Aug. 11, 1925. 1,549,263

R. T. JOHNSTON

SHINGLE

Filed Sept. 15, 1922 2 Sheets-Sheet 1

Fig. 1.

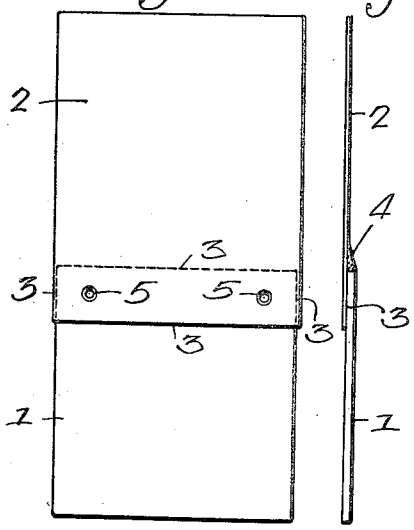


Fig. 2.

Fig. 6.

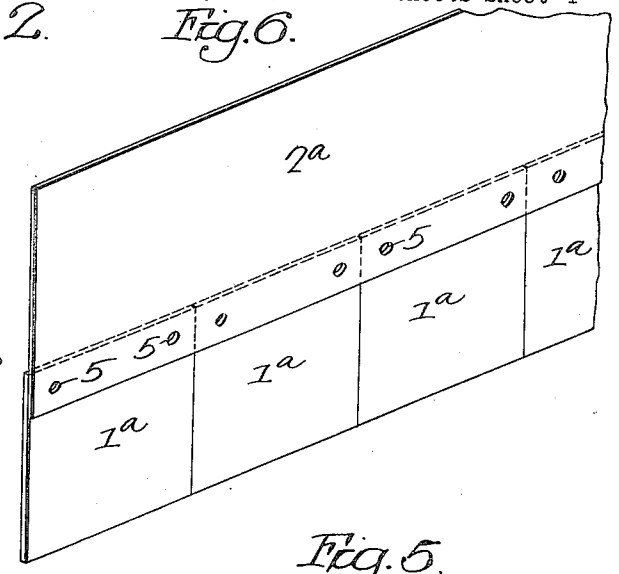
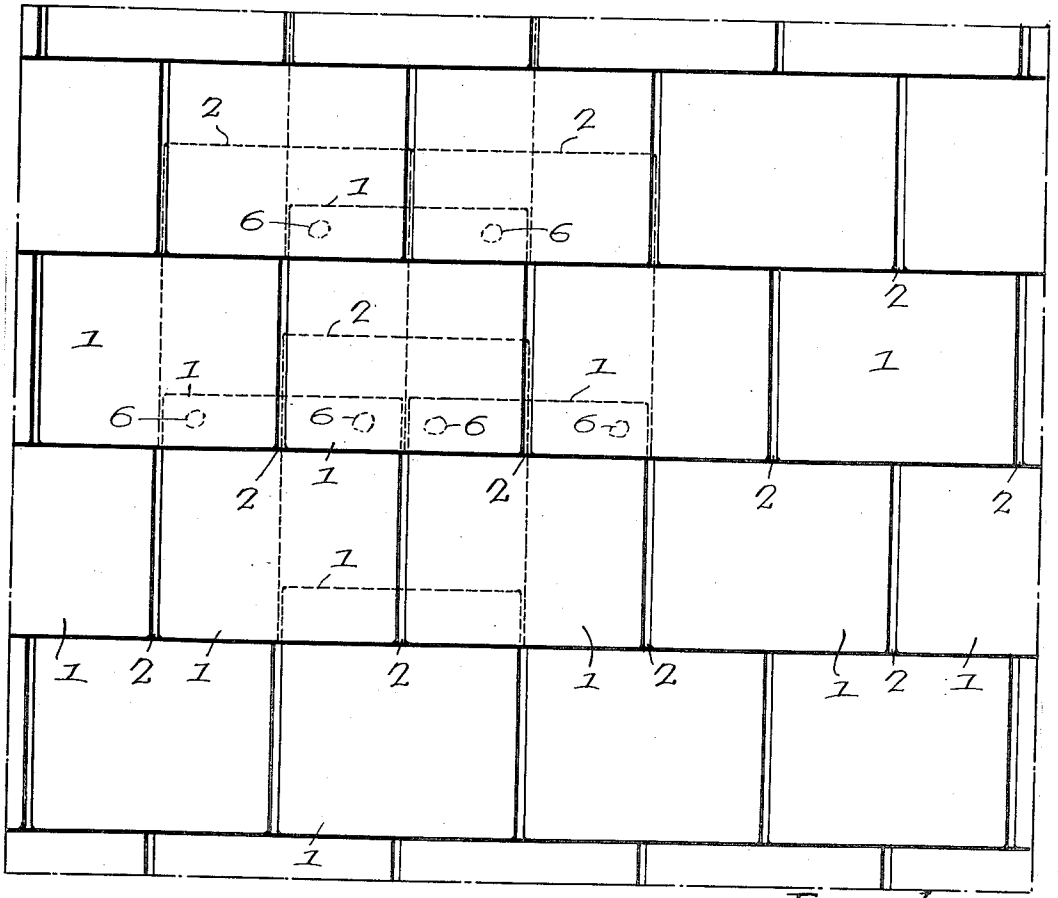


Fig. 5.



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Fig. 3.

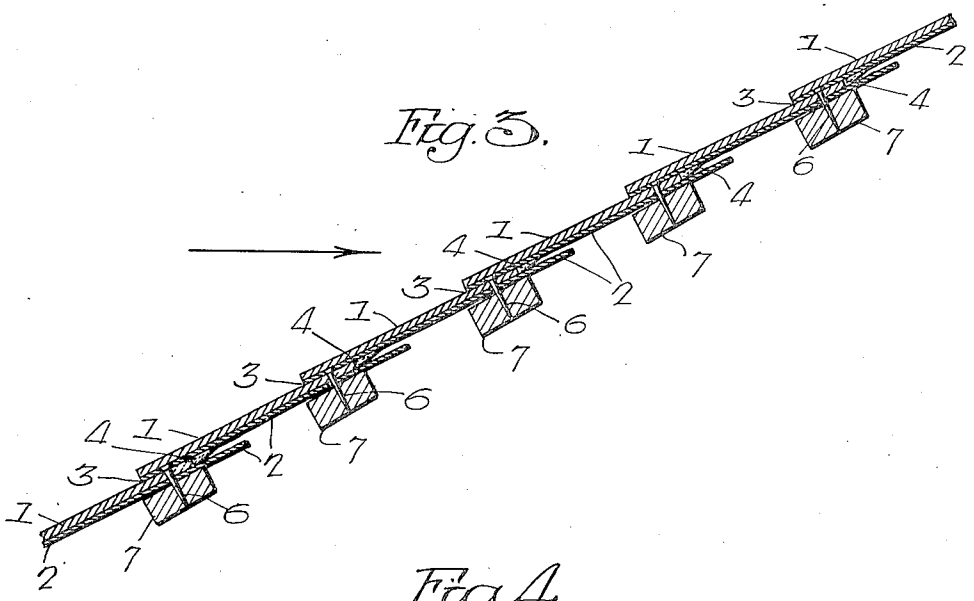
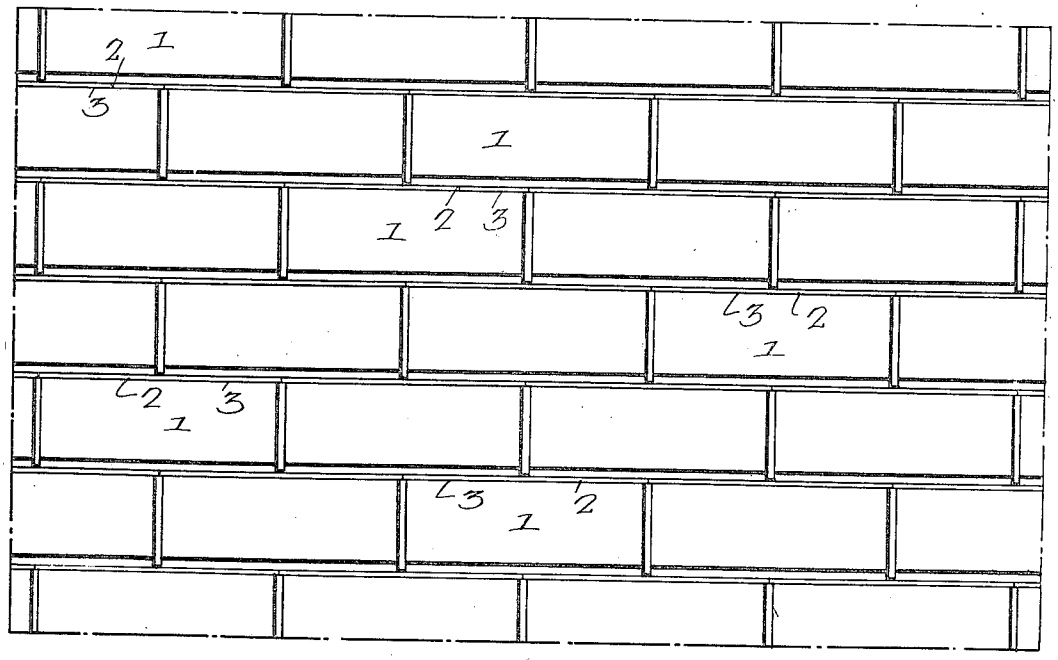


Fig. 4.



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Patented Aug. 11, 1925. 1,549,263

UNITED STATES PATENT OFFICE.

ROBERT T. JOHNSTON, OF HIGHLAND PARK, NEW JERSEY, ASSIGNOR, BY MESNE ASSIGNMENTS, TO JAMES H. MUNRO, OF PEN ARGYL, PENNSYLVANIA.

SHINGLE.

Application filed September 15, 1922. Serial No. 588,390.

To all whom it may concern:

Be it known that I, ROBERT T. JOHNSTON, a citizen of the United States, residing in Highland Park, New Brunswick, Middlesex County, New Jersey, have invented certain Improvements in Shingles, of which the following is a specification.

One object of my invention is to improve the construction of roofs of slate, or similar material, in which the amount of slate is considerably reduced—the roof being tight under all conditions.

A further object of my invention is to design the shingles, of which the slate roof is composed, so that they are smaller than could be used heretofore in combination with a felt strip to which the slate is secured.

These objects I attain in the following manner, reference being had to the accompanying drawings, in which:

Fig. 1 is a face view of a combination shingle made in accordance with my invention;

Fig. 2 is an edge view of the same;

Fig. 3 is a sectional view of my improved roof, showing the slate in position;

Fig. 4 is a side view looking at the roof in the direction of the arrow, Fig. 3;

Fig. 5 is a plan view of the roof, showing a method of laying the shingles; and

Fig. 6 is a view showing a modification of my invention, in which a series of sections of slate are attached to the felt strip.

Referring to the drawings, 1 is a piece of slate, rectangular in shape in the present instance, although one edge may be ornamented in any manner desired. 2 is a sheet of felt, or paper, saturated with asphalt, or other suitable water-proofing material—commonly known as heavy roofing paper. This felt is secured to one edge of the slate, as at 3, by asphalt, or similar cement. In some instances, the corner between the edge of the slate and the felt may be filled with water-proofing material 4. The felt sheet is wider than the slate, as clearly shown in Fig. 1, so that, when the shingles are located side by side, as in Fig. 5, the felt of one shingle will abut against the felt of an adjoining shingle, leaving a clear space between the sections of slate. This provides a tight, resilient joint between the shingles, the sections of slate being uniformly spaced apart, as shown in Fig. 5.

5, 5 are nail holes. These nail holes can be punched in the slate and felt of the combined shingle at the factory, which reduces the loss by cracking of the slate when the shingles are applied to a roof. 6 are the nails that extend through the holes in the shingle. The nails are driven into the roofing lath 7, or sheathing boards. It will be noticed that these nails are also driven through the felt section of an adjoining shingle, which makes an exceedingly substantial construction.

When the shingles are laid on a roof, they are placed with the felt section uppermost and the next row of shingles is placed with the joints alternating with those of the shingles previously laid. The outer edges of the slate sections are preferably on a line with the edge of the felt section, as clearly shown in Fig. 5. This arrangement, shown by dotted lines in said figure, makes a perfectly tight roof. Any water entering the space between two shingles will flow from the exposed portion of the water-proof felt section onto the shingle below it. Water cannot flow laterally under the shingles, as the joints are sealed.

Shingles laid upon a roof in the manner shown in Fig. 3 can be held securely to the roof structure. As the end of the slate section, through which the holes are punched, is bounded on both surfaces by a flexible felt packing because the shingles are laid with the lower edge of one slate section in line with the felt of the section below it—the appearance of the roof is considerably improved, the shingles having a more massive appearance

As one felt section extends beyond the adjoining felt section, the felt not only provides a substantial seal against wind and weather, but also insulates the building against high and low temperatures.

Furthermore, my improved shingles can be laid on a roof without the use of chalk lines as they are self spacing, as clearly shown in Figs. 3, 4 and 5.

In some instances, the shingles may be made as illustrated in Fig. 6, in which a series of slate sections 1^a is secured to a single strip of felt 2^a.

It will be seen that by the use of my improved shingles, sections of slate smaller than the standard size can be used. In fact, scarred sections and sizes that are now discarded can be used advantageously.

When my improved shingles are packed for shipment, the breakage is considerably reduced, owing to the fact that the felt sections of the shingles act as cushions for the slate sections. In the event of breakage, when the shingles are in place on a roof, the broken section of shingle can be more readily replaced than when ordinary slate shingles are used.

In my improved shingle, the felt section only overlaps the slate a sufficient distance to make a water-tight and wind-proof joint. It does not extend the full length of the shingle, consequently, each shingle can be applied to a roof with the felt uppermost, the slate section resting directly upon the underlapping felt portion of the shingle previously laid.

I claim:

1. A composite shingle made of a section of slate and a section of waterproof felt overlapping the face of the slate section at one end, the felt being wider than the slate and projecting beyond the slate at each side.

2. A roof structure made of a series of composite shingles, each shingle consisting of a slate section having secured to it an overlapping felt section which leaves the greater portion of the slate exposed, the felt sections being of greater width than the slate sections, the felt sections of each series being arranged with their side edges abutting whereby to provide spaces between the side edges of the slate sections.

3. A roof structure made of a series of composite shingles, each shingle consisting of a slate section having secured to it an overlapping felt section, which leaves the greater portion of the slate exposed, the felt sections being of greater width than the slate sections, the felt sections of each series being in contact, the lower edges of the slate of one series being in line with the lower edges of the felt of the series previously laid, and the joints of one series alternating with the joints of another series.

ROBERT T. JOHNSTON.