

the then lake. At the present time there are three lines of railway running through it. Such has been the rapid growth of the Sphagnum moss. In some places the peat reaches a depth of nine or ten feet, the whole, with the exception of that portion close to the shores, floating on the top of the water.

*Its Calorific Value as a Fuel*—The elements of peat are essentially the same coal, save and except the sulphur and phosphorus, viz:—carbon, hydrogen, oxygen, and nitrogen. Its freedom from sulphur and phosphorus is a very essential matter, especially for the smelting of ores. It does not require coking or reducing to charcoal but can be used direct from the machine, although it will stand to be coked and charcoaled equally well with coal. It is extensively used in an air-dried state only in Norway and Sweden for the reduction of iron ores, and some of the finest brands of iron are smelted with peat. It makes more homogenous iron than coal, being very similar to a charcoal iron. In some of the European countries it is being used exclusively for railway purposes. They find it cheaper than coal, the only disadvantage being its bulk. They require specially built vans to carry it in its crude state. It is very dirty to handle as well as bulky, but its freedom from clinkers and cinders and the absence of sulphur, which creates sulphurous acid to eat up the fire boxes and grate bars, is very important. In an experiment made on the Grand Trunk Railway some years ago, the details of which I have before me, air-dried peat, containing 20 per cent. of water compared favorably with bituminous coal. The peat stood 80 as to 100 of coal, or one ton of peat being equal to four-fifths of a ton of coal. Compressed peat is, however, so far ahead of the old air dried material that it may be classed as coal. Its specific gravity is 1.49 weighing 93 lbs. per cubic foot, anthracite coal weighing 93.5 lbs. per cubic foot, its specific gravity being 1.5, and bituminous coal weighing 86.89 lbs. per cubic foot, its specific gravity being 1.39—thus it will be seen that peat produced by the Dickson process will not occupy any more space than the best grades of coal; consequently it will be readily seen that the one great objection which has prevented the more universal use of peat for fuel has been entirely overcome and done away with. In a very severe test made at the John Abell Engine Works, in Toronto, the details of which I have before me, 457½ lbs. of Dickson's compressed peat was tested against an equal amount of anthracite lump