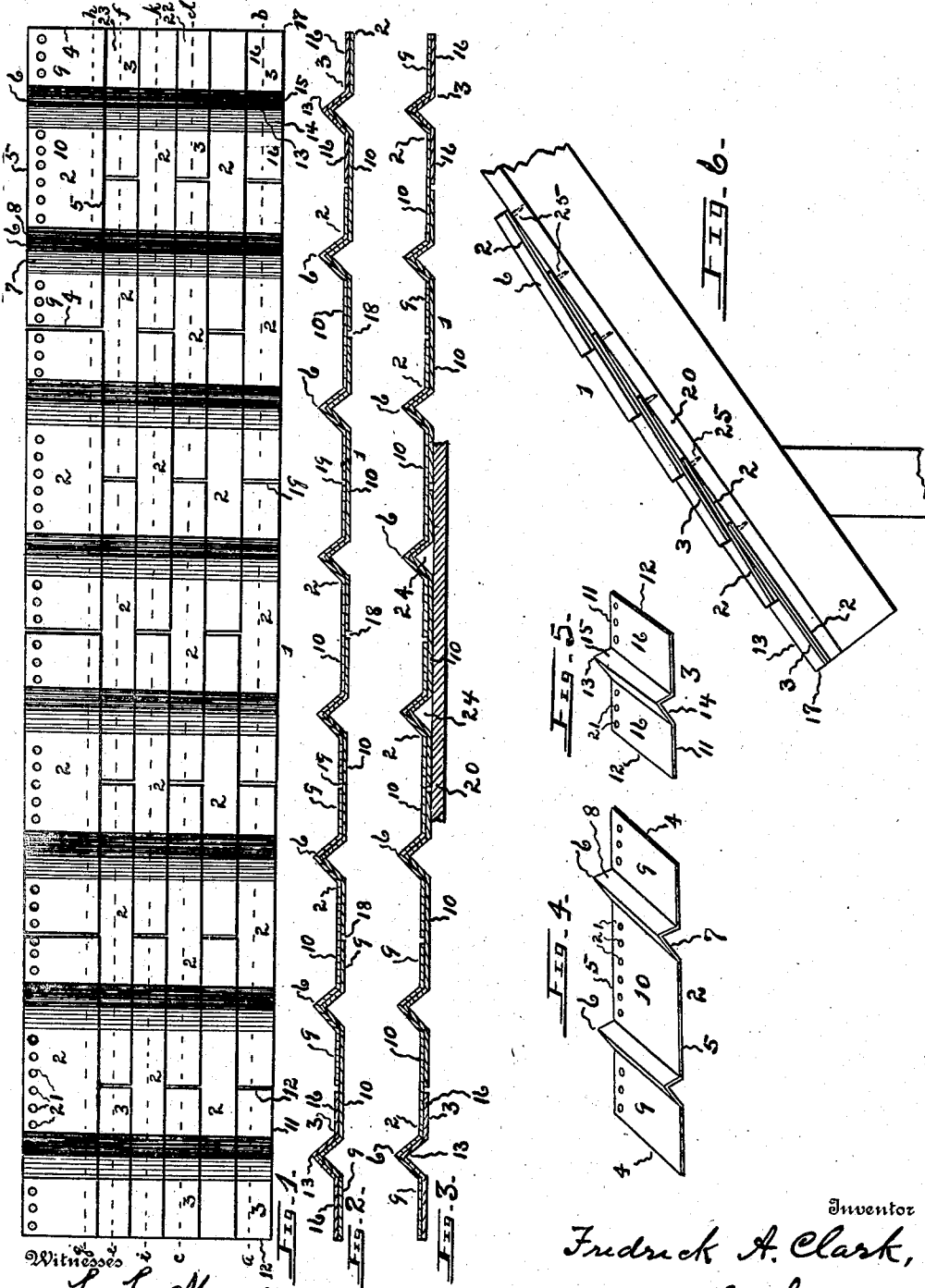


F. A. CLARK.
 METAL ROOF COVERING.
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924,144.

Patented June 8, 1909.



Witnesses
 L. L. Martin
 M. L. Parrotta

Inventor
 Fredrick A. Clark,
 Hiram A. Sturges.
 Attorney

UNITED STATES PATENT OFFICE.

FREDRICK A. CLARK, OF FREMONT, NEBRASKA.

METAL ROOF-COVERING.

No. 924,144.

Specification of Letters Patent.

Patented June 8, 1909.

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To all whom it may concern:

Be it known that I, FREDRICK A. CLARK, a citizen of the United States, residing at Fremont, in the county of Dodge and State of Nebraska, have invented certain new and useful Improvements in Metal Roof-Coverings, of which the following is a specification.

This invention relates to improvements in metal roof covering, and has for its object the provision of a covering for roofs of buildings, which may be quickly laid and which, comparatively, will not be expensive, the covering to consist of metal plates, so formed that they may be packed within a limited space for transportation purposes, and may be laid without the employment of skilled labor.

The invention has reference to the use of rectangularly formed metal plates having parallel ridges which, in use, result in the formation of air spaces between the plates and the roof boards or foundation upon which the plates are secured, the ridges of each plate also being for the purpose of adding rigidity to the balance of the plate, and to reinforce each other when used as a covering for the roof.

The invention consists of the combination and arrangement of parts as described herein, pointed out by the appended claim, and as illustrated in the drawing,—wherein—

Figure 1 is a plan view of a roof covering formed of plates, and embodying my invention. Fig. 2 is a sectional view upon any of lines *a b*, *c d*, or *e f* of Fig. 1. Fig. 3 is a sectional view upon lines *g h* or *i k* of Fig. 1, a portion of roof board being added. Figs. 4 and 5 are perspective views of metal plates employed. Fig. 6 is a broken away end view of a portion of a roof, and showing courses of the metal plates.

Referring now to the drawing for a more particular description, numeral 1 indicates a roof covering, formed by use of the series of metal plates shown, respectively by numerals 2 and 3; plate 2 has parallel sides 4 and parallel ends 5, and is formed with parallel ridges 6, and the ridges are parallel with its sides; these ridges consist of walls 7 and 8 disposed, preferably, at right angles with reference to each other and projected outwardly from the same surface of the plate, adjacent sides 4; and bearing-leaves 9 are formed between each ridge and one of

the side edges 5 of the plate, and a valley 10 is formed between ridges 6.

Plate 3 has parallel ends 11, parallel side-edges 12 and a single ridge 13 extending midway between and substantially parallel with sides 12; ridge 13 has walls 14 and 15 disposed at a right angle, and the plate extends laterally from the ridge to form bearing-leaves 16. The plates thus described are rectangular in form with ridges formed thereon of similar extent, and they are each provided with perforations 21 extending crosswise and in alinement, near one of their ends, these being for the purpose of admitting nails 25 for securing the plates upon the backing or roof boards.

As thus described the metal plates may be economically formed; they may be stamped by any suitable dies, and the ridge or ridges and perforations may be formed at the same time, and they can be conveniently packed for shipping to occupy a small space, since the ridges of the plates correspond in size; and it will be understood that the ridges will resist bending of the plates in directions transverse to said ridges. Also as described, the metal plates may be conveniently used for the covering of a roof, and in forming the roof of a building, the first course is laid double and is composed of plates 2 and 3. The double or first course 17 is arranged by placing a series of plates 2 side by side as shown in Fig. 2, and when thus placed their adjacent edges will form crevices 18; a layer of plates 2 is then placed upon the first layer to partly complete course 17, and their adjacent edges will form crevices 19, and plates 3 are used as end plates, to complete this course.

Fig. 2 illustrates a section upon any of lines *a b*, *c d*, or *e f* of Fig. 1, and it will be seen that the covering for the roof is composed principally of plates 2, and that, while plates 3 are necessary, they are used only upon alternate courses, to complete the ends of said alternate courses of the roof covering.

Courses 22 and 23, shown in Fig. 1, are laid as already described and as shown in Fig. 2, except that plates 2 and 3 are laid with a portion of their surface "to the weather".

When seams or crevices 19 are formed upon the top layer of a course as shown in Fig. 2, they occur between ridges 6 or between ridges 6 and 13, and, in such cases,

valleys 10 of the lower layer are interposed between bearing-leaves 9 and 16 and backing 20, and the valleys operate as carriers of water or other substances which may fall upon the roof; and when seams 18 occur upon the upper surface, as shown in Fig. 3, they are located between ridges 6; and valleys 10 of the lower layer are interposed between leaves 9 and backing 20, to operate as a water shed. Rain water when passing from the roof is conveyed upon valleys 10, between the upwardly-projecting ridges 6, and between ridges 6 and 13.

In preparing the metal plates they are enameled upon both sides, which effectually prevents rusting of the plates, and the manner of laying them, closely adjacent each other, substantially prevents buckling, so common to metal roofs it being understood that the plates are laid in the manner of laying ordinary shingles.

The metal plates thus described may be made without use of expensive machinery; they may be formed of any desired proportions, and when secured to the foundation or backing, the ridges of the plates will be reinforced by overlapping; and the air-spaces 24, formed between the metal plates and backing 20 are longitudinal recesses, which

permit evaporation of moisture which often accumulates beneath the metal sheets or plates of a roof.

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

A roof covering comprising a plurality of plates laid in the ordinary manner of laying shingles, each of said plates comprising a pair of upstanding V shaped ridges 6, which extend entirely across said plates and which are parallel with the sides thereof, a central valley portion 10 which lies between said ridges, and a bearing leaf 9, upon the outer side of each of said ridges, said leaves lying in the same plane as the valley portion 10 and each of said leaves being substantially half the width of said valley portion, whereby when said plates are laid in the manner of laying shingles, said valley portion will accommodate the abutting leaves of adjacent plates.

In testimony whereof I have affixed my signature in presence of two witnesses.

FREDRICK A. CLARK.

Witnesses:

HIRAM A. STURGES,
GEORGE W. COVELL.