G. H. PEDLAR.

INTERLOCKING METALLIC SHINGLE.

APPLICATION FILED JAN. 2, 1909.

943,888. Patented Dec. 21, 1909.

Fig. 9.

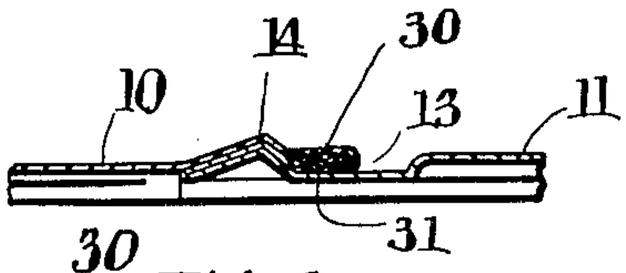


Fig. 10.

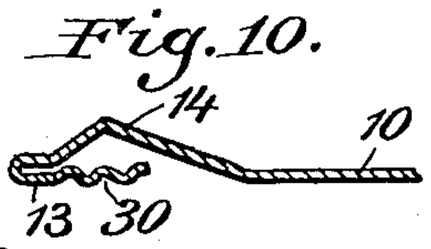


Fig. 8.

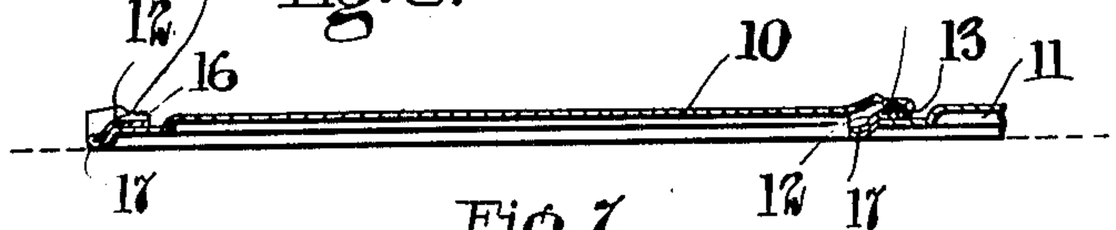


Fig. 7.

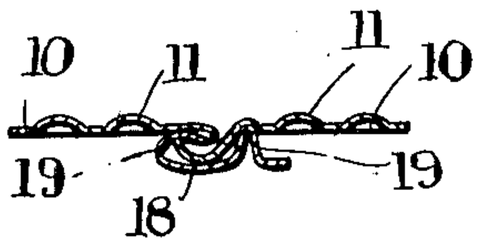


Fig. 5.

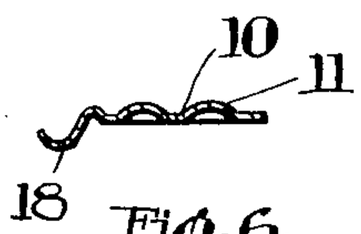


Fig. 6.

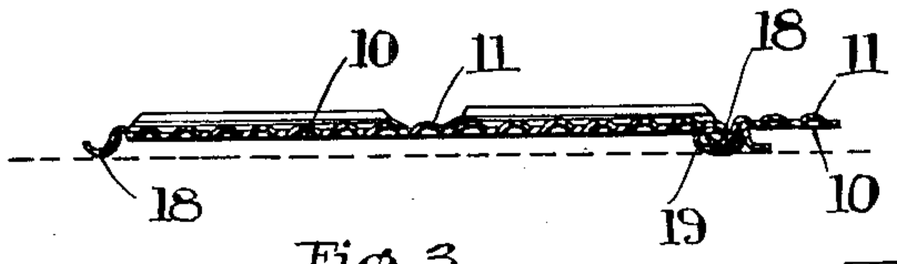


Fig. 3.

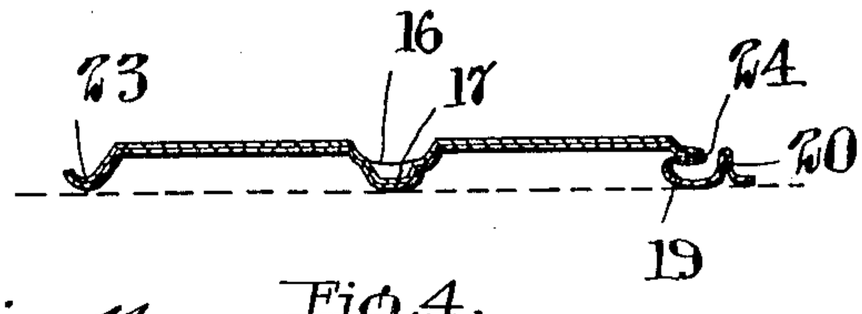
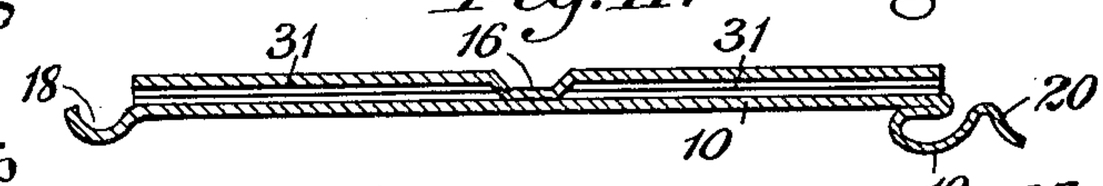


Fig. 4.

Fig. 11.



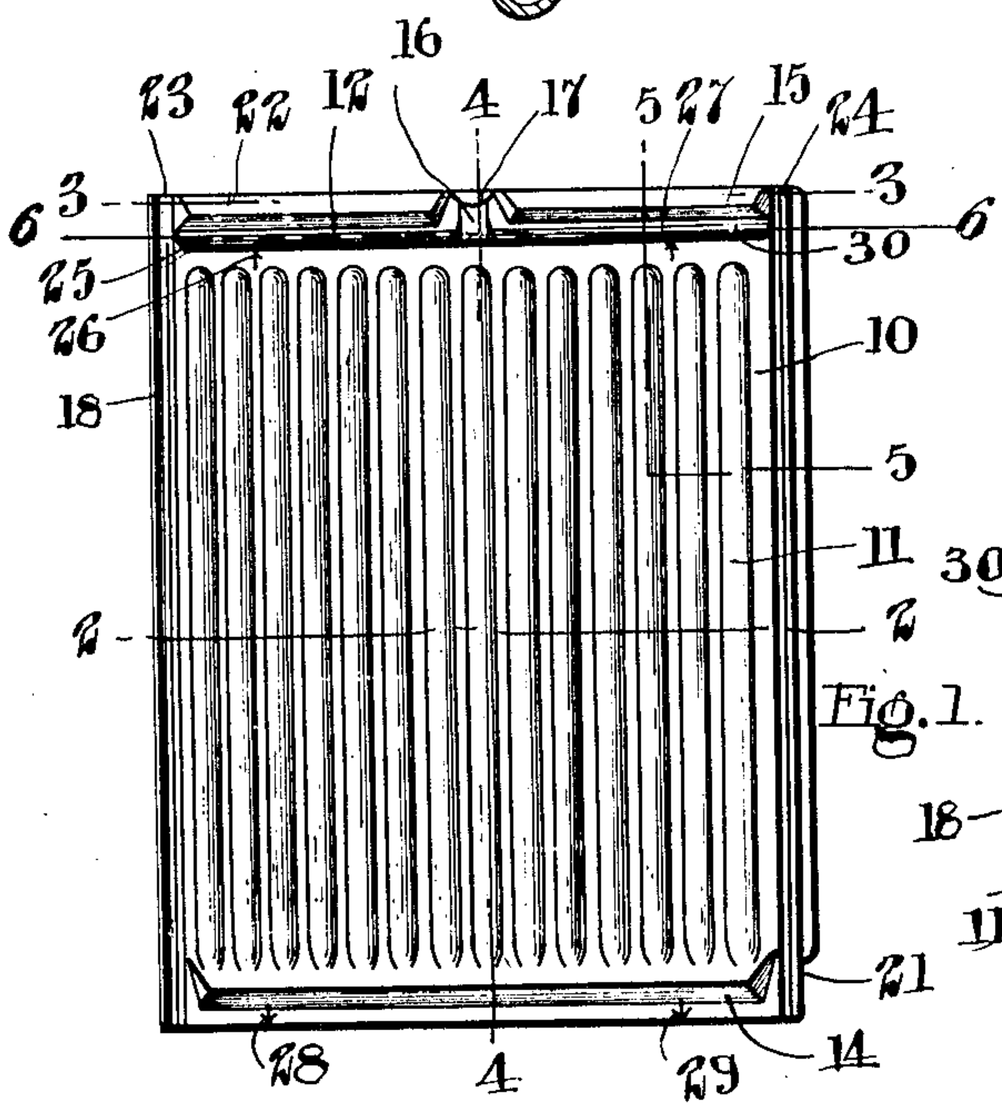


Fig. 1.

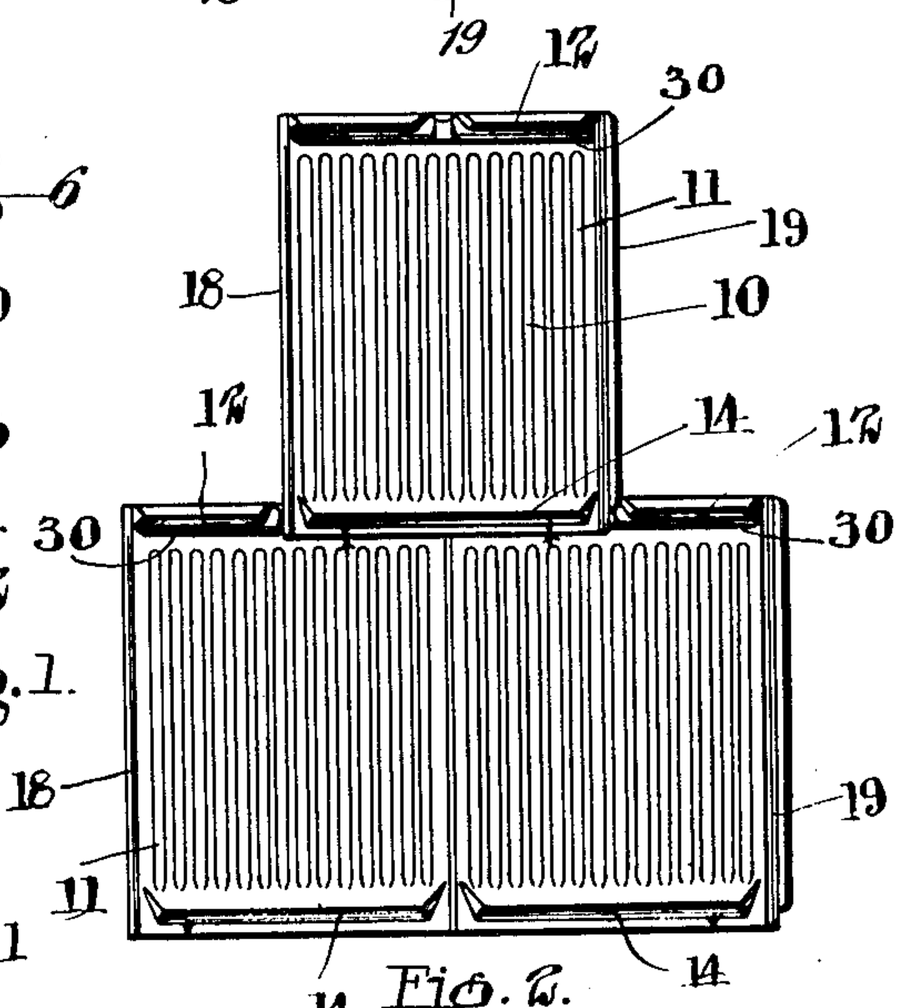


Fig. 2.

WITNESSES.

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UNITED STATES PATENT OFFICE.

GEORGE HENRY PEDLAR, OF OSHAWA, ONTARIO, CANADA.

INTERLOCKING METALLIC SHINGLE.

943,888. Specification of Letters Patent. Patented Dec. 21, 1909.

Application filed January 2, 1909. Serial No. 470,543.

To all whom it may concern:

Be it known that I, GEORGE HENRY PEDLAR, of Oshawa, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Interlocking Metallic Shingles, of which the following is a specification.

My invention relates to improvements in interlocking metallic shingles, and the objects of my invention are to provide means for strengthening the face of the shingle, and at the same time carrying the water off the shingle and away from the side joints thereof.

Further objects are to provide means for firmly and effectively supporting the face of the shingle in position parallel with the roof, for providing means for enabling the interlocking flanges to fit more closely to each other and to occupy as little room as possible, and also to provide means whereby the shingles may be accurately interlocked and registered with each other, without the necessity of appealing to the judgment of the workmen.

These objects are accomplished first, by longitudinally-extending fluting formed in the surface of the shingle adapted, at once to strengthen the same and form gutters or channels for carrying off the water from the shingles away from the side joints; secondly by depressions centrally in the top, each adapted to bear on the roof and support the face of the shingle parallel with the roof; thirdly by an improved form of downwardly curved trough-shaped interlocking flanges at the side adapted to bear against the roof to support the face of the shingle in its proper raised position; fourthly, by improvements in the interlocking top, bottom and side flanges hereinafter more particularly described in detail; and fifthly, by indicating score marks on each shingle adapted to register with the adjacent shingle, when they are in their proper relative position. All these and other features of the invention are described more fully in the accompanying specifications and drawings.

In the drawings, Figure 1 is a plan view of the shingle. Fig. 2 is a plan view showing three of the shingles interlocked together. Fig. 3 is a section along the line 2—2, Fig. 1. Fig. 4 is a section along the line 3—3, Fig. 1. Fig. 5 is an enlarged sectional detail through the interlocked side joint. Fig. 6 is an enlarged sectional detail through the trough-shaped flange at the edge of each shingle. Fig. 7 is a sectional detail on the line 4—4, Fig. 1. Fig. 8 is an enlarged sectional detail through the overturned flange, the section being taken at the point indicated by the line 5 5, Fig. 1. Fig. 9 is an enlarged section through the overturned flange at the top of the shingle. Fig. 10 is an enlarged section through the underturned flange at the bottom of the shingle. Fig. 11 is an enlarged section on the line 6 6, Fig. 1.

In the drawings, like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, 10 represents the face of the shingle, which, in accordance with the present invention, is formed with a plurality of longitudinally-extending flutes 11 which may be formed in any suitable shape, such as either U-shaped, V-shaped, semi-cylindrical or otherwise, in cross-section, those illustrated being partially cylindrical. These flutes give great rigidity to the face of the shingle, and prevent it bending even when picked up by one corner. Further than this, as they extend in a vertical direction when the shingle is laid, they form effective gutters for carrying water on the roof, preventing it running down the side joints.

Hitherto, when the face of the shingle has been made plain, any water on the roof has run down the side joints, and while, ordinarily, these are water-tight, yet, when a very large roof is covered, the shingles near the bottom of the roof frequently have such quantities of water running down the side joints, as to render it very difficult, if not impossible, to maintain them in a water-tight condition. The present invention distributes this water over the whole face of the shingle.

The top and bottom joint between the shingles is formed by an overturned flange 12 at the top of each shingle, which engages

with the underturned flange 13 formed along the bottom of each. Each shingle is further provided with a suitable molding 14 near the bottom which may be in the form of an annular ridge and the overturned flange and shingle beneath it is provided with a corresponding molding 15 adapted to fit into and register with the molding 14, whereby an effective barrier is provided against the entrance of water and at the same time a stiffened ridge is provided which will effectively resist any downward pressure on the joints.

In order to enable the shingles in the different rows to break joint, it is necessary to provide a central depression 16 in the upper ridge. To further hold the upper edge of the shingle on a level with the face thereof, and also to give greater support to the face, a downwardly-extending projection 17 is formed at about the middle of the upper edge of the shingle, the said projection being adapted to bear on the upper surface of the roof, as shown most clearly in Fig. 7.

To give increased rigidity to the underturned and overturned flanges 12 and 13 respectively, a plurality of corresponding corrugations 30 and 31 are provided in the same extending transversely of the shingle. It will be observed that these corrugations form effective means for locking the overturned and underturned flanges together, and as the metal possesses a certain amount of resiliency, a spring lock is thus formed between them.

The side joint of the shingle is formed by a trough-shaped flange 18, along one edge, which fits into an underturned flange 19, formed on the edge of the adjacent shingle, the said underturned flange being provided with a ridge 20 adapted to fit on the underside of the trough-shaped flange as shown in Fig. 5. This trough-shaped flange is curved down sufficiently to cause its underside to bear against the bottom of the underturned flange and thus derive support from the roof, whereby the surface of the shingle will be supported by the said trough-shaped flange 18 bearing against the roof in the manner specified.

In order to enable the metal to lie flatly and evenly at the point where the top and bottom and side joints meet, the end of the underturned flange 19 has a portion cut away to form a rabbet or recess 21, the use of which will be seen from an inspection of Fig. 2.

To enable the top and bottom joints to fit more closely and accurately together, the outer portion 22 of the overturned flange 12 has the extremities 23 and 24 thereon pressed into engagement with the trough 18 and the underturned flange 19 while the outer portion 25 on the flange 12 only extends to the edge of the trough and the underturned flange respectively, and is not pressed into engagement with the trough or the underturned flange as shown more particularly in Fig. 11.

To enable the shingles to be accurately registered with each other, to secure a better joint between the different sections and at the same time to increase the speed with which they may be laid by the workman, two score marks 26 and 27 are provided on the top and 28 and 29 on the bottom, adapted to register with each other when the shingles are laid as shown in Fig. 2.

What I claim as my invention is:—

1. A metallic shingle formed with interlocking side joints, the flanges of which extend below the face of the shingle, and having the top edge of the shingle formed with a depression on the upper surface forming a projection on the lower surface adapted to space the shingle from the roof, and a suitable interlocking means formed along the top and bottom of the shingle.

2. A metallic shingle formed with interlocking side joints, the flanges of which extend below the face of the shingle, and having the top edge of the shingle formed with a projection formed by a depression pressed in the edge of the shingle, adapted to abut the roof and support said edge in the same plane as the face of the shingle, and suitable interlocking means formed along the top and bottom of the shingle.

3. A metallic shingle formed at the side with interlocking flanges and having the bottom formed with an underturned flange and the top formed with an overturned flange, the ends of the upper part of which are pressed into engagement with the side flanges, the said overturned flanges having an outer portion extending only to the edge of the side joints, and disconnected from said side joints.

4. A metallic shingle having suitable interlocking top and bottom joints and having interlocking side joints formed by an undercurved flange on one side, and a trough-shaped flange on the opposite side, the said trough-shaped flange extending down sufficiently to form a support for the face of the shingle by bearing on the bottom of the undercurved flange, whereby the faces of the two abutting shingles may be supported in the same plane, the upper edge of the said shingle being provided with a depression on the upper surface forming a projection on the lower surface adapted to bear against the roof and thus space the face of the shingle from the roof.

5. An interlocking metallic shingle having an overturned interlocking flange at the

edge thereof, the said flange being formed with a plurality of corrugations extending longitudinally thereof and adapted to strengthen the same.

6. An interlocking metallic shingle having an overturned flange at the top and an underturned flange at the bottom, both of said flanges being formed with corresponding corrugations adapted to strengthen the same.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

GEORGE HENRY PEDLAR.

Witnesses:

ED. J. STEPHENSON,

ROBT. PATE.