March 23 , 1926. 1,577,935

J. C. RUNKLE

SPLIT WOOD SHINGLE

Filed Jan. 4, 1926

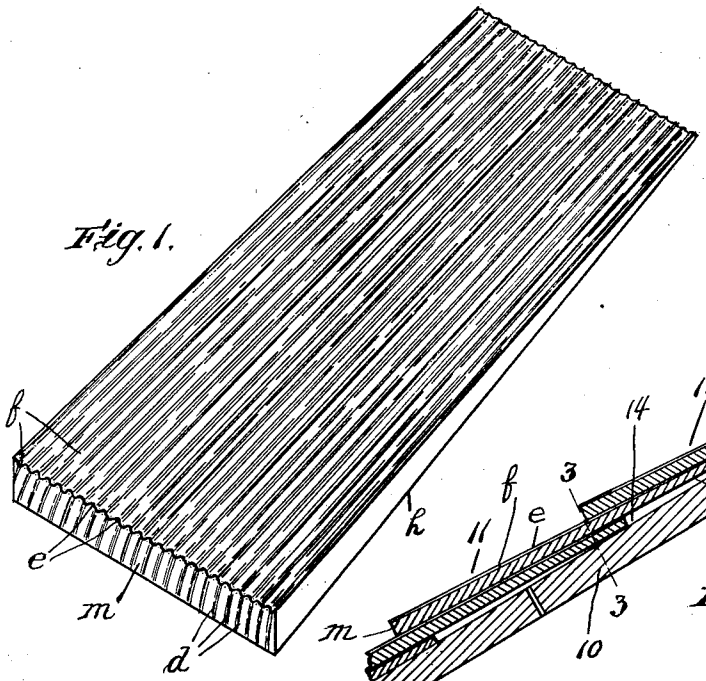


Fig. 1.

Fig. 2.

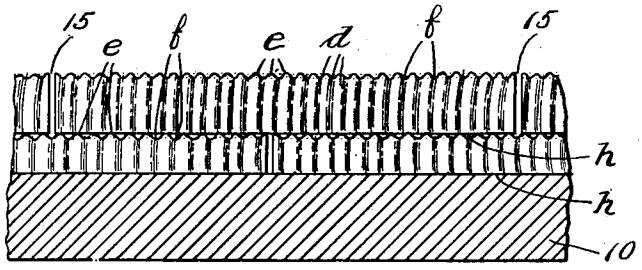


Fig. 3.

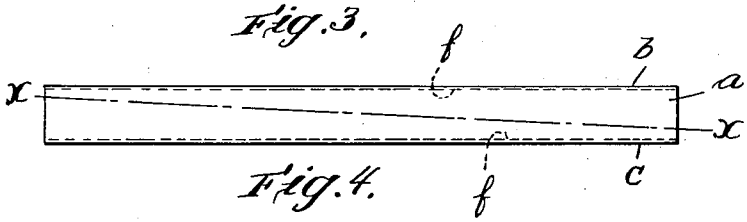


Fig. 4.

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UNITED STATES PATENT OFFICE.

JOHN C. RUNKLE, OF CAMBRIDGE, MASSACHUSETTS.

SPLIT WOOD SHINGLE.

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To all whom it may concern:

Be it known that I, JOHN C. RUNKLE, a citizen of the United States, residing in Cambridge, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Split Wood Shingles, of which the following is a specification.

This invention relates to wood shingles and has particular reference to split shingles.

A split shingle is formed by splitting, as contrasted with sawing, a shake or slab having the thickness of the shingle from a bolt of wood of suitable length. The opposite faces of the shake are rough, due to being split or torn from the bolt; and it is this rough appearance which is highly desired in a shingle of this type inasmuch as the rough surface of the shingle is considered to impart an artistic effect to the roof or other surface on which the split shingles are laid. The shake usually is of approximately uniform thickness, while the shingle must be tapered.

The shake is, therefore, formed into a tapered shingle by shaving material off both sides of the shake so that the shingle tapers on both sides. By this practice, the shaved surface extends over a relatively great extent of the entire face of the shingle and, consequently, the major part of the desirable rough, or split, appearance is removed.

It is quite common practice, with sawed shingles, to vary the amount of exposure, or overlap, of the shingles of successive courses, or even of the shingles in any one course, for the purpose of imparting an artistic effect to the roof. This practice can not be carried out to any extensive degree with the usual split shingle for the reason that the amount of exposure can not be increased sufficiently for the purpose without exposing a considerable extent of the shaved portion of the shingle. The shaved face presents an unsightly contrast with the rough split surface of the shingle and so detracts from the artistic effect intended.

It is one of the objects of this invention, therefore, to provide a uniformly-tapered split shingle the entire upper face of which presents a uniform split or rough surface, from the butt to the edge, so that the amount of overlap of such shingles may be varied at will without exposing any surface other than the split rough surface.

It is well known that the under sides of wood shingles, as laid on a roof, should be ventilated so that water which collects there may run off or evaporate quickly. Otherwise, the water is absorbed by the shingles, causing them to decay rapidly. With the usual type of split shingle, the superimposed shingles may make a direct and close contact with each other, since both faces of the shingle are shaved to provide the shingle with the necessary taper. Water collects in the junction between two superimposed shingles and is retained therein by capillary action, and cannot run off or evaporate readily, but is absorbed in the pores of the shingle.

It is a further object of this invention, therefore, to provide a split shingle of such character that when the shingles are laid on a roof, air pockets or ducts in free communication with the atmosphere are provided between and beneath the superimposed shingles, whereby moisture which collects between and beneath the shingles can run off and evaporate readily and before any material amount of moisture can be absorbed and thereby retained by the wood.

A further object of the invention is to provide a split shingle with an upper face which is split in such a way with relation to the grain of the wood that a plurality of narrow longitudinally-arranged channels are provided which serve to guide the water to run off the shingle in the direction of the length of the shingle, thereby to prevent a large portion of the water from running laterally across the shingle and into the space between two adjacent shingles.

I obtain all of the above objects of my invention in a shingle prepared from a shake which is split from the bolt in such a manner that the split faces of the shake are mainly perpendicular to, or lie across, the grain or year rings of the wood. As thus arranged, the grain of the wood in the shingle is on edge with the split face of the shingle and the grain runs lengthwise of the wood. The wood splits irregularly across the year rings so that there

are a plurality of alternate and parallel ridges and channels between the year rings, which ridges and channels extend lengthwise of the shingle.

The shingle is provided with a smooth bottom face and is tapered uniformly from the butt to the edge, material being removed from the shingles only from the bottom face thereof, to provide the necessary taper so that the upper surface is rough, or presents a so-called split appearance throughout its entire upper face, while the bottom face is smooth and plane.

Since the entire rough split upper face of the shingle is retained intact, the amount of exposure of the superimposed shingles can be varied, without restriction.

When such shingles are placed on a roof, the smooth and plane bottom face of an upper shingle is adapted to lie upon and over the rough split face, or the ridges and channels, of the next lower shingle; and the ridges and channels, in combination with the smooth face, provide a plurality of longitudinally-extended ventilating ducts which lie between the shingles and thereby permit the rapid escape and evaporation of moisture from between the superimposed shingles.

A further object is generally to improve the construction and extend the field of use of split wood shingles.

Fig. 1 is a perspective view of a split shingle embodying my invention.

Fig. 2 is a sectional detail of a roof on which the shingles are applied.

Fig. 3 is an enlarged detail along line 3—3 of Fig. 2 and illustrating the manner in which the edge-grain of the rough face of one shingle cooperates with the smooth lower face of a superposed shingle to provide ventilating ducts between the superposed shingles.

Fig. 4 is a side view of a shake or slab of wood from which the shingles are taken.

The split shingle embodying this invention is taken from a shake or slab *a* of wood, Fig. 4, which has been split from a bolt, or section of a tree trunk, in such a way that the opposite side faces *b* and *c* are approximately at right angles with the grain or year rings *d* of the bolt as is best illustrated in Fig. 1. The year rings are thus arranged on edge as regards he opposite board faces of the slab and the shingles formed from the slab. Since the faces *b* and *c* are split or torn from the bolt of wood, the surfaces are rough and are provided with a plurality of alternate ribs or projections *e* and channels or depressions *f*, which ribs and channels are formed by and represent the edges of the year rings on the faces of the shingles. These ribs and channels are approximately parallel with each other and cover the entire extent of the broad faces of the slab and the shingles formed therefrom.

The shingles are tapered uniformly from one to the other and are given a smooth and plane bottom face by sawing the slab *a* diagonally from one corner to the other thereof or along the line *x*—*x*. By this method of cutting, two shingles are formed out of a single slab and each shingle is uniformly tapered from the butt *m* to the edge *g* and each shingle is provided with a smooth and plane bottom face *h*; and rough or split appearance of the upper face *b* of the shingle is thereby preserved unaltered. The shingles can thereby be laid on a roof 10 as illustrated in Fig. 2 and the amount of exposure of the shingles in the separate courses 11, 12, and 13 can be varied at will so that, if desired, the entire length of the shingle can be exposed, without exposing other than the split face of the shingles. The smooth and plane bottom face *h* of an upper shingle is laid over and rests upon the tops of the ribs or projections *e* of the next lower shingle and covers over the channels *f* which lie between the ribs *e*. Said channels *f* thereby provide ducts which are in free communication with the atmosphere at the edge of the upper shingle. Consequently, any moisture which runs in between the two shingles can readily escape by way of the channels *f* and air has access into the space between the two shingles, by way of said channels, so that moisture can readily evaporate before any material amount of it can be absorbed by the shingles, whereby to prevent them from decaying rapidly. The overlapping of the shingles in the successive courses may also form pockets 14 between the shingles and the roof 10. The ducts formed by the channels *f* are in free communication with these pockets and consequently ventilate them freely. The ribs *e* and channels *f* are parallel with the length of the shingle and so provide a plurality of longitudinally-arranged channels down which the water may flow. These guide channels also prevent the water from running down and laterally across the shingle and entering the spaces 15 between adjacent shingles in the same course, whereby to prevent a large amount of water from accumulating and being retained in these spaces.

I claim:

1. A uniformly-tapered split wood shingle having a smooth and plane bottom face and an upper face which presents a split or rough appearance throughout its entire extent.

2. A uniformly-tapered split wood shingle having a smooth and plane bottom face and an upper face which presents a split or rough appearance throughout its entire ex-

tent, the grain of the wood in the shingle being on edge with the split or rough face and extended lengthwise of the shingle.

3. A uniformly-tapered split wood shingle having a smooth and plane bottom face and an upper face which presents a split or rough appearance throughout its entire extent, the grain of the wood in the shingle being on edge with the split or rough face and extended lengthwise of the shingle, and the edge-grain providing a plurality of longitudinally-arranged ribs and channels in the split or rough face of the shingle.

In testimony whereof, I have signed my name to this specification.

JOHN C. RUNKLE.