

# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN THE MANUFACTURE OF PAPER-PULP FROM STRAW, &c.

Specification forming part of Letters Patent No. 121,130, dated November 21, 1871.

### *To all whom it may concern:*

Be it known that I, JULIUS A. ROTHE, of Philadelphia, in the State of Pennsylvania, have invented a certain new and useful Process in the preparation of Straw, Indian Corn, Broom-Corn stalks, Sugar-Cane, and other fibrous material in making pulp for the manufacture of paper and other fabrics made of pulp, as well as preparing fibrous materials for the spinning of cloth, &c., of which the following is a specification:

The nature of my invention consists in taking straw, Indian corn and broom-corn stalks, sugar-cane, and other fibrous material; the process herein described for treating fibrous material in the manufacture of paper-pulp, the same consisting in boiling the material in water or in a solution of sal-soda, and then treat with ammonia, as set forth. After having been boiled in water or a solution of sal-soda, then apply to the material, after it has been drawn out of the boiling-vats, the solution of ammonia, (prepared by dissolving ammonia in water) upon the straw or other material, by sprinkling or pouring the said so-

lution upon successive layers as the material is drawn from the boiling-vats and being piled up on heaps, by which means the fermenting process is made very rapid, and a separation of the silicious matter from the fibrous in the plant or other fibrous material is greatly facilitated, by solving the silicious matter and thus disintegrating the same from the fibrous, and rendering the fibrous texture of increased strength and tenacity, greatly improving the fibrous texture, and preparing the same for the manufacture of paper or other fabric made of pulp, and for spinning the same into cloth, &c.

I claim as my invention—

The process herein described for treating fibrous material in the manufacture of paper-pulp, the same consisting in boiling the material in water or in a solution of sal-soda, and then treat with ammonia, as set forth.

JULIUS A. ROTHE.

Witnesses:

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