UNITED STATES PATENT OFFICE.

HENRY W. JOHNS, OF NEW YORK, N. Y.

IMPROVED COMPOUND FOR ROOFING AND OTHER PURPOSES.

Specification forming part of Letters Patent No. 76,773, dated April 14, 1868.

To all whom it may concern:

Be it known that I, HENRY W. JOHNS, of the city, county, and State of New York, have invented a new and Improved Composition of Matter for Roofing and other Kindred Purposes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same.

This invention consists in compounding the fibrous mineral known as asbestus with pigments, oil, coal-tar, mineral-pitch or asphaltum, wood-tar, resin, varnish, and the like, or kindred compounds of any of these with other minerals, as ground slate, marble-dust, sand, clay, lime, and the like, with asbestus, as will hereinafter be more fully set forth.

The presence of asbestus in any compound designed as a roofing-cement, or for a purpose of similar nature, confers a tough, elastic quality to the compound, which said quality is due to the fibrous and flexible nature of the asbestus.

In those compounds intended for roofing purposes and the like, vegetable or animal fibers were, from their inflammable and perishable nature, excluded from such composition, or only used to a very limited extent. The asbestus is fire-proof, imperishable, and not soluble in water, nor liable to undergo any chemical change under ordinary circumstances. It is therefore the only fit ingredient of a fibrous flexible nature for roofing and other like compounds, and when so employed not only gives body to the fluid pigments, oils, resins, or other substances of a kindred nature, entering into the compound, but also embodies such substances in fibrous mass which are tough, slightly elastic, and durable.

Heretofore asbestus was but little known to the arts, its use being confined to the manufacture of articles of a textile character and of limited durability; but by my invention this anomalous mineral, so abundant in nature, is utilized and made to conduce to the welfare of man.

I prepare it for mixing with other substances by crushing or grinding the fibers as found in nature down to a fibrous flock or pulverent mass. I then mingle it with the oleaginous, resinous, or other matter in any suitable proportions—that is to say, in such proportion as the knowledge and experience of those persons skilled in the preparation of roofing-cements and the like would dictate were they using hair or such other fibrous material heretofore used.

I desire to be understood as not limiting myself to the use of asbestus as an ingredient for roofing-cements exclusively, but contemplate its employment in the manufacture of fire-proof paint, it being mixed in due proportion with the oil and pigments heretofore used, or with the addition of such other ground or powdered minerals as my judgment may dictate. I also contemplate the use of asbestus in the manufacture of a plastic composition for stopping the cracks and fissures in metal and other roofs, or for making tight the joints of steam-pipes, drain-pipes, water-pipes, gas-pipes, and for plumbers' use generally, where applicable. I also contemplate the use of asbestus in the manufacture of a fire-proof paste for coating wood, paper, sheet metal, felt, canvas, or other woven fabrics which are employed for structural or household use.

I append a description of the ingredients and proportions employed in the use of asbestus as an ingredient, but desire to be understood as not limiting myself to the precise quantity or number of ingredients, as the same is subject to endless modifications, all of which, however, partake of one and the same general feature, which is the employment of asbestus as a fibrous ingredient of roofing-cement, fire-proof coating, or plastic compound, for stopping fissures in masonry, roofs, and making tight the joints of metal pipes.

No. 1. Plastic cement for drain-pipes and the like: One-half pound of the viscid residuum of copal and asphaltum varnishes, combined with three pints of partially-distilled coal-tar and one and three-quarter pound of asbestus. This is also applicable as a coating for roofing purposes by thinning the above ingredients down to a suitable consistence with distilled tar, naphtha, or other light oils.

No. 2. Plastic compound for stopping leaky joints and fissures: Seven-eighths of one pound of asbestus combined with two pounds of ground slate and the viscid residuum of copal and asphaltum varnishes, as in No. 1.

No. 3. Plastic compound for joints of steam-pipes and other heated metal connections:

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One pound of asbestus combined with one-half pound of red lead and three gills of boiled linseed-oil or "oil-foots," so called.

No. 4. Body for fire-proof paint or coating: Three pounds of asbestus with three gills of boiled linseed-oil or oil-foots, to be reduced and mixed with pigments and applied with a brush.

No. 5. Cement body for paint or joining surfaces: Five ounces of asbestus combined with one and a half ounce of india-rubber and one pint of spirits, as camphene, naphtha, and like solvents.

I also contemplate combining asbestus in suitable proportions, such proportions as would be obvious to those skilled in the manufacture of fibrous rubber packing, with the rubber, the latter being afterward vulcanized for use as piston-packing, air-pump valves, and the like.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of asbestus with pigments, oleaginous or resinous matters or varnishes, or spirits, or ground, or powdered minerals or rubber, all substantially as described, and for the general purposes set forth.

The above specification of my invention signed by me.

HENRY W. JOHNS.

Witnesses:

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