July 7, 1942. P. A. VOIGT ET AL 2,289,298

COVERING UNIT

Filed May 31, 1940

Fig. 1.

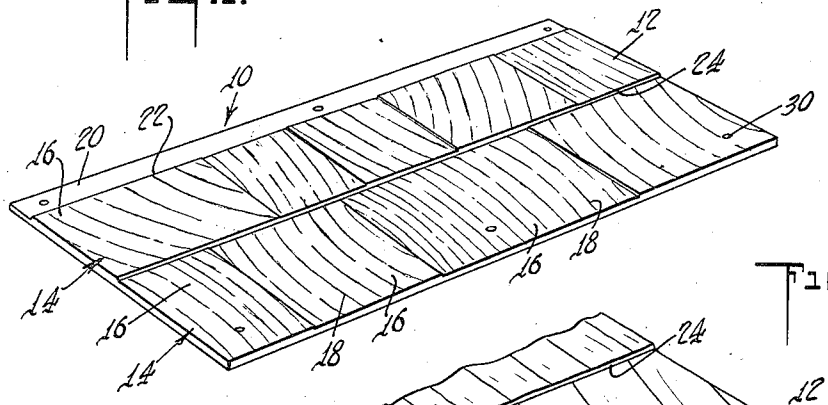



Fig. 2.

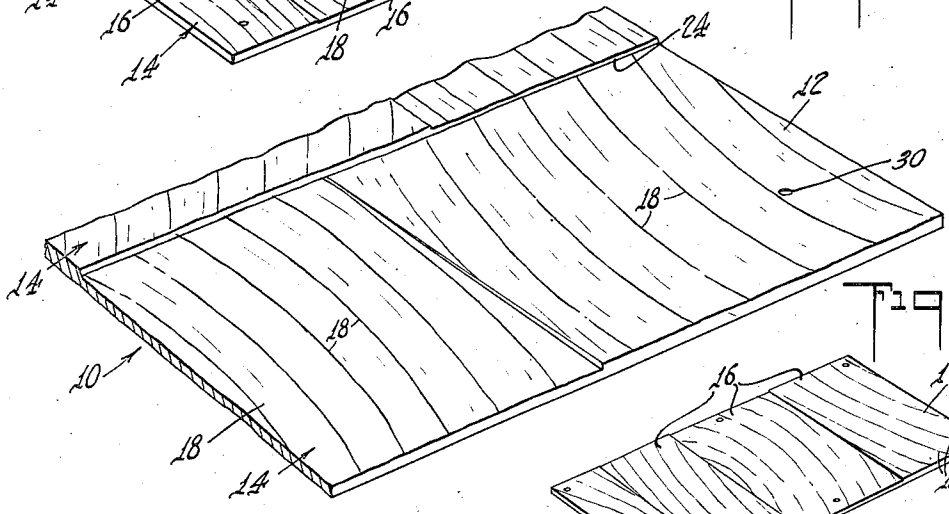



Fig. 5.




Fig. 3.

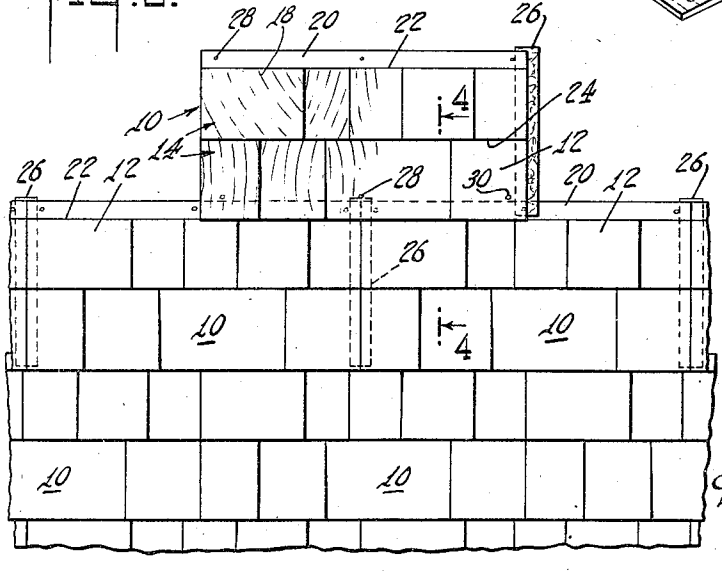
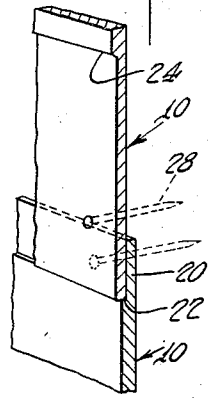



Fig. 4.




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# UNITED STATES PATENT OFFICE

2,289,298

## COVERING UNIT

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5 Claims. (Cl. 106—3)

The present invention relates to improvements in covering units for roofs and side walls, and particularly to units of a rigid nature composed of a hardened, compressed, cementitious composition.

The advantageous properties of units of the above-referred-to type have long been recognized, but their acceptance by the trade in substitution for conventional wooden shingles has been restricted due to their appearance of artificiality, particularly when made in the relatively large sizes necessary to secure economical application. Heretofore, attempts have been made to surface the units to overcome this disadvantage and to relieve the monotonous appearance of the units. These proposals include the provision of alternating ribs and depressions in an attempt to simulate wood graining. In some instances, the ribs and depressions have been arranged in bands to divide the surface of the unit into what is intended to portray a plurality of shingles in adjacent course-wise relationship. However, the depressions defining the ribs must be relatively wide and deep if they are to perform these functions, with the result that the actual appearance of the units is very foreign to that of wooden shingles and, in fact, the appearance of artificiality is accentuated rather than the contrary. Actually, conventional wooden shingles have a rather fine grain which does not stand out to any great extent, their most prominent surface feature being the kerf marks comprising comparatively shallow concentric grooves left by the saws which sever the shingles from the block. A wall covering of wooden shingles owes its distinctive appearance principally to the presence of the kerf marks forming a subdued background effect and the irregularities in surface levels between adjacent shingles of a course.

The principal object of the instant invention is the provision of a covering unit, particularly a siding or roofing shingle, composed of a hardened, compressed, cementitious composition, and closely simulating the appearance of one or more partial courses of wooden or similar shingles laid in contiguous relationship.

Another object of the invention is the provision of a covering unit of the type referred to, in which a plurality of surface features are combined to give the desired appearance and in which weathering accentuates such features.

A further object of the invention is the provision of covering units of the character described, adapted for ready assembly on a side wall or roof to provide a weather-tight structure.

Our invention will be more fully understood and further objects and advantages thereof will become apparent when reference is made to the more detailed description thereof which is to follow and to the accompanying drawing, in which:

Fig. 1 is a perspective view of a covering unit in accordance with the invention;

Fig. 2 is a fragmentary perspective view on an enlarged scale of a portion of the unit of Fig. 1;

Fig. 3 is an elevational view depicting a plurality of the units laid in assembled relationship on a side wall or the like;

Fig. 4 is an enlarged sectional view taken on the line 4—4 of Fig. 3; and

Fig. 5 is a perspective view of a modification of the invention.

Referring now to the drawing, and particularly to Figs. 1 and 2, a covering unit in accordance with the invention comprises a slab of a hardened, compressed, cementitious composition, particularly an asbestos-cement composition of the type now commonly used in the manufacture of so-called asbestos-cement siding and roofing shingles. The unit 10 includes a face 12 to be exposed, which, in accordance with preferred practice, is impressed to divide it into two or more bands 14 to simulate two or more partial shingle courses laid in normal overlapping relationship. The bands 14 are, in turn, divided into a plurality of laterally adjacent individual shingle simulating areas 16, the contiguous edges of which are at different levels.

The simulations of the plurality of shingle courses and, as well, the individual shingles of each course are obtained by unequal compression of the unit prior to hardening of the cementitious content. In the normal manufacture of the units, they are stacked, with press plates inserted between adjacent units, and the stack is subjected to heavy pressure between press platens of a hydraulic press or the like. In the present instance, the desired surface configuration is obtained by providing the press plates with a surface contour which is the reverse of that to be impressed on the unit.

In addition to the individual shingle and shingle course simulations impressed in the surface of the unit, each of the simulated shingles is provided with a surface contour in imitation of the saw kerf lines of a conventional wooden shingle, as illustrated at 18 in Figs. 1 and 2. The latter are relatively shallow depressions of substantially concentric arcuate form. The units may also be recessed at their upper ends, as indicated by the numeral 20, to receive, when the units are assembled on a side wall, roof, or the like, the butt edges of units of the next adjacent overlapping course. Preferably, the shoulder 22, defining the recess 20, is of such height that the thickness of the exposed butt edges of the overlapping units is equal in height to the shoulder 24, defining the butt edges of the upper simulated shingle course 14. As a result, when a plurality of the units are assembled on the wall, uniformity of apparent butt thickness between real courses and simulated courses is obtained. The depressions 18 and the recess 20 are suitably obtained by providing the reverse of these fea-


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tures on the press plates, in addition to the reverse surface contours previously described.

Referring now to Figs. 3 and 4, a plurality of the covering units of Figs. 1 and 2 are shown in assembled relationship, as on a side wall, roof, or the like. As illustrated, the units of each course are laid in staggered relationship with units of adjacent courses with the butt edge of each next higher course seated in the recess 20 of the next lower course. The joints between adjacent units of each course are closed as by backer strips 26, suitably comprising an asphalt saturated rag felt or the like. The units are secured in position by nails 28 passing through preformed perforations 30.

Covering units in accordance with the invention very closely simulate the appearance of a plurality of individual wooden shingles, due, in part, to the subdivision of the relatively large units 10 into individual areas of substantially the exposed area of normal wooden shingles. The accuracy of the simulations is also due to the shallow depressions of such shape and contour as to closely imitate the kerf cuts of a shingle saw.

Inasmuch as the individual shingle simulations are at different levels, the shallow depressions need only portray the surface appearance of wooden shingles, the necessity of accentuating the graining to break up the unit into smaller visual areas being entirely unnecessary. Furthermore, the appearance of individual shingles is accentuated during the weathering of the units. This follows from the fact that the portions which have been compressed to the greatest extent in the manufacture of the unit are more dense than those portions which have been less compressed, with the result that the denser portions absorb less moisture, and hence, do not become darkened by the deposit of dirt and other foreign matter thereon to the extent that the less impervious portions do. As a consequence, after the units have been laid for a short time, the division between individual shingle simulations is enhanced by shadow lines.

The unit has been described above as preferably including the horizontal shoulder 24 to divide it into two partial course simulations. However, in many instances this feature may be eliminated and each individual shingle simulation extended from the butt edge to, or substantially to, the upper edge of the unit as shown in Fig. 5 to define a single partial course. The latter is particularly applicable where it is desired to simulate shingles laid with a wide exposure. The butt receiving recess 20 may also be eliminated as indicated in Fig. 5, the recess having substantial merit but not being essential to the main effect desired, namely, the simulation of wooden shingles. Such units, similarly as those including the shoulder 24, closely simulate the appearance of a plurality of wooden shingles, due to the shingle simulating areas at different levels at their contiguous edges, the imitated saw kerf lines, and the weathering effects resulting from the different densities of the material at the different levels.

Having thus described our invention in rather full detail, it will be understood that these details need not be strictly adhered to, but that various changes and modifications will suggest themselves to one skilled in the art, all falling within the scope of the invention as defined by the subjoined claims.

What we claim is:

1. A covering unit composed of a hardened, compressed, asbestos-cement composition, said unit comprising a surface to be exposed divided into a plurality of laterally adjacent individual shingle simulating areas, each of said areas having its lateral edge portions at different elevations than the edge portions of the contiguous areas, said edge portions of less elevation being more compressed than contiguous edge portions of greater elevation, the faces of said areas including relatively shallow depressions.

2. A covering unit composed of a hardened, compressed, asbestos-cement composition, said unit comprising a surface to be exposed divided into a plurality of laterally adjacent individual shingle simulating areas, each of said areas having its lateral edge portions at different elevations than the edge portions of the contiguous areas, said edge portions of less elevation being more compressed than contiguous edge portions of greater elevation, the faces of at least certain of said areas including generally concentric, arcuate depressions.

3. A covering unit composed of a hardened, compressed, asbestos-cement composition, said unit comprising a surface to be exposed having longitudinally extending bands simulating shingle courses in overlapping relationship, the butt edge of a simulated overlapping course being elevated with respect to the adjacent portion of a simulated overlapped course, said bands being divided into a plurality of laterally adjacent shingle simulating areas, each of said areas having its lateral edge portions at a different elevation than the edge portions of the contiguous areas, the material of the unit at the portions of less elevation being more compressed than at contiguous portions of greater elevation, the faces of said areas including shallow depressions.

4. A covering unit composed of a hardened, compressed, asbestos-cement composition, said unit comprising a surface to be exposed having longitudinally extending bands simulating shingle courses in overlapping relationship, the butt edge of a simulated overlapping course being elevated with respect to the adjacent portion of a simulated overlapped course, said bands being divided into a plurality of laterally adjacent shingle simulating areas, each of said areas having its lateral edge portions at a different elevation than the edge portions of the contiguous areas, the material of the unit at the portions of less elevation being more compressed than at contiguous portions of greater elevation, the faces of said areas including shallow depressions.

5. A covering unit assembly comprising a plurality of covering units composed of a hardened, compressed, asbestos-cement composition and laid in overlapping courses with the units of each course recessed to receive the butts of units of an overlapping course, each of said units comprising a surface to be exposed divided into a plurality of laterally adjacent individual shingle simulating areas, each of said areas having its lateral edge portions at a different elevation than the edge portions of the contiguous areas, said edge portions of less elevation being more compressed than contiguous edge portions of greater elevation, the faces of said areas including shallow depressions.

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