

at a less cost than at present. He also urged the formation of a mining exchange which would act as a medium between the prospector and the capitalist and be of great service to both. Shares sold at a discount would enable the prospector to secure working capital more readily than if sold at par.

Mr. C. W. CHADWICK endorsed the remarks of the previous speaker. Any combination of four or five men, he thought, should be able to secure a charter at short notice, and put the stock upon the market for what it is really worth. He thought that some resolutions might be prepared which would express the opinions of the people of the district, and to this end he moved that a committee be appointed to draw them up and submit them at another meeting to be held during the week.

CAPT. DEALY seconded.

Mr. BELL did not believe in the practice of gambling in mining stock, and he did not wish to see it introduced in Ontario mining. If a mine was worth anything at all it could be capitalized at a reasonable figure and the stock sold at par. Large capitalization was not required in the Lake of the Woods where the working costs were low. Further, it was necessary to give some sort of protection to the public, hence the desirability of advertising the application for a charter for thirty days prior to incorporation.

GENERAL WILKINSON agreed that a dollar's worth of stock should be sold for a dollar. In England a heavy tax was made on chartered companies.

Mr. H. LANGFORD said he had come late, and had not heard all the discussion, but had listened with interest to what he had heard. There was no difficulty about selling stocks at a low price. The low price simply represented the value of the prospect at the commencement, and as its value was increased by development the value of the stock increased. He did not see why the Government should try to take under its charge the whole of the people of this country. They should give them a chance to speculate in stocks if they want to. As to selling stocks that were fully paid up and non-assessable, at a low figure, there was nothing in the law to prevent it. The Government had heretofore refused to grant charters with a large capitalization. He did not see why they should not incorporate a company for a million dollars capital, or \$5,000,000 or \$6,000,000 if they wanted to. He was in sympathy with the remarks of Mr. Chadwick. He must say he did not approve of the joint Stock Companies Act as it stood. The Government had refused to give the powers in charters that were asked for. He did not see why they should not allow the people to organize with full powers to carry on their business. The Government should not try to be so paternal as to hinder the people from speculating in stock if they want to. The trouble with them was that they were not sufficiently posted as to our needs, and therefore did not give the powers that were wanted.

Mr. FRED. PROUDFOOT thought both the Joint Stock Companies Act and the Mining Act could be amended to good advantage. One point was very defective. The law in respect to miners' licenses was very defective. If a miner took out a certificate the law should give him some rights. He did not find the statute sufficiently clear. He thought a prospector should have sixty days within which to perfect title to a discovery. The law gave him no rights in that respect.

Mr. T. R. DEACON spoke of the large extent of country to which Dr. Coleman referred. He said only a very small portion of it had been thoroughly prospected. There were still millions of acres open. He had surveyed a large number of locations in the last few years, and the best properties were those he had surveyed this year. As he interpreted the Act a man can hold a prospect for a reasonable time if he will blaze a tree and write his name on it, and then make application to the Government.

After some further discussion the following were appointed a committee to draft resolutions:—B. T. A. Bell, Dr. Coleman, C. W. Chadwick, George Drewry, T. R. Deacon, General Wilkinson, K. Rogers, F. Proudfoot, N. C. Westerfield and H. Langford.

The meeting then adjourned till Thursday evening at the Town hall.

Meeting on Thursday Evening.

The adjourned public meeting was held in the Town hall, Rat Portage, on Thursday evening, Mayor Barnes in the chair.

Mr. PROUDFOOT presented the report of the Committee on Resolutions, which, after being submitted clause by clause, was adopted as follows:—

"Whereas the Ontario Mining Institute having caused this quarterly meeting to be held at this place, and having called a public meeting of the citizens and mining men of the place and district, and after listening with great interest to the able address of their worthy secretary, Mr. B. T. A. Bell, Dr. Coleman of the Toronto School of Practical Science, General Wilkinson of the Regina Mine, N. C. Westerfield, capitalist and mine owner of St. Paul, Minnesota, and having heard also the views of many influential citizens and mining men, the following resolutions were unanimously adopted:—

In view of the fact that the attention of the whole world has been drawn to the mineral resources of the Dominion, and that millions of foreign capital have gone into mining enterprises in British Columbia, and in view of the fact that the Province of Ontario has an enormous area of mineral lands (covering some 20,000 square miles), and the fact also that its vast wealth in mineral resources (though now amply proved by actual results) has not been fully aided or given prominence to.

Be it therefore resolved: 1. That the Ontario Mining Institute be respectfully requested to use its power and influence with the Ontario Government to induce it to give its assistance to the district in every way in its power, feeling that by doing so it will result in vast advantage to the provinces at large.

2. In view of the fact that as yet no map of the Lake of the Woods district has been issued showing the locations which have been patented or applied for as mining locations, the Government be urged with all possible speed to issue the best map possible showing locations surveyed or taken up to date, and that the same be distributed broadcast and free of charge, as the Province of British Columbia and other Provinces are doing, both as to maps and literature respecting their resources.

3. Resolved in this connection, that a sub-agency of the Crown Lands Department (having special reference to the mineral lands of the District) be established at this place, where maps (corrected up to date) and all possible information can be had as to their lands; and that a cabinet of minerals be placed here in connection with said agency.

4. As to the formation of Joint Stock Companies for mining purposes, be it resolved, that the Ontario Government be urged to pass an enactment whereby such companies, for mining purposes, can obtain a charter with greater speed and at a much less cost than at present.

5. That the present law as to Miners' License be changed so as to define and settle the right of prospectors to hold a claim for sixty days after discovery thereof, and that in the event of his discovery not being surveyed or paid for within that time, the location be considered as abandoned.

6. Be it resolved, that the Government be urged to establish a Mining School at this place during the winter months so that miners and those interested in the mines may be able to avail themselves more fully of its benefits.

7. So far as regards the annual rental now charged upon mining leases, be it resolved, that the Government be urged to allow the same (or so much thereof as has

been paid as rent), to be applied upon the purchase money for said land when the patent is applied for, and that this rule be made to apply to all mining leases now outstanding and hereafter to be granted.

8. Resolved, that the present law as to royalties upon the precious metal, while of little utility to the Government, is a serious impediment in the way of investors, and should be totally abolished.

9. Lastly, it is the unanimous opinion of this meeting, and of many competent judges, that this district, both as to its mineral resources and as to its advantageous position for mining, is second to none in the Dominion of Canada, and is fully justified in claiming some of the millions of foreign capital now going into the mines of the West, and that any assistance now given by the Government in utilizing or in setting forth its advantages will result in great benefit to the Province and District, and will come at a most opportune time.

SUPPLEMENTARY RESOLUTIONS.

Resolved, that a map of all locations in unsurveyed territory be prepared by the Crown Lands Department once a month (showing locations up to date), and a copy to be sent to, and posted up, in the Crown Lands Office in each mining district in the Province.

Resolved, that the secretary of the Institute be instructed to communicate with the Honourable the Commissioner of Crown Lands, with a view to securing the immediate publication of Dr. Coleman's report of his geological investigations in the Lake of the Woods, Manitou and Rainy River gold fields, and that the distribution of said report be made in pamphlet form, separate and distinct from the annual report of the Bureau of Mines. Further, that the Director of the Geological Survey of Canada be requested to publish at the earliest possible date all information in his department respecting these districts.

Resolved, that all machinery and explosives used in mining be admitted free of duty in all cases where the same (considering the question of freight charges) can be laid down at the lowest cost to the purchaser, and that the Institute be respectfully requested to use its influence with the Dominion Government in having the law amended so as to cover the desired change.

Resolved, that it is the opinion of this meeting that great advantage would accrue to the mining interests if the Ontario Government would appoint a competent assayer and mill-man to give reports of ores submitted either for mill test or assay.

Resolved, that the Ontario Mining Institute be requested to memorialize the Dominion Government with a view to securing an early abolition of the duty on explosives.

Resolved, that a hearty vote of thanks be tendered to Mr. B. T. A. Bell for having called the quarterly meeting of the Ontario Mining Institute to be held at Rat Portage, and also for the kindly interest he has lately taken in this district as a mining centre.

The Economic Value of Coal Dust.

By W. BLAKEMORE, M.E., Glace Bay, C.B.

This brief paper has been suggested by a series of letters which have recently appeared in various mining publications on "The Utilization of Waste Products," and is in many respects a kindred subject; for it is not too much to say that some of the most useful and profitable manufactures throughout the world to-day are due to the inventive genius of man directed to the reclaiming of waste products.

If it is now possible to convert all the bye-products of coking into marketable commodities, yielding so large a profit that the manufacturer can afford to lose sight of the base; if blast furnace slag can be made into a valuable fertilizer, and if the unsightly heaps or banks from our mines, which hitherto have only disfigured the surface of the earth, are being transformed into excellent building material, surely it is time that scientific knowledge and practical experience should combine to remove the reproach which rests upon the mining intelligence of our day when, with few exceptions, 10 to 15 per cent. of all coal mined, after being reduced to powder or duff in the operation, is either left in the mines as useless, or, after being brought to the surface and handled at considerable expense, is either dumped in a waste heap, or, as in the Hocking Valley, blown away by artificial means to drape the hills with a sombre mantle and pollute the streams to an inky blackness.

The urgency of this question lies in the fact that of late years, owing to increased competition, mine owners have been compelled to place their coal in the market in a constantly improving condition. Fifteen years ago the average yield of slack in Great Britain was 20 per cent. of the output. A few days ago one of the highest authorities in the mining world stated that it is now 30 per cent.

In face of the improved appliances both for mining and screening coal, it cannot be a fact that more small coal is produced in operating the mine; it is rather to the before-mentioned circumstance that we must attribute this increase, and if it was an important consideration in the old days how best to manipulate the 10 or 15 per cent. of small actually left after allowing for colliery consumption, &c., it must be still more important to determine this now that the percentage is so largely increased.

One need hardly point out that the net result of producing 30 per cent. of slack is, that after consuming a possible 10 per cent. in the usual way there is a balance of 20 per cent. which, if no market be found for it, means an addition to the total cost of a corresponding percentage.

Of course the first aim of all mining operations is and must be to produce the minimum quantity of fine, at least until that day (of which science has already given some promise) shall dawn when all coal is reduced to impalpable powder and then converted into electrical energy before leaving the mine. In other words, the fruition of those hopes which depend on the direct production of electricity from disintegrated coal. Meanwhile, there can be no question that the first thing to aim at (and indeed this is not a question of option but compulsion) is to make good round coal, leaving some 30 to 40 per cent. of small. This, if properly handled, can be divided into 25 per cent. of nut and 15 per cent. of duff.

For the nut there is already an increasing sale in all populous centres, this class of coal being especially advantageous for cooking purposes, and also growing in favor for stoves, where anthracite is not absolutely necessary.

With reference to the 15 per cent. of duff; there are many purposes for which it can be profitably employed, and in this connection there is a fact too often forgotten, viz.: that the chemical constituents of the despised coal dust are precisely the same as of the large coal, and if intelligently handled are capable of developing an even greater potential energy. The reason of this is that by washing, practically all ash can be removed from the former, whereas, the larger lumps of the latter conceal many impurities.

The first important advance made in this direction was by Dr. Siemens, who, more than a quarter of a century ago, invented a gas producing furnace, which con-