

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.