

lamps might be easily constructed for the production of Acetylene directly from the carbide. The latter, for railway work, could be stored in steel cylinders (the same in which oil gas in the Pintsch system at present is compressed), and by a self-adjusting stopcock the water could be brought in contact with the carbide, thus evolving the gas steadily, and illuminating the cars with a white, cool flame. The same principle, with minor alterations in detail, has been suggested with regard to "acetylene lamps" for use where other gas could not be obtained, such as country houses, etc. Such lamps would contain the carbide in the stand or pedestal, and the water simply be allowed to drop on to it. The gas so liberated could be burned from a small steatite "hole" burner. Another novel suggestion is its use for bicycle lamps and for camp lights. However, the chief use of the gas would be in enriching water gas or low grade coal gas, for which, providing its poisonous qualities did not disqualify it, Acetylene would prove of the greatest value.

We have not as yet any precise data as to the cost of calcium carbide, although some authorities have stated its price at about \$15 to \$20 per ton, and experiments carried out on a practical working scale have shown that one ton of the carbide yields on the mere addition of water between 10,000 and 11,000 cubic feet of Acetylene. At the same time, about 1,500 pounds of lime are produced, a material of some value in gas works.

A consideration of the marvellous illuminating power of this gas together with its simple and cheap production, leaves very little doubt but that its manufacture bids fair to become a very formidable rival of the foremost gas enrichment processes now in practice.

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## OTTAWA PHYLLOPODS.

By ANDREW HARKELL.

Two years ago, when examining a shallow pool near New Edinburgh, I saw some transparent little creatures actively swimming about. Were they the larvæ of some insect? I caught a number of specimens and on placing them in a glass jar and observing their structure and movements, set about determining what they were, as they were quite new