

at a normal temperature and under a higher pressure than in the first compartment. The final treatment consists in subjecting the fibres to another treatment with alkali, this time the strength of the solution being only 1° Beaumé at normal temperature, but still greater pressure. After this, the material must be thoroughly washed, when it is ready for making into paper, either by itself, or by being mixed with other paper stuff, with any kind of paper-making machinery."

*Brin's Process for Manufacturing Paper Pulp.**—This process is both mechanical and chemical. The peat is passed between a pair of rollers, fitted with teeth which open the fibres, and at the same time, by means of a stream of cold water, frees them from earthy and soluble matter. The rollers are situated in a cistern provided with a strainer beneath the rollers to allow the water to drain away. Combs are provided for removing the fibres which may adhere to the teeth of the rollers. The fibres in this condition are passed between a pair of squeezing rollers, made of hardwood or any other material not affected by the chemicals used in this process. By this means the water and colouring matter contained in the peat cells are expelled, so that the liquors used may enter them. The rollers are fitted with springs on the bearings and the fibres are passed through the rollers by a screw conveyor, and are at the same time subjected to the action of a hot solution of caustic soda at 2½° Beaumé, and to a steam pressure of about 75 lbs. per square inch. This apparatus is continuous, so that the fibres are passed repeatedly between the rollers. The operation takes about one and a half hours, when the fibres are discharged into a tank, where they are washed with cold water, which is run off through a strainer, made of wire cloth, at the bottom of the tank. In this tank the mass is kept agitated by a wheel and is conveyed by a jet of steam and gas issuing from a nozzle immersed therein through a pipe to a bleaching tank.

The bleaching tank contains a pair of squeezing rollers between which the fibres are forced to pass repeatedly while subjected to the bleaching action. The gas is supplied by a pipe and is mingled with the steam from a nozzle within the chamber. The gas is active oxygen or oxychloride of hydrogen. When the charge has been bleached, it is discharged into a tank, afterwards confined in a closed vessel containing a solution of caustic soda, at 5° to 6° Beaumé, and water acidulated with " to 3% hydrochloric acid. The pulp is then ready for paper making.

OTHER PEAT PRODUCTS.

Textile Peat.—A number of attempts have been made to utilize the fibrous peat formed of the bog cotton (*Eriophorum vaginatum*) for the manufacture of yarn for weaving purposes.

The cloth made, is, when new, quite soft and nice, but does not wear well. It is on account of its disinfective properties suitable in hospitals and such places.

*Björling and Gissing.