

number of reforms are desirable. It is to be expected that there will be much difference of opinion. This has been provided for by endeavoring to make the Council a truly representative body. Some are of the opinion that the methods of election do not guarantee this. Some complain that they are not kept reasonably well informed of the action of Council. Some complain that other reforms are needed.

It would be well if members who have reforms to suggest would make their suggestions to the Council in order that they be given due consideration. And it would be well if the Council would keep members better informed as to their actions. A little publicity would probably show that some of the grievances are ill-founded and that others could be easily remedied. As a rule the criticisms offered are not on very important matters, and are hardly worthy of the attention of the annual meeting.

As a rule Institute affairs run along very smoothly, and would probably continue to do so without radical changes in methods. Difficult questions have arisen frequently and have been successfully disposed of. There are, however, always some discontented members. Greater endeavor might be made to remove the reasons for discontent. Possibly similar reasons are responsible for some good mining men in Canada not joining the Institute.

The retiring president, Dr. A. E. Barlow, has long been an enthusiastic supporter of the Institute. He has given much of his time to furthering its interest and will be able to present a good report. His successor is Mr. G. G. S. Lindsey. Mr. Lindsey is not a geologist, but is otherwise well qualified for the position.

### SINKING SHAFTS IN WET GROUND

Among the papers presented at the New York meeting of the American Institute of Mining Engineers was the one on grouting which appears elsewhere in this issue. The author gave a very interesting account of the successful exclusion of water from underground openings. He believes that the methods used are applicable in many cases. The chief difficulty is in sandy ground.

Where the openings are in rock, as most mine openings are, the use of cement grout for the exclusion of water is well worthy of consideration. There are many obvious advantages to be gained by preventing the flow of water into shafts. If it can be economically done, as Mr. Donaldson believes, there is reason to believe that it will become common practice.

### THE EIGHT-HOUR SHIFT

Since December 1, 1913, the underground employes of the Michigan copper mining companies have been required to work only eight hours each day. In a recent issue we stated, in error, that the law required this. A bill providing for the eight-hour shift was un-

der discussion last summer; but was not passed by the State Legislature. Some time later, however, after the Western Federation strike was declared, the mine managers announced that they were willing to grant the demand for an eight-hour day. They had had this under serious consideration for some time, and might have granted it without a strike if they had not found that it is much more difficult to put the eight-hour rule in force than might be expected. There can be little doubt that the strike hastened the determination of the mine managers to try the experiment.

The Michigan copper mines are, by those who know, regarded as mines in which the conditions are very favorable for good work. The ventilation, in spite of the depth of the mines, is good. The machines are usually the best obtainable and are kept in good repair by skilled mechanics. The steel, powder and other supplies used are those which are found by constant testing to give the best results. The managers believe in doing everything possible to increase the efficiency of the workers. Under the conditions obtaining a miner should be able, and is able, to do a good day's work in eight hours.

As a matter of fact there is good reason to believe that few of the miners on company account really worked more than eight hours under the old regulations. The workmen in a large mine are in small groups so far apart that no reasonably economical system of watching the men as is done on surface work is possible. Only occasionally are the workers visited by the shift bosses. They must be judged by the work done between visits. While frequent complaints are made regarding the treatment by bosses, it must be evident that no such surveillance as is practised by foremen on surface work, such as railroad construction, is possible. There are abundant opportunities for loafing. It would be remarkable if the men did not take advantage of such opportunities. The experience of mine managers has proven that mine workers are much like other men.

It is easy to conclude therefore that the results to be obtained under the new regulations depend largely on the spirit in which the men accept the change. In proportion as they work a larger percentage of the time they are supposed to work, the total work done in the shorter shift will approach the old figures. The systematic records of the Michigan copper mining companies should prove very interesting in this connection.

While the strike seems to have failed, and has, owing to the methods of those responsible for it, been a disgrace to organized labor, it has doubtless hastened the adoption of new policies which should make the life of the copper miner more attractive.

### AMERICAN INSTITUTE OF MINING ENGINEERS

The annual meeting of the American Institute of Mining Engineers was held in New York February 17-20, 1914. Those present, and there was a large