This invention relates to improvements in metal roofing shingles, and more particularly to a metal shingle which will be reinforced at its opposite ends, and will be arranged to automatically give notice to the workman applying the shingles, that the correct lap has been secured.

An object of the invention is to provide an improved metal roofing shingle which will automatically give the correct lap when the shingles are being laid, and which will afford an air space or lock between the courses of shingles when in position on a roof.

Another object of the invention is to provide an interlocking metal shingle for roofing purposes which will interlock with adjoining shingles at its sides and ends to provide a waterproof roof, and will have its upper end corrugated to add strength to the shingle and to the joint when attached to another shingle.

Another object of the invention is to provide a metal roofing shingle which will have its lower end bent downwardly and inwardly to cooperate with and contact the raised water breaks or beads in the adjacent shingle in the next lower course to provide for the correct lap, and will have its upper end bent upwardly and said bent up portion being corrugated to add strength to the shingle.

Another object of the invention is to provide an improved metal roofing shingle which will cooperate with other similarly formed shingles to produce an automatically and correctly lined roof.

A still further object of the invention is to provide a metal shingle construction which will have its ends cooperate with the ends of adjacent similarly constructed shingles to form an air lock between the courses of shingles to positively prevent capillary attraction when the shingles are applied to a roof.

Other objects will appear as the description proceeds.

In the accompanying drawing which forms a part of our application,

Figure 1 is a perspective view of several shingles made in accordance with our invention, showing the same in operative relationship;

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

Figure 3 is a sectional view taken on the line 3—3 of Figure 1;

Figure 4 is a sectional view taken on the line 4—4 of Figure 1;

Figure 5 is a plan view of a portion of the lower left hand corner of a shingle showing the flanged portions adjacent the corner being cut away, and Figure 6 is a sectional view through the interlocking joint in a modified form of shingle.

Like characters of reference are used throughout the following specification and the accompanying drawing to designate corresponding parts.

In carrying out our invention, we provide a metal roofing shingle 1, formed with an interlocking flange 2 on its left side, and a cooperating locking slot 3 on its right side, for the interlocking of adjacent shingles when a roof is being applied. The shingle 1 is also formed with one or more raised water breaks or beads 4, which cooperate with the lower edge of the shingle in the following course, said lower edge of the shingle being bent downwardly and inwardly as at 5, to lie upon the upper surface of the lower shingle, and to positively and automatically engage the bead, thereby providing the correct lap when the shingles are being applied.

In the preferred form of our shingle illustrated in Figure 1, the upper end of the shingle is bent upwardly and is corrugated as shown at 6. From the sectional view shown in Figure 2, it will be apparent that the corrugated ends of the upper course of shingles contact and support the undersurfaces of the shingles in the next or following course, thereby forming a waterproof joint and providing an air lock between the several courses of shingles, thus preventing capillary attraction.

In the modification illustrated in Figure 6, the upper terminal end of the shingle is bent upwardly and downwardly as at 7, parallel to the shingle surface, to further reinforce and add strength to the shingle where it is most needed. The shingles will be fastened to the roof by suitable nails 8, which will be inserted through the pre-formed openings 9 in the shingles.

From the drawing in Figure 5, it will be apparent that the flanged portions of each shingle is cut away at the lower left hand corner, which will make a tight and waterproof joint, when joined to the next shingle.

Due to the cooperation between the water breaks or beads in the shingles and the downwardly and inwardly turned lower end of the shingle in the following course, the workman applying the roof, will merely place the upper shingle on the previously applied shingle until the lower end of the upper shingle strikes the water break on the lower shingle, at which time the proper lap will be obtained, and the upper shingle will then be nailed to the roof.

The bending of the metal in opposite directions...
to the shingle at its opposite ends, and then bending the extreme ends inwardly to extend parallel to the shingle as shown in Figure 6, provides many advantages when the roof is laid. For example, the angular relation of and the overlying contacting portions of the adjoining terminal ends of the shingles affords a reinforced air lock which may be walked on without injuring the joint or lock, and also the beads carry away any water which seeps into the air lock. Furthermore the flanges at the upper ends of the shingles serve to turn back or throw back water driving between the joints, towards the beads, where it will drain off, thus insuring waterproof joints between the shingles.

Many minor changes in detail of construction may be resorted to without departure from the spirit of the invention.

Having thus described our invention what we claim as new and desire to secure by Letters Patent of the United States is:

A roof composed of metallic shingles, each shingle having a flat body portion, an upstanding flange with an inwardly turned portion at right angles thereto on the upper edge of said body, and a similar downwardly and inwardly extending flange on the lower edge thereof, beads extending transversely of said body adjacent said upwardly extending flange, said shingles each having said lower flange resting on the body of a subjacent shingle and contacting a bead thereon, and being supported by the upwardly and inwardly extending flange of said subjacent shingle.

JESSE FULENWIDER.
HARRY FULENWIDER.