

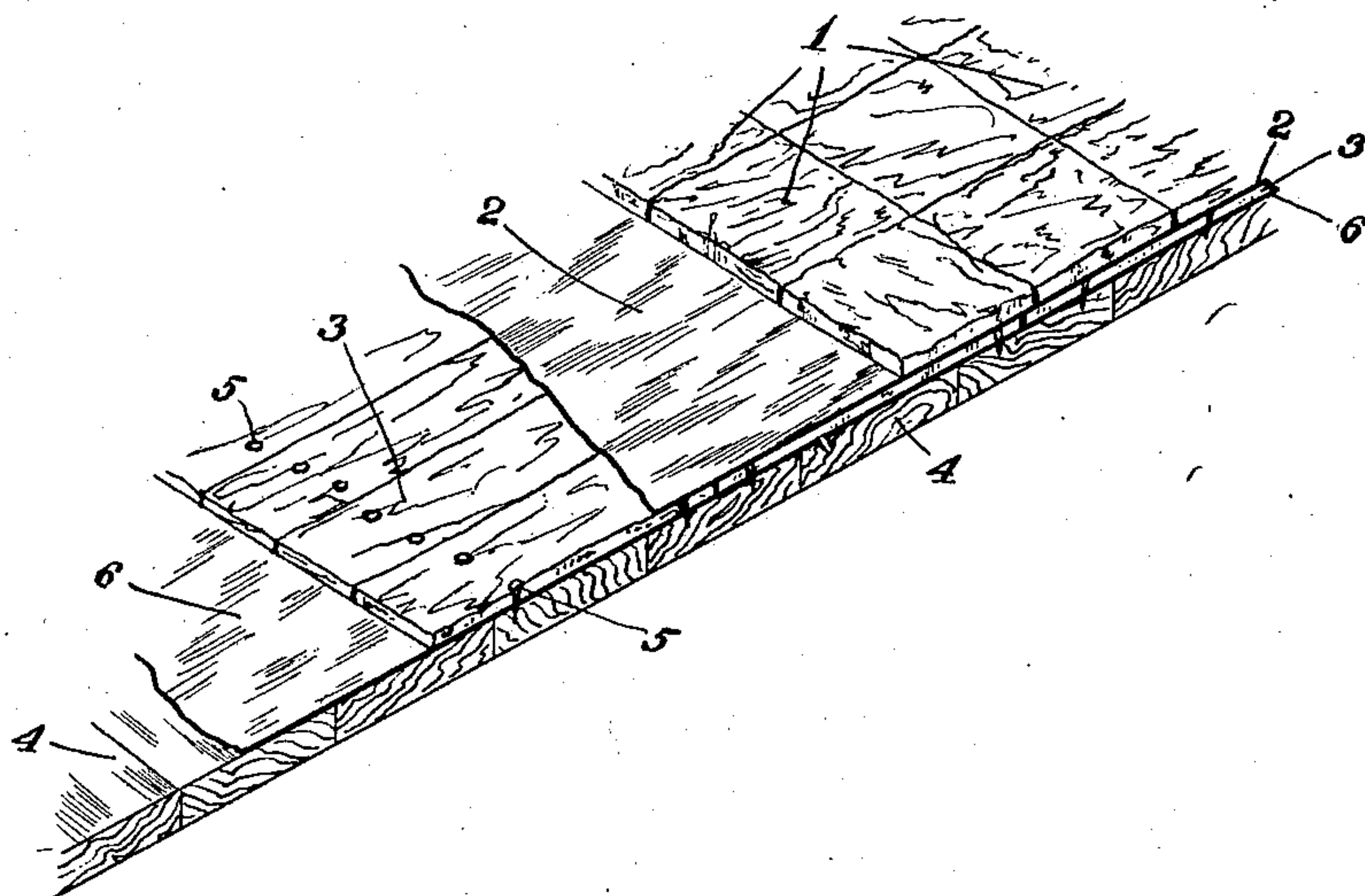
No. 756,180.

PATENTED MAR. 29, 1904.

J. H. MUNRO.
ROOFING.

APPLICATION FILED JAN. 29, 1904.

NO MODEL.



Witnesses
Fran Konigsberg
Harry H. Walton

James H. Munro Inventor
By his Attorney
Alexander C. Brundage

UNITED STATES PATENT OFFICE.

JAMES H. MUNRO, OF NEWARK, NEW JERSEY, ASSIGNOR OF ONE-HALF
TO JOHN MILTON VAN ORDEN, OF NEWARK, NEW JERSEY.

ROOFING.

SPECIFICATION forming part of Letters Patent No. 756,180, dated March 29, 1904.

Application filed January 29, 1904. Serial No. 191,157. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. MUNRO, of Newark, New Jersey, have invented certain Improvements in Roofing, of which the following description, in connection with the accompanying drawing, is a specification, like numerals on the drawing designating like parts.

This invention relates to building construction, and has for its object the production of covering means capable of use to great advantage as a roofing material, but also applicable to walls and in other situations where my improvements are rendered available and desirable by their nature.

In perfecting my invention I have made possible the use of members of roofing-slate of much smaller dimensions than are required ordinarily, redeeming from the waste pile large quantities of this material, which accordingly I prefer to utilize, but to which I do not, of course, limit myself.

The chief feature of my invention is a light, waterproof, fireproof, and air-tight covering made, preferably, out of exceptionally thin slate cut up into unusually small sections and secured to the roofs or walls of a house or the like, preferably by an elastic, waterproof, and adhesive cement, making the finished surface of this thin slate present a flat plane. This air-tight and waterproof slate construction cannot be obtained by the present method of nailing slates to a roof or wall in which each slate overlaps others tilted at an angle to carry the water from one slate to the other and prevent the rain getting beneath. When one of these slates works loose from its fastening by the action of the elements, as very often occurs, it slips out of its position and falls to the ground, not only to the danger of the passerby, but leaving the open joint of the underlying slates uncovered and unprotected from the storm, letting the water penetrate and do damage inside. Another cause for detachment of slates from their fastening when laid by the present method of nailing slates one over the other is the fact that slate by its own nature attracts and draws moisture, although it does not absorb it, and in winter it accumu-

lates in the air-space below each and every slate set by the present method of lapping the slate members over each other and very often freezes, expanding and cracking the slate, which slides off when the thaw comes. These slate members weigh from three to seven pounds each, according to the size of the slate used, and many fatal accidents occur through detachment of the slates and their blowing off the roof. To eliminate this danger, I prefer to split or cleave the slate exceptionally thin and reduce the size of the members to about one-twentieth part the size of the average slate members now used and about one-fortieth part in weight and then cement these upon a lining, preferably of slates, with a waterproof and preferably an elastic cement. Another object in reducing the size of the slate into small members is to overcome the uneven surface of the natural cleavage of slate, which is in many cases so pronounced as to prevent its being practicable to embed large slates into a thin bedding of cement without having air-pockets or vacuum portions which would make the slates break when walked upon and unsafe by reason of their thinness. To summarize, I propose to cut the slate into small members to insure solidity and provide a flatter surface with a corresponding economy in weight and material.

The various features of my invention are illustrated and described fully in the accompanying drawing and specification and pointed out in the claims.

In the drawing the figure illustrates in perspective a portion of roof in the construction of which my invention has been embodied.

In the embodiment of my invention selected for description and illustration as a convenient form to enable a ready and complete understanding of my improvements, referring to the drawing, the reference-numeral 1 designates individual covering members, which in the instance shown may be deemed to be squares of slate about one-twentieth of the size of roofing-slates now commonly used. These members in the instance illustrated are set close together with joints which register in adjacent rows and embedded in a thin layer

2 of cement, preferably waterproof and of an elastic character, to prevent the vibrations of the roof or other structure from tending to loosen the slates and to permit a certain resilience in the covering when walked upon, this provision being especially advantageous to prevent injury from vibrations produced by wind and from distortion produced by the weight of snow. To preserve this elastic quality of the cement by preventing drying out of the volatile ingredients into the air or into the boards of the roof, I prefer to interpose a lining between the cement bedding and the support, and this lining may be of any material suitable to prevent such drying out; but for the sake of strength and on account of its non-absorbent qualities I prefer to make the lining of a layer of slate members which may be secured to the roof by any convenient means. These members (indicated by the reference-numeral 3) are in the instance illustrated elongated to distribute the strain over a plurality of the roof-boards 4, to which they are shown as secured by nails 5 and a layer of cement 6, it being unnecessary in some instances to use both the cement and nails, one or the other being used, as found desirable, or some other form of fastening means substituted, according to the nature of the roof-support. The alternate boards 4 may be omitted, the lining members being supported at each end by the remaining boards, which would then be equivalent to the furring strips or laths commonly used.

It will be understood that I do not limit myself to roof-covering in which the members

are laid with the joints registering nor to the specific mode of carrying into effect the various features of my invention illustrated and described herein nor in general otherwise than as set forth in my claims read in connection with this specification.

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

1. A covering for roofs or the like composed of a plurality of slates or the like constituting a lining, and a separate covering composed of relatively small members of slate or similar material laid in the same plane with each other upon the said lining.

2. A covering for roofs or the like composed of a plurality of slates or the like constituting a lining, and a separate covering composed of relatively small members of slate or similar material laid in the same plane with each other upon the said lining, and a layer of elastic cement intervening between said lining and covering to secure the same together.

3. A covering for roofs or the like comprising a lining of slate, a bedding thereon of elastic cement and a covering of relatively small members of slate capable of independent expansion or other movement under wind strains and the like.

Signed at New York, in the county of New York and State of New York, this 25th day of January, A. D. 1904.

JAMES H. MUNRO.

Witnesses:

ALEXANDER C. PROUDFIT,
HENRY B. POGSON.