This invention relates to the process of extracting pulp from the hulls of rice. These hulls are a waste product and since they have a high silicate content cannot burn and so are very difficult to dispose of.

The silicate in the hulls may be removed by either one of two methods; namely, the acid or the base process, both of which are well known in the wood pulp industry. We prefer the base process because it is less expensive.

The re-agent in this case is approximately a 5% solution by weight of caustic soda. (1) The hulls are placed in a closed or adjustable vessel and covered with water. (2) To this is added the caustic soda solution, about 25% by weight of the quantity of hulls in the vessel. (3) This mass is boiled under a pressure of 50 to 100 pounds per square inch, for six or eight hours, the pressure being higher when the time of boiling is short. At the end of this time the sodium silicate has settled to the bottom, leaving the fibrous pulp on top. (4) The pulp is withdrawn and thoroughly washed. (6) It is then run through a defiberating machine, such as the balsam stone beater.

A clean fibrous pulp is obtained which by subsequent proper manipulation may be transformed into paper, paper board or other products. Approximately 50% of the hulls is available for pulp, the other 50% being silica and other foreign matter.

What we claim is:

1. The process of extracting fibrous pulp from hulls of rice by placing the hulls in a closed vessel, placing water in the vessel so that it covers the hulls, placing about 5% solution of caustic soda in the vessel, approximately 25% by weight of the quantity of the hulls, boiling the mass under pressure of twenty to eighty pounds per square inch for six or eight hours thus extracting and settling the silicates, removing the fibrous pulp, washing the pulp, and then defiberating the pulp.

2. The process of making paper pulp from rice hulls, which comprises cooking the hulls in a weak sodium hydroxide solution to release the silica in the hulls and cause it to react with the solution to form practically pure sodium silicate solution, removing the sodium silicate solution from the mass and beating the mass to a pulp.

In testimony whereof we affix our signatures.

JEAN FRANCOIS PUTTAERT.
HENRY FRANCIS JOSEPH PUTTAERT.