

June 19, 1934.

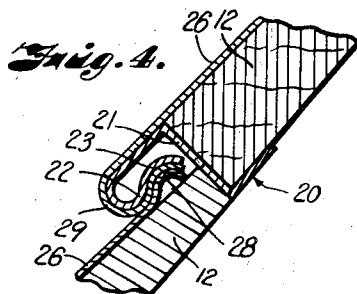
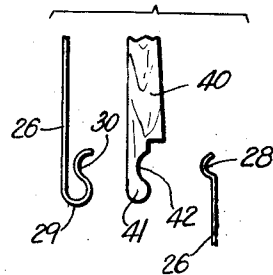
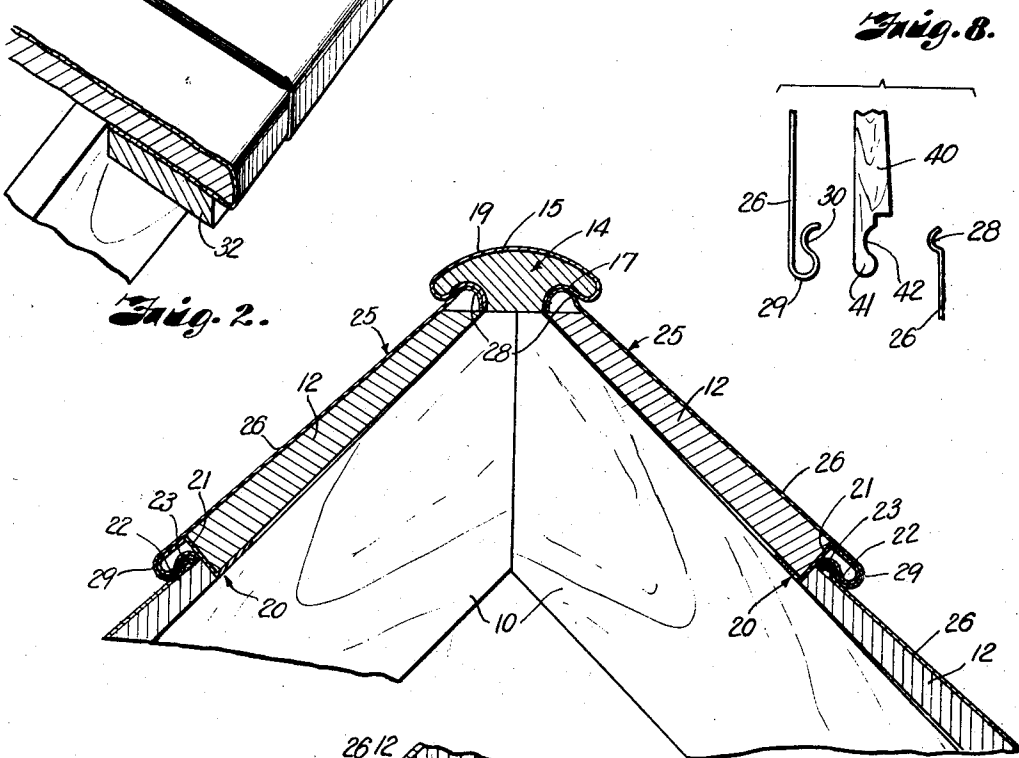
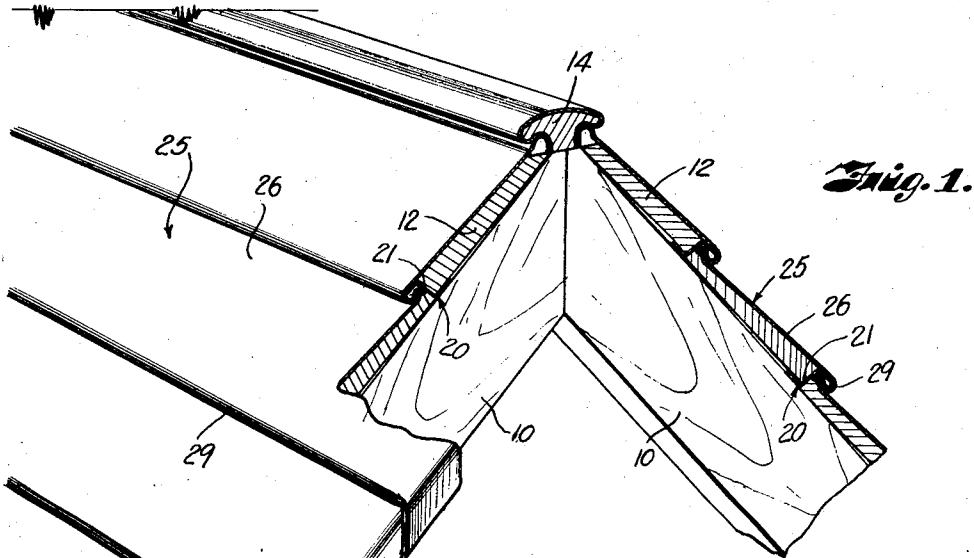
N. JENKINS

1,963,583

METAL ROOFING

Filed Dec. 15, 1930

2 Sheets-Sheet 1



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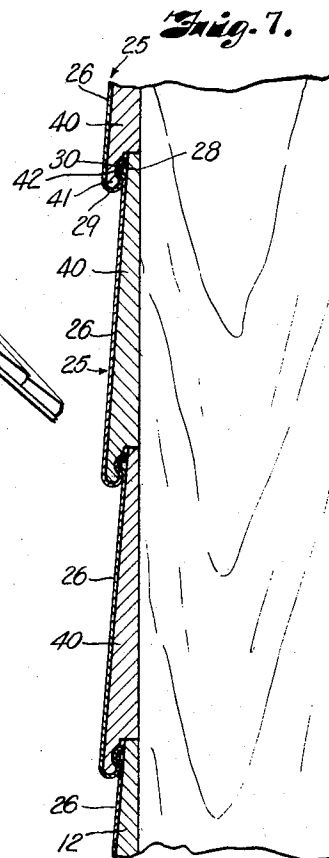
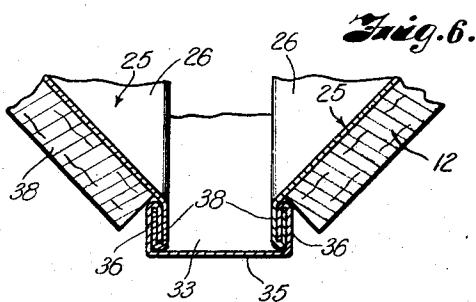
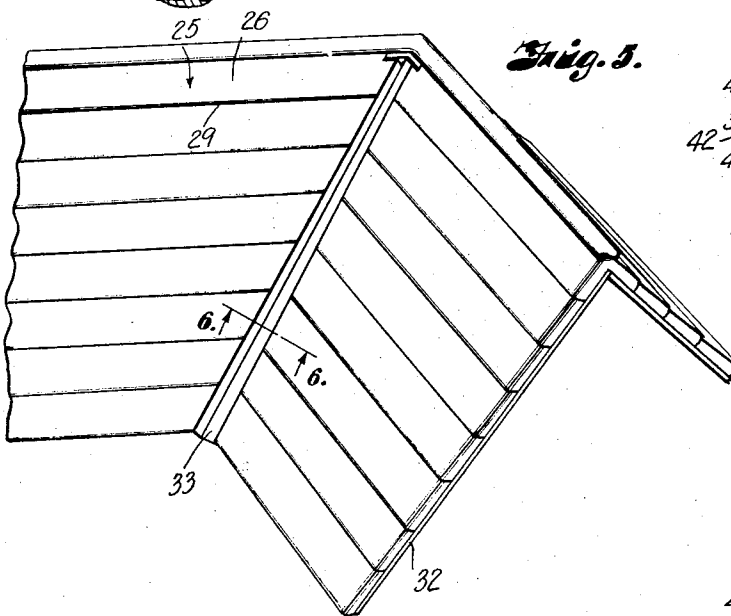
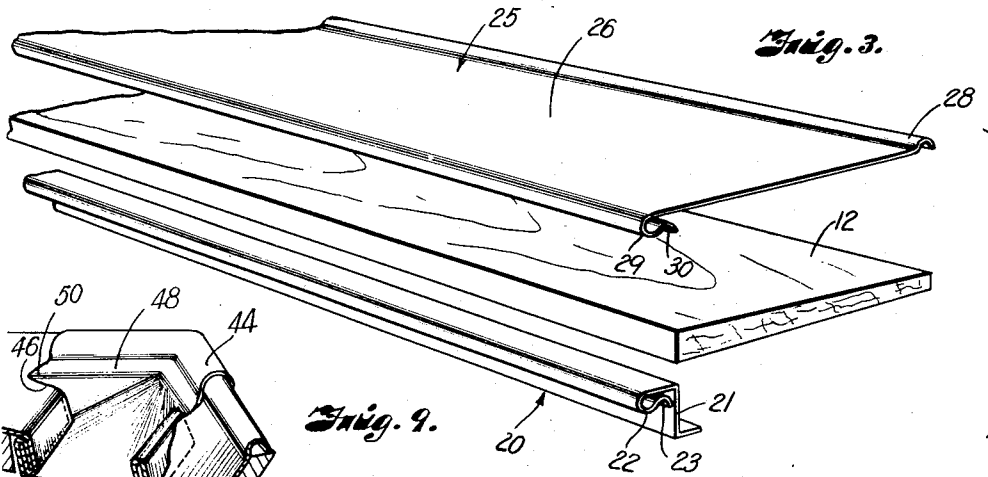
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2 Sheets-Sheet 2



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## UNITED STATES PATENT OFFICE

1,963,583

## METAL ROOFING

Nicholas Jenkins, Joplin, Mo., assignor of one-half to Patrick E. Tabor, Joplin, Mo.

Application December 15, 1930, Serial No. 502,468

3 Claims. (Cl. 108—17)

This invention relates to metal roofing and siding, and more particularly to a metal roof or siding which can be attached without the use of nails or solder.

In metal roofs, it is the usual practice to employ an entire sheet of the metal and attach the same to the sheathing by means of nails. The expansion and contraction of these large metal sheets causes bulging, enlarges the nail holes, and results in leaks in the roof after a short period.

It is an object of this invention to eliminate this disadvantage by employing relatively narrow sheets of metal and attaching them by crimping in a particular manner.

It is a further object of the invention to provide pre-crimped sheets of metal which may be attached after the sheathing is in place, and which will be firmly held to the sheathing at all times.

These and other objects of the invention are accomplished by means of the following preferred constructions, in which:

Fig. 1 is a perspective view partly in section, showing one form that the invention may take.

Fig. 2 is a cross sectional elevational view of the type of roofing shown in Fig. 1.

Fig. 3 is a detail view showing the metal shingles, sheathing and the lock bar separately.

Fig. 4 is an enlarged section showing a joint between two pieces of sheathing.

Fig. 5 is a view showing intersecting roof portions with a valley therebetween.

Fig. 6 is a detail view on the line 6—6 of Fig. 5, showing the construction of the valley.

Fig. 7 is a cross sectional view showing a modification of the invention.

Fig. 8 is a detail view similar to Fig. 3, showing the various parts going to make up the unit shown in Fig. 7.

Fig. 9 is a fragmentary perspective view, partly in section, of the top of a valley illustrating a valley top fitting, the edge of one shingle adjacent the valley being partly broken away.

In the drawings, in which like numerals indicate like parts throughout the several views, and referring in particular to Figs. 1, 2, 3, and 4, the rafters 10 support the sheathing 12 which may be nailed in place in the usual manner.

A ridge roll 14 is used at the apex of the roof. As best shown in Fig. 2, the ridge roll 14 comprises a curved upper portion 15 and a reversely curved portion 17 having an undercut section on the lower side of the roll by which means the upper edge of the first shingle is held in place.

A metal covering 19 is placed over the ridge roll

14 conforming in shape to the roll 14, on both upper and lower sides. The covering 19 may be put on by sliding on from the end after the ridge roll has been nailed in place. The sheathing 12 is then nailed down to the rafters 10 with the metal lock bars 20 placed under the lower edge of the sheathing. The metal lock bars 20 (best shown in Fig. 3) comprise in general a Z-shaped section having a vertical leg 21 of length equivalent to the corresponding portion of the sheathing 12, the upper end thereof being curved back and under to form a reverse curve 22 and a lock notch 23.

The shingle 25 may be of any convenient length and may be formed directly on the job. As shown in Fig. 3, the shingle 25 comprises a flat portion 26 having at one side a raised semi-circular portion 28, and is bent back, as shown at 29, at the other side thereof to form a reverse curve having a notch 30. The formation of the bent back portion 29 conforms in shape to that of the portion 22—23 of the metal lock bar 20, the notch 30 fitting into the notch 23. The roll 28 fits beneath the notch 30 of the next shingle above to form a fastening for the shingle. This construction is best shown in Fig. 4. The shingle adjacent the ridge roll is given a curve to correspond with the curve 17 to lock that shingle in place beneath the ridge roll.

At the intersecting portions of the roof, such as shown in Fig. 5, provision is made for the introduction of valleys, the construction being most clearly illustrated in Fig. 6. The valley 33, shown in Figs. 5 and 6, comprises a lower piece 35 bent upwards at the ends and turned back to form an inverted U—36 having its open end towards said member 35. The corresponding ends of the shingle are also bent in a U-shape, as shown at 38, the two free legs of the U's overlapping each other to make the construction waterproof. It will be noted that this piece may also be inserted from the end of the roof after all of the shingles have been laid.

The ends of the roof are finished by bending back the shingles under the eaves of the roof and fastening in place by a molding, as shown at 32. If desired, the edge of the roof may be finished with a metallic gutter, similar to the valley construction described above.

A variation of the form of shingles shown in Figs. 1 to 4, inclusive, is shown in Figs. 7 and 8. In this form of construction there is employed a specially milled sheathing shown at 40, and

having a projecting end 41 shown in Fig. 8, and a notch 42 in said projection for the reception of the roll portion 30 of the shingle 25. The construction of the shingles is identical and the fastening together is done in a similar manner. This form of construction eliminates entirely the metal lock bar 20, but increases the cost of construction to the extent of having to have the boards 40 specially milled. The construction shown in Figs. 1 to 4, inclusive, is preferable in that it has a little greater strength than the form shown in Figs. 7 and 8.

The valley 35 further preferably includes a top fitting portion comprising the upper end of the plate 35 having converging side edges curved to form locking hooks 44 seatable on the curved upper end edges of shingles 25 as illustrated in Fig. 9.

The plate 35 is a slit transversely on each side as at 46, to define the ends of the U-shaped edge portions 36 and permit bending of panel-like portions 43 of the plate to snugly overlies adjacent shingles. The pointed ends 50 of the panels thus extend laterally from the valley trough over the roof.

The curved edges of the valley top fitting extend beneath the ridge roll cover, as suggested in Fig. 5.

It will thus be seen that applicant has provided a relatively simple form of metal shingle which

may be used either for roofs of houses or for sidings, and which has provision for valleys and fastening means.

What is claimed as new and desired to secure by Letters Patent is:

1. In metal roofing, sheathing having a tongue projecting therefrom, said tongue having a notch on the under side thereof, metal shingles having interlocking portions cooperating with said notch to form a joint between the shingles.

2. A roof including sheathing boards, locking means associated with the edge of one of the boards and having a reversely curved under face overlying and spaced from the edge of the adjacent sheathing board, shingle members covering said sheathing boards having reversely curved interlocking flange portions engaged under and in said reversely curved face portion to lock the shingle members to the sheathing.

3. A roof including sheathing boards, a Z-shaped anchoring strip having one of its legs clamped under the edge of one of the sheathing boards and its other leg terminating in a reversely curved flange, shingle members covering said sheathing boards having a similarly curved flange engaging under and over the locking strip and having an upwardly curved rib on its opposite edge to engage under the reversely curved flange of an adjacent covering member.

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