

UNITED STATES PATENT OFFICE.

WILLIAM P. ARNOLD, OF NEW YORK, N. Y.

IMPROVEMENT IN THE MANUFACTURE OF ROOFING AND SHEATHING FELT.

Specification forming part of Letters Patent No. **130,615**, dated August 20, 1872.

To all it may concern:

Be it known that I, WILLIAM P. ARNOLD, of the city of New York, in the State of New York, have invented certain new and useful Processes for the Manufacture of Paper-Felt from the Reed-Cane disintegrated by the explosive force of steam and certain new and useful products, articles, and manufactures called paper-felt, of which the following is a specification:

To make paper-felt cheap enough and suitable for lining or sheathing frame-houses to keep out heat, wind, and cold, and also for putting under slate and tin roofs, and as a substitute for lath and plaster I use the following new composition of matter: First, I take the reed-cane disintegrated as aforesaid, and reduce it to pulp in the ordinary way, but as it is too soft and tender when used alone, I mix with it some hard stock or straw-pulp sufficient to give the product the necessary compactness and tenacity, preferring, for that purpose, to use two-thirds cane-fiber to one-third straw. After the cane-fiber and the straw pulp are thoroughly mixed together in the

paper-maker's rag-engine I apply rosin-size and alum to the pulp in the rag-engine to render the product sufficiently water-proof for the purposes to which it is to be applied. The size is beaten up with the pulp, which is then run off upon a paper-machine.

This new article of manufacture is well adapted to and cheap enough for building purposes aforesaid. It is stout, strong, pliable, sufficiently non-absorbent of moisture and repellent of water, and not liable to warp.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of reed-cane, disintegrated by the explosive force of steam, and straw-pulp or hard stock treated with rosin-size and alum in the rag-engine, for the production of paper sheathing-felt, as set forth.

2. As a new article of manufacture, the paper sheathing-felt above described.

Chicago, 22d September, 1871.

W. P. ARNOLD.

Witnesses:

GEO. T. GRAHAM,
H. P. HOPPIN.