"In my opinion the recognition of the U. M. W. would be prejudical to the welfare of the community here." G. H. D.

only live as long as they are thrifty, and, though I do not pretend to preach thrift from an exalted standpoint, I do beg those who are present and those outside these walls whom my words may reach to remember that thrift is the surest and the strongest foundation of an empire, to sure, so strong and so necessary that no great empire can long exist that disregards it. (Cheers.)

MINING DISASTERS.

When one reads of mine horror after mine horror following in steady succession in the United States, he is inclined while praising the work now being done by the U. S. Geological Survey Department to wonder that some such work was not done years ago. A New York paper gives a full account of the manner in which the experiments are being carried out. These accounts have been condensed as follows. We are indebted as we quote to the Montreal Witness :

"The ever recurring fatalities in coal mines caused by explosions, the origin of which has been not infrequently remote, emphasises the gravity of the recent report of some United States scientists employed by the Government, who assert that they have proved by experiment that most of the so-called safety explosives used in the coal mines of the country are veritable menkillers. Every time, they say, a miner touches a match to a fuse he takes his life in his hands, and the records show that hundreds have been sacrificed by these supposed non-dangerous agents. Coal dust has been found to be nearly as explosive as dynamite, and many heretofore mysterious mine disasters are now laid to this apparently harmless material. These two important discoveries and others of almost equal value to coal miners have been made by a few men, who heroically risked their lives in experimenting. They carried on their experiments in a mammoth boiler-plate cylinder at Pittsburg, reproducing the exact conditions existing in the lower levels of the coal mines in the great metal tube which is six feet in diameter and a hundred feet long. Already a great deal of information has been gained relating to the deadly fire damp, to gases, and the effects of various kinds of blasting powders. In a big glass encased, airtight room, adjoining the boiler plate tube, the geological survey men are making exhaustive experiments in rescue work. The room contains tunnels such as are found in a coal mine, and in these narrow ways are placed various obstructions, similar to those that are found in a mine after it has been wrecked by an explosion. Dummies, weighing 150 to 200 pounds, which are supposed to represent asphyxiated miners are placed at intervals along the tunnels, and the minature mine is then filled with deadly gases and a rescue corps is sent in, The rescuers are provided with helmets carrying a supply of oxygen, and remain in the tunnels for intervals of two hours, removing obstructions, picking up the dummies and carrying them out on stretchers, and performing all the duties that ordinarily fall to the lot of a rescue party after a mine disaster.

Besides that, this make-believe rescue corps has gained practical experience, for the other day it was called upon to help real miners in genuine peril. One of the mines near Pittsburg caught fire and the geological survey men hurried to the scene. One miner was saved from death. He was taken out of the tunnel in an unconscious condition by one of the helmeted rescuers, received oxygen treatment and recovered. One half of the large building in which the model coal mine is built is constructed as an auditorium, and several hundred miners and operators are able to watch the rescue drill through the big glass windows which seperate them from the gas filled chambers. All this is most admirable work, but according to the New York 'Tribune', the matter which the scientists themselves consider the most important and far reaching, is the fact that they have been able definitely to show that coal dust is an explosive of equal danger with the deadly fire-damp. This has been a mooted question among mining engineers and miners alike, both insisting that it is impossible to explode coal dust unless there is gas present. That the coal dust will explode in a mine where there is no gas has been repeatedly shown to several hundred operators and miners at the testing station. The experts at the station are now bending their energies to discovering some method by which this dust can be prevented from being a serious menace to the miners. Experiments in wetting it have been going on for some time, but nothing of a very definite nature has as yet been learned, unless it is the fact that the coal dust does not ignite when there is a great amount of moisture in it. It is expected that these experiments will have the desired results both of saving life and effecting a saving of the waste in mining coal. These are the true heroics of modern life."

SPONTANEOUS FIRES

There is still much mystery in connection with spontaneous fires underground and on board ships. We are still in need of information as to what is the nature of the physical or chemical property of a particular coal which renders it liable to spontaneous combustion. The rapid raise of temperature which takes place where radiation is prevented can be simply shown by covering an electric light with material such as fine coal, when it will be found that in the course of an hour or so the heat is so great that the glass of the lamp melts and collapses. It was show by Henry Hall, inspector of mines for Liverpool district, that timber will ignite in an atmosphere at a lower temperature than coal or cannel; that partially decayed timber such as old pit props, ignites most readily of all. It is possible that fires underground would not be so frequent if care were taken to clear out all old or used timber from seams where heating takes place.

The receipts of Nova Scotia coal at Boston for last year, according to figures in the Coal Trade Journal, were 370,709—presumably short tons—against 545,652 for 1907. That is, there was a decrease in N. S. shipments for 1908 of 175,000 tons, and yet they speak of the growing market in the New England States.