Dr. Hay arrived. He found Schneizer just gasping his last breath.

At the office of the Harlem Electric Light Company no one would give any information about the accident. Lamps of this kind are extremely dangerous. The current used is one of great intensity. If the lamp is in order, the wires and carbons are all insulated from the frame. In this case there was a contact somewhere, and when Schneizer caught the lamp the whole strength of the current passed through his body to the ground.

Schneizer was unmarried, and lived with an uncle at 117th Street and First Avenue.—*New York Sun.*

[There is no excuse for the employment of dangerous electric light wires or lamps, and whoever does so should be subjected to adequate penalties.]