

July 31, 1934.

W. SMITH. JR

1,968,228

ROOF AND METHOD OF LAYING SAME

Filed May 26, 1932

3 Sheets-Sheet 1

Fig. 1

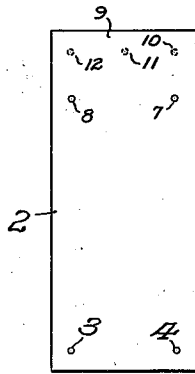
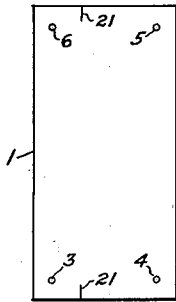


Fig. 2

Fig. 3

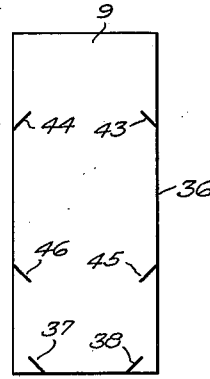
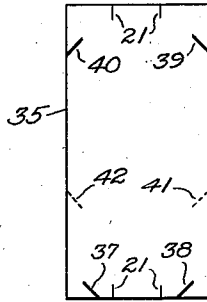


Fig. 4

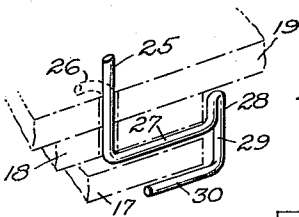


Fig. 5

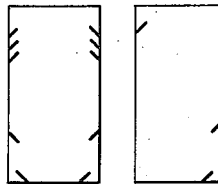


Fig. 6

Fig. 10

Fig. 7

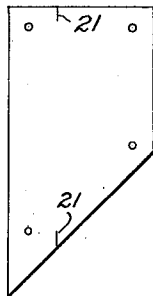


Fig. 9

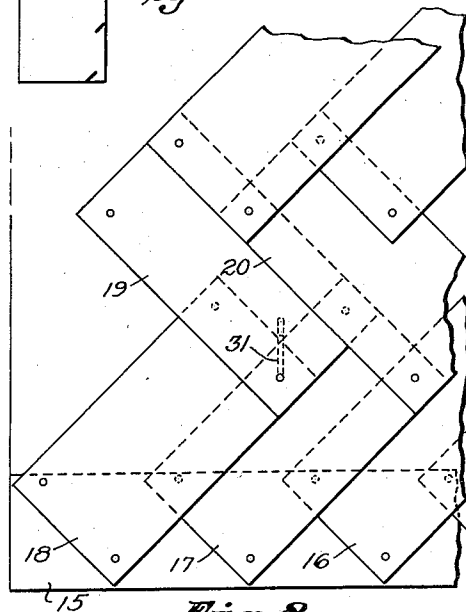
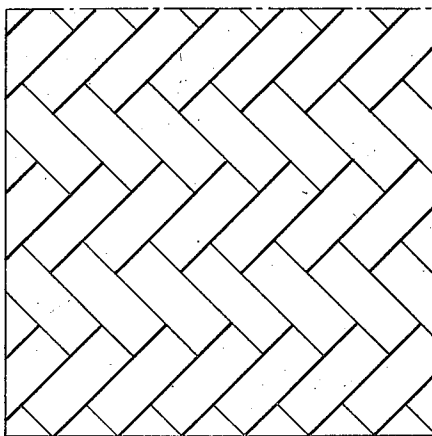


Fig. 8

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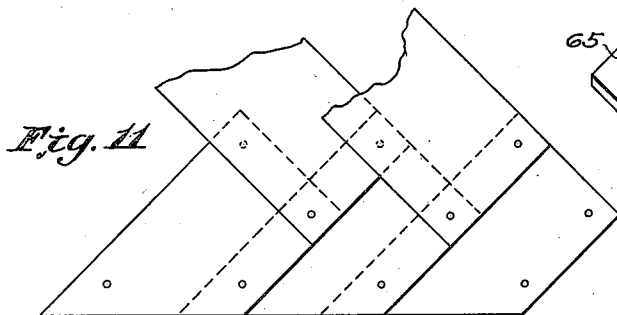


Fig. 11

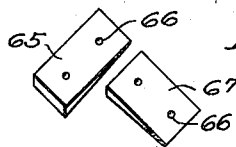


Fig. 12

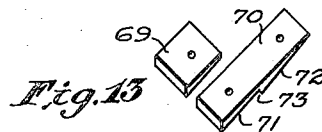


Fig. 13

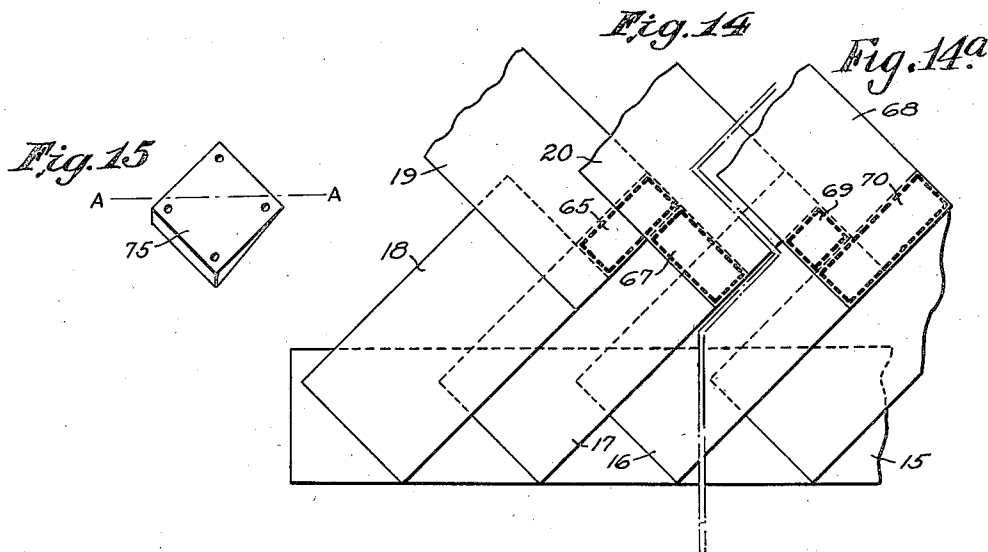


Fig. 14

Fig. 14a

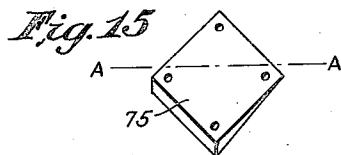


Fig. 15

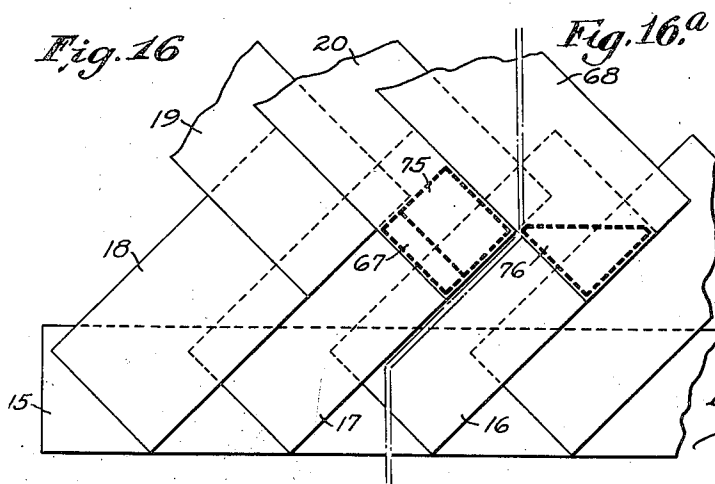


Fig. 16

Fig. 16a

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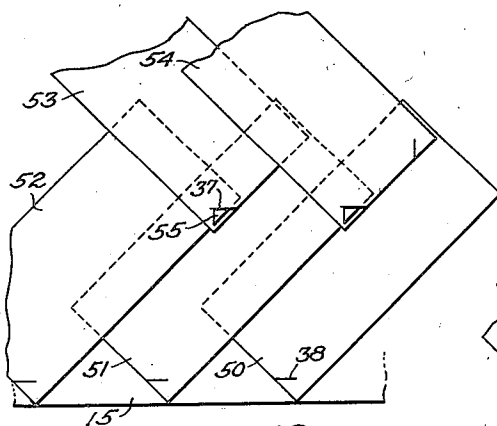
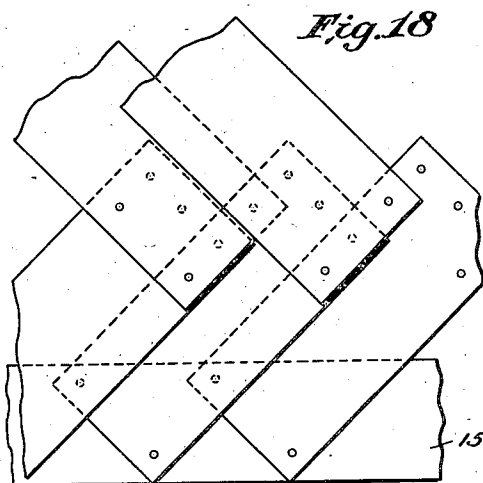
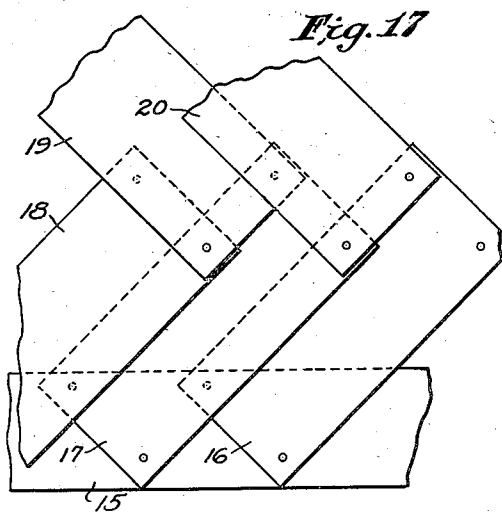


Fig. 19

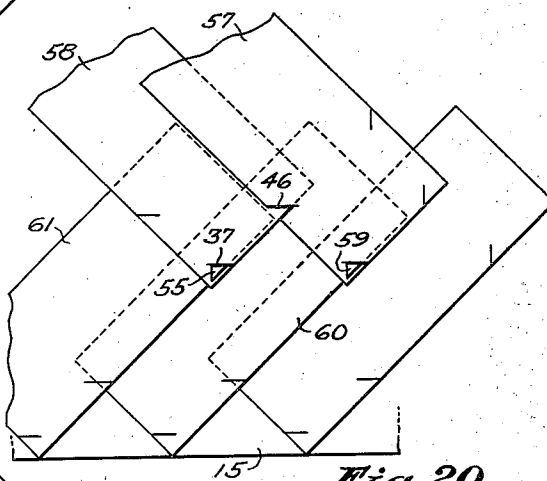
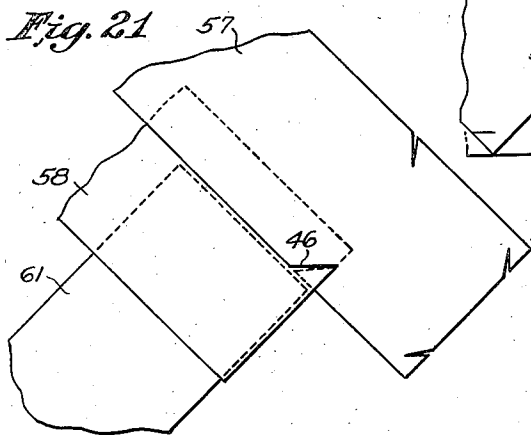


Fig. 20



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UNITED STATES PATENT OFFICE

1,968,228

ROOF AND METHOD OF LAYING SAME

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Application May 26, 1932, Serial No. 613,734

7 Claims. (Cl. 108—7)

This invention relates to roofing and more particularly to shingles and the method of laying the same on the roof or side of a building, the invention having for its principal objects to

5 provide a shingle which may be cheaply manufactured and which may be applied easily.

With these and other objects in view the invention resides in the novel details of construction and combinations of parts constituting the shingle, as well as in the steps and combinations of steps constituting the method of applying the shingle, all as will be disclosed more fully hereinafter, and particularly pointed out in the claims.

15 Referring to the accompanying drawings forming a part of this specification and in which like numerals designate like parts in all the views;—

Figs. 1 to 7 inclusive are plan views of types of shingles contemplated by this invention;

20 Fig. 8 is a partial plan view of a roof to which has been applied a plurality of the shingles such as particularly illustrated in Fig. 1;

Fig. 9 is a diagrammatic representation of the herring-bone effect obtained by this method of shingle application;

Fig. 10 is a perspective view of the hook fastener employed in securing the lower exposed corner of the shingle against storm displacement;

30 Fig. 11 is a fragmentary view of a portion of a roof in which the shingle application is somewhat similar to that shown in Fig. 8, the difference lying in the use of the shingle particularly shown in Fig. 7 in the starter or bottom course;

35 Figs. 12 and 13 are perspective views of the members disposed in the shingle application as particularly shown in Fig. 14 and which are for the dual function of increasing the shadow effect in the finished roof as well as preventing wind, rain, etc. from entering under the shingles;

40 Figs. 14 and 14a are diagrammatic representations of shingle application according to the method indicated in Fig. 8 and accentuating the incorporation of the members shown in Figs. 12 and 13;

45 Fig. 15 is a perspective view of a modified form of member utilized for the same purposes as those illustrated in Figs. 12 and 13, the member of this particular figure of drawings being that from which a portion of triangular shape is cut and which is further disclosed in Fig. 16;

50 Figs. 16 and 16a are views similar to Figs. 14 and 14a but showing the incorporation of different portions of the member illustrated in Fig. 15;

Fig. 17 is a partial roof plan view illustrating more in detail the application of shingles ac-

cording to the method indicated in Fig. 8, an additional difference in these figures, however, being that in Fig. 8 there is shown the utilization of the hook fastener shown in Fig. 10;

Fig. 18 is a view similar to Fig. 17 but illustrating the application of shingles of the type shown in Fig. 2;

Figs. 19 and 20 are views similar to Figs. 17 and 18 except that they disclose the utilization of shingles of the type of those shown in Figs. 3 and 4; and

Fig. 21 is a somewhat enlarged detail view illustrating the manner of interlocking the shingles shown in Fig. 20.

This invention contemplates the use of either rigid, semi-rigid, or flexible shingles, of rectangular shape, so constructed and applied to a roof or side of a building that there is created a herring-bone effect brought about by the laying of the individual shingles with their lower sides inclined at approximately 45° to the eaves. The rigid and/or semi-rigid shingles are provided with preformed holes at similarly spaced dimensions from an edge for receiving therethrough the securing device and, in laying the roof, the shingles are superimposed in lapped arrangement with the holes in registry. Therefore, it will be understood that these holes assist materially, by serving as guides, in the forming of the herring-bone pattern. This type of shingle is particularly illustrated in Figs. 1 and 2, the principal difference between these constructions being a matter of size; for example the shingle 1 shown in Fig. 1 may be nine by eighteen inches whereas the shingle 2 shown in Fig. 2 may be nine by twenty-one inches, in both of which types the holes are similarly placed. That is to say, the hole 3 is positioned in one corner equidistant from the two adjacent edges of the shingle, the holes 4, 5 and 6 being placed respectively in the remaining corners of the shingle at the same spacing distance from the edges as was the case with hole 3.

In the shingle illustrated in Fig. 2 there are disposed holes 3 and 4 similarly disposed at the same spacing distance in the lower corners, but holes 7 and 8 will be disposed inwardly from the upper corners due to the increased length of this type of shingles, it being desired to maintain the distances between 4 and 7, as well as 3 and 8, equal to the distance between 4 and 5 of shingle 1. This leaves an extreme end portion 9 at the end of the shingle 2 which is without means for receiving a fastener, nails or other suitable devices being intended to pass through the holes just mentioned. The purpose of this difference in con-

struction between shingles 1 and 2 is particularly brought out in Figs. 14 and 16 in the former of which it will be seen that the shorter shingles are intended for use when a one-third end lap is desired whereas the longer shingles will permit a two-thirds end lap. The side lap is one-third with either the short or long shingle. The shorter type shingle is admirable for steep roofs and siding, whereas the longer type has a wide field through its adaptation for use on roofs of small pitch, or use anywhere in regions where the high winds or heavy storms prevail.

Either or both of the types of shingles shown in Figs. 1 and 2 may be supplied with additional holes indicated in dotted lines in Fig. 2 whereby there will be provided in one end of the shingle a total of five holes, three of which are along the short edge of the shingle at equal spacings, and the other two of which are disposed inwardly from the end edge to maintain the desired nailing distance 4-7 as previously mentioned. These additional three holes are indicated at 10, 11 and 12 and the purpose of them is particularly brought out in the method of application shown in Fig. 18.

In applying the shingle of Fig. 1 to a roof the bottom or eaves course is laid first with the shingles inclined to assume a 45° position on the roof, there being first laid an eaves strip indicated at 15 of a width to protectively underlie the lower corners of said course and preferably extending as a single piece from one end of the eaves to the other. With particular reference to Fig. 8, the shingle 16 is then applied over the eaves strip and fastened to the roof by the insertion of nails in the left side holes corresponding to 3 and 6 as shown in Fig. 1. The next shingle 17 is then superposed with a one-third parallel lap over shingle 16 and likewise secured to the roof by nailing through the left side. In a similar manner shingle 18 is lappingly applied over shingle 17 and secured to the roof. This manner of laying is continued throughout the remaining length of the bottom course of shingles, it being understood that the extreme end shingles will be suitably cut to conform with the ends of the roof surface.

The next course of shingles is then applied but the direction of laying is reversed to that of the underlying course. In other words, the shingle such as 19 is applied with its lowermost end superposed upon shingles 18 and 17, with its upper long edge in prolongation of the upper short edge of shingle 17, and its lower short edge in prolongation of the lower long edge of shingle 18, thereby causing the shingle 19 to assume a 45° disposition.

With the shingles 17, 18 and 19 thus properly positioned, the securing holes therein will be brought into registry due to their spacing from the adjacent shingle edges. In other words, this hole spacing is made one-half of the intended lap. Further shingle 19, by virtue of its 45° position and rectangular formation, will have a one-third lap over shingle 18. Then the next adjacent shingle such as 20 is applied so as to have a one-third lap over the upper long edge of shingle 19 and positioned so that its upper long edge will be in prolongation of the upper short edge of shingle 16, and its lower short edge will be in prolongation of the lower long edge of shingle 17. In a similar manner the following shingles of this course are applied with nails driven through the right side holes in each shingle, one of which holes 4 will register with one of the holes 6 in the upper end of an underlying shingle. Then the next horizontal course of shingles

is laid in the same direction as the first or bottom course of shingles was laid, with the bottom ends of the shingles of this course overlapping one-third the width of the shingles in the intermediate course, and nails driven through the left side holes to secure the shingles in place. Also it will be understood that the upper long edges of the shingles of any one horizontal course as well as the lower short edges thereof will be caused respectively to lie in prolongation of the upper short edges and the lower long edges of the shingles of the adjacent underlying course. By this method of laying it will be seen that there are no joints butting together, and that all of the shingles are overlapping. By this method the alternate courses are laid in the same direction, with the intermediate courses laid in the opposite direction.

The bottom or starter course of shingles could be made with those of a form shown in Fig. 7, which would eliminate the necessity of an eaves strip 15 and which would also make unnecessary the disposition of shingles at a 45° angle since the bevelled edge of the shingle of Fig. 7 is formed at that degree. In other words, this shingle would be laid with its angle edge on the eaves line which would automatically make the shingle assume the 45° angle; and obviously if other degrees of shingle laying were desired, the angle of the edge would be changed to suit. It is also to be understood that the extreme end shingles of any horizontal row will be shaped, either on or off the job, in accordance with the shape of the roof.

For assistance in laying, each shingle may be preformed with a guide mark generally indicated by the numeral 21 at the two opposite ends and spaced from a longitudinal edge a distance equal to the amount of lap desired. In the case of a nine inch shingle it is practical and preferable to have a one-third or three inch lap with the holes disposed one-and-a-half inches from the edges so that they will register with the holes of superposed shingles. These guide lines will be formed, in such a case, three inches from a long edge and may be merely short score lines of only sufficient depth to be visible to the roofer but, of course, said lines may be imprinted but of a color not so contrasting to the color of the shingle as to be undesirably visible and prominent after the roof is completed.

Also, with reference to Figs. 8 and 10, there may be provided a hook fastener for holding the lower corner of the exposed shingle instead of the usual storm nail or rivet device heretofore contemplated. This comprises a piece of copper or other suitable wire, of comparative stiffness, but readily bendable, having a pin portion 25 the extreme end of which when properly placed may be bent over as indicated in dotted lines at 26 to securely hold down the corner of the shingle. The pin portion 25 is a rectangular extension of one end of the main body portion 27 whose other end has an upwardly disposed but closed loop 28, the free end of said loop extending parallel to the pin portion 25 to form a shank indicated at 29 whose end 30 is bent rectangularly to form an anchor parallelly disposed to the main body portion 27. All of said fastener is substantially in a single plane.

In applying this hook fastener, see Figs. 8, and 10, the anchor 30 is slipped beneath the undermost shingle thereby lying in contact with the roof sheathing, and moved downwardly of the roof to position the shank 29 as well as the loop

28 in the V angle created by an overlapped pair of shingles in a horizontal course. At the same time, the upper shingle of this pair is lifted slightly and through the hole in the corner thereof is passed the pin portion 25 of the fastener, as a result of which it will be seen that the undermost shingle, such as 17, occupies the space between the main body portion 27 and the anchor 30 of the fastener, said portion 27 of the fastener lies between the shingles 17 and 18, and the pin portion 25 extends upwardly through the hole of shingle 18.

In this position the fastener will remain in a vertical plane whereby the pin will be positioned for ready engagement with a shingle of the next superposed course; the loop and shank portions of said fastener preventing lateral displacement.

There will be a fastener for each shingle or pair of shingles, but in Fig. 8 only one of these fasteners has been indicated in dotted lines at 31 for the purpose of clearness. When the next upper horizontal course of shingles is laid, the lowermost hole of each shingle is made to engage the pin portion 25 of a fastener and, after said shingle has been properly disposed at the 45° angle and secured in said position by a nail driven through the other hole of its lowermost end, then the end of said pin portion is bent over by a few hammer blows so as to 'clinch' the uppermost shingle such as 19 in such manner that its lowermost corner can not be upturned by elements of the weather. Therefore, by employing this hook fastener, it will only be necessary to use one securing nail in each upper end of a shingle.

With particular reference to Figs. 2 and 18 it will be seen that substantially the same principal of shingle laying is employed as described hereinbefore, except that a longer shingle is used. As mentioned in the first part of this specification this shingle 2 is three inches longer than the shingle 1, and therefore the upper end of the longer shingle is adapted to underlie two thirds of the width of a transversely superposed shingle, thereby providing the two-thirds lap. Also, by the provision of the five holes such as 7, 8, 10, 11 and 12 in the upper end portion, a firmer securement to the roof structure may result, and preferably with this type of shingle the hook fastener is not contemplated since the V, formed by two adjacent shingles and in which the loop and shank of the fastener was disposed, would be so far from the holes engaged by the pin of the fastener that the main body portion 27 of said fastener would be over four inches in length, resulting in a fastener which would be impractically too long. This longer type shingle makes possible the material reduction in size, if not the substantial elimination, of the triangular space created by two overlapped shingles and through which wind, rain, or snow might enter under the shingles and tend to lift them from the roof sheathing.

With particular reference to Figs. 19, 20 and 21, it will likewise be seen that shingles of the type shown in Figs. 3 and 4 may be similarly laid in horizontal courses with angular disposition, but these shingles are intended to be of flexible nature through which a nail may be driven so that preformed holes are unnecessary, each shingle provided with slits in the edge portions so disposed that, when co-engaging with slits of an adjacent shingle, the lower corners of the exposed shingles will be held down against raising by the elements of the weather. In other words, there is provided a shingle generally indicated by the numeral

35 which may be nine by eighteen inches, as also a shingle 36 of say nine by twenty-one inches, each provided in its bottom end or butt portion with a pair of slits indicated by the heavy black lines 37 and 38, each slit disposed at 45° to the edge of the shingle and located from a corner of the shingle so that it will be disposed substantially centrally of the one-third lap. These two slits converge in a direction toward their associated short edge of the shingle.

In each of the long sides of the short shingle 35 is disposed another slit, such as shown at 39 and 40, these two slits likewise converging in a direction toward the other short edge of the shingle and disposed therefrom a distance approximately equal to one-half of the one-third lap. If desired, other slits such as indicated in dotted lines at 41 and 42 may be provided in the long edges of the shingle for co-engagement with straight edge portions of an overlying shingle, all of said slits being preferably disposed at 45° to the edge of the shingle. In the two opposite short ends there may be provided score marks 21 as hereinbefore described and serving as guides in the application of the shingles to the roof, and by which the proper amount of overlap is obtained.

In the longer shingle 36 shown in Fig. 4 the slits 37 and 38 hereinbefore mentioned are duplicated in the butt end, and a pair of slits 43 and 44 are provided in the long sides which are similar to the slits 39 and 40 of the shorter shingle and which are disposed the same distance from slits 37 and 38 as were the said slits 39 and 40, thereby leaving an extreme opposite end portion in the long shingle exactly similar to the end 9 of the shingle shown in Fig. 2.

Additional slits 45 and 46 may be formed in the long edges of the shingle 36 in positions corresponding to those of the slits 41 and 42 above mentioned.

In applying the shingles of Figs. 3 and 4 to a roof the same principles of arrangement as hereinbefore described are followed, so that the 45° displacement or herring-bone effect is obtained. With particular reference to Fig. 19 in the starter or eaves course, the shingle 50 is superposed by the shingle 51 which in turn is superposed by the shingle 52, these shingles being given a one-third lap. In the next horizontal course, the shingle 53 laps shingles 52 and 51, and shingle 54 laps shingles 53, 51 and 50. However, when shingle 53 is applied its slit 37 is engaged by the triangular tongue 55 of shingle 52, which tongue is formed by such a slit as 39 in its longer edge. Thus it will be seen that the tongue 55, by extending upwardly through the slit 37 and overlying the lowermost corner of shingle 53, will aid in holding said corner down against raising tendency by weather elements. Any exposed slits such as 38 of any shingle will not cause any material damage to the roof since any weather which might pass through said slit would be stopped by the surface of the shingle or eaves strip therebelow. In the starter course it is preferable to apply a storm nail or fastener to the lowermost corner of the shingles. The manufacture of these shingles in rights and lefts is avoided by providing all of the slits in similarly arranged pairs, wherefore a mere turning may cause a shingle to fit any horizontal course, and the laying may be started in either direction. Also if desired, the eaves strip 15 in Fig. 19 could be slitted for engagement with the slits 38, with an underposed protector.

Fig. 20 discloses the application of shingles of the type shown in Fig. 4 and which, being three

inches longer, will permit a two-thirds lap. Exactly the same functions of slits 37 and tongues 55 obtain here as with the use of the shorter shingle except that the tongue 55 in this case is that formed by a slit 43. In addition it will be seen that the slit 46 of shingle 57 is engaged by the edge of the lower short end or butt of its underlying shingle 58 in such manner that the tongue formed by the slit 46 may be depressed to lie under said shingle 58. It thus results that the lowermost corner of shingle 57 is held down against weather elements not only by the tongue 59 of shingle 60, (which tongue 59 corresponds with the previously described tongue 55) but additionally by the co-engagement of the slit 46 of shingle 57 with the edge of shingle 58. It will therefore be seen that the slit 46 provides a tongue constituting means for causing the lower end portion of the exposed long edge of shingle 57 to lie in substantial contact with the surface of shingle 60. This eliminates the triangular space which otherwise would be normally created by the bridging of shingle 57 across the elevated edges of shingles 58 and 60, and through which winds, rain, or snow might enter, tending to lift the shingles from the roof sheathing. In this construction and arrangement it will, of course, be understood that the upper corners of each shingle will be secured to the roof by suitable nails or the like. Fig. 21 shows more clearly in greater detail the additional securing means brought about by such a slit as 46, and further shows the outside edge of its associated tongue portion abutting the upper short edge of the underlying shingle 61.

It should here be stated that the particular disposition of the upper slits 39, 40, 43 and 44 will be in accordance with the amount of lap intended at the top or short side of the shingle, and that the disposition of the intermediate slits 41 and 42, or 45 and 46, will be in accordance with the amount of lap intended along the long side thereof. More slits could be provided at the top, as suggested by Fig. 5, thereby forming a shingle susceptible of practically universal application in that it could be used in a plurality of lapping arrangements, the exposed slits being over underlying shingles so that their exposure would have no deleterious effect. Also the slits could be formed singly, as suggested by Fig. 6, instead of in similarly arranged pairs as heretofore described but, if this were done, then the shingles would have to be made in rights and lefts unless they were of homogeneous construction, in which latter case they could be reversed or turned-over and therefore applied either side up.

It will be observed that in applying rigid shingles in overlapped relation, there will be left spaces between the superposed shingle and the shingles therebeneath, into which space wind, rain, or other storm elements may enter. If the roof be more or less flat, it will be better that these spaces be closed, whereas on roofs of steep pitch the likelihood of damage is materially lessened from storm elements entering said spaces. Therefore, there is contemplated the provision of members particularly illustrated in Figs. 12, 13 and 15 which may be used to fill these spaces, and the disposition of these members is particularly accentuated in Figs. 14 and 16 with respect to these shingles.

Particularly referring to Fig. 12 there is provided a wedge shaped member 65 approximately of a width equal to the amount of lap of the long edges of the shingles, in the drawings shown as

a one-third lap, and the length of said member is made approximately equal to the difference between the width of a shingle and the amount of end overlap, this being in the drawings shown as two-thirds of the width of a shingle. Each member is provided with at least one hole such as indicated at 66 so spaced that it will register with one of the holes of the shingles with which the member is associated.

With particular reference to Fig. 14 it will be seen that the shingle 18 overlaps the long edge of shingle 17 and that the shingle 19 overlaps both shingles 18 and 17, thereby producing the triangularly shaped space beyond the upper extremity of shingle 18 and lying between shingles 19 and 17. It is into this space that the wedge 65 is fitted, with the hole in the thin edge portion of the wedge registering with the hole in the lower right hand corner of shingle 19 and the hole in the upper left hand corner of shingle 17. It may be that a single nail passed through these registering holes will be sufficient to hold the wedge in place since the edge of the thick end of said wedge will abut against the straight upper edge of shingle 18 thereby preventing pivotal movement causing lateral displacement of said wedge. However, on the side of safety, an additional similar hole may be provided in the thick end of said wedge for further securement by a second nail, particularly when said wedge is used in association with flexible shingles through which a nail may easily be driven. Should rigid or semi-rigid shingles be employed then those having the three holes 10, 11 and 12 (see Fig. 2) in the top short end edge would preferably be used with the wedge 65, so that a securing nail could be passed through the co-registering center hole 11 of shingle 19, hole 8 of shingle 17, and the hole in the thick end of the wedge.

Still referring to Figs. 12 and 14 it will be seen that shingle 20 overlaps shingles 19 and 17 thereby creating a rectangularly shaped space between the lower surface of shingle 20 and the upper surface of shingle 17. This space may be fitted likewise with a wedge shaped member, such as indicated at 67, of suitable dimensions and also provided with holes 66 similarly registrable with the holes of the associated shingles 20 and 17 just as was explained in the preceding with reference to the other wedge shaped member 65. In Fig. 12 the two members 65 and 67 have been illustrated in perspective in their approximate relationship to better illustrate their application, which latter is shown only in plan in Fig. 14.

An alternative method of space stoppage is also shown in plan in Fig. 14 and more in detail in the perspective views of Fig. 13. According to this method it will be observed that the space between shingle 16 and the superposed shingle such as 68 is filled by two members 69 and 70, the former of square formation with a slight taper and provided with a centrally disposed securing hole, and the latter approximately three times as long as it is wide to fit completely under the entire width of shingle 68 and provided with securing holes in its two end portions. The under surface of member 70 is divided into two inclined portions 71 and 72, the former occupying one-third of the length of the member and the latter extending the other two-thirds of said length. These two surfaces are separated by the shoulder 73 which is adapted to abut the upper short edge of shingle 16 thus permitting surface 71 of the member 70 to contact the upper

surface of shingle 16 and the other inclined surface 72 to contact the upper surface of the shingle beneath shingle 16. The holes of the two members 69 and 70 will, of course, be positioned to register with the holes formed in the ends of rigid and semi-rigid shingles, and in the case of flexible shingles, the holes preferably but not necessarily will register with the shingle holes.

With particular reference to Figs. 15 and 16 there is shown a further modification of stopping the spaces above mentioned. In Fig. 15 is shown in perspective a wedge shaped member 75 of square face which may be used in its entirety as suggested in Fig. 16 to fill the space between shingles 20 and 17, although it is obvious that a member such as 67 could be utilized to lie only under the long edge of shingle 20, as previously described. In order to fill the space between shingles 68 and 16 the member 75 could be modified by cutting it along the line A—A to provide a substantially triangularly shaped wedge member 76. The members 75 and/or 76 would be provided with suitably spaced securing holes adapted to register with the securing holes in the rigid or semi-rigid shingles, this registration not being so necessary in the case of the more easily penetrable flexible shingles.

The chief difference in space stoppers is brought about by virtue of the difference in length of shingles employed and the amount of lap desired. That is to say, members such as 65 and 67, or 69 and 70 would be used more particularly in application with short shingles having a lesser lap, whereas the members 75 and/or 76 would be used in the case where long shingles with greater lap were employed. Not only will the members 65, 67, 69, 70, 75 and 76 serve admirably as weather stops, but they will also be highly valuable in establishing proper shadow effect in the completed roof.

It will be noticed that in this specification there has been more or less specific mention made of one-third and two-thirds lap, but it is to be understood that these laps are only relative and for the purpose of better illustrating the manner of laying the shingles. In other words, in a shingle of nine inches width a one-third lap is desirable, but other fractional laps may and will be used as occasion demands; in the case of a shingle twelve inches wide, while a three inch lap would be all that was desired, yet this would be only a one-fourth lap, and so on. With shingles of varying widths it will be appreciated that variable laps may be employed. The particular feature, however, to keep in mind is that the relative differences between the shingle types shown in Figs. 1 and 2 as well as in Figs. 3 and 4 lies in the fact that the shorter shingle is used where a relatively narrow lap is desired, whereas the longer shingle is intended for use where a greater lap should be made.

It is also desired stated that whereas the shingle of the type shown in Fig. 2 is described as being three inches longer than that of the type shown in Fig. 1, this is only a matter of relative size for the purpose of illustration. In other words, this difference in length of shingle 2 could be more or less than three inches, the principal feature to be stressed being that in the longer shingle where more overlap at the end is desired, the holes such as 7 and 8 will be spaced inwardly from the extreme end of the shingle to assume a distance from the other holes 3 and 4 such as to maintain the proper spacing of the shingles when laid.

With reference to Figs. 13 and 14 it will be

observed that the member 69 is shown and described as being substantially square, but this is occasioned by the relative dimensions specifically mentioned. In other words, with a shingle nine inches wide which is given a one-third side lap, this member 69 would be substantially three inches square, but if the side lap or the end lap were made of a different dimension, then this member 69 would not necessarily be square, but it would be rectangular. Likewise, the inclined portions 71 and 72 will not necessarily have lengths in the proportion of one-third to two-thirds, but will be made in the proportion of the amount of lap given the shingles.

It is obvious that those skilled in the art may vary the details of construction as well as the steps and combinations of steps constituting the method, without departing from the spirit of the invention, and therefore it is not desired to be limited to the foregoing except as may be required by the claims.

What is claimed is:—

1. A roof comprising shingles laid in plural courses, the shingles of a course obliquely inclined to the roof edge and being side-lapped one upon the other, the shingles of the superadjacent course oppositely inclined to the roof edge and oppositely side-lapped one upon the other, the lower edges of the shingles in the superadjacent course substantially coinciding with the side edges of the shingles in the course therebeneath.

2. A roof comprising shingles laid in plural courses, the shingles of a course obliquely inclined to the roof edge and being side-lapped one upon the other, each shingle of said course having a slit extending inwardly adjacent the upper end of its exposed side edge, the shingles of the superadjacent course oppositely inclined to the roof edge and oppositely side-lapped one upon the other, the lower edges of the shingles in the superadjacent course substantially coinciding with the side edges of the shingles in the course therebeneath, each shingle of said superadjacent course having a slit adjacent its lowermost corner and extending inwardly from said coinciding edge and coengaging with the slit of the subadjacent shingle for interlocking the coinciding edges.

3. A roof comprising shingles laid in plural courses, the shingles of a course obliquely inclined to the roof edge and being side-lapped one upon the other, the shingles of the superadjacent course oppositely inclined to the roof edge and oppositely side-lapped one upon the other, each shingle of the superadjacent course having a slit in its side edge extending inwardly, the lower edge of each of the shingles in the superadjacent course engaging the slit of the overlapping shingle in that course and also substantially coinciding with the side edge of the shingle in the course therebeneath.

4. A roof comprising shingles laid in plural courses, the shingles of a course obliquely inclined to the roof edge and being side-lapped one upon the other, each shingle of said course having a slit extending inwardly adjacent the upper end of its exposed side edge, the shingles of the superadjacent course oppositely inclined to the roof edge and oppositely side-lapped one upon the other, the lower edges of the shingles in the superadjacent course substantially coinciding with the side edges of the shingles in the course therebeneath, each shingle of said superadjacent course having a slit adjacent its lowermost corner and extending inwardly from said coinciding edge and coengaging with the slit of the subad-

- 5 jacent shingle for interlocking the coinciding edges, and each shingle of the superadjacent course having another slit extending inwardly from its exposed side edge and spaced from the lowermost corner to coengage with the lower edge of the underlapped shingle in that course.
- 10 5. A roof comprising shingles laid in plural courses, the shingles of a course obliquely inclined to the roof edge and being side-lapped one upon the other, the shingles of the superadjacent course oppositely inclined to the roof edge and oppositely side-lapped one upon the other, the lower edges of the shingles in the superadjacent course substantially coinciding with the side edges of the shingles in the course therebeneath, the shingles of two adjacent courses provided with holes in their lapped corners, and a securing pin passing through the holes of two lapped shingles to prevent raising of the lapped corners, said pin having a portion fitting around and under a side edge of the lowermost shingle.
- 15 6. A roof comprising shingles laid in plural courses, the shingles of a course obliquely inclined to the roof edge and being side-lapped one upon the other, the shingles of the superad-
- 20 jacent course oppositely inclined to the roof edge and oppositely side-lapped one upon the other, the lower edges of the shingles in the superadjacent course substantially coinciding with the side edges of the shingles in the course therebeneath, the shingles of two adjacent courses provided with holes in their lapped corners, and a securing pin passing through the holes of two lapped shingles to prevent raising of the lapped corners, said pin having a portion fitting around and under a side edge of the lowermost shingle and another portion engaging an edge of another shingle to prevent turning of the pin.
- 25 7. A roof comprising shingles laid in plural courses, the shingles of a course obliquely inclined to the roof edge and being side-lapped one upon the other, the shingles of the superadjacent course oppositely inclined to the roof edge and oppositely side-lapped one upon the other, the lower edges of the shingles in the superadjacent course substantially coinciding with the side edges of the shingles in the course therebeneath, and tapered members fitting the spaces created by the lapped shingles.
- WRIGHT SMITH, JR.

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