

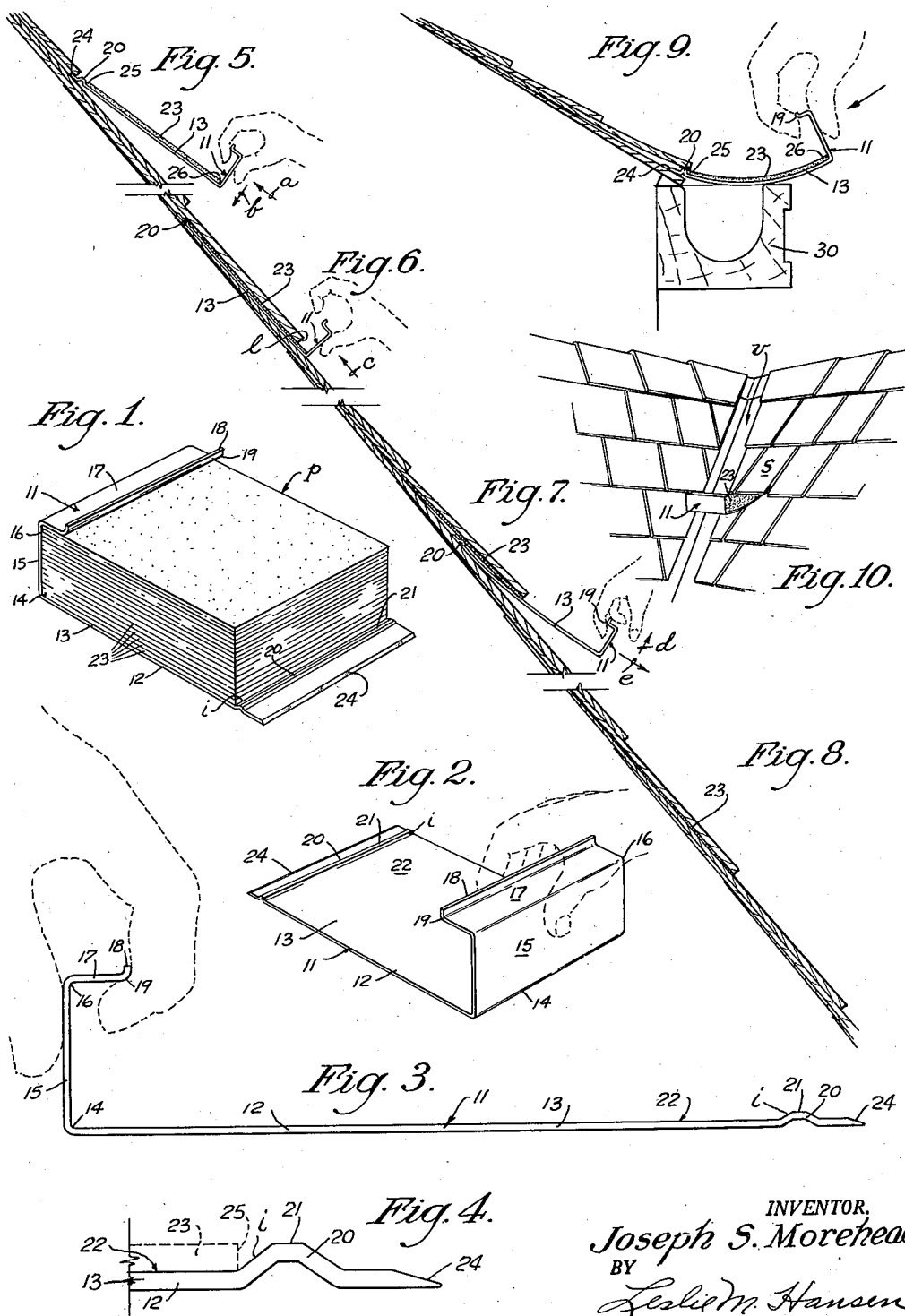
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PATCH INSERTING TOOL

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PATCH INSERTING TOOL

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This invention relates to improvements in roofing tools and more particularly to a tool for inserting patches between shingles or like over-lapping exterior finishes.

The present invention contemplates the provision of a tool for guarding a patch during insertion thereof between over-lapping boards and for effecting adherence of the patch to one of said boards during withdrawal of the tool.

Another object of this invention is to provide a patch inserting tool for spreading over-lapped boards during insertion of a patch therebetween.

Another object is to provide a flexible tool for inserting patches between over-lapping boards.

Still another object is to provide a patch inserting tool operable by but one hand of the person using the same.

These and other advantages will become apparent in the following description when the latter is read in the light of the drawings in which:

Fig. 1 is a perspective view of a package consisting of the patch inserting tool of the present invention and a supply of patches.

Fig. 2 is a perspective view of the patch inserting tool of the present invention.

Fig. 3 is a side elevation of the tool shown in Fig. 2.

Fig. 4 is an enlarged detail of one end of the tool shown in Figs. 2 and 3.

Figs. 5, 6, and 7 are sectional views illustrating certain steps of the use of the tool.

Fig. 8 is a section of roofing with a patch inserted according to the steps of Figs. 5 to 7.

Fig. 9 is a sectional view of a typical gutter arrangement for the purpose of illustrating the flexibility of the tool herein.

Fig. 10 is a fragmentary perspective of a typical roof valley and illustrating another condition under which the flexibility of the tool is advantageous.

The patch inserting tool of the present invention, as best shown in Figs. 2 and 3, comprises a body 11 of sheet material 12 which is preferably light guage metal of a width comparable to the average width of a roof shingle.

The body 11 includes a main portion 13 bent upwardly as at 14 adjacent one end to provide a vertical section 15 having its upper end bent inwardly as at 16 to provide an upper section 17 which lies parallel to the body 11. The section 17 has its extreme edge 18 curved upwardly a slight distance from the vertical section 15 to provide a finger engaging bead 19 which will not cut or otherwise injure the fingers of the hand of the repairman.

It should be noted that the configuration of the sections 15 and 17 is such as to fit between the thumb and fingers of the user so that the tool will be under manual control at all times.

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The opposite end of the main portion 13 of the body 11 is provided with a ridge 20 having a flat top 21 disposed in spaced relation to the upper surface 22 of the portion 13. The spacing of the top 21 of the ridge from the surface 22 is comparable to the thickness of a patch 23 which is to be inserted by the tool so that when the tool is disposed between over-lapping shingles, the uppermost shingle will be raised above and out of engagement with the patch 23.

The leading end 24 of the tool is preferably, though not necessarily, tapered so as to act as a wedge after entry thereof between over-lapping shingles and to prevent accidental damage to the abutting surfaces of the shingles such as catching on weather worn knots or the like.

The tool as hereinbefore explained is adapted to provide a form for a plurality of patches 23 in the manner as shown in Fig. 1 which when wrapped or bound will present a package *p* suitable for sale as a unit.

The patches 23 may be made of any material which is suitable for the purpose but the present invention is preferably for use with patches made of pliable material such as asphalt saturated felt. Patches of such material are best suited for shingle roofing or over-lapping siding because the asphalt with which they are impregnated has a tendency to become fluid under the heat of the sun and therefore are self-vulcanizing with respect to the surfaces against which they bear. It is with such pliable patches 23 that the present invention is most particularly concerned for the purpose of maintaining such patches in a flat condition during insertion. Moreover, the present tool acts as a guard for preventing accidental snagging of the pliable patches on splintered sections of the shingles and for manipulating the patch into a position for adherence with the shingles as will now be explained.

The uses and operation of the tool of the present invention are clearly illustrated in Figs. 5 to 10 inclusive, it being understood, however, that many other difficult circumstances not shown may be met due to the adaptability of my tool to various situations.

Referring now to Fig. 5 it will be noted that the first step in inserting a patch 23 is to place the patch upon the main portion 13 of the tool body 11. In this position the leading edge 25 of the patch lies just to the rear of the ridge 20 while the trailing edge 26 of the patch lies in abutting relation to the upturned section 15 of the tool.

The tool body 11 is then disposed angularly to the surface of the roof by lifting the sections 15 and 17 gripped between the fingers and thumb of the user as shown in Fig. 5. The tapered end 24 of the tool will easily enter between the uppermost shingle and the underlying one and after

proper entry in the direction of arrow *a* the tool is lowered in the direction of arrow *b*, Fig. 5.

The tool is thereafter pushed in the direction of arrow *c*, Fig. 6, it being noted that the uppermost shingle rides upon the top 21 of the ridge 20 so that the patch lying on the main portion 13 of the tool does not engage the uppermost shingle. The foregoing movement in the direction of arrow *c* is continued until the upstanding section 15 of the tool abuts the lower edge *l* of the uppermost shingle. Thereafter the tool is manipulated by the finger of the user as illustrated in Fig. 7 to raise the trailing end of the tool by an upward lift in the direction of arrow *d*.

The ridge 20 provides a fulcrum about which to tilt the main body 13 as stated above so that the lifting of the finger bead 19 by the user raises the patch 23 as is clearly illustrated in Fig. 7 to dispose the patch in engagement with the under surface of the uppermost shingle. The felt base patch thereafter frictionally engages and adheres to the under surface of the uppermost shingle sufficiently to prevent displacement of the patch during withdrawal of the tool in the direction of the arrow *e*, Fig. 7.

In connection with the foregoing it should be noted that the tool is highly polished and smooth of surface so that any tendency of adherence between the patch and the surface 22 of the tool is minimized. In other words, the patch 23 is held on the tool more by gravity than by any tendency toward any adhesion between them. Therefore, the natural tendency of the patch to adhere to the roughened under surface of the uppermost shingle is such as to permit relative movement of the tool in the direction of arrow *e* without displacing the patch relative to the shingles.

It should be noted further that the asphalt impregnated patch, prior to insertion, is kept cool and in the shade and therefore is not tacky. Consequently, its leading edge 25 will readily climb the incline *i*, Figs. 3 and 4 of the ridge 20, permitting withdrawal of the tool from beneath the patch.

After complete removal of the tool from between the overlapping shingles, the patch 23 remains therebetween in the position as illustrated in Fig. 8, and the foregoing operation is repeated in another location where a repair patch is required.

A common condition in which the present tool is useful is shown in Fig. 10 wherein a patch is required beneath a shingle *s* disposed adjacent the valley *v* of a roof structure. In such instances it will be apparent that insertion of a rigid tool beneath the shingle *s* would be impossible due to the extended tool striking against the companion rise of the roof across the valley *v*. However, since the present tool has no ribs or rigidifying means in a lengthwise direction it is flexible. Therefore, a slight bowing of the main portion 13 with a patch 23 thereon is permissible with the present tool and it can be used to insert a patch beneath a valley shingle in the manner as illustrated in Fig. 10.

The flexibility of the tool is also advantageous in situations such as the one illustrated in Fig. 9 wherein the upper extremis of the facade of the gutter 30 extends above an imaginary line extended from the roof line. In such a situation a slight bowing of the tool is possible for the purpose of inserting a patch 23 between shingles adjacent the gutter of a roof.

While the foregoing description is directed to one specific form of the present invention it will

be apparent that the same is susceptible to variations, alterations and modifications without departing from the spirit of the invention. I therefore desire to avail myself of all variations, alterations and modifications as fairly come within the scope of the appended claims.

What I claim as new and desire to protect by Letters Patent is:

1. A tool for inserting a patch between overlapping exterior board finishing comprising a main body adapted to receive and support a patch, a vertical section at one end of said main body in abutting relation to a patch disposed thereon, said vertical section having a finger engaging bead, and a ridge formation adjacent the opposite end of said main body for protecting the leading edge of a patch disposed thereon during insertion of the same between said overlapping board finish by said tool.

2. A tool for inserting a patch between overlapping boards, comprising a main body adapted to receive and support said patch, said main body being bent upwardly at one end thereof to provide a thumb engaging portion, said thumb engaging portion having an inwardly disposed finger engaging bead overlying said main body, and a ridge formation on said main body adjacent the opposite end of the same for elevating the uppermost one of said overlapping boards out of engagement with said patch during insertion of the main body therebetween and providing a fulcrum for tilting said main body in the direction of the uppermost one of said boards to effect adherence of the patch thereon to the under surface of said uppermost board.

3. A tool for inserting a patch between overlapping boards, comprising a main body adapted to receive and support said patch, said main body being bent upwardly at one end thereof to provide a thumb engaging portion, said thumb engaging portion having an inwardly disposed finger engaging bead overlying said main body, and a ridge formation on said main body adjacent the leading end thereof, said ridge formation being of sufficient height for elevating the uppermost one of said overlapping boards above said patch, and for effecting a fulcrum about which to tilt said main body by an upward thrust against said finger engaging bead to dispose said patch in adhering relation to said uppermost one of said boards, said ridge formation having an inclined surface on that side thereof adjacent the patch supporting portion of said main body for facilitating slippage of the patch supported on said main body over said ridge upon withdrawal of the main body from between said overlapping boards.

4. A tool for inserting a patch between overlapping boards comprising, a sheet of smooth flexible material having a main body for receiving and supporting an asphalt impregnated patch, an upstanding thumb engaging section on the rearmost end of said body in abutting relation to the rearmost edge of said patch for guiding the same between said overlapping boards when the main body is inserted therebetween, and a ridge formed adjacent the leading end of said main body provided with an inclined section contiguous to the leading edge of said patch whereby upon tilting of said body toward the uppermost one of said boards into adherence with the uppermost board and withdrawal of the main body from beneath the same, said patch will climb said inclined section and remain in position.

5. A tool for inserting a patch between over-

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lapping boards comprising a sheet of relatively smooth flexible material having a main body adapted to receive and support an asphalt impregnated felt patch for maintaining the same in a relatively flat condition during insertion thereof between said over-lapping boards and for enabling insertion of said patch in a curved or bowed condition, said body having a thumb engaging portion adjacent its trailing end for engaging the rearmost edge of said patch, a finger engaging bead on said thumb engaging portion overlying said main body for facilitating elevation and withdrawal of said main body by finger manipulation of the operator, and a ridge formed adjacent the leading edge of said body for elevating the uppermost one of said overlapping boards out of contact with said patch during

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insertion thereof and for providing a fulcrum facilitating tilting of said main body upwardly to dispose said patch in adhering relation to said uppermost board during withdrawal of said main body from between said boards.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
730,781	Mitchell	June 9, 1903
972,028	Schimanski	Oct. 4, 1910
1,133,310	Nash	Mar. 30, 1915
1,890,273	Wells	Dec. 6, 1932