

Correspondence.

PROVO CITY, Oct. 18th, 1869.

Editor *Deseret News*:—The general muster at "Camp Wells," near Provo, of the militia of Utah Military District, took place on the 13th, 14th and 15th instant, and passed off pleasantly, as the weather was favorable. In view of the pressing labors of the season the muster present was commendable; although some of the extreme outposts were not represented.

On the morning of the 13th, camp was formed with the 1st cav. on the right, 2nd cav. on the left, 1st and 2nd brigade occupying the centre. The lines of tents, wagons, teams, etc., made a stirring prospect in our vicinity. The afternoon was spent in company and battalion drill.

Thursday 14th was a busy day, every man employed in drilling and camp duty. In the morning Major Gen. R. Burton and Lieut. Col. H. W. Lawrence, of your city, with escort, were duly received by the troops in line; they afterwards took an active part in the exercises of the day.

Friday 15th, the troops were reviewed and inspected by Gen. Burton, after which the forces were drilled in field movements until 4 o'clock p. m., many visitors witnessing the evolutions, and listening to the brass and martial music with pleasure. At the close, a square was formed and the assembly addressed by the Hon. A. O. Smoot, who encouraged all to faithfully perform their duty; he was followed by Gen. Burton in an able and patriotic speech. Gen. Pace congratulated the troops on their attendance and the good feeling prevailing during the muster, and directed that the encampment break up in good order, which was done, all marching from the parade with cheerful hearts and willing minds, having done their duty.

A military ball was given in the evening at the Theatre Hall in which a goodly number of the officers participated. F.

BOILER EXPLOSIONS.

The recent steam boiler explosion at the Indiana State Fair is another fearful instance of the recklessness, so far as human life is concerned, for which the country is becoming notorious, and through which so many lives are annually lost on railroads, steamboats, etc., and furnishes additional evidence of the necessity of legislative interference to prevent their recurrence.

We have received the following communication from Mr. W. J. Silver, Civil Engineer and Draughtsman, of this city, which contains many excellent suggestions in reference to this subject—now becoming of more interest than ever to the people of Utah, on account of the increased importation of steam boilers and other machinery since the completion of the Railroad:

SALT LAKE CITY, Oct. 18, 1869.

Editor *Deseret News*:—Sir.—The late disastrous boiler explosion at the Indiana State Fair seems to have caused considerable excitement, judging from the comments in various Eastern papers, and in consequence considerable talk of legislative arrangements tending to prevent the occurrence of such calamities in future.

Of course public attention has been particularly drawn to this case in consequence of its surroundings, probably that the accident occurred in the woods with nobody but the engineer or fireman killed or hurt, very little would have been said, as men filling those positions are supposed to be used to such contingencies, and therefore not to feel so bad about it.

In this city, and in various localities within a short distance are many steam engines and boilers at work, principally engaged in driving saw mills or wood working machinery; and I wish to call attention to the fact, which is beyond successful contradiction, that not one of these boilers are known to be in safe working condition; except such as from being recently new, may reasonably be supposed to be unimpaired; although the boiler at the Indiana Fair was new and supposed to be in good order.

As we are likely to have a continual increase of boilers and engines, from time to time in operation in this city and territory as business increases, requiring pow-

er, it may perhaps be as well to call the attention of our legislators, who will shortly meet, to the necessity of endeavoring to do something to prevent, as far as possible, the occurrence of such disasters in this Territory by the enforcement of certain regulations which have been found in other places to answer the desired purpose to a great extent.

New York state has a most excellent law, which however applies only to steamboats, &c., but not to the numerous engines employed for stationary purposes, which law, when I was there, was frequently rendered doubtful and oppressive in its operations by the appointment of inspectors who had no other qualifications than being politicians of an uncertain grade, and who, in certain cases, could be (not bribed of course) but considerably influenced by certain considerations which could be used by wealthy proprietors, or still more by political friends.

I would recommend among other enactments the appointment of a suitable person as inspector, whose business it should be to examine the boilers within a certain district and satisfy himself by personal inspection, inside and out, where possible, that every boiler in his district is in safe condition for running, and give a certificate accordingly.

Next, the use of hydraulic pressure at intervals of not less than six months to an amount proportioned to the pressure intended to be used; not less than 150 pounds where 100 pounds is to be the working pressure.

I would also call the attention of proprietors to the fact that there are several appliances, not at present in general use here, which greatly tend to economy and safety in the use of steam power. For instance the Glass Water Gauge by which the proprietors, or any person passing can tell by a glance whether the water is at its proper height or not, and in fact is the only method of ascertaining the water level when alkali or other water which foams much has to be used.

Independent feed pumps, by which the engineer can at any time, whether convenient to run his engine or not, pump water into the boiler, and at other times pump into a tank or reservoir ready in any case of fire. This is generally supposed to be an expensive arrangement, but the idea is a mistaken one, as 100 to 150 dollars would furnish and fit this apparatus to any engine in this city.

Fusible plugs, which melt when by any means the water gets too low, and allow the steam to blow into the fire and put it out, are often rendered inoperative by want of understanding how to use them. There should be, at least, three or four of them, one of which should be in place and the others kept in good order ready for insertion when required. One should not be kept in more than one month, when it should be taken out and another put in, and those in reserve carefully examined to see that the metal is not corroded. The time occupied in changing will not exceed half an hour.

If I were engaged as engineer, and sure of my situation for two years, I would, at my own expense, furnish the above arrangements for the time that I was running the engine, as the comfort and security, which I should derive therefrom, would more than repay the expense; but, of course, I do not consider it the engineer's business to do so.

Pressure gauges are in general use by all responsible persons and need not further be referred to.

The employment of a competent engineer, by which I do not mean a man whose sole recommendation is that he served his time to the business, who affects to have secrets in his mode of working, which he is very careful to guard from others. I have always found the man of profound mystery an ignorant man who took this method of hiding his ignorance. Give me a careful and intelligent man, who, by work and study, will render himself competent for his duty, who will not rest satisfied to know only as much to-morrow as he knows to-day, who will not be content till he knows everything about his engine, so that not a bolt or a key can get loose without his being able immediately to detect it and remedy the fault.

But after these qualifications you must not expect to hire him at about the same rate of wages as are paid to a teamster for driving a few yoke of cattle or span of mules. Demand the proper qualifications and then pay for them.

If necessary let every man pass an examination and get a certificate thereof. In this respect I understand the German method is superior to the American, as a man is not only examined theoretically but a committee wait on

him at his engine and note his mode of firing, the amount of fuel used, and the steadiness with which he keeps up his steam and water and other points in actual working.

In the above communication I have not said anything which will injuriously affect any one, as from my acquaintance with steam proprietors here they are as desirous as any others can be to take such precautions as are necessary for safety which also means economy.

W. J. S.

The following observations on the same subject, from a recent number of the *New York Tribune*, are exceedingly pertinent and well timed:

"The details of the calamity at the Indiana State Fair forcibly suggest one or two questions. Was there any necessity for placing a boiler where its explosion could kill or maim nearly one hundred persons? Cannot the power to drive machinery be conveyed from a boiler distance at least a hundred feet from the crush and throng of a public exhibition? Ours is pre-eminently the country of boiler explosions. It is only where our State laws enforce a rigid inspection that such accidents become rare. The framed certificate that is displayed on every passenger steamboat is a badge of protection; but why should this be confined to steamboats? Why not follow up the boiler of every steam-engine by suitable inspection from the hands of the maker to its final destruction? Anybody at present may purchase an old boiler, patch it up, place it under a sidewalk or in a building, and fire up. Perhaps the owner has an intelligent engineer, perhaps not. A rough guess is made as to how many pounds the thing will stand, and the safety-valve is weighed accordingly. That legislative interference which is the horror of an American is rarely applied to steam; and yet there are more people killed by its explosions, in times of peace, than by gunpowder."

ECHO, Oct. 15th, 1869.

Editor *Deseret News*:—Yesterday C. R. Savage, Esq., the well known photographer of your city, and myself, visited a canyon situated about seven miles south east of this place; and felt well paid for our labor. The canyon opens into the station at Echo. The mouth is a narrow gorge bounded by smooth steep hills; but as you ascend the canyon becomes wider, the valley being covered with fine grass. About four miles from the mouth, we found some of the most singular, grand and beautiful formations of conglomerate sandstone we ever saw. Many peaks rising nearly perpendicularly for hundreds of feet, some in the form of pyramids; some having large projecting caps; others worn into the most wonderful and fantastic shapes imaginable. The colors were varied, presenting every shade from white to black. From the shape of many of the rocks we felt authorized in naming the canyon Pyramid Canyon. In our opinion it is one of the most remarkable in the Territory of Utah.

We wandered among the vast pile of rocks until sunset; wishing that instead of a day we could have a week to spend among scenes so grand and beautiful.

Mr. Savage secured a few stereoscopic views, and promises to return the first opportunity for greater results.

Yours &c.,

O. C. SMITH.

THE NEST OF THE CROCODILE.

The favorite haunts of the crocodiles being but seldom visited, in consequence of the insalubrity of the localities in which they are generally to be found, and of the dangerous character of their inhabitants, the habits of these animals are very imperfectly known. The following account of two nests, which were recently found within a few miles of Colombo, may therefore be interesting to naturalists. The first of these nests was discovered by Mr. Symonds of the Survey Department, who found it to contain about one hundred and fifty eggs, which he removed, not without considerable risk, having been repeatedly charged by the old crocodile who was guarding them. My curiosity having been excited by the description which I received of the nest from Mr. Symonds, I went to examine it myself. I found it amongst the bushes on the swampy bank of the Bolgodde lake, at a distance of a few feet from the water. The nest itself consisted of wet vegetable matter mixed with mud, and was raised to the height of between three and four feet, presenting in shape very much the appearance of a small conical haycock, but in color and consistency that of a heap of dung. Round the base of the cone was a circular trench more than three feet broad, and about two feet deep, in which the old croco-

dile was wont to wallow while watching her nest. The circle inclosed by this trench, the whole of which was covered by the base of the nest, was between six and seven feet in diameter. I am not aware that these conical nests have been previously noticed. The eggs are placed at a height of at least two feet above the surface of the water; and, although the nests in Ceylon are principally composed of aquatic weeds, in a wet state, which might be expected to give out considerable heat in fermenting, yet I do not believe that any artificial heat is required to hatch the eggs, because several eggs, which were procured from the Bolgodde nests, were hatched in my house, being merely deposited in earth which was kept damp and exposed to the rays of the sun.

While examining the nest that had been discovered by Mr. Symonds, we were told by some natives who accompanied us that there was another nest, within a mile or two of the spot, which had not yet been disturbed. On visiting this second nest, we found it in all respects very like the first, except that it was not so large, and that beside the trench which surrounded it, there were one or two holes in the swamp in which the natives said that the old crocodile was accustomed to lie. Warned by the narrow escape which Mr. Symonds had when examining the first nest, we approached very cautiously, expecting an attack every moment, and when we were all assembled on the edge of the trench surrounding the nest, we hesitated to cross it, because it was when he was in the act of stepping across the trench that Mr. Symonds was first attacked by the other crocodile, which raised its formidable jaws directly beneath him, and would no doubt have effectually put a stop to his proceedings, had he not promptly discharged the contents of his fowling-piece down her throat. This shot was not, however, fatal; for Mr. Symonds was subsequently charged twice by, as he believes, the same crocodile. On finding, however, that no crocodile appeared, our confidence returned; and at length one of our number ventured to approach near enough to remove the top of the nest, and to take away the eggs, of which he procured twenty-five. On my expressing astonishment at the pacific conduct of the parent crocodile, and suggesting that it was probably absent in pursuit of food, the natives who were with us expressed their conviction that it was at that moment in the trench, but that it was of a different caste from the first. Further inquiries have satisfied me that this belief in the existence of two different species—or, as the natives call them, castes of crocodiles, is universal in the country; and Dr. J. Anderson, of the Indian museum, Calcutta, informs me that a similar belief prevails in Bengal respecting the mugger, which closely resembles the crocodile of Ceylon, if it be not identical with it. One caste is said to confine itself to a fish diet, while the other attacks human beings. The former, called by the Sinhalese Elle Kimbola, or gray crocodile, grows to a larger size than the more savage species, and it is said to be that which is found about Kornegalle. As I have two thriving specimens, hatched from the eggs of the crocodile which attacked Mr. Symonds, and am promised one of the progeny of that which submitted so quietly to the plundering of its nest in my presence, I hope that I shall be able to ascertain, by the aid of some eminent English naturalist, whether they belong to the same or to two different species. At present they present no difference that an unscientific eye can detect.

I may mention that there is some difficulty in bringing up young crocodiles by hand, as they obstinately refuse every kind of food that I have ever presented to them. One, which was brought to me, some years ago, died of inanition, although, for a week or ten days that it was in my possession, I constantly tempted it with both flesh and fish. Those which I now have I feed by forcing bits of raw meat down their throats with a stick, two or three times a week. Under this treatment they seem to thrive, having about doubled in size since they left the egg; but the operation is not a pleasant one, and requires some dexterity, as their teeth are exceedingly sharp, and they lose no opportunity of turning upon the hand that feeds them.—*Rev. Bancroft Bouke.*

Spending \$50,000 a year, out of an income of 5000, caused a New York cashier to default.

Two detachments of cavalry collided at a recent military review, near Beverloo, Belgium, and seriously injured fourteen men and two officers.