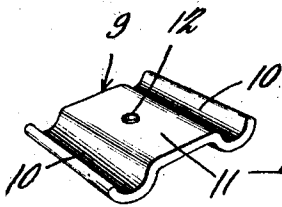
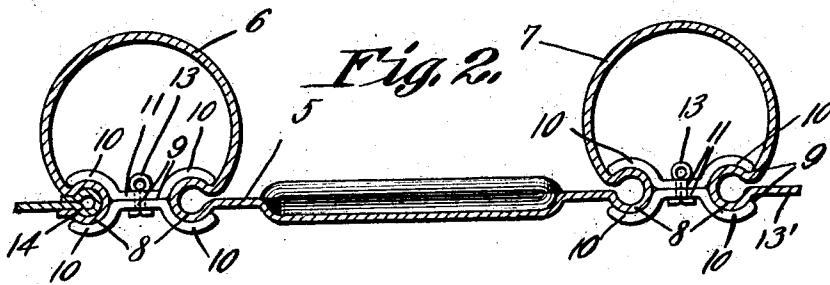
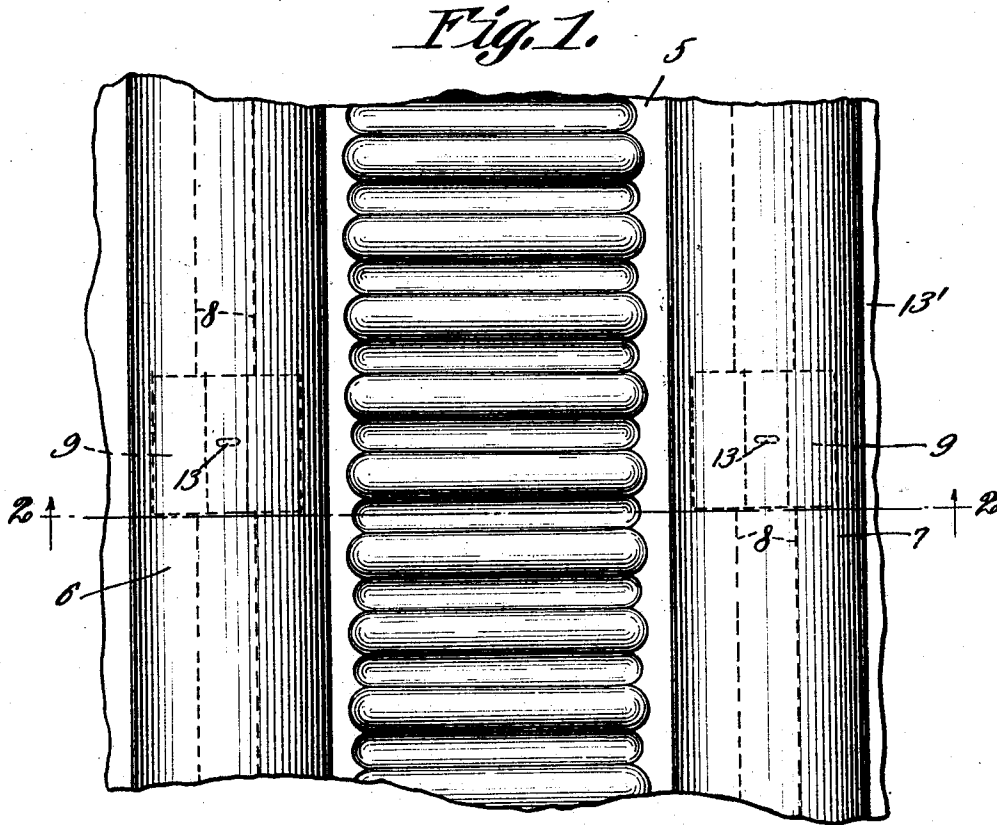


H. H. CRAWFORD.
METALLIC ROOF.
APPLICATION FILED MAY 5, 1921.

1,406,980.

Patented Feb. 21, 1922.
2 SHEETS—SHEET 1.



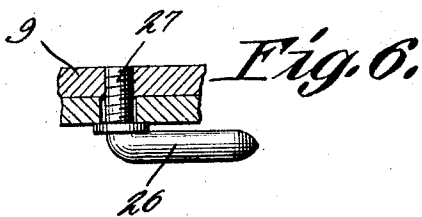
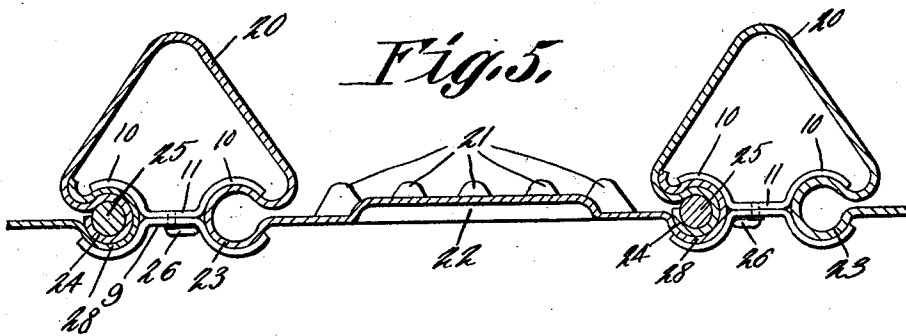
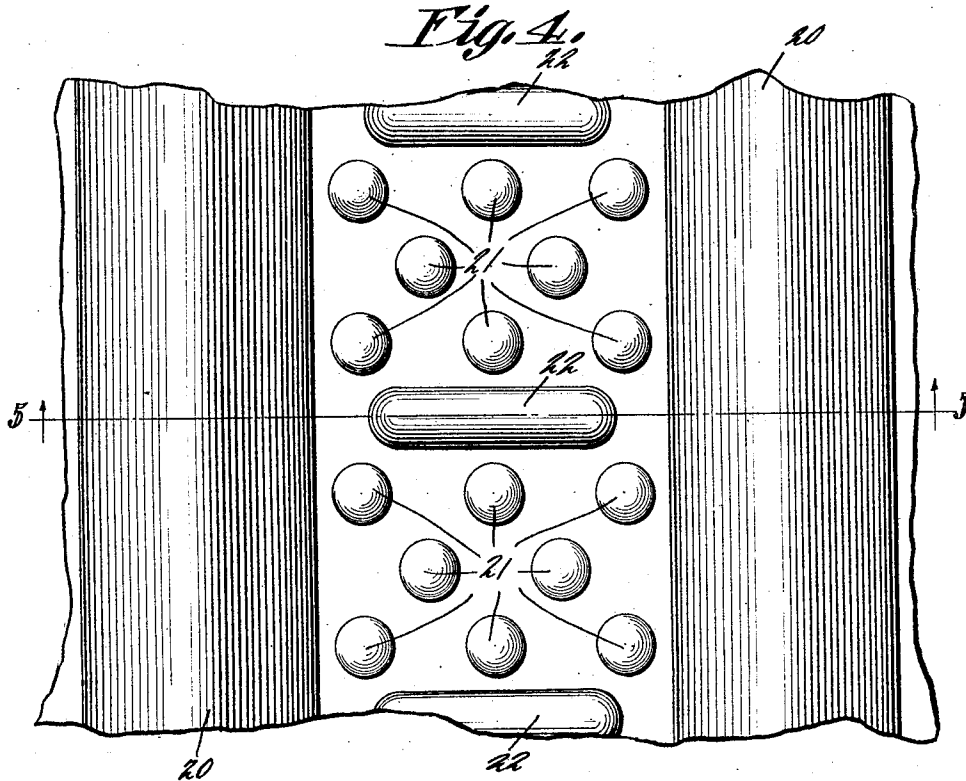
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1,406,980.

Patented Feb. 21, 1922.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

HEZEKIAH H. CRAWFORD, OF EL PASO, TEXAS.

METALLIC ROOF.

1,406,980.

Specification of Letters Patent.

Patented Feb. 21, 1922.

Application filed May 5, 1921. Serial No. 466,889.

To all whom it may concern:

Be it known that I, HEZEKIAH H. CRAWFORD, a citizen of the United States, residing at El Paso, in the county of El Paso and State of Texas, have invented a new and useful Metallic Roof, of which the following is a specification.

This invention relates to metallic roof constructions, and more particularly to a novel means for securing adjacent edges of sections of a roof, to prevent the same from becoming disconnected.

A further object of the invention is to provide a novel construction which is braced throughout its length, to eliminate sagging of the roof, and prevent vibrating under wind pressure.

A still further object of the invention is to provide a securing means which will be free of nails and nail openings to insure a leak-proof roof.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

Referring to the drawings:—

Figure 1 is a fragmental plan view of a roof constructed in accordance with the present invention.

Figure 2 is a sectional view taken on line 2—2 of Figure 1.

Figure 3 is a perspective view of one of the sections of the separable key.

Figure 4 is a fragmental plan view of a modified form of roof.

Figure 5 is a section on line 5—5 of Fig. 4.

Figure 6 is a detail of a modified securing member.

Referring to the drawings in detail, the reference character 5 designates one section of a roof, it being understood that in the construction of a roof, a plurality of these sections are employed to cover the entire surface thereof.

Each section is formed preferably of sheet metal and is provided with hollow ribs 6 and 7 respectively, which are disposed in spaced relation as clearly indicated by Fig-

ure 2 of the drawing, and as shown, each rib is formed with opposed enlargements 8, which are substantially circular in cross section, for purposes to be hereinafter more fully described.

The portion of each section between the hollow ribs 6 and 7 is corrugated as clearly shown by Figure 1 of the drawings, so that the sections are braced intermediate the ribs, against transverse strains, which corrugations together with the hollow ribs 6 and 7 forms a rigid structure. In order that the ribs 6 and 7 will be held in their true forms, separable keys are provided, each key including opposed sections 9, each section having curved side edges 10 and a central straight section 11, the curved side edges 10 of opposed sections of a key being designed to grip the enlargements 8 to secure the same in proper spaced relation with each other.

Each of the sections 9 is provided with a central opening 12 so that when opposed sections of a key are brought together, they may be secured in such locking position, as by means of the cotter pin 13 which passes through the openings 12 of the sections, and secures the sections together. Forming a part of each roof section is a laterally extending flange 13 which is provided with a bead 14 formed longitudinally of its free edge, the bead 14 being designed to be positioned in the adjacent enlargement of the adjacent roof section, thereby locking opposed roof sections together.

From the foregoing it will be obvious that upon constructing a roof of sections as described, it is only necessary to interlock the edges of opposed sections and secure the same by means of the key as described.

In the modified form of the invention as illustrated by sheet 2 of the drawing, the hollow ribs are substantially triangular-shaped in cross section as illustrated by the reference character 20 and disposed in spaced relation throughout the length of a strip of roofing, there being provided intermediate the ribs, a plurality of cone-shaped bosses 21 disposed in staggered relation with respect to each other. At predetermined intervals throughout the space between adjacent ribs, are transversely extending elongated bosses 22 which are designed to strengthen the portions of the roof sections between adjacent ribs.

The ribs 20 are connected to the relatively

flat portions by means of the tubular portions 23 to permit of movement between the ribs and remaining portions of the strip of roofing to prevent adjacent strips of roofing 5 from becoming disconnected under light movement of the roof due to expansion and contraction due to heat and cold.

The outer edge of each section is formed into a tubular member indicated at 24, in 10 which tubular member is positioned a rod 25 extending throughout the entire length thereof, the rod being designed to reinforce the tubular member.

As clearly shown by Figure 5 of the drawings, the securing member is similar to that shown by Figure 3 of the drawings, and as shown this tubular member is provided with a central opening, to accommodate the key 15 26 which is provided with a threaded extremity 27 fitted within the threaded opening of the securing member so that when the securing member is to be positioned, the key may be rotated, to bring the sections of the securing member into clamping engagement with the tubular members of the 20 ribs.

In this form of the invention, each section is shown as having a tubular member 28 formed along one edge thereof, which tubu-

lar member embraces the tubular member 24 30 forming one edge of the hollow rib of the adjacent section.

Having thus described the invention, what is claimed as new is:—

1. In a metallic roof, a plurality of roof 35 sections, each section having a pair of spaced longitudinal ribs, each rib having hollow enlargements, and a key fitted over the enlargements of each rib to secure the walls of the ribs against movement. 40

2. In a metallic roof, a plurality of roof sections, each section including opposed longitudinal ribs, the portion between the ribs being corrugated, each rib having hollow enlargements, each section having a flange 45 provided with a beaded portion, the beaded portion adapted to be positioned within the adjacent hollow enlargement of the adjacent roof section, and a key for securing the walls of each rib against movement. 50

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

HEZEKIAH H. CRAWFORD.

Witnesses:

N. J. MORRISON,
L. B. POLLARD.