May 26, 1959 E. E. MILLS 2,887,781

ALIGNING JIG FOR SHINGLES

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Fig. 1

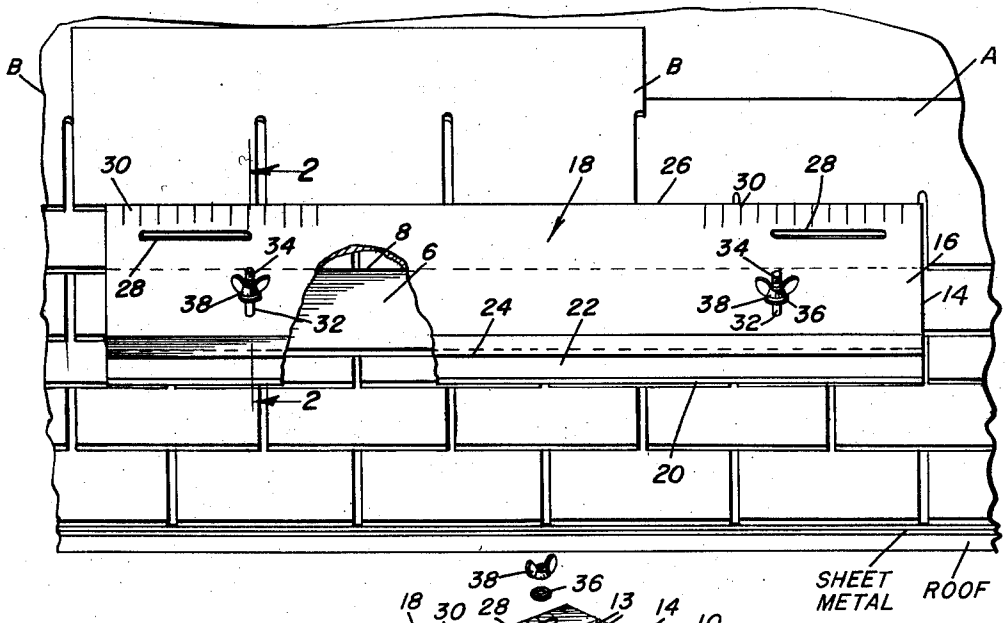


Fig. 3

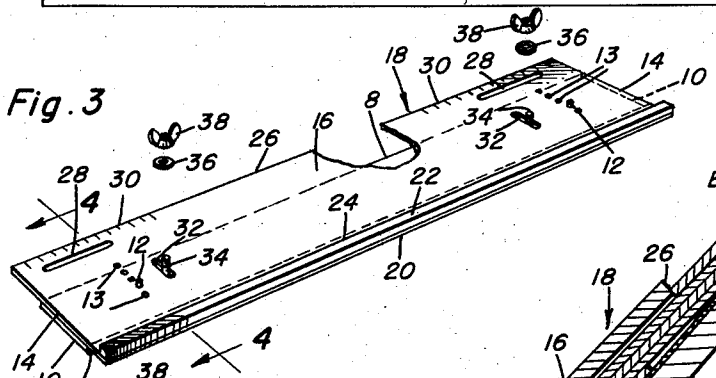


Fig. 2

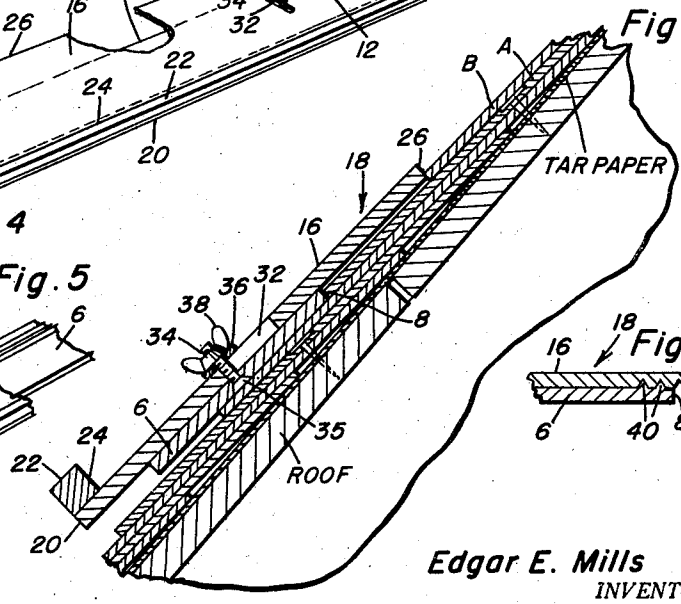


Fig. 5

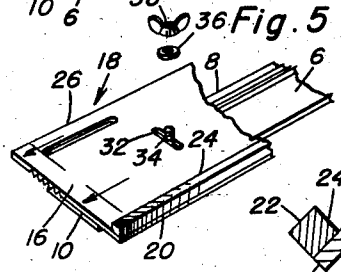
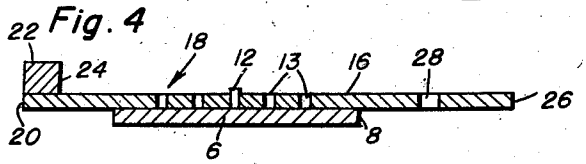


Fig. 6

Fig. 4



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ALIGNING JIG FOR SHINGLES

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2 Claims. (Cl. 33—188)

The present invention relates to a jig which is expressly, but not necessarily, adapted to enable skilled, as well as unskilled, persons to reliably and successfully utilize the same during the course of applying and fastening asphalt, wood, metal and equivalent roofing shingles to a roof.

More specifically, the invention pertains to a simple, practical and reliable jig, the use of which enables the user to maintain the laid shingles of a given row in prerequisite row alignment and speeds up the actual application and therefore constitutes a desirable time, money and labor-saving tool.

In keeping with the requirements of an effectual and easy-to-use tool, such as a jig, it is equipped with the necessary facilities or complements to enable even a comparatively unskilled user to cope with otherwise quite complicated shingle laying requirements by reason of the fact that uniformly laid rows of shingles will be accurately positioned and nailed so that the lower edges of the shingles of the then finished row will serve accurately as a gauge in positioning the jig itself whereby the latter will correctly position the shingles of the next above row before they are nailed, these results being accomplished in such a manner that the intended depth of lap or overlap, as the case may be, is assured and uniform results are maintained.

It is believed that a jig to be desirable in a given line of endeavor should utilize or involve a construction and arrangement of parts resulting in an easy and speedy instrumentality, one which is simplest in design, satisfactory in service and capable of complying not only with the manufacturing economies and requirements of manufacturers but the needs of both retailers and users.

Briefly summarized, the invention in a preferred embodiment thereof is characterized by a portable structure some four feet or less in length and constructed of wood, lightweight aluminum or appropriate material and comprising a first or bottom plate having a straight edge which is placed and firmly held so that said straight edge abuts the available lower marginal edges of the shingles of a row wherein said shingles have been already aligned and nailed to a roof, and a second plate superimposed on said first plate, adjustable thereon and having a straight edge which is parallel to but spaced from said first-named straight edge and which is adapted to permit the loose shingles of the next above row to be located in their prescribed positions, and held against displacement until they too have been nailed in their intended duly aligned row positions.

Other objects, features and advantages will become more readily apparent from the following description and the accompanying sheet of illustrative drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the same;

Figure 1 is a fragmentary plan view showing a portion of a roof, a couple of rows of nailed, ready-to-use shingles and a succeeding or so-called subsequent row, at least one shingle thereof located in position to bring about correct alignment and nailing, and showing the jig and how it is used;

Figure 2 is a section on the plane of the line 2—2 of Figure 1 looking in the direction of the arrows, said view being on an enlarged scale and of a fragmentary type;

Figure 3 is an exploded perspective view of the jig having an added structural modification;

Figure 4 is an enlarged detailed section taken through the jig on the plane of the line 4—4 of Figure 3 in the direction of the arrows;

Figure 5 is a fragmentary perspective view, similar to Figure 3, and wherein a further structural embodiment, or modification, is depicted; and,

Figure 6 is a fragmentary section on the line 6—6 of Figure 5.

By way of introduction to the description of the details, it is to be pointed out that applying shingles, for instance asphalt shingles, to a roof usually involves the employment of stringing and striking lines and, especially where the job is a one-man operation, the results are thought to be exceedingly slow, costly and, what is more noticeable, wearying and tiresome. It is to be kept in mind, too, that it is generally necessary when laying shingles with the aid of a conventional line to stop and make adjustments either up or down. Despite the fact that the manufacturers generally include instructions for spacing and application with each bundle of asphalt shingles, squaring and layout requirements are nevertheless difficult under current "do-it-yourself" practices. A problem and challenge has thus been posed for the provision of a practical, economical and easy-to-use layout and shingling gauge or jig.

In carrying out the principles of the instant invention, several structural adaptations or modifications are under advisement and these are here disclosed in Figs. 1 and 2; Figs. 3 and 4; and, Figs. 5 and 6, respectively.

Referring now to the drawings (Figs. 1 to 6 generically construed) the first or bottom plate, which is usually some 48 inches long and 5 inches wide is denoted by the numeral 6 and it is of appropriate material. In most instances it will be a single-length plank or a board. In any event, it is rectangular and the approximate one-quarter inch thickness thereof provides along one longitudinal edge what is here described as a straight edge 8. In fact, this may be treated as the "primary" straight edge. Inwardly of the transverse ends 10 are fixed outstanding studs 12 (modification Figs. 3 and 4) which constitute detents and these are selectively engageable with the properly chosen keeper holes 13 which are formed inwardly of the transverse ends 14 of the upper or second plate 16. The two plates 6 and 16 constitute the over-all template or jig 18. It will be noted that the plate 16 is approximately twice as wide (that is, 10 inches) as the plate 6. However, it is approximately the same length; that is, 48 inches. The plates may be either shorter or longer depending on the recognized expectations of one-man accomplishments. The bottom longitudinal edge portion 20 has superimposed thereon a lengthwise strip or cleat 22 one edge 24 of which constitutes a ledge for tools such as a square, a hammer, nails and so on. The upper and more important edge 26 is a second straight edge and parallels and cooperates with the straight edge 8. Below it are lengthwise paralleling slots 28 or "peepholes" and these have graduations 30 cooperable therewith. The right angularly related relatively short slots 32, which are parallel to the ends 14, are provided intermediate the edges 20 and 26 and these serve to accommodate the screw-threaded shank portions 34 of coacting bolts. The bolt-heads 35, as shown in Fig. 2, are countersunk. The projecting

portions 34 of the bolts are provided with washers 36 and wing nuts 38.

Specific reference is now to be had to the modification or form of the invention, the simplest adaptation appearing in Figs. 1 and 2. Here, the concept, generally speaking, has to do with the first plate 6 having a straight edge 8 which is placed and firmly held so that the straight edge abuts the available marginal lower edges of the shingle of the row wherein the shingles have already been aligned and nailed to the roof. There is a second plate 16 superimposed on the first plate 6 and it is adjustable thereon and it has a straight edge 26 which is parallel to and spaced from the straight edge 8 so as to permit the shingles of the next row above to be located in a prescribed position and held against displacement. In this simple form of the invention the adjustment is maintained merely by way of the two slots 32 and bolts 34 extending through the slots and carrying the clamping nuts 38.

In the modification seen in Figs. 3 and 4, the construction just described is repeated except that here, to take care of a finer and step-by-step adjustment, the keeper holes 13 are added alongside of the slots 32 these to accommodate the cooperating studs 12 in the manner which is quite apparent from Fig. 4.

With reference now to what may be treated as a third modification, it is to be pointed out that it may be desirable under certain circumstances to use, instead of the keeper holes 13 and the studs 12, an arrangement of interlocking tongues and grooves. Therefore, and as shown perhaps best in Fig. 6, the top surface of the lower plate 6 is provided near its edge 8 with two or more fixed ribs or tongues 40 and these are selectively keyed in the cooperating parallel and selectively usable grooves 42.

It will be evident, therefore, that the claims which are hereinafter embodied are directed to the generic aspect of the over-all concept and to the several modifications seen, respectively, in Figs. 1 and 2; Figs. 3 and 4; and finally Figs. 5 and 6.

It should be understood that a roof should be solidly covered with straight edge boards, ship lap, tongue and groove or exterior plywood. This is then covered with a good grade of roofing paper nailed at the top side only and only after all knot-holes, if any, are covered with a piece of tin or galvanized metal. It is generally suggested by manufacturers that the top under edge of the roofing paper be tarred and most manufacturers further suggest that a piece of galvanized metal about 12 inches wide be applied to the eave edge extending over the edge of the eave about ½ or ¾ of an inch. Bottom sides of the metal should be tarred to prevent water from running up under the eave. The edge of this metal should be squared with the roof. A layer of shingles with slot up should then be placed over the metal and square with the metal and nailed. Onto this is then placed a row of shingles completely across the building slot down, end slots equally distanced from each side of the building, edges of the shingles square with the metal and previous upside-down layer of shingles and nailed. We are now ready to apply the second layer of shingles with the aid of the jig.

I have found it more practical and it is recommended by some manufacturers that a nail should be above each side of the slot and at each side of the shingle but always high enough to be concealed by the next layer of shingles. It is better to square the roof and apply the metal to the eave edge of the roof, square with the roof, before applying the roofing paper. No further squaring is necessary and as soon as the roofing paper is applied the laying of the shingles can be started keeping the upside down shingles and the first top layer square with the eave edge metal.

From the foregoing, the construction and operation of the device will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. For use by skilled as well as unskilled persons in properly gauging, locating, holding and lining up roofing shingles which are applied by hand and finally nailed in prescribed row alignment; a portable jig comprising a substantially imperforate elongated bottom plate at least several feet in length and having generally flat top and bottom surfaces and being of a thickness greater than the thickness of the thickest portion of the edge of the shingle with which it is intended to cooperate, said edge constituting a straight-edge which is adapted to abut a cooperating lower marginal edge of the shingles of a row wherein said shingles have already been aligned with each other and nailed to a roof, and a generally imperforate top plate commensurate in length with and superimposed flatwise on and completely covering the bottom plate and adjustable on said bottom plate, the upper edge thereof constituting a straight-edge which is parallel to, in a horizontal plane above and spaced forwardly from said first named straight-edge and is adapted to permit each shingle of the next above row to be located in a prescribed position and held against displacement until it has been nailed in its intended position, both of said plates being generally rectangular in plan, said top plate being of a width considerably greater than the width of the bottom plate and having its longitudinal edges extending well beyond the respective longitudinal edges of the bottom plate, the projecting upper straight-edge portion of said top plate having graduations and also having associated elongated slots providing peepholes, a longitudinal cleat superimposed upon the top surface of the top plate and located adjacent to and paralleling the lower longitudinal edge portion of the top plate and cooperating with said top plate in providing an accommodation and gathering space and ledge for tools, nails and the like, the lower edge portion of said top plate projecting beyond and overhanging the corresponding edge portion of said bottom plate, and means carried by and cooperating with the respective plates and fastening the same separably and adjustably together.

2. The structure defined in claim 1 and wherein said means comprises, in each instance, a transverse slot formed in an end portion of the top plate and at right angles to the adjacent peephole slot, a plurality of keeper holes arranged in a row and cooperating with and adjacent to said transverse slot, said bottom plate being provided with a fixed bolt extending through the cooperating slot and provided with an adjusting and retaining nut, said bottom plate being also provided with at least one stud and said stud being selectively seatable in a selected one of the cooperating keeper holes.

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