

JAMES M. PRICE,
IMPTS. IN ROOFS ETC.

117327

PATENTED JUL 25 1871

FIG. 1.

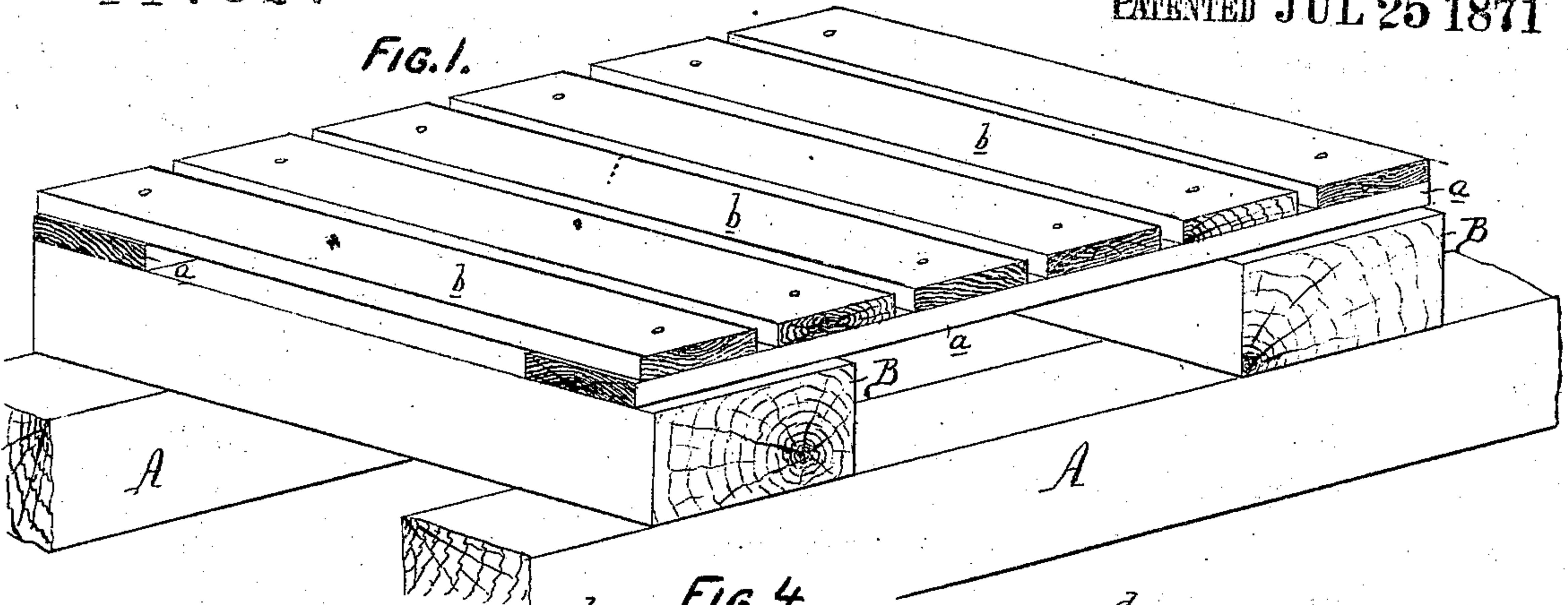


FIG. 4.

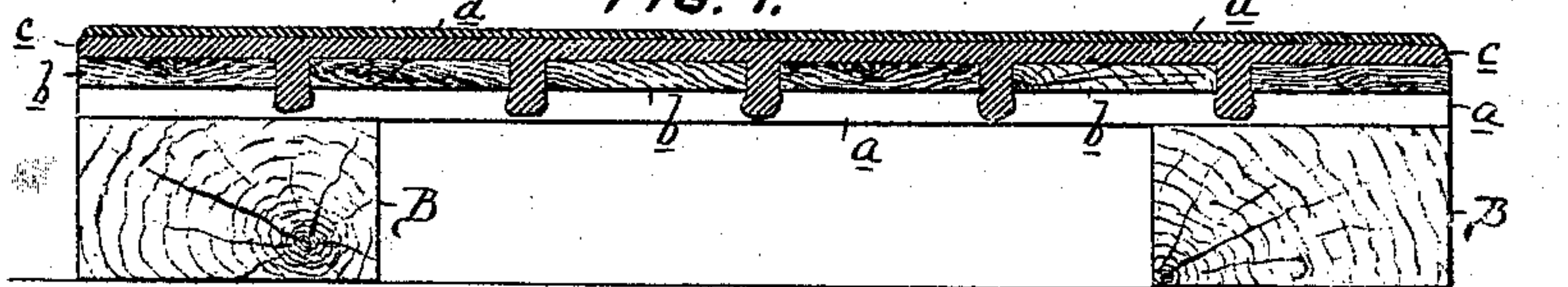


FIG. 5.

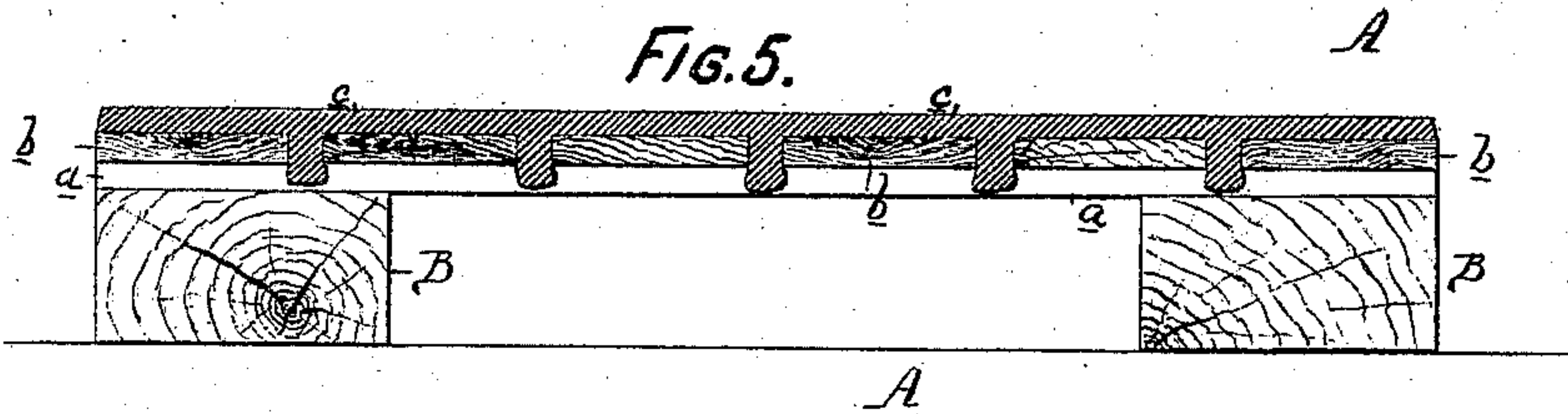


FIG. 2.

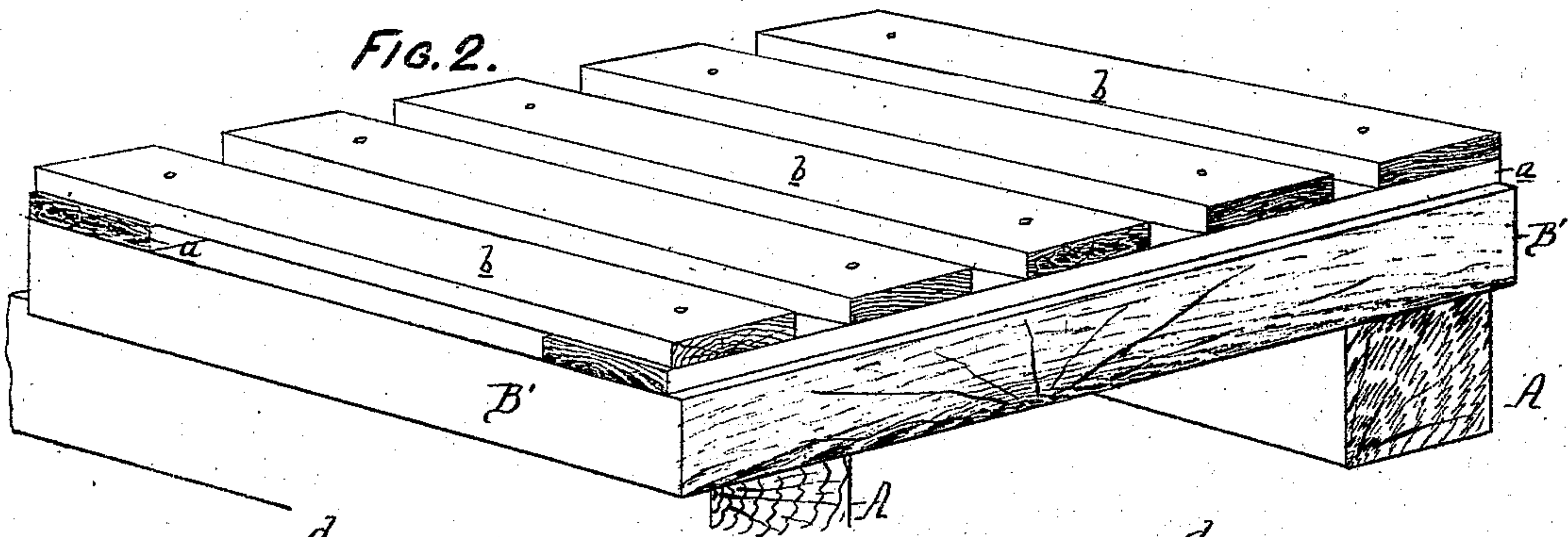


FIG. 6.

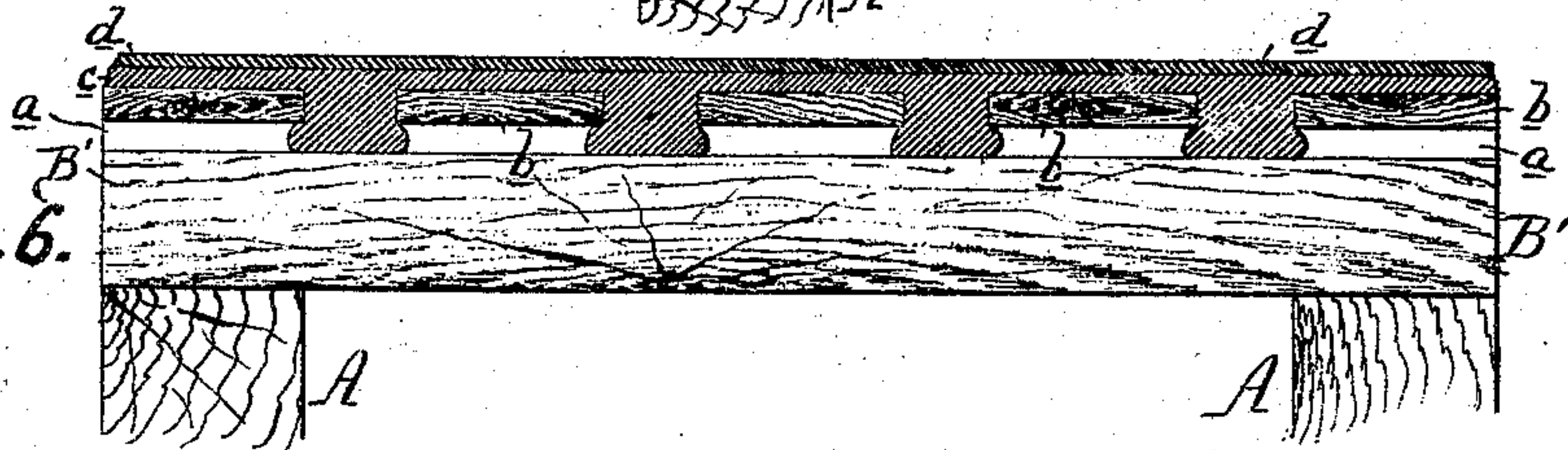
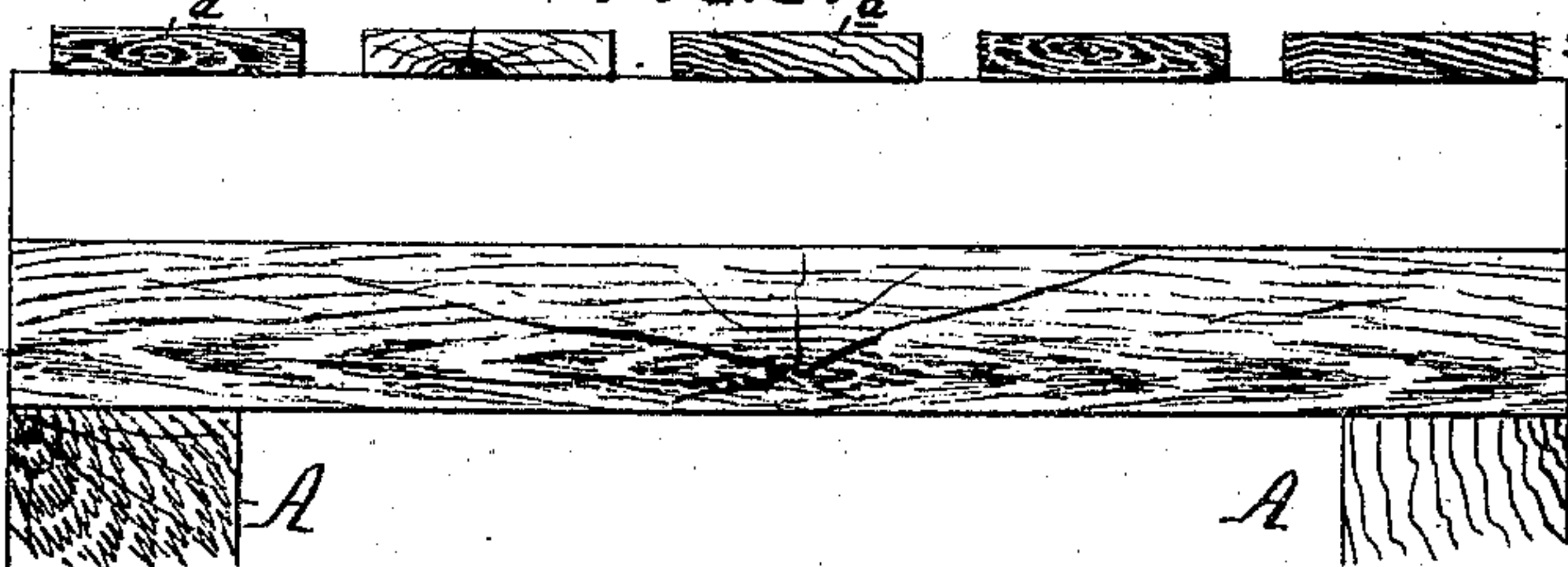


FIG. 3.



James M. Price
by his Atty
B. H. H. H. H. H.

WITNESSES,
W. A. Steel.
Jno. B. Harding.

UNITED STATES PATENT OFFICE.

JAMES MARTIN PRICE, OF NETHER PROVIDENCE, PENNSYLVANIA.

IMPROVEMENT IN ROOFS.

Specification forming part of Letters Patent No. 117,327, dated July 25, 1871; antedated July 13, 1871.

To all whom it may concern:

Be it known that I, JAMES MARTIN PRICE, of Nether Providence, county of Delaware, State of Pennsylvania, have invented an Improvement in Roofs, &c., of which the following is a specification:

My invention relates to a roof consisting of a cellular foundation, to which are applied two coatings of a character too fully described hereafter to need preliminary explanation.

Figures 1 and 2 are perspective views; Fig. 3, a sectional view, showing different modes of constructing the foundation; and Figs. 4, 5, and 6 are sectional views, showing the foundations with the coatings applied to the same.

The foundation consists of strips A A, which support the remainder of the roof, and to these strips is secured either a series of parallel cross-pieces, B B, or a continuous covering of boards, B', Figs. 2, 3, and 6, the latter being employed when it is desired to form a flat roof or pavement, as described hereafter. The strips B B are generally ordinary shingle-lathing; but they may be of any suitable size, and should, under ordinary circumstances, be about six inches or more apart. Upon the boarding B', or across the strips B when the latter are used, at right angles to the same and parallel to each other, are nailed plastering-laths *a*, or their equivalents, in continuous lines, at intervals generally of from two to six inches. In most instances a second series of laths, *b*, is nailed upon the laths *a*, at right angles to the latter, and at intervals of from one-eighth of an inch to one inch apart. Upon the outer series of laths is laid in the ordinary manner a coating, *c*, which I prefer to make by mixing hydraulic cement, calcined plaster of Paris, and sand, in equal or other suitable proportions; but in some instances this coating may consist of ordinary hair-plaster, made of stone-lime, sharp sand, hair, and water, or a mixture of hair-plaster, hydraulic cement, and finely-powdered calcined plaster of Paris, with or without sand. This should be

applied immediately after the materials are combined, so that it may be in its position before it "sets" or hardens. Upon this coating is applied or "floated" a second coating, which consists of hydraulic cement, made either of Portland cement, Rosendale cement, or their equivalents, mixed with calcined plaster in equal or other suitable proportions, and stirred in sufficient water. This should be made only in such quantities as can be immediately applied, as it hardens or sets quickly after being mixed. After this second coat is dry it should be painted or oiled with linseed-oil or its equivalent. When two series of laths laid at right angles to each other upon a board surface are coated with the cement, the spaces or cells between the lower laths, the boards, and the cement retain a body of air, which acts as a non-conductor to prevent external heat or cold from being transmitted to the interior of the building.

This structure is peculiarly suitable for flat roofs, inasmuch as the first coating, penetrating the interstices between the laths, spreads and clinches below the latter, and rests upon boards, as shown in Fig. 6, thus supporting the coating, so that when a weight is placed upon the same it will not "sag," bend the laths, or crack the plaster or cement.

I do not claim, broadly, a roof the outer surface of which is hydraulic cement; but

I claim—

A roof, consisting of a cellular foundation, constructed as described, to which is applied a coating, *c*, of the ingredients specified, and an outer coating, *d*, of hydraulic cement.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES M. PRICE.

Witnesses:

CHARLES E. FOSTER,
FRANK B. RICHARDS.