

J. G. FOX & H. W. SIMMS.
SHINGLE.
APPLICATION FILED MAR. 18, 1912.

1,048,517.

Patented Dec. 31, 1912.

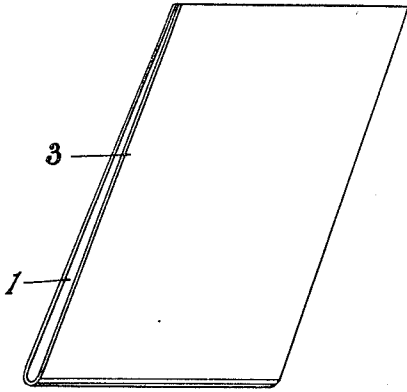


FIG. 1

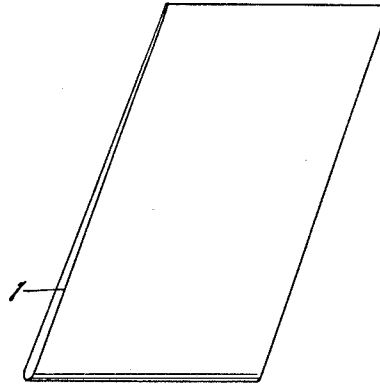


FIG. 2

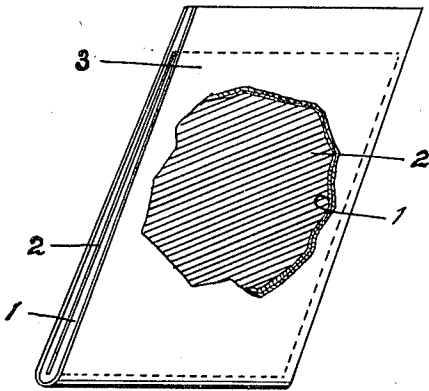


FIG. 3

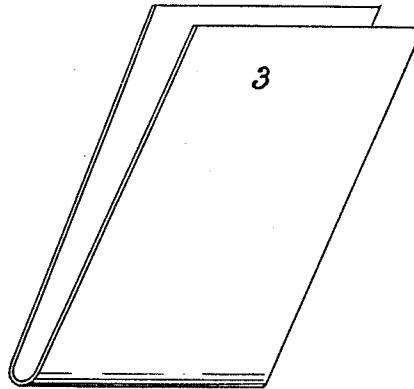


FIG. 4

WITNESSES:
Geo. W. Smith,
Christine A. Braidel.

Jacob G. Fox INVENTORS
Henry W. Simms
BY
Geo. B. Wilcox ATTORNEY

UNITED STATES PATENT OFFICE.

JACOB G. FOX AND HENRY W. SIMMS, OF BAY CITY, MICHIGAN.

SHINGLE.

1,048,517.

Specification of Letters Patent.

Patented Dec. 31, 1912.

Application filed March 18, 1912. Serial No. 684,527.

To all whom it may concern:

Be it known that we, JACOB G. FOX and HENRY W. SIMMS, both citizens of the United States, residing at Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Shingles; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention is an improvement in shingles and relates more particularly to shingles of the general tapered or wedge-shaped cross-section commonly employed in wooden shingles, but the improvement relates more particularly to shingles made of a combination of materials.

The purpose of our invention is to provide a flat shingle so constructed that it cannot be easily broken, that is impervious to water and not readily affected by heat or cold, and that is practically fire-proof.

A further object is to provide a non-porous shingle that will not warp and that will be capable of lying flat against and adhering to the underlying shingles.

Another object of our invention is to provide a shingle that can be easily and cheaply manufactured and so constructed that its butt or thick end shall be rounded, that is, having the upper and lower edges of the butt curved, as distinguished from the corresponding sharp edges of the ordinary wooden or cement shingle; the object of providing the round butt being to reduce as far as possible the tendency which is always present in the square butted shingle, to draw water by capillary action up between the faces of two overlapping shingles, thereby causing the shingles to remain damp and resulting in the generating of moss and other harmful growths.

With these and certain other objects in view which will appear later in the specification, our invention consists in the devices described and claimed and in the equivalents thereof.

In the drawings, Figure 1 is a perspective view of a shingle of our improved construction; Fig. 2 is a view of the interior or composition part of a shingle without reinforcement; Fig. 3 is a similar view of a modified construction, showing the composition part of the shingle reinforced; and Fig. 4 is a perspective view of the outer covering or

jacket to be applied to the composition interior of a shingle.

As is clearly shown in the drawings, the shingle consists in a core 1 of any suitable cementitious composition; as for instance cement mixed with other substances, the ingredients of the mixture being non-essential to our present invention, although it will be understood that the cementitious material shall be of such nature as to be not excessively brittle and preferably capable of being shaped by sawing and to permit the driving of nails through it without causing it to split. Such materials being well known in various arts, it is not necessary in the present description to specify the exact ingredients.

The core is preferably of approximately the shape of the finished shingle, that is, if the shingle is to be of the ordinary tapered type, the core is made in the form of a flat sheet thinner at one end than at the other, as shown in Figs. 2 and 3.

The cementitious core may be unreinforced, as shown in Fig. 2, or if desired may be reinforced, as shown in Fig. 3, in which 2 represents a reinforcing sheet of any suitable material, as for instance tarred felt, cloth, wire gauze, or any other suitable flexible reinforcing sheet extending from the butt nearly to the thin edge of the core and embedded therein.

The core is covered on its bottom, its top and its lower end or butt by a covering which we prefer to term a jacket preferably made of tarred felt, or of any other suitable flexible material, as any one of the well known types of prepared roofing.

In making the shingle we prefer to first cover one side of the jacket with the cementitious material in which the reinforcing sheet 2 may or may not be embedded, as desired. We then fold over the upper half of the jacket, and subject the plastic core and the jacket to pressure whereby the jacket is not only closely brought into contact with the plastic core, but all air is squeezed out so that when the core is set the jacket and core become practically integral.

It will be noted that by reason of wrapping the jacket around the butt of the core, the upper and lower edges of the thickened end of the shingle are thereby rounded for the purpose which has already been set forth.

After the material of the core has set we

prefer to dip the shingle in any suitable water-proofing solution, preferably of the same nature as the solutions with which the jacket material has been treated.

- 5 By the means above described we have produced a shingle that will not warp or crack, the surface being flat so that two overlapping shingles will fit closely together and form practically a continuous structure.
- 10 This close contact between two overlapping shingles tends to prolong the life of the roof by preventing the shingle nails from rusting, for the reason that water can not come into contact with the nails by seeping
- 15 between the shingles.

Our improved shingles are inexpensive to manufacture and are capable of being handled in any of the ways in which shingles are ordinarily used without liability of

20 breakage.

Having described our invention, what we claim and desire to secure by Letters Patent, is:—

In a shingle, the combination with a core of cementitious material, formed with a 25 butt having its upper and lower edges rounded; of a jacket of impervious flexible material, said jacket comprising a single sheet secured to and completely covering one face of said core, and passing around the 30 butt and secured to and completely covering the upper face of said core.

In testimony whereof, we affix our signatures in presence of two witnesses.

JACOB G. FOX.
HENRY W. SIMMS.

Witnesses:

CHRISTINE A. BRAIDEL,
GEO. W. SMITH.