

good current of air sweeping along the edge of it is only sufficient to keep the volume of gas from enlarging without carrying it all away, or in the case of a large cavity in the roof containing gas with the air-current sweeping under it. In this case, if the gas was in explosive proportions, it would remain so right to the edge and on putting the lamp into it the flame would immediately spire up, and in all probability explode in the lamp and put out the flame.

By a careful test in this manner a percentage of 2½ can be found with a cap about 1/16 of an inch in height. Enlarging this would show a bigger percentage (about 7 per cent.) raising the cap almost the height of the lamp, whilst if 10 per cent is present the gas will explode; higher percentages have the effect of putting out the light through the insufficiency of oxygen to carry out the process of combustion.

If the gas was present in such quantity as to only show a small cap, I should consider it as dangerous, and not allow the miner to work in it.

If it was suspected the place contained black-damp, I should use great care and caution, and should take two lamps as before, holding one lamp as high as possible and the other close to the floor, advancing slowly into the place. Then if the lamp showed the least signs of the damp I should hang one lamp behind me and thrust the lamp with which I was making the test forward inch by inch, keeping it close to the floor and at arms length; and if the damp was in sufficient quantity and density the lamp would quickly die down, but if it was raised smartly up the light would not be lost. If 3 or 4 per cent of damp is present in the air, it has the effect of producing headache and inability to work, while 10 to 15 per cent would put out the light, and if a person unfortunate enough to get into this, only remained in it a very short time he would be overcome; and unless he was pulled out death would very soon ensue. Unless the undertaking was an important one, and in charge of a competent person I should consider the low percentages dangerous, and would not allow the mine to work until it was cleared away.

If these tests are carried out in this way there is very little danger to the examiner, but in the case where these accumulations are known to be present, it is much safer to be accompanied by another person, who, whilst the examiner is making the test, will remain a yard or two behind.

#### RECIPROCITY AND THE PRICE OF COAL.

The following interview with Gd. Master McNeil and Gd. Sec'y Moffatt appears in the Herald of Monday last:—

"I suppose you have been interested in the discussion that has been going on for a year or so past on reciprocity and the high price of coal to local consumers?"

"Yes, the miners follow the discussion closely, if it can be said that there has been a general discussion, but I do not think there has been. Of course, Mr. Milner, of the Free Coal league, loses no opportunity of airing his opinions, but his articles are not considered weighty, by, at least a majority of the men, and are causing no concern, not to say alarm. The official heads of our coal companies must be credited with being capable business men, and the miners cannot imagine, if there is all in reciprocity which its advocates say, that they would turn their backs upon it. That is not their way; instead they are, I believe, on the lookout for new markets, but they desire profitable ones. We were told

two or three years ago, that markets could be had in Europe. So they can, and so they can almost anywhere, if no regard is had to profit. Shipments were made on a somewhat large scale to Sweden, but I am informed there was no money in it, and, consequently, Sweden as a market was abandoned. Attempts have been made to send coal to various other points with a like result.

"Prudence suggests," Mr. Moffatt continued, "that the duty be not tampered with until there is the perfect assurance that, duty off, we can capture a very large part of the New England market."

"I conclude you are not in favor of reciprocity. Can you speak for a majority of the men?"

I am safe in saying that a vast majority of the men are at present opposed to any interference with existing arrangements, and though I am not the spokesman of the operators, I believe a majority do not look upon the agitation—if there is any—with favor. Indeed the authorities on the coal trade have not expressed any great cordiality for the movement."

"And who do you consider authorities?"

"That is too personal a question, but I may, without risk, quote the editor of the Mining Record, who is considered to have as big a grasp, all around, of the coal trade of Nova Scotia as any one. He has not, it is true, come out squarely against reciprocity. He has told us, time and again, that he has the open mind. Knowing the editor of the Record well I read between the lines and take his "open mind" to mean that he is willing to be convinced of the benefits to accrue to the coal trade from reciprocity, convinced by and by, not just yet. With a vast majority of the miners he is content to let well enough alone at present. I admit that a year or two ago the Record thought it was absolutely necessary we should have new markets, but for the past six months or so it has been silent on the subject. Close readers of the paper perceive there has been a change of front and that the Record's opinion is that there is about to occur a phenomenal development of the home, that is, the Canadian market. I may confess that I have had several close conversations with the editor of the Record on the subject, and he has given reasons why agitation in favor of reciprocity is unnecessary on the part of Nova Scotia. I gathered from the conversation that he is of opinion that reciprocity, or something akin to it, will come in a few years without any desire on our part for it. Or, in other words, he thinks that just as during the anthracite strike there was a suspension of the American duty on coal, in order to meet the exigencies of the situation, so there may come a suspension of the duty on imported coal in order to meet exigencies in the New England states, and that the suspension of duty may come regardless of any action on the part of Canada; and he gives some plausible reasons for his belief."

"What are these?"

"As he himself has not yet seen fit to give them publicity I might be breaking a confidence to give anything further. Possibly the agitation for reciprocity, whether it be a one man agitation or emanating from a 'league' might not have been looked upon by the miners with hostile eyes, had there not accompanied it a clamor for cheaper coal and an abuse of the operators as robbers."

"You think then that the clamor for cheaper coal is to be deprecated?"

"Most certainly that is the opinion generally held by the miners. The increase in rates to the colliery workers was consequent upon an increase in the market price of coal, and we fear that any reduction in price might be followed by a demand from the operators for lower rates."