July 31, 1934. S. P. MOFFIT 1,968,217

SHINGLE

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Fig. 1.

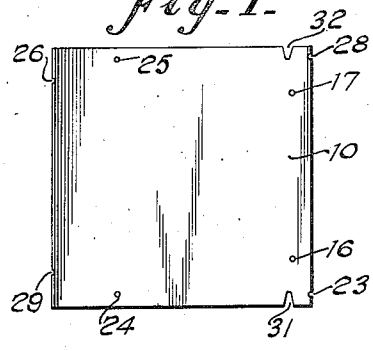


Fig. 2.

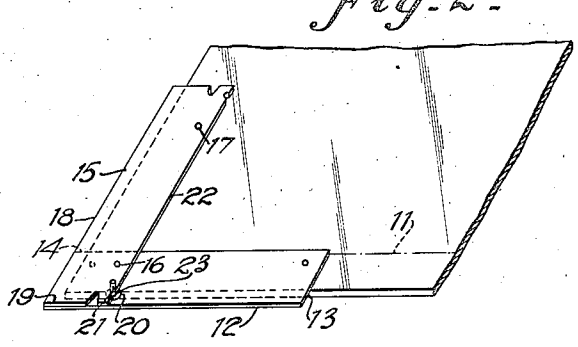


Fig. 4.

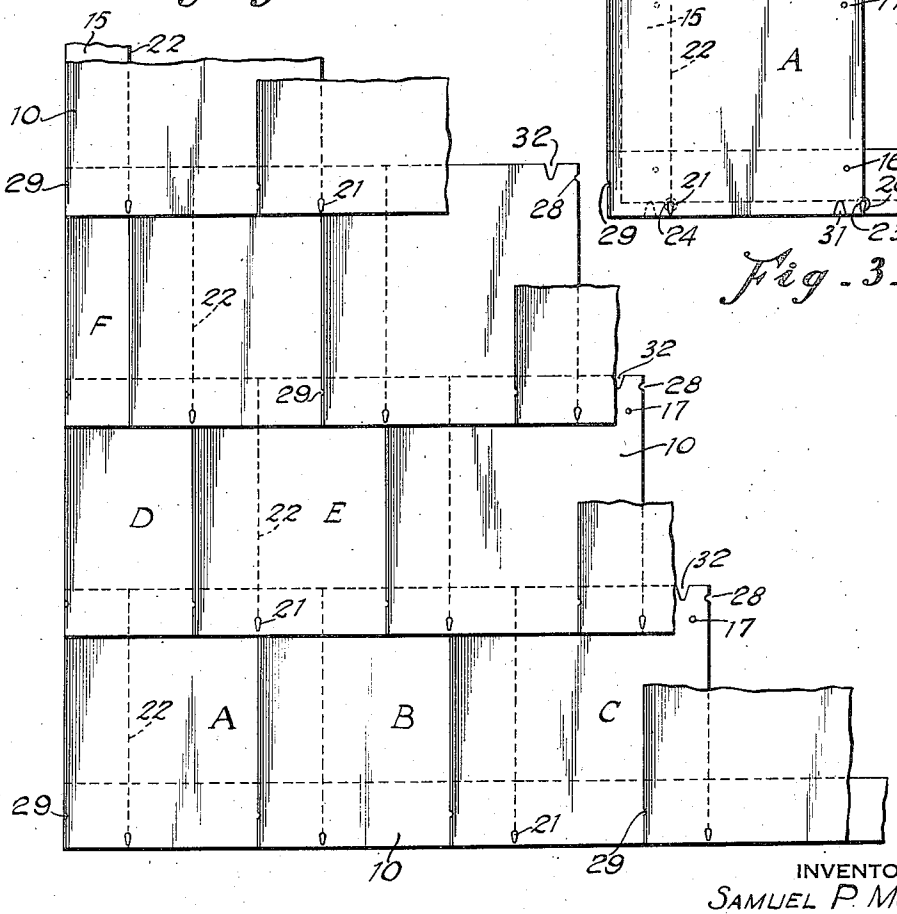


Fig. 3.

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Fig. 5.

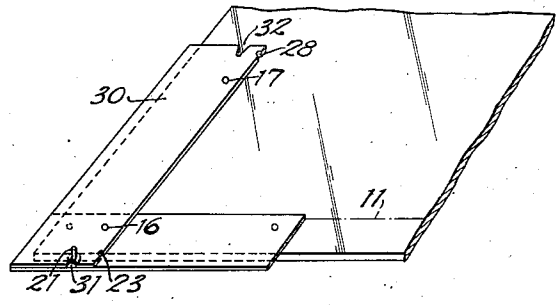


Fig. 6.

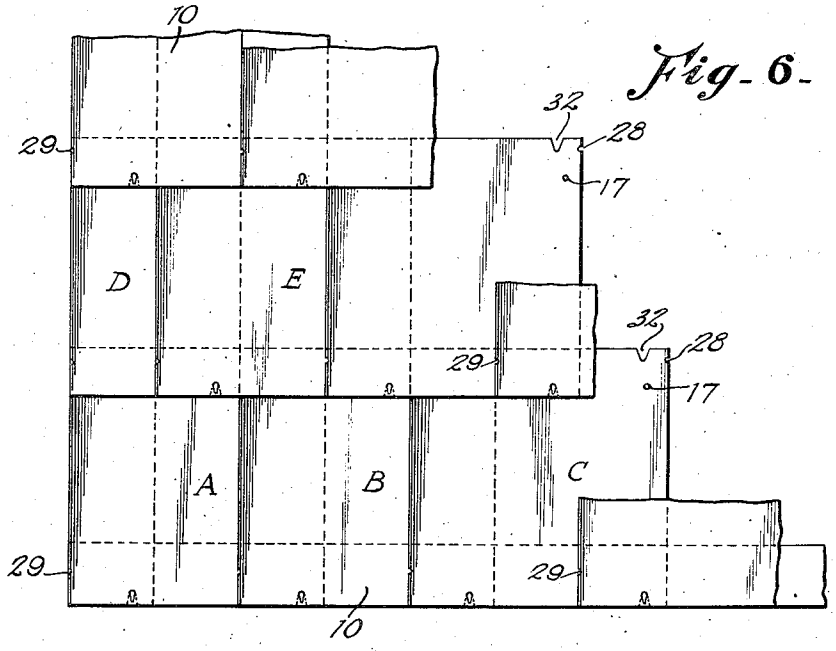
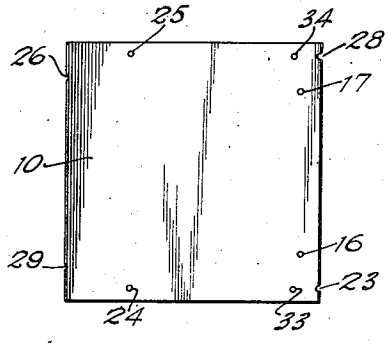


Fig. 7.



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1,968,217

SHINGLE

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Application September 13, 1933, Serial No. 689,292

4 Claims. (Cl. 108—9)

The present invention relates to shingles adapted to be applied to roofs and other structures according to the so-called Dutch-Lap method, in which they are laid in horizontal courses with one side and the upper edge of each shingle lapped, and with the vertical joints of the several courses broken. More particularly, the invention relates to shingles which are marked, punched or cut to facilitate the laying thereof, with variable degrees of sidelap, and in either direction.

An object of the invention is the provision, in a shingle of the character mentioned, of a system of marks, holes and cuts of a minimum in number, to serve not only as markers for laying with a variable sidelap, but also to serve as headlap markers and nail holes for attachment of the shingle to the roof deck or other structure.

It is a feature of the invention that certain of such openings, serving as gages automatically to determine the selected one of the optional sidelaps, may be so positioned as to have the added function of gages for automatically determining the headlap of one course upon another; and others so positioned that when functionless as gages, because of the direction of application of the shingles, they nevertheless serve as nail holes for securing the shingles to the roof deck or other structure, and thus also have a double function.

Other objects and features of the invention will more fully appear upon reference to the accompanying drawings, in which:—

Figure 1 is a plan view of a shingle embodying the invention;

Fig. 2 is a view in perspective showing starter strips nailed to the roof deck at the lower left corner thereof, for left to right application of the shingles, and for the lesser of the optional side laps, the initial storm nail being also shown in its place for such lesser sidelap;

Fig. 3 is a plan view showing the first full sized shingle in place over the starter pieces at the lower left corner of the roof, for left to right application, and with storm nail in place for the lesser of the optional sidelaps;

Fig. 4 shows an assembly of the units in several courses, in left to right application, and in which the units have the lesser of the optional sidelaps;

Fig. 5 is a perspective view of the starter strips, similar to that shown in Fig. 2, but with the storm nail positioned for laying the shingles with the greater of the optional sidelaps.

Fig. 6 shows an assembly of the units in several courses, in left to right application, and in which the units have the greater of the optional sidelaps; and

Fig. 7 is a plan view of a modified form of the shingle.

In the following description of the drawings, it is assumed, for the purposes of illustration only, that the lesser of the two optional sidelaps is a four inch sidelap; and that the greater of the two is a five and one-third inch sidelap, and that the shingle is a sixteen by sixteen inch shingle. In applying the shingle 10 left to right with the four inch or lesser sidelap, the procedure is as follows. A chalk line 11 is preferably snapped three inches above and parallel to the eave and four by sixteen inch starter strips 12 are nailed to the roof deck lengthwise thereof, with a one inch overhang 13 at the eaves. These are extended to have a one inch overhang 14 beyond the rake of the roof. A vertical starter piece 15 of four inch width is then cut from the right side of one of the shingles 10 and placed as shown in Figure 2. The shingle 10 has nail holes 16 and 17 therethrough in vertical alignment near its right edge, and the strip 15 is of width to include these nail holes. Through these holes the strip 15 is nailed to the roof deck, with its left and bottom edges 18 and 19 in registration with the corresponding edges of the starter piece 12.

The head 20 (see Fig. 3) of one of the storm nails 21 is then slipped under the right edge 22 of strip 15, and seated in a notch 23 (see Fig. 1) in that edge of the strip near the base thereof. In this position of the storm nail, it will register with another hole 24 in a shingle 10 when, as shown in Fig. 3, such shingle is laid over strips 12 and 15 with its left and bottom edges in registration with the corresponding edges of these strips. The first full sized shingle 10, designated as A, being so placed, the first storm nail 21 will project through and above the shingle. The shingle is then nailed to the roof deck by a nail through the hole 16 thereof, and by a nail through a hole 25 in a shingle near the upper left corner thereof; whereupon the first storm nail is bent down into clinching position against the upper face of the shingle, and another storm nail inserted under the right edge of shingle A and into the notch 23 thereof.

The second shingle, B, is then sidelapped on shingle A so that the last mentioned storm nail passes through the hole 24 of shingle B; and the lower edge 19 of shingle B being swung to coincide with the corresponding edge of the horizontal starter piece 12, shingle B is then secured in the same manner as shingle A by nails through holes

16 and 25 thereof; the nail through hole 25 passing also through a notch 28 in the upper right edge of shingle A. The storm nail is then clinched on shingle B. The other shingles of the first left to right horizontal course are similarly applied; and it will be seen that the amount of sidelap where the storm nail is at the notch 23 at the right edge of the shingle, is determined by the distance of the hole 24 from the left edge of the shingle. It will be further noted that in the laying of this first course, the hole 17 of the shingles has not been used, except as to the left starter piece 15.

The second course is started with a shingle D, which is like any shingle 10 except that a four inch vertical strip has been cut from the left side thereof. Such a cut having resulted in the removal of the hole 25, another hole is punched in the starter D to replace the lost hole. Before this starting shingle D, or any of the shingles of the second course, is laid, a storm nail is inserted under the left edge of the overlap of each of the shingles B, C, etc. in the first course, and into a notch 26 therein near the top thereof. If the overlap of shingle B on shingle A in the first course is four inches, and if the starting shingle D of the second course is of four inch less width than shingle A, then the headlapping right edge 22 of shingle D will abut the left edge of shingle B when the left edges of shingles A and D are in alignment; shingle D is laid against the left edge of shingle B, with the notch 23 thereof in registration with the notch 26 of shingle B, a storm nail having already been set, as aforesaid, in such notch 26. This registration of notch 23 of D with notch 26 of B automatically determines the proper headlap of D on A. In the example given in the drawings, the headlap is three inches. Thereupon shingle D is secured to the roof deck by nails through its hole 16 and specially punched hole 25.

Shingle E is the first full sized shingle of the second course. When its right edge is placed against the left edge of shingle C of the first course, it will have the same four inch or other selected sidelap on shingle D which the shingles of the first course have on one another. Its headlap on shingle B will be the same as that of shingle D on shingle A, as automatically determined by registration of notch 23 of E with notch 26 of C. Hole 24 of shingle E will register with and receive the first storm nail 21 for the second course. It is secured like the first course shingles by nails through holes 16 and 25, and by turning down the storm nail just mentioned. All other shingles in the second course are similarly applied.

The third course is laid as are the first and second courses, except that the starting shingle F of the third course is the right half of a full shingle, instead of the right three-quarters as in the case of starter D of the second course, or the right one-quarter as is the starter 15 of the first course.

The fourth course, like the first course, starts with a quarter sized starting shingle 15; and succeeding courses, as to the size of their starting shingles, go through the same rotation as the first four courses. Before laying any course the storm nails are placed in the notches 26, as above mentioned in connection with the second course, so that such nails will be in set position for registration with holes 24 of overlapping shingles.

For laying the shingles from right to left, they are merely given a half turn, so that notch 23, for instance, will be at the upper left edge instead of lower right edge. The notch 23 now assumes the function which notch 28 had in the left to right lay of the shingles, and notch 28 assumes the function which notch 23 had in such other lay of the shingles. Similarly, hole 25 which in the left to right application served as a nail hole now takes the place of hole 24 to receive the storm nail, and hole 24 becomes a nail hole. Hole 17 now takes the place of hole 16 as a regularly used nail hole. Notch 29 in the lower left edge of the shingle in Fig. 3, which was functionless in the left to right application, now takes the place of notch 26.

In order that these interchanges may be made, notches 23 and 28 are at equal distances from the lower and upper edges, respectively, of the shingles; holes 16 and 17 are in vertical alignment and at equal distances from the lower and upper edges, respectively, of the shingles; holes 24 and 25 are in vertical alignment and at equal distances from the lower and upper edges, respectively, of the shingles; and notches 26 and 29 are at equal distances from the upper and lower edges, respectively, of the shingle.

The procedure in laying the shingles from right to left is the same as in the left to right application, except for reversal of direction and application.

To apply the shingles with the greater of the two optional sidelaps, (here assumed to be a five and one-third inch sidelap), the procedure differs from that above described in the following respects only: the initial lower left vertical starter strip 30, (see Fig. 5) is a strip five and one-third inches wide, cut from the right side of one of the shingles 10, instead of the four inch strip 15 of Fig. 2. This strip 30 having been nailed through its holes 16 and 17, has a storm nail 21 inserted under its lower edge into the inner end of a notch 31 in such edge, near the lower right corner thereof; instead of into the notch 23, as in Fig. 3. It is to be noted, however, that the seat for the storm nail at the inner end of notch 31 is in horizontal alignment with the notch 23, so that the headlap will be the same, whether the sidelap be four inches or five and one-third inches.

The stem of this storm nail is left upstanding for passage through the hole 24 of the first full sized shingle laid, as in Fig. 3. In order that this storm nail may register with such hole 24 when the left edge of such full sized shingle coincides, as in Fig. 5, with the left edge of the starter strip 30, the notch 31 is four inches from the left edge of the starter strip; and, to delimit a five and one-third inch sidelap, must therefore be one and one-third inches from the right edge of the starter strip. In laying the first full sized shingle A, not only is its hole 24 registered with the storm pin in the notch 31, but its hole 25 is brought into registration with a notch 32 in the upper edge of the starter piece. Notch 32, which functions for notch 31 in the converse or right to left application of the shingles, is in vertical alignment with the notch 31 and is of the same depth as notch 31. The first full sized shingle is then secured by nails through its holes 16 and 25 as in Fig. 3, and the first storm nail is turned down against the face of the shingle. All other shingles, B, C, etc. of the first course are applied in the same manner.

The second course is started with a shingle D from which a five and one-third inch strip has been cut from the left side, and in which a hole 33 is punched to replace the hole 25 thus lost. This starter piece is placed with its notch 23 at

notch 26 of the second shingle B of the first course, as in the case of Fig. 4, and is nailed through its holes 16 and 33. A storm nail is then inserted in the notch 31 of the starter and left upstanding.

The first full sized shingle E of the second course is then sidelapped on D, with its notch 23 in registration with notch 26 of shingle C of the first course. Its hole 24 will then register with and receive the storm nail set in the starter. Nails are then driven through holes 16 and 25, the nail through hole 25 passing through the inner end of notch 32 in the upper edge of the starter. The storm nail is then turned down to the surface of E. Other shingles of the second course are laid in the same manner.

The third course is started with a piece similar to that of the first course; the fourth with one like that of the second course; and so on, in alternation.

For laying right to left with the larger, or five and one-third inch of the optional sidelaps, the shingle is given a half turn; so that, as to functions, the notches 31 and 32 exchange places. The other holes and notches exchange places and functions, as is the case in the right to left application of the shingles with the lesser, or four inch, lap.

A modification is illustrated in Fig. 7, wherein holes 33—34 are used instead of the notches 31—32 for securing the storm nail 21 in place when laying the shingles in either direction with a sidelap of the greater of the two optional widths. In this instance, as in the one previously described, the holes 33—34 are in horizontal alignment with the openings 23—28, respectively, so that the headlap will be the same when the shingles are laid with either of the two optional widths or sidelap.

It is to be understood that various modifications in the details of construction and application herein described may be made without departing from the scope and spirit of the invention defined in the claims.

What I claim is:—

1. A shingle of substantially rectangular form adapted to be laid in sidelapped relation with laps of different widths, said shingle having an opening at one side thereof near one corner which provides a gage for laying with a sidelap of one width, an opening at the lower edge thereof adjacent said corner which provides a gage for laying with a sidelap of a different width, an opening adjacent the opposite lower corner for reception of a storm nail, the width of the sidelap being selectively determined by the registration of said last named opening in an overlapping shingle with one or the other of said gages in the overlapped shingles, and having an opening in the opposite side from the first named opening near the upper edge thereof which by registration with said first named opening in a laterally abutting shingle of a succeeding course serves as a gage to determine the headlap of one course on another.

2. A reversible shingle of substantially rectangular form adapted to be laid in horizontal courses in sidelapped relation in either of two directions with laps of different selected widths, said shingles having two vertically aligned openings at one side thereof near and equidistant from the upper and lower corners of the shingle, respectively, each adapted to serve as a gage for laying with a sidelap of one of said selected widths, one opening being adapted to so serve in laying in one direction, and the other to so serve, upon reversal of the shingle, for laying in the opposite direction, and two vertically aligned openings, one near each of said corners, adjacent the upper and lower edges, respectively, of the shingle, each of said last mentioned openings being adapted to serve as a gage for laying with a side lap of the other said selected width, one of said openings to so serve in laying in one direction, and the other to so serve, upon reversal of the shingle, for laying in the opposite direction, and the shingle having two openings at its other side, in the lower and upper parts, respectively, thereof, one or the other of said last named openings, according to the reversible setting of the shingle, being adapted to receive a storm nail which upon passage thereof also through either the first-named opening, or the opening adjacent thereto, in an overlapped shingle, determines the side lap.

3. A reversible shingle of substantially rectangular form adapted to be laid in horizontal courses in side lapped relation in either of two directions with laps of different selected widths, said shingles having two vertically aligned openings at one side thereof near and equidistant from the upper and lower corners of the shingle, respectively, each adapted to serve as a gage for laying with a side lap of one of said selected widths, one opening being adapted to so serve in laying in one direction, and the other to so serve, upon reversal of the shingle, for laying in the opposite direction, and two vertically aligned notches, one near each of said corners, in the upper and lower edges, respectively, of the shingle, each of said notches being adapted to serve as a gage for laying with a sidelap of the other said selected widths, one notch to so serve in laying in one direction, and the other to so serve, upon reversal of the shingle, for laying in the opposite direction, and the shingle having two openings at its other side, in the lower and upper parts, respectively, thereof, one or the other of said last named openings, according to the reversible setting of the shingle, being adapted to receive a storm nail which upon passage thereof also through either the first named opening, or the notch adjacent thereto, in an overlapped shingle, determines the side lap, said shingle having also two openings in the opposite side from the first named openings, near the upper and lower edges respectively, one or the other whereof, according to the reversible setting of the shingle and by registration with one or the other of said first named openings in a laterally abutting shingle of the succeeding course, serves as a gage to determine the headlap of one course on the other.

4. A reversible shingle of substantially rectangular form adapted to be laid in horizontal courses in sidelapped relation in either of two directions with laps of different selected widths, said shingles having two vertically aligned openings at one side thereof near and equidistant from the upper and lower corners of the shingle, respectively, each adapted to serve as a gage for laying with a sidelap of one of said selected widths, one opening being adapted to so serve in laying in one direction, and the other to so serve, upon reversal of the shingle, for laying in the opposite direction, and two vertically aligned notches, one near each of said corners, in the upper and lower edges, respectively, of the shingle, each of said notches being adapted to serve as a gage for laying with a sidelap of the other said selected widths, one notch to so serve in

laying in one direction, and the other to so serve, upon reversal of the shingle, for laying in the opposite direction, and the shingle having two openings at its other side, in the lower and upper parts, respectively, thereof, one or the other of said last named openings, according to the reversible setting of the shingle, being adapted to receive a storm nail upon which passage thereof also through either the first named opening, or the notch adjacent thereto, in an overlapped shingle, determines the side lap, the inner end of each of said notches in the lower and upper edges being in horizontal alignment respectively with the adjacent of said first named openings, so that when a storm nail through either the notch or the adjacent opening in one shingle is inserted through the corresponding of the last named openings on the other side of a sidelapping shingle of a succeeding course, the headlap of one course on the other will be the same in either instance.

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