siderably increased by an intensive pulping process, which also improves the drying conditions, as later explained.

The sphagnum moss and partially humified sphagnum peat are largely used as raw materials in the moss litter industry and have been or are used to some extent for the manufacture of paper, building, filling, packing and insulation materials, for medical use and for the manufacture of alcohol.

b. Hypnum Peat.—The hypnum moss requires lime and occurs, therefore, on limy ground or where the water contains lime. Contrary to the sphagnum the hypnum has thick walled cells without pores or spiral cells and lacks the great moisture absorbing property of the former.

It humifies slowly, has high contents of ash. 8-30%, very poor plasticity, and when dried and handled goes very easily to pieces. Only when well humified and mixed with the remains of other plants, with lower contents of ash, is it suitable for fuel manufacture.

The hypnum bogs are rich in nitrogen, lime and other nourishment, and are, therefore, as a rule well adapted for agricultural purposes.

c. Forest Moss Peat.—This class of peat is formed by mosses, heath plants and the residue of forests. Trunks and roots of trees are generally plentiful, but with the exception of pine these remains are, as a rule, decayed, soft and easily pulped in a suitable peat machine.

The peat, on account of the great variety of plants from which it is formed, is easily amified, but generally has little cohesion. This is improved by a ther that mixing and pulping process. The content of ash is from 5 to 8  $_{\ell\ell}$ .

Wi in well humified and properly treated it gives a good fuel of comparatively high fuel value. Part of the vegetation forming these bogs is always made up of spagnum and on limy ground by hypnum, in which latter case the peat contains a comparatively large amount of lime. It is always rich in nitrogen, and under these conditions suitable for agricultural purposes.

## II.-GRASS PEAT,

This group is sub-divided into three or more smaller groups:

a. Sea Peat.—This peat is principally formed by the remains of such plants as phragmites, scirpus and equisetum, often mixed with the remains of menyanthes, nymphæa, etc. It is easily humified, but always contains fragments of roots not lumified. Generally it is mixed with the remains of fishes and bird. and contains considerable amounts of nitrogen, lime and other inorganic substances. The content of ash is from 8 to 10%. When well humified, it is a soft plastic mass, from which a heavy and compact peat fuel is obtained.

b. Carex Peat.—Peat of this class is formed by the remains of the large variety of plants belonging to the Carex family, generally mixed with the remains of mosses and other plants. The composition is very variable. In