

MARITIME MINING RECORD

Vol. 14, No. 16. Stellarton N. S., Feb. 28th. 1912. New Series

RESCUE APPARATUS.

PAPER READ BY MR. JAMES McMAHON.
SOUTH CAPE BRETON MINING SOCIETY.

In making an investigation of the work done at the Mines Bureau of Pittsburgh, Pa., I concentrated my efforts mainly upon gathering information as to the experience of the Rescue and First Aid Departments, and, while I did not lose any opportunity of getting knowledge of what is being done by other Departments, to appreciate and carry away a proper sense of the different lines of work in all the Departments would require much more time than I could give.

In Rescue work the Department have found the way well prepared for them, as the various types of rescue apparatus in general use had been already perfected and in use over widely distributed areas both in Europe and America. They therefore started out on accepted lines to train men in the use of the apparatus at the Arsenal, Pittsburgh, and from there sent out men to act as engineers and foremen of other rescue stations scattered throughout the States from Washington, D. C., to Seattle, Washington. The Bureau now has attached to the Rescue Department several men who are in readiness to answer any call at any time. They are all experienced mining men of good character, sound physically, and of even, unexcitable temperament, and steady habits of life. In watching their performances and studying them at close range, I found them much as the average mining man in Cape Breton and elsewhere, whilst there was evidence of earnest enthusiasm in their work and a generous disposition to share their knowledge with others.

At the Arsenal the equipment is of a very non-descript character. They have the following apparatus:

Draeger type, 1907-10-11. (Six types in all.)

Westphalia, 1907-09-10. (Six types in all.)

Fleiss, renamed the 'Proto', (Two types.)

Aerolith, using liquid air. This has only been added since October 27th., and not tried out yet.

Of the smaller type of apparatus there are the Half-hour Draeger, the One-hour Draeger, and the Hull Self-Rescue Apparatus, also several forms of mechanical air machines like the König, Westphalia, and Bureau.

For charging apparatus using oxygen, hand pumps of the Draeger or Westphalia type are used, and after strict inquiry, I find there is not a motor driven pump in the whole of the States or Canada except our own, so in this matter, as well as in the establishment of the first Rescue Station on this side of the Atlantic, the Dominion Coal Company show

the way.

They have a large number of Palmotors and they also have several Bratt resuscitators.

Miscellaneous equipment comprises telephone sets and cables wound on drums for communication underground; ropes for exploring parties; horns for the leader of the party; electric lamps of the H55d, Draeger, and Hirsch types.

The training chamber is of the usual type, with means of exercising the men and putting them through drills involving timber-setting, brick-laying, building of stoppings, tramming, sawing timber, climbing and carrying men and material over overcast, weight lifting and all the various contrivances used to keep men actively engaged. Instead of smoke or sulphur they now use formaldehyde and permanganate of potash to produce unfavourable conditions in the chamber. This has the advantage of not deteriorating the apparatus by corrosive fumes of smoke.

In many ways the Arsenal, at Pittsburgh, compares unfavorably with a modern rescue station. The buildings once formed part of the military establishment and were given to the Mines Department to start its experimental work in. They are most unsuitable for the work of training, etc., and the wonder is that so much has been accomplished under present conditions.

In the training of men they also follow the lines of well-established usage, though the time taken for complete training is much less than I consider necessary. They try to compress into a week or ten days the training that would be better carried over three months, and only suggest that a man should present himself once in every six months for renewed training. This should be compulsory to be of any value. The recruit, after passing successfully all the tests of the Doctor, and training, is given a certificate of efficiency, and a number which is kept on file at the Bureau.

In the matter of efficiency of the various types of apparatus, the Bureau refuses to act in an advisory or critical capacity beyond that necessary to indicate which apparatus has successfully answered their requirements. In this way they assist, with equal solicitude, the claims of Draeger, all types, Westphalia, all types, and Fleiss, leaving to individual opinion to decide upon the apparatus most suitable for individual requirements. The men of the Bureau and the Rescue corps outside are equally divided in sentiment, each one speaking in favor of the type that he likes best or has used most.

The reason for this is that some decided objections have been made against the Department at Washington on the least evidence or suspicion of favoring one type at the expense of the others, and the officials and men are forbidden to say that any one apparatus used by the Bureau is better than any other. Suffice that