

Feb. 12, 1952

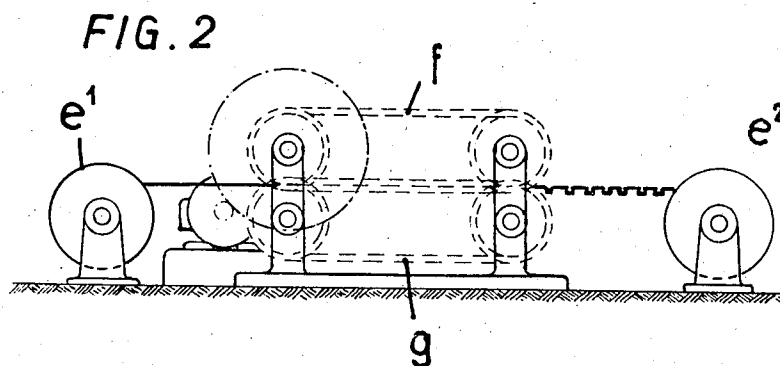
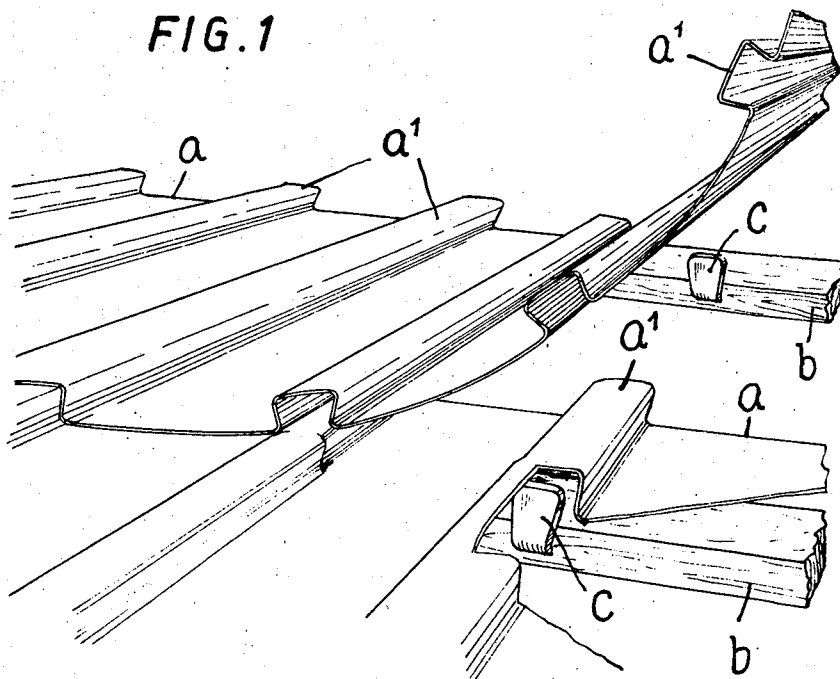
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2,585,760

ROOF AND WALL COVERING

Filed Sept. 7, 1948

2 SHEETS—SHEET 1



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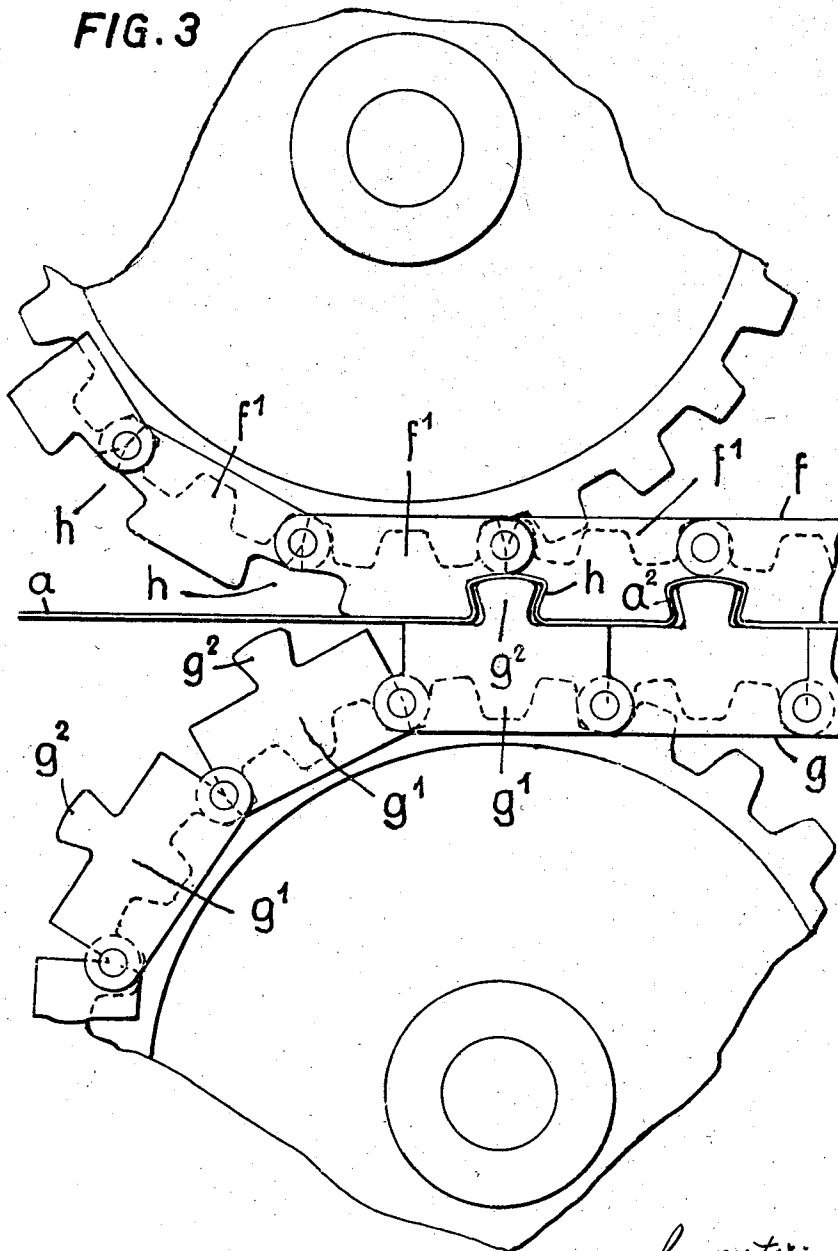
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2 SHEETS—SHEET 2

FIG. 3



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UNITED STATES PATENT OFFICE

2,585,760

ROOF AND WALL COVERING

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Application September 7, 1948, Serial No. 48,092
In Switzerland March 4, 1947

1 Claim. (Cl. 108-13)

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Corrugated metal sheets are often used for making roof- and wall-coverings, these being fastened in overlapping relationship on a support constructed of wooden laths and attached by means of nails which are driven through the corrugated sheet, which is disadvantageous when the corrugated sheets are intended for repeated use and are pierced every time.

The invention relates to a sheet for covering roofs and walls which can be secured in position without the use of nails or other fastening means which have to be driven through them.

This sheet is characterised by the fact that equally spaced parallel hollow ribs are pressed into the sheet, these ribs running transversely of the length of the sheet and having a downwardly tapering profile such that, when the sheets are laid in overlapping relationship, by rolling a rolled up sheet on to another stretched out sheet, the hollow ribs of the upper sheet, as it is unrolled, can be brought into secure engagement with the hollow ribs of the lower sheet by clipping over the latter.

The invention includes a machine for making sheets with hollow ribs of the above-mentioned kind which is characterised by the provision of two opposed caterpillar chains, one of which has links which carry central male members tapering towards the link, while the links of the other caterpillar chain are cut away at their adjoining ends to form female members, the whole in such a way that, in use of the machine, when a flat sheet is fed between the caterpillar chains, each male member cooperates with one of the female members by bulging the sheet into the female members, the opening in which, as the links between which it is formed move from their circular into their straight line path, becomes gradually smaller until the sheet material is finally pressed by the end walls of the female member against the male member to complete the formation of the hollow ribs in the sheet.

In the accompanying drawing are shown one example of construction of the roof- and wall-covering sheet according to the invention, together with a machine suitable for making the same.

Fig. 1 is a perspective view of a section of a roof covering and shows, in particular, how the sheets are laid to form the same,

Fig. 2 is a diagrammatic side view of the machine for making the sheets, and

Fig. 3 is a section through the machine to a larger scale.

The roof covering according to Fig. 1 consists

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of metal sheets *a* which are laid in overlapping relationship on roof laths *b* which constitute a support for it. These sheets *a* are provided with equally spaced hollow ribs *a*¹ extending in parallel transversely of the length of the sheet, which ribs have a downwardly tapering profile. These hollow ribs are conveniently slightly staggered at their end part, which is overlapped by the other (upper) sheet. To lay the roof covering the bottom sheet is first brought on to the roof support in the rolled condition and then unrolled on to it in the desired position. Then a second sheet is laid in a similar manner, this slightly overlapping the lower sheet. On unrolling the second sheet on the first one, the hollow ribs of the upper sheet clip, during the unrolling operation, over those of the lower sheet, whereby, thanks to the tapering of the rib profile at the lower part thereof, a secure engagement of the ribs of the upper sheet with those of the lower sheets is ensured. The sheets themselves are held on the roof support by means of attachment tongues *c* provided on the roof laths *b* and corresponding in shape with the section of the profile of the hollow ribs *a*¹, whereby the mutual engagement of the ribs and tongues is likewise effected during the unrolling operation.

Fig. 2 is a diagrammatic view of a machine for making the sheet with hollow ribs of the above-described section. *e*¹ is a roll from which the sheet is unrolled and *e*² is a take-up roll for the sheet, the sheet being fed on its way from one roll to the other between two opposed caterpillar chains *f* and *g*. As shown in Fig. 3, on a larger scale, the attached links *g*¹ of the lower caterpillar chain *g* are formed on their outer faces with projecting male members *g*² which taper downwardly in section. In correspondence with these the attached links *f*¹ of the caterpillar are cut away on their adjoining ends and so form a female member *h*.

In operation of the machine, when a flat metal sheet is passed between the motor driven chains *f* and *g* the male and female members cooperate in such a way that the male member first of all bulges the sheet into a female member which is open to its maximum extent. As soon, however, as the chains move from their circular into their straight line path the opening of the female member becomes gradually smaller in consequence of the gradual approach of its end walls until the latter finally press the sheet from opposite sides against the male member and form in the bulge in the sheet material a hollow rib of downwardly tapering section,

What I claim is:

A roof- or wall-covering construction comprising a plurality of covering sheets with the longitudinal edges of adjacent sheets in overlapping relationship, a plurality of laths for supporting said sheets and extending longitudinally thereof and being spaced apart at a distance less than the width of said sheets, said sheets being provided with transversely-extending, substantially equally spaced parallel hollow ribs of a downwardly tapering profile, and the said laths being provided with spaced upstanding attachment tongues substantially corresponding in shape and size with the cross sectional profile of said hollow ribs, said tongues being spaced apart at the same distance as that between said ribs, whereby successive sheets may be readily laid by unrolling and during such unrolling are clipped on the one hand onto the previously laid sheet by the inter-

engagement of the respective ribs thereof and on the other hand onto the tongues of the next succeeding lath, so that a nailless securing of the covering sheets to their supporting structure is realized.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
689,281	Brown	Dec. 17, 1901
2,262,378	Zavodsky	Nov. 11, 1941
2,278,477	Nyberg	Apr. 7, 1942
2,329,789	Schank	Sept. 21, 1943
2,369,487	Ochiltree	Feb. 13, 1945