

levelled, whereby transportation is facilitated and a better shaped peat is obtained. Any reasonable amount spent on the drainage and levelling the bog is, therefore, generally well spent and pays in the long run.

The drainage of the bog should be done at least one year previous to beginning of manufacturing operations, in order to give the bog time to set down. Experience has shown that when a newly drained bog contains peat of good quality gives per cubic yard about 200 lbs. of air dried peat with 25% moisture, the same bog after one year gives 250 lbs. and after two years 300 lbs. or more per cubic yard.

Trees preventing the free access of air and wind should be removed, the effect of the wind on the drying of peat is of more importance than that of the sun.

The machinery and methods employed must be suitable for the bog. The bogs differ greatly as well as the local conditions and a machine or method which works satisfactorily in one bog may be found very unsatisfactory in another. A thorough investigation of the bog and the advice of a competent person is therefore desirable before operations are started. A capable superintendent or foreman, trained workmen and suitable machinery and transportation facilities are of great importance if the work is to proceed satisfactorily. Generally it is preferable to work by contracts, paying the men a fixed sum per 1,000 pieces of peat or per cubic unit of raw peat dug out of the bog.

PRELIMINARY WORK.

The first work to be undertaken after a bog in a suitable locality has been found is the investigation and sampling of same. The area is divided into squares with sides of 150-300 feet, and at each corner of these squares samples are taken from different depths. The instrument used for this purpose should be of such construction that samples can be taken from any desired depth without being mixed with material from any other depth. If the samples from the same depths are of uniform character they can be mixed together and a general sample made, but if they differ materially in composition or appearance separate analyses should be made. The content of ash generally increases with depth and in order to avoid the production of fuel with high content of ash the composition of the different layers should be thoroughly investigated. The degree of humification as well as the cohesive properties of the peat should also be ascertained.

After the levels have been taken, profiles can be made showing the different layers of the peat and a proper plan for working the bog should then be made out. The next work, if the bog has proved to be suitable, is the drainage of same. The main drain is first dug and afterwards a ditch around the margin of the bog in order to drain away the surface water from the surrounding ground. Next in order comes the levelling and drainage of the dryir field, which, as a rule, is the surface of the bog nearest the working trenches.