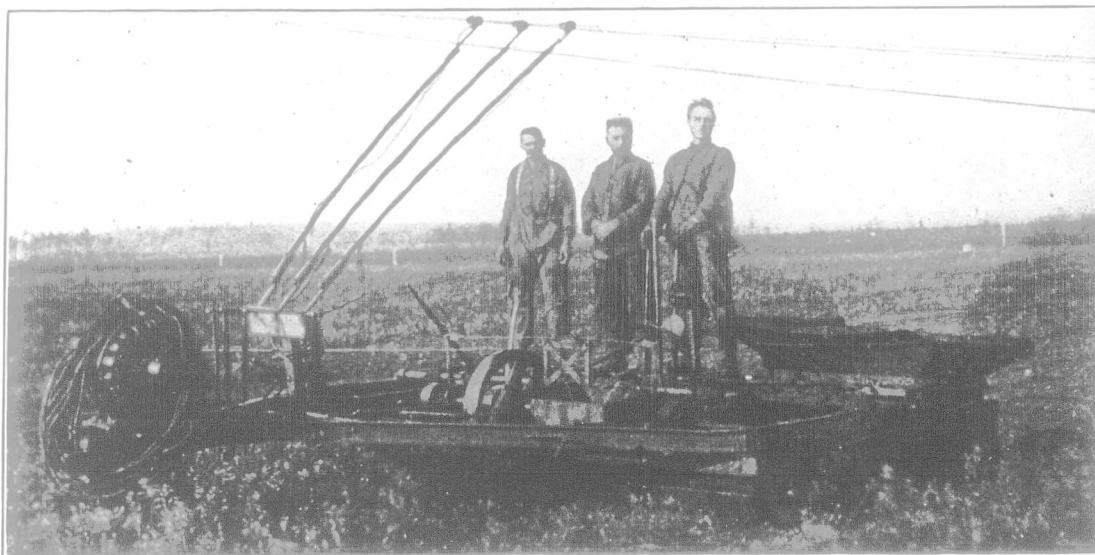


found covered with a mantle of moss and other smaller vegetable matter which may or may not be accompanied by a growth of shrubs or of tamarac and spruce trees. Under natural conditions the bogs usually have a certain amount of surface water which may be permanent or only periodical and this makes drainage a necessary prerequisite to the digging of the peat.

After this surface water is removed a large percentage still remains, part in mechanical suspension and part in chemical combination. It is estimated that as much as 80 to 90% of moisture is retained in the natural peat by these means and the method of manufacture which can most economically and most successfully remove 60 to 90% of this moisture is the one which receives most favor among those interested. The solution of this problem has developed many variations of three main methods of manufacture which are known as first, the dry process, by which the raw peat is collected either in its natural condition or after a partial air drying, the water reduced to a suitable percentage by artificial means and the product briquetted by pressure; second, the wet process, in which the

submitted showed first, that for the economic production of fuel from peat, machinery driven by power must be substituted as far as possible for manual labor. Second, that processes, so far invented, for removing the water content of the peat by pressure and artificial heat have not led to commercial results, and after trial have been abandoned.

Dr. Haanel speaking before the meeting of the American Peat Society in Ottawa in 1910 said: "The endeavor to accomplish economically, by artificial means, and in a short time, what has been accomplished by nature in exceedingly long periods of time, namely the change of peat into a substance similar to coal, has so far, apparently not been attended with success. I would not like to say that it cannot be done; since it is unsafe to make any statements regarding the possibility of future achievement; but at present the outlook in this direction is certainly not encouraging. In view of these facts, the only proper course for us in Canada to follow, if we desire to establish a peat industry and render ourselves, at least to some extent, independent of outside sources for our fuel is to introduce



Machine for Spreading Pulped Peat on drying ground and cutting peat into blocks of suitable size.

peat as collected and before drying is thoroughly ground or puddled, moulded into bricks or any desirable form and then dried and third methods in which the moulding or briquetting of the peat is omitted.

The value of the product and the ultimate necessity of developing the peat areas has led many individuals and companies to formulate methods and attempt the production of peat fuel on a commercial scale during the earlier history of the industry in Canada. Much money, thought and energy were expended and many plants erected in an endeavor to solve the problem. But owing to lack of experience and of sources of information as to methods, etc., most of the enterprises proved to be failures either commercially or mechanically or perhaps in both respects. With a view to the preventing of any further futile expenditure on the part of private investigators the Dominion Department of Mines about 1907 appointed a committee to investigate conditions and methods of manufacture in Europe where the industry had already been placed on a successful working basis. The report

such processes and such machinery as have proved successful and are now in actual commercial operation in Europe. It was with the view of introducing these methods in Canada and of showing that they were adaptable to Canadian conditions that the government purchased a bog of 300 acres at Alfred, Ont., and began the manufacture of peat by methods which had been found to operate successfully in Europe.

Without giving details of manufacture by the two methods, namely wet and dry processes, it will be sufficient to show some differences in the finished product which show decided advantages in favor of the wet method and which coupled with advantages in manufacture have served to bring about the adoption of this method in Canada. The following differences in the peat produced by the two methods are noted: First, The dry process fuel is not so dense as the wet, i.e. more fuel is contained in a given volume of wet process fuel than in the same volume of dry process.

Second, the dry process of pressure peat consists of unaltered particles of vegetable material.

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