

UNITED STATES PATENT OFFICE.

PETER PRINS, OF MINNEAPOLIS, MINNESOTA

PROCESS OF MAKING STRAWBOARD

No. 819,595.

Specification of Letters Patent.

Patented May 1, 1906.

Application filed October 20, 1905. Serial No. 283 699

To all whom it may concern:

Be it known that I, PETER PRINS, a subject of Queen Wilhelmina of the Netherlands, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in the Processes of Making Strawboard; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a new and improved process for making heavy paper or board from straw; and to this end it consists of the mode of treatment hereinafter set forth in the specification and particularly pointed out in the claims.

I obtain the best results by carrying out the process in the following manner, to wit:

First. The straw is cut into short sections of about three inches in length.

Second. This cut straw is placed in a closed retort and is therein commingled with quicklime in the proportion of .06 pounds of quicklime to each pound of straw. The retort is rotated for about three and a half hours and all the time steam is introduced into said retort under a pressure of about five atmospheres per square inch, so that the commingled straw and quicklime is kept moist and hot. This second step of the process reduces the straw to a fibrous condition and reduces the commingled mixture to a semifluid condition.

Third. The fibrous pulp is ground up and reduced to a homogeneous mass. This may be done by any suitable grinder.

Fourth. The pulp is further reduced by a beating process or by intense agitation, which also renders the pulp a lighter or less dense body.

Fifth. The pulp is filtered and partially dried, and

Sixth. The dried or partially dried pulp is rolled, pressed, or otherwise formed into

the sheets of desired thickness to form the strawboard or heavy straw paper.

In practice I have found that the above process will effect a great saving in material and in the cost of the production of the completed board. Furthermore, I have been able to produce a better grade of strawboard by the above process.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. A process for making strawboard which consists, first, in cutting the straw into short sections; second, in commingling the straw with quicklime within a closed compartment, and in subjecting the two to the action of steam while under agitation; third, in grinding up the fibrous pulp, to reduce the same to a homogeneous mass; fourth, in beating the ground pulp, to further reduce and lighten the same; fifth, in filtering, and at least partially drying, the pulp; and sixth, in forming the pulp into a sheet or sheets of desired thickness.

2. A process for making strawboard which consists, first, in cutting the straw into short sections; second, in confining the straw in a closed retort, and commingling the same with quicklime in the proportion of .06 pounds of quicklime to one pound of straw, in introducing steam into said retort under a pressure of about five atmospheres, and in keeping up an agitation of the said straw and quicklime for about three and a half hours; third, in grinding up the fibrous pulp into a homogeneous mass; fourth, in beating the ground pulp, to further reduce the same; fifth, in filtering and partially drying the pulp; and sixth, in pressing, rolling, or otherwise forming the pulp into a sheet or sheets of desired thickness.

In testimony whereof I affix my signature in presence of two witnesses.

PETER PRINS.

Witnesses:

A. L. JONES,
E. N. BAKER.