R. L. SHAINWALD, JR.

ROOFING.

APPLICATION FILED JAN. 7, 1915.

1,210,855. Patented Jan. 2, 1917.

Fig. 1

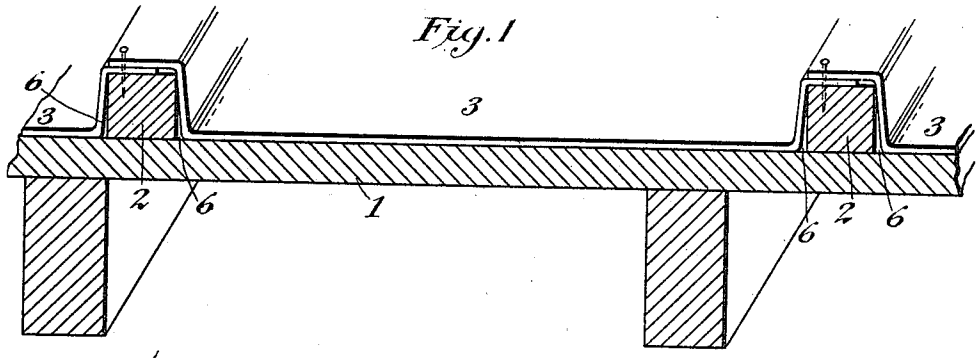


Fig. 2

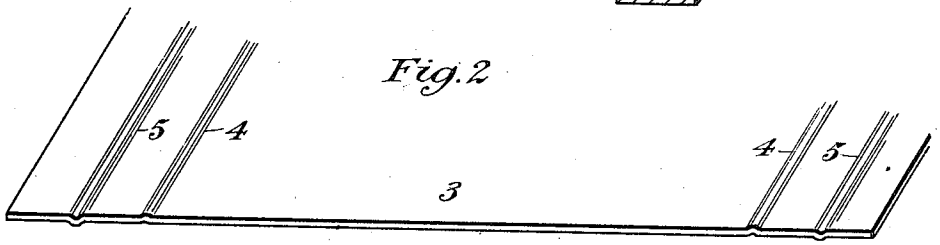


Fig. 3

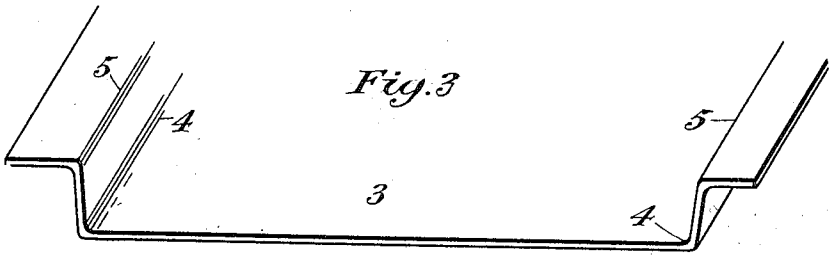


Fig. 4

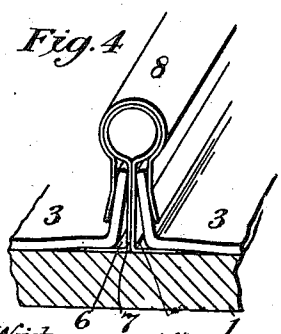


Fig. 6

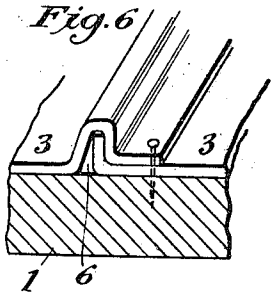
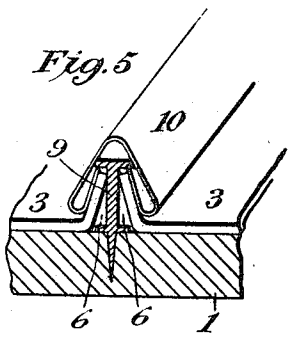


Fig. 5



Witnesses
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UNITED STATES PATENT OFFICE.

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ROOFING.

1,210,855. Specification of Letters Patent. Patented Jan. 2, 1917.

Application filed January 7, 1915. Serial No. 895.

To all whom it may concern:

Be it known that I, RALPH L. SHAINWALD, Jr., a citizen of the United States, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Roofings, of which the following constitutes a full, clear, and exact specification.

My invention relates to a new and improved roof construction employing prepared roofing.

The object of my invention is to provide a roofing construction consisting of prepared roofing sheets laid in such a manner as to prevent buckling or wrinkling of the sheets, to obtain water tight seams, and to give the roof an attractive appearance.

Heretofore it has been exceedingly difficult to lay the roofing so that the sheets would not be wrinkled or buckled by the relative movement of the roofing and the sheathing, produced by variations of temperature, humidity, loading or other causes.

I overcome this difficulty by providing an improved roof construction which consists in covering the roof with sheets of prepared roofing which are bent in such a manner as to form standing seams extending from the ridge to the eaves of the roof, and to provide spaces into which the bent portions of the sheets can expand whereby relative movement of the sheets and the sheathing may take place without causing the sheets to buckle or wrinkle.

In the accompanying drawings illustrating my invention, Figure 1 is a cross section of a roof construction embodying my invention. Fig. 2 is a view of a section of a prepared roofing sheet. Fig. 3 is a view of a sheet in bent form; Figs. 4, 5 and 6 show modifications of the roof construction.

Similar reference characters refer to similar parts throughout the several views.

Referring to Figs. 1 to 3, of the drawings, in which I have shown a preferred form of my invention, the reference character (1) indicates the sheathing of the roof having battens (2) fastened thereon in spaced relation to each other and in a direction extending from the ridge to the eaves. The battens, which may be of wood, metal or other suitable material, are spaced apart at a definite interval and serve as means for supporting the standing seams.

The roof is covered with sheets of prepared roofing (3) which are suitably bent in such a manner as to form standing seams extending from ridge to eaves of the roof and to provide spaces into which the bent portions of the sheets can expand. Each of the sheets is creased along longitudinal lines 4 and 5, as shown in Fig. 3, to form a comparatively wide trough having relatively narrow lateral flanges which flanges are adapted to overlap the flanges of the adjoining sheets on top of the battens and to be fastened together thereon so as to form a standing seam raised above the body of the roof.

In carrying out my invention the sheets are bent so that the width of the portion thereof included between the opposite creased lines (4), will be slightly narrower than the width of the space between the pair of battens or supports in which it is designed to be laid, and consequently, when the bent sheet is laid in between the batten or supports, a small space (6) is provided to allow for the relative movement of the sheet or sheathing boards which may be produced by changes in temperature or other causes.

To facilitate the proper bending of the sheets into required form, the roofing is preferably prepared with longitudinal grooves or guide-lines arranged at predetermined positions thereon. The position of the lines is determined by the interval at which it is intended to space the battens and the cross sectional dimension of said battens; that is to say, the lines (4) are formed at a distance apart which is slightly less than the interval between the battens and the lines (5) are disposed so that the distance between the lines (4) and (5) will be approximately equal to the depth of the battens.

In the modification illustrated in Fig. 4, I employ sheet metal supports (7) of any suitable form, for the purpose of supporting the standing seams and I secure the bent edges of the sheets together by means of any suitable cap or fastener (8).

In Fig. 5, I have shown another modification in which I employ a plurality of rails or studs (9) for supporting the seams and a suitable cap or fastener (10) for securing the edges of the bent portions of the adjacent sheets.

A further modification of my invention is illustrated in Fig. 6, wherein I have indicated a roof construction in which the edges of the sheets (3) are bent so as to form

self supporting standing seams having expansion spaces (6) provided between the bent portions of adjacent sheets. According to this modification the necessity of employing separate battens or supports for supporting the seams is eliminated.

It will be apparent to those skilled in the art that various equivalent means may be employed for supporting the standing seams and for securing the edges of the seams together without departing from the scope or spirit of this invention.

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

A roof construction comprising sheets of prepared roofing, each having its marginal portions folded to form standing seams and an intermediate trough portion; said sheets being secured in such manner as to provide spaces, adjacent to folded margin of the trough portion, to accommodate the expansion of the sheet by variation in the angle of the fold, rather than by otherwise distorting the sheet; the line of fold of said sheets having been previously defined, as by creasing, so as to insure the concentration at the fold of the distorting effect of expansion.

In testimony whereof, I have hereunto affixed my signature in the presence of two subscribing witnesses.

RALPH L. SHAINWALD, JR.

In presence of—
B. K. WEST,
R. J. CUNNINGHAM.