

however, to reflect upon what disastrous effect this may have upon the cost of living in the world and in the interest of humanity we hope that they will bury the secret beyond all chance of recovery."

#### MUMMIFIED BODIES OF MINERS.

Fifteen bodies of miners were recovered from the St. Paul coal mine. To the amazement of veteran mine inspectors, eleven of the bodies entombed since last Nov. 23, when brought to the surface, were found to be almost mummified.

The mummified condition was brought about by the bodies having been during the three months in a part of the mine which was dry and warm, so that they went through a slow process of drying up.

"This is one of the most remarkable incidents of a disaster which has been full of wonders," declared an old mine inspector. "The mummies are in such good preservation that they might have been taken out of ancient tombs of Egypt."

The bodies of 173 men remain in the mine, it is estimated.

Fighting through fire and the deadly black damp, which ever since the disaster has stood between them and the bodies still entombed in the mine, the rescuers found the eleven bodies in what is known as the second level. They were about 175 feet from the main air shaft. The men, instead of retreating to remoter parts of the mine, evidently had made a desperate effort to escape when the fire broke out and they were among the first to die.

They were found with their arms stretched forward and face down, having been suffocated, as they ran, probably by a gush of heat and gas. Shut in an airtight chamber when the mine was finally sealed up, they remained in a kind of an oven, in which the temperature was a little above blood-heat. Their clothing was so badly scorched and their features so badly disfigured by falling rock that identification was difficult.

#### SUPERHEATING.

A superheater is an appliance placed between the boiler in which the steam is generated and the engine in which the steam is used, so that a certain degree of heat known as superheat may be added to the saturated steam so as to "dry" it, and as a result prevent the occurrence of condensation. This condensation of saturated steam may be brought about either by withdrawing steam from a higher or lower pressure, or by applying heat to the steam after it has left the boiler. The result of the condensation is that the steam has a temperature greater than that corresponding to its pressure, its volume is increased, but the pressure remains constant. Seventy-two (72) British heat units have to be added to superheat 1 lb. of steam by 130° Fah. This is only about 6 per cent. of the heat required to generate 1 lb. of saturated steam, the resulting increase of volume due to the addition of the 6 per cent. of heat averages about 30 per cent." (Prof. W. H. Watkinson).

The benefits derived from superheating are as follows:—Steam condensation is prevented. Leakage past valves and pistons of engines is less than when saturated steam is used. Superheated steam flows more easily through the pipe columns and other steam passages than does saturated steam. Owing to this feature there is less drop in pressure between the steam

chest and the cylinder during admission, and the back pressure during exhaust is also reduced. The result is that there is a great saving in the consumption of steam and coal, and following these benefits there will be less capital expenditure.

The terms of the new agreement under discussion between the employers and the colliery workmen of South Wales include some interesting new provisions. Among these is one requiring all men applying for work to be subjected to medical examination. This is thought by the employers to be a necessary safeguard against complications arising under the Compensation Act.—*Can. Mining Journal*.

(Continued from page 10)

days, and the manager states that the output of the day is less by from 110 to 125 tons. It is perhaps not unnatural that the managers should doubt whether philanthropy pays. But at the same time such experiments do not decide the question. The effect upon the bodies, minds and morals of fewer hours every day is not to be gauged by working long hours five days, and short hours one day in the week. And in the above cases the contract men felt that they could make up their earnings during the other five days if they wished to, while the non contract men, in some of the cases at least, did not lose any wages through the half holiday. But while this is true, the figures about the half holiday are not wholly without significance. There is no way of deciding beforehand what effect a reduction in time would have upon the efficiency of the contract men. It is certain they would not be content with less earnings. If, then, the shorter day reduced their earnings, they would either work harder hour per hour, or demand a higher rate of wages per ton. And if they made this demand they would argue justly that they should not be expected to bear a loss of wages because of a law passed mainly in the interest of the non-contract employees.

One reason why this question is difficult to answer is that it is impossible to calculate how much the day of the contract men would be shortened by an eight hour bank to bank law. This difficulty about time is not so great in the case of most of the non-contract men. These would lose on an average at least two hours a day, and probably more. And these could not do as much work under the eight hour bank to bank law as now. Some of them have to wait more or less for their work, others are doing work where speeding beyond certain limits is undesirable, and in the case of all of them a reduction of two hours would be hard to make up. The argument of the American Federation writers seems pertinent here. Could the men do as much work in 8 hours bank to bank as in 10 or 11 hours bank to bank? And should the question of a shorter day be made to depend upon the answer to this question?

Working Days in Nova Scotia.—The nominal year in the mines includes every day except Sundays, National, Labor Day, Christmas, and, with some, Church holidays. This gives about 300 days. And apart from a very few cases of a short Saturday in summer, there are no recognized short days. It is, however, seldom that any mine works 300 days in the year.