

July 13, 1943.

C. W. KRAUS

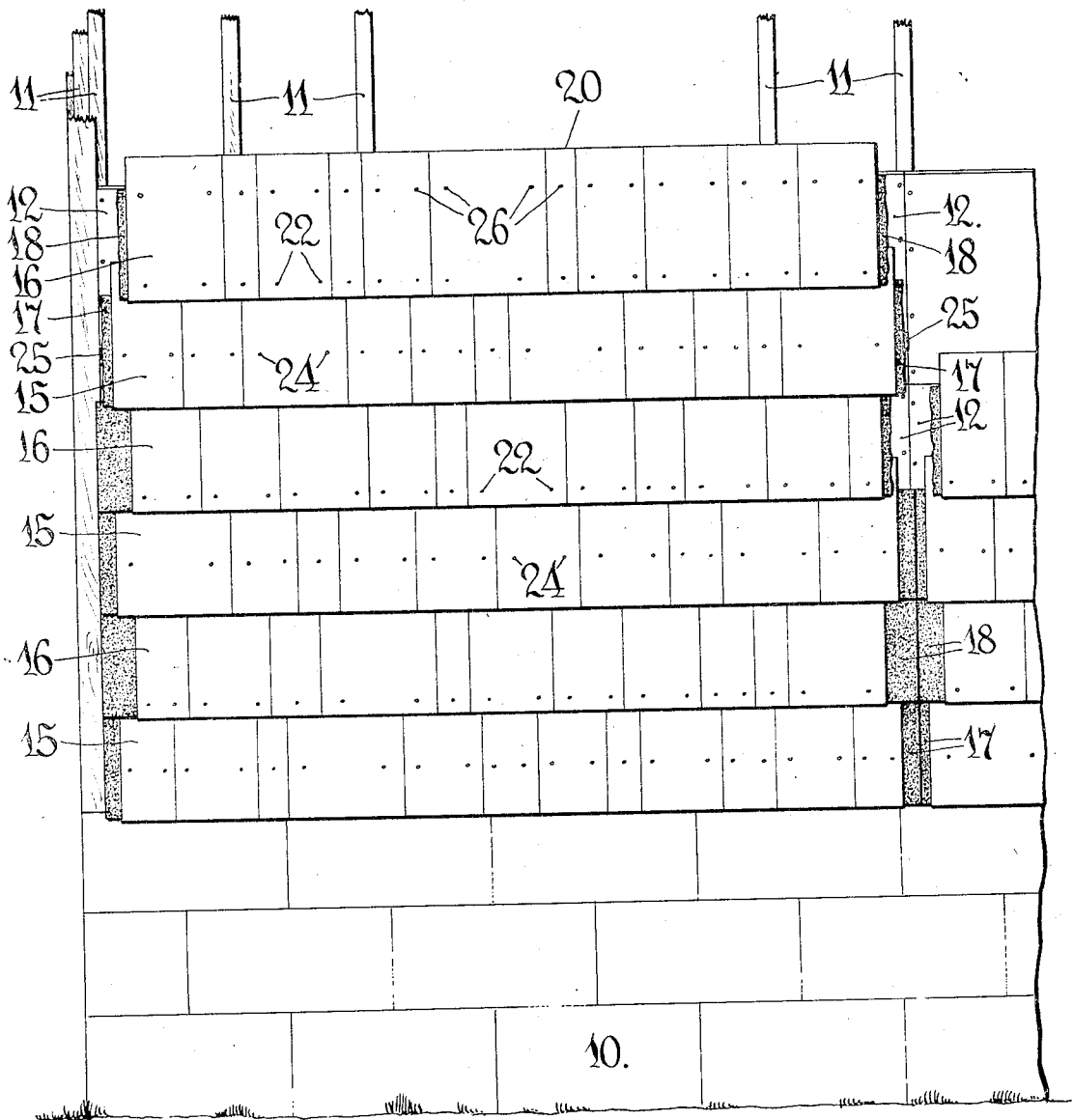
2,324,218

BUILDING CONSTRUCTION

Filed July 30, 1942

2 Sheets-Sheet 1

FIG. 1.



INVENTOR
Clarence W. Kraus,
BY
Beau, Brooks, Buckley & Beau.
ATTORNEYS

July 13, 1943.

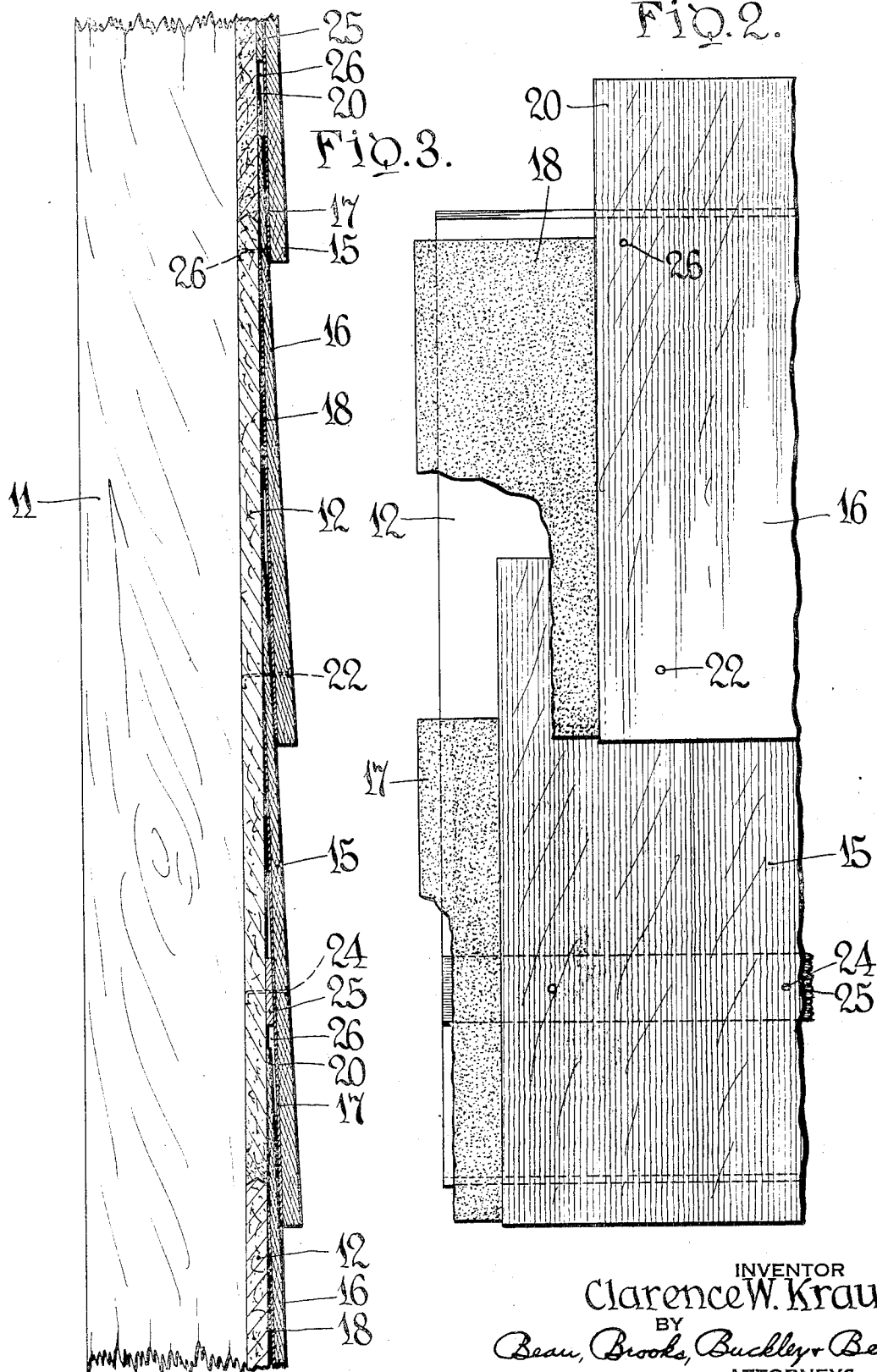
C. W. KRAUS

2,324,218

BUILDING CONSTRUCTION

Filed July 30, 1942

2 Sheets-Sheet 2



UNITED STATES PATENT OFFICE

2,324,218

BUILDING CONSTRUCTION

Clarence W. Kraus, Buffalo, N. Y.

Application July 30, 1942, Serial No. 452,835

8 Claims. (Cl. 20—5)

This invention relates to building construction involving multiple prefabricated panel units including sheathing and siding.

It has been proposed heretofore to apply relatively low density insulating panels against building framework, in the nature of studding or the like, and to subsequently apply siding material. Constructions of this nature are relatively slow and expensive in application and are objectionable because of the inability of the low density insulating material to retain nails used in applying the shingle siding. In my prior art Patent No. 2,256,435 I show a panel unit including a base sheet of low density insulating material having shingles secured thereto with their nails clenched at the back of the panel. While this obviates the prior art tendency of the shingle nails to become loose, I have found a further novel arrangement of shingle elements upon an insulating base sheet which is far superior from the standpoint of being impervious to the elements.

It is an object of the present invention to provide a composite unit panel of this kind wherein random width shingles may be employed with the major portions of their lengths to the weather without danger of the admission of moisture or the like. Further advantages are derived by reason of the provision of a novel arrangement of strips of roofing felt, building paper or the like behind the several courses of shingles. In its preferred form the presently proposed building unit construction is advantageous in that its production requires an absolute minimum of different parts or parts of different size. All of the shingles are of substantially the same length, and of either random or standard width, and the strips of weatherproofing paper or the like may be of a single size.

Other objects and advantages incident to a pursuance of the teachings of the present invention will occur to those skilled in the art from a consideration of the following description of a typical embodiment of the invention taken in connection with the accompanying drawings.

In the drawings:

Fig. 1 is a fragmentary elevational view of a building wall having building units of the kind here in contemplation applied partially thereacross;

Fig. 2 is a fragmentary elevational view of the left end portion of a building unit with portions thereof broken away; and

Fig. 3 is a vertical cross-sectional view through a building wall including the illustrative form of building unit.

Throughout the several figures of the drawings, like characters of reference denote like parts and the numeral 10, Fig. 1, designates a building foundation having studding 11 rising therefrom in conventional manner. The building units of the present invention include base panels of gypsum or plywood or an insulating material, such as low density pulp board, and the panels, designated 12, are preferably of a width substantially equal to a multiple of a pitch of the studding. If desired, the panels 12 may be of tongue and groove construction as shown in Fig. 2. In the illustrated instance the vertical height of each panel is such as to cooperate with and support two horizontal courses of shingles, but any desired number of courses may be secured to a single base panel.

Referring to Figs. 2 and 3, a lower course of shingles of random width is designated 15 and an upper overlapping course is designated 16. Directly behind the shingles of the lower course 15 is disposed a horizontal strip of roofing felt or building paper designated 17 and extending vertically from the lower or butt ends of the shingles, preferably to a point upwardly slightly beyond the butt ends of the upper course of shingles 16. An identical backing strip 18 is disposed directly behind the shingles of the upper course 16. In the form shown the butt ends of the shingles of the lower course 15 extend downwardly slightly beyond the lower edge of the base panel 12 to which they are secured and the upper ends or tips of the shingles of the upper course 16 extend upwardly substantially beyond the upper edge of the base panel 12 as at 20.

In the form shown the shingles of the two courses are jointly secured to the base panel 12 by nails 22 or other suitable fasteners which extend through the butt ends of the upper course of shingles and the tip ends of the lower course, the nails 22 being clenched over the back of the insulating base panel 12. The shingles of the lower course 15 are additionally secured to the base panel 12 by nails 24 and at this point of the fastening a horizontal furring strip 25 is interposed between the base panel 12 and the shingles. This furring strip, or other suitable equivalent spacing means, provides a pocket 26 of predetermined size between the panel 12 and the portions of the shingles of the lower course 15 which extend below the furring strip. The pocket 26 receives, in interlocking fashion, the projecting tips 20 of the upper course 16 of shingles of a corresponding building unit secured to the studding 11 directly below the one being discussed.

The backing sheet 17 of the building paper or roofing felt is disposed outside of the furring strip 25 so that it overlies the shingle tips of a sub-jacent unit extending into the pocket, and, in fact, extends downwardly beyond the upper edge of the backing sheet 18 of the course of shingles therebelow, such course being an upper course 16 of the subjacent building unit.

It will be noted from Figs. 1 and 2 that the shingle courses do not extend entirely across the base panels 12 and, further, that the shingles of the upper course 16 stop short of the ends of the lower course 15. This facilitates the application of relatively narrow shingle portions to close the gaps in the lower courses and subsequently applying relatively wider shingles portions to close the gaps in the upper courses. Suitable jigs or fixtures may be employed for gauging the application of the shingles of the courses 15 and 16 in the first instance and, while random width shingles may be employed, if provision be made for having the ends of the courses 15 and 16 a uniform distance in from the edges of the panels 12, shingle portions for filling in between courses on the job may be of standard width. This eliminates any cutting of shingles on the job in ordinary application of the units along a continuous surface.

The backing sheets 17 and 18 preferably project laterally beyond the base panels 12 at each side, as indicated in Fig. 2, so that the backing sheets 17 and 18 overlap laterally adjacent panels. In this way the completion of a wall by insertion of shingle sections to close the gaps in the lateral meeting edges of the several units results in a completely weather-proofed sheathing and siding construction.

In practice the upper shingle course 16, held to the base panel 12 by nails 22, is additionally fastened by nails 26.

It is to be understood that the foregoing specific embodiment of the principles of the present invention is set forth by way of example only, and that the spirit and scope of the invention is not to be considered as limited otherwise than as defined in the appended claims.

I claim:

1. A building construction unit comprising a base sheet and a plurality of horizontal courses of shingles secured thereto, the tips of the uppermost course of shingles projecting substantially beyond the top of said base sheet, and a horizontal furring strip secured between the lowermost course of shingles and the base sheet, said furring strip being spaced upwardly from the bottoms of said base sheet and said lower course of shingles a distance sufficient to provide a pocket for receiving the projecting tips of an upper course of shingles of a lower contiguous unit.

2. A building construction unit comprising a base sheet of low density insulating material and a plurality of overlapping horizontal courses of wooden shingles secured thereto, the tips of the uppermost course of shingles projecting substantially beyond the top of said base sheet, and a horizontal furring strip secured between the lowermost course of shingles and the base sheet, said furring strip being spaced upwardly from the bottoms of said base sheet and said lower course of shingles a distance sufficient to provide a pocket for receiving the projecting tips of an upper course of shingles of a lower contiguous unit.

3. A building construction unit comprising a

base sheet and a plurality of horizontal courses of shingles secured thereto, the tips of the uppermost course of shingles projecting substantially beyond the top of said base sheet, and a horizontal furring strip between the lowermost course of shingles and the base sheet, said furring strip being spaced upwardly from the bottoms of said base sheet and said lower course of shingles a distance sufficient to provide a pocket for receiving the projecting tips of an upper course of shingles of a lower contiguous unit, and a weatherproof backer for each course of shingles comprising a sheet approximately the width of said base sheet and extending vertically from the butts of the shingles of its course at least up to the overlapping butts of the shingles in the upwardly adjacent course.

4. A building construction unit comprising a base sheet and a plurality of horizontal courses of shingles secured thereto, the tips of the uppermost course of shingles projecting beyond the top of said base sheet, the size of such projecting portions being approximately equal to the size of unexposed tips of shingles of a course therebelow, and a horizontal furring strip secured between the lowermost course of shingles and the base sheet, said furring strip being spaced upwardly from the bottoms of said base sheet and said lower course of shingles a distance sufficient to provide a pocket for receiving the projecting tips of an upper course of shingles of a lower contiguous unit.

5. A building construction unit comprising a base sheet and a plurality of horizontal courses of shingles secured thereto, the tips of the uppermost course of shingles projecting substantially beyond the top of said base sheet, and a horizontal furring strip secured between the lowermost course of shingles and the base sheet, said furring strip being spaced upwardly from the bottoms of said base sheet and said lower course of shingles a distance sufficient to provide a pocket for receiving the projecting tips of an upper course of shingles of a lower contiguous unit, said courses of shingles terminating short of a lateral marginal edge of said base sheet.

6. A building construction unit comprising a base sheet and a plurality of horizontal courses of shingles secured thereto, the tips of the uppermost course of shingles projecting substantially beyond the top of said base sheet, and a horizontal furring strip secured between the lowermost course of shingles and the base sheet, at an intermediate point to cause the shingles of said course to flare downwardly away from said base sheet and provide a longitudinal pocket for receiving the projecting tips of an upper course of shingles of a similar lower contiguous unit.

7. A building construction unit comprising a base sheet and a plurality of horizontal courses of shingles secured thereto, the tips of the uppermost course of shingles projecting substantially beyond the top of said base sheet, and a horizontal furring strip secured between the lowermost course of shingles and the base sheet, at an intermediate point to cause the shingles of said course to flare downwardly away from said base sheet and to provide a longitudinal pocket for receiving the projecting tips of an upper course of shingles of a similar lower contiguous unit, the outer side edges of the end shingles of each course being inset from the marginal side edges of the base sheet to provide exposed marginal base sheet portions for nailing to building framework.

8. A building construction unit comprising a base sheet and a plurality of horizontal courses of shingles secured thereto, the tips of the uppermost course of shingles projecting substantially beyond the top of said base sheet, and a horizontal furring strip secured between the lowermost course of shingles and the base sheet, the upper edges of the shingles of said lowermost course being held between the base sheet and

the butts of the shingles of the next course above and said furring strip being spaced upwardly from the bottoms of said base sheet and said lower course of shingles a distance sufficient to provide a pocket for receiving the projecting tips of an upper course of shingles of a lower contiguous unit.

CLARENCE W. KRAUS.