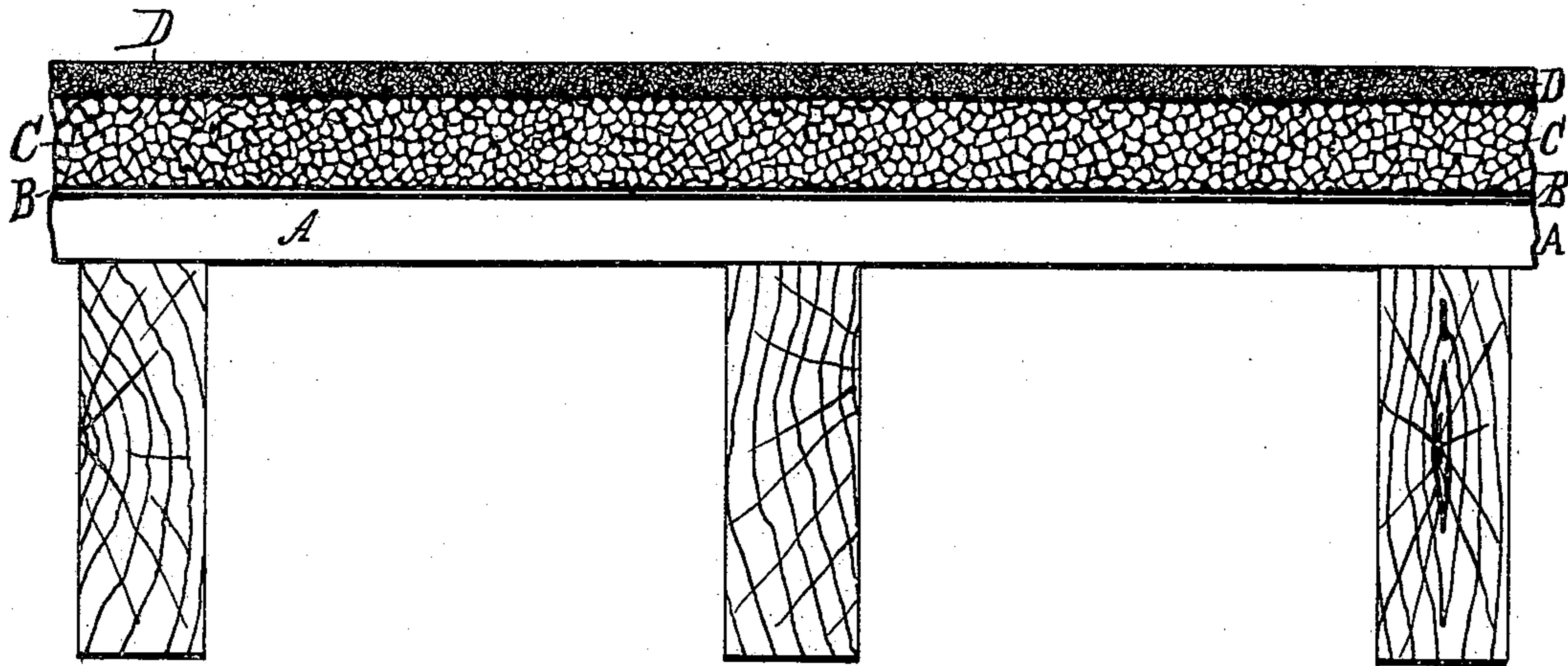


(No Model.)

H. VAN NEWKIRK.
ROOF.

No. 547,097.

Patented Oct. 1, 1895.



WITNESSES _
O. W. Dean
C. J. Shiple

INVENTOR _
Henry Van Newkirk
By Walter H. Chamberlain
Attorney

UNITED STATES PATENT OFFICE,

HENRY VAN NEWKIRK, OF CHICAGO, ILLINOIS, ASSIGNOR TO JOHN C. ZALLÉE, OF ST. LOUIS, MISSOURI.

ROOF.

SPECIFICATION forming part of Letters Patent No. 547,097, dated October 1, 1895.

Application filed December 26, 1893. Serial No. 494,661. (No specimens.)

To all whom it may concern:

Be it known that I, HENRY VAN NEWKIRK, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have
5 invented a certain new and useful Improvement in Roofs; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled
10 in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, which forms a part of this specification.

My invention has for its object the production of a roof for a building which shall be
15 at once light, strong, durable, cheap, substantially fireproof, and easily put on.

The invention relates particularly to that class of roofs in which a foundation of boards, tile, or the like is first prepared and on this
20 laid a suitable coating or surface, which constitutes the roof proper.

In this invention the basic element of the composition is asphalt, and this is prepared and applied in the manner hereinafter described and claimed.
25

The figure in the drawing represents a cross-section of a portion of one of my roofs.

In carrying out my invention A represents a suitable base consisting of boards, tile,
30 sheet-metal shingles, or any other suitable frame on which the composition may be laid. In preparing, the roof is preferably painted over with a coat of liquid-asphalt paint B. On this is laid what I term my "roof-body"
35 C, consisting of a mixture of asphalt and a light body material, say coke. It is of course obvious that other body materials might be employed—such as sawdust, cork, or any other light, pliable, or semipliable material.
40 This coat or body composition is, we will say, one and one-half inches, more or less, in thickness. On this coat is laid a surface-dressing D—say one-half inch, more or less, in thickness—consisting of a mixture of asphalt, sand,
45 clay, (preferably fire-clay,) and lime. The proportions of these various elements vary; but in practice I have found that a mixture having twenty-five per cent. of asphalt, thirty-five per cent. of sand, fifteen per cent. of
50 clay, and twenty-five per cent. of lime gives perhaps the best results. It will be seen that in this mixture the sand acts as a fireproof-

body material, which on account of its cheapness makes it preferable. The fire-clay and lime act as absorbents to take up the moisture, while the asphalt acts to unite the other
55 elements and yet make the dressing waterproof and to a very large extent fireproof. In the body C the elements are mixed in the proportion of ninety-five per cent. of body material and five per cent. of asphalt; but these
60 might be altered without departing from the spirit of my invention.

It will be readily understood that not only the proportions but the elements themselves
65 of the top dressing might be altered, the only essential requisite being that the mixture of asphalt, (or equivalent material,) a body material, and an absorbent be used. Thus another mixture which I have found equally as effective
70 as the above is one in which there is first mixed with a given body of asphalt about five per cent. of lard or other similar substance. This lard asphalt is then mixed with sand and hydraulic cement in the proportions of about
75 sixty per cent. of sand, twenty per cent. of cement, and twenty per cent. of lard asphalt. It will, of course, be understood that both the body C and the top dressing D are applied
80 while warm or hot. It will also be understood that while I have used the term "asphalt" in my specification and claims, yet I would be understood as contemplating by
85 said term any of the various substitute materials for the same—such as coal-tar, &c.

What I claim is—

1. A roof consisting of a suitable foundation, on which is a thin coating of cementing substance, above the cementing substance a covering of asphalt and a suitable body material, and above this a top dressing of asphalt, a body material and an absorbent substantially as described.
90

2. A roof consisting of a suitable foundation, a covering of asphalt and coke united to the foundation by a coat of asphalt paint, and a top dressing of asphalt, sand, clay and lime substantially as described.
95

In testimony whereof I sign this specification in the presence of two witnesses.

HENRY VAN NEWKIRK.

Witnesses:

C. W. BARNEY,
W. H. CHAMBERLIN.