

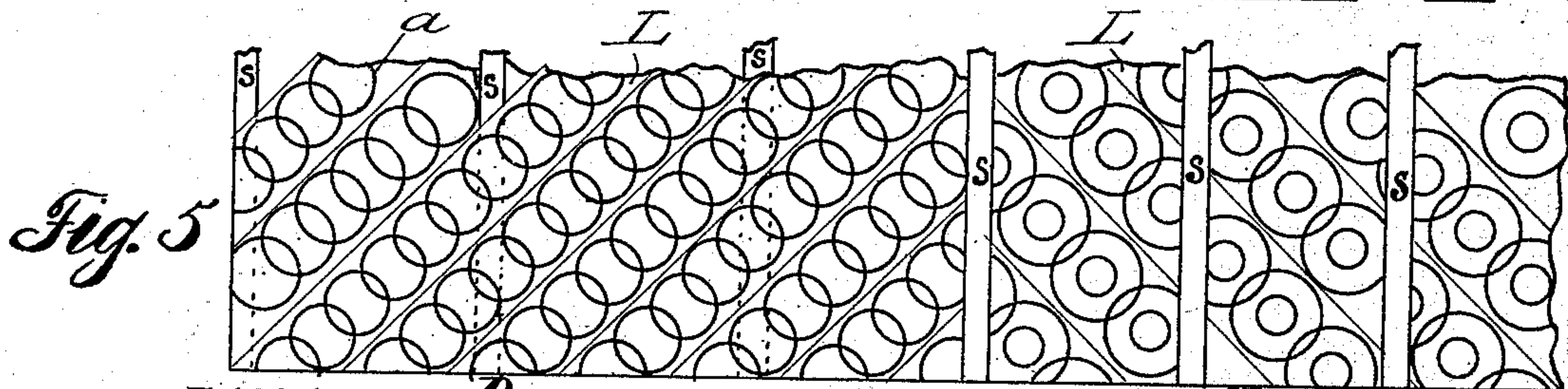
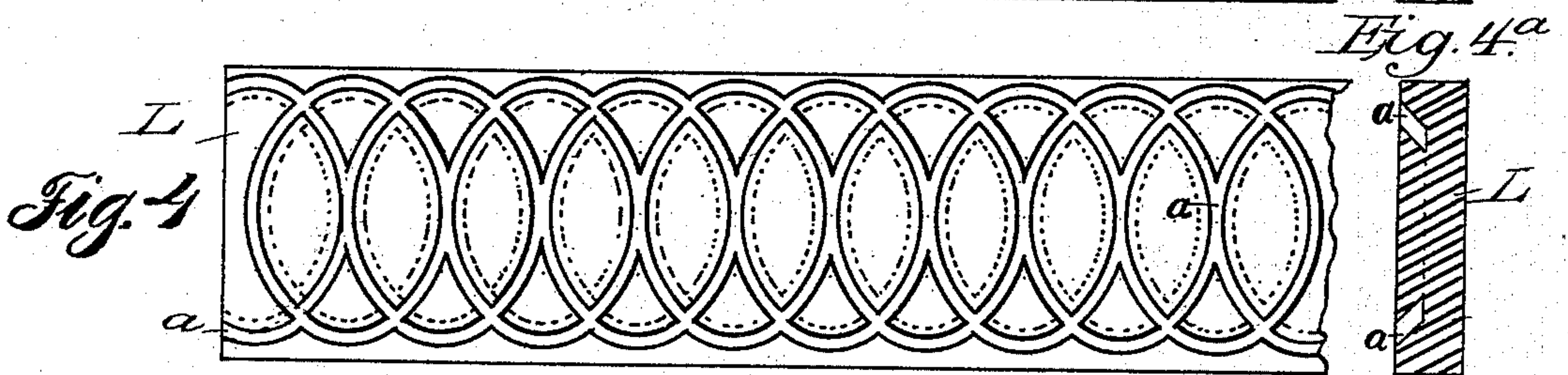
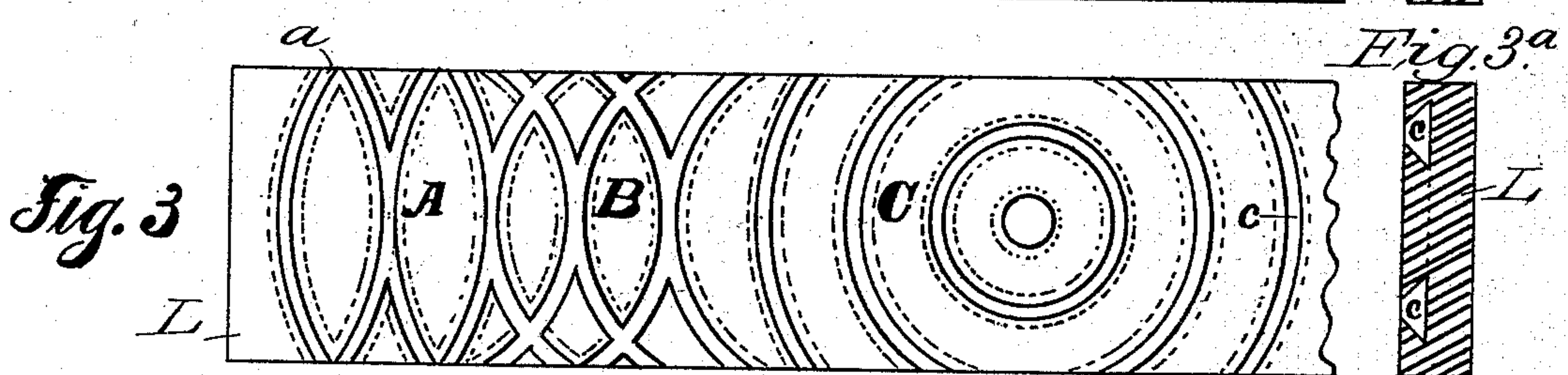
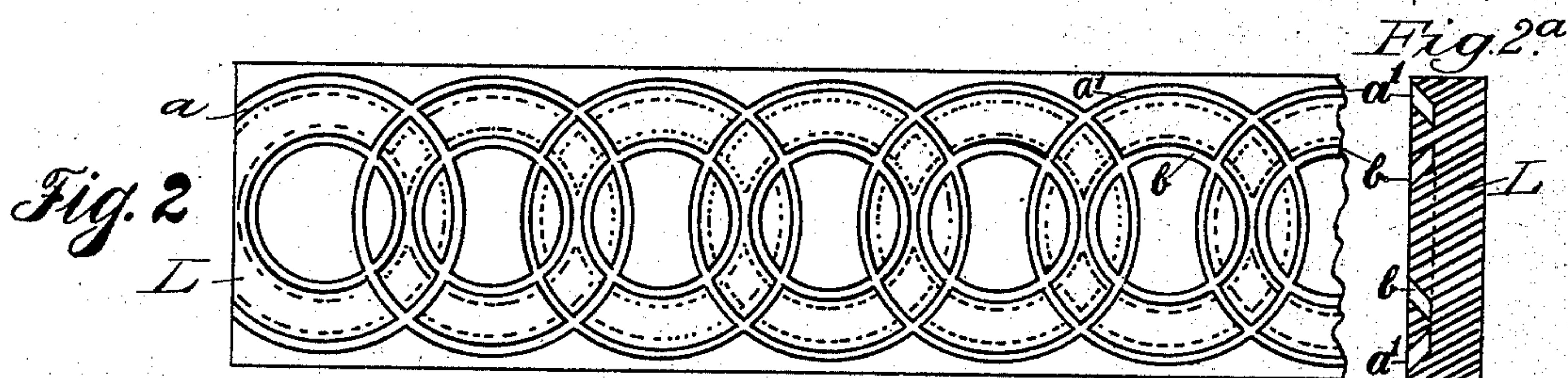
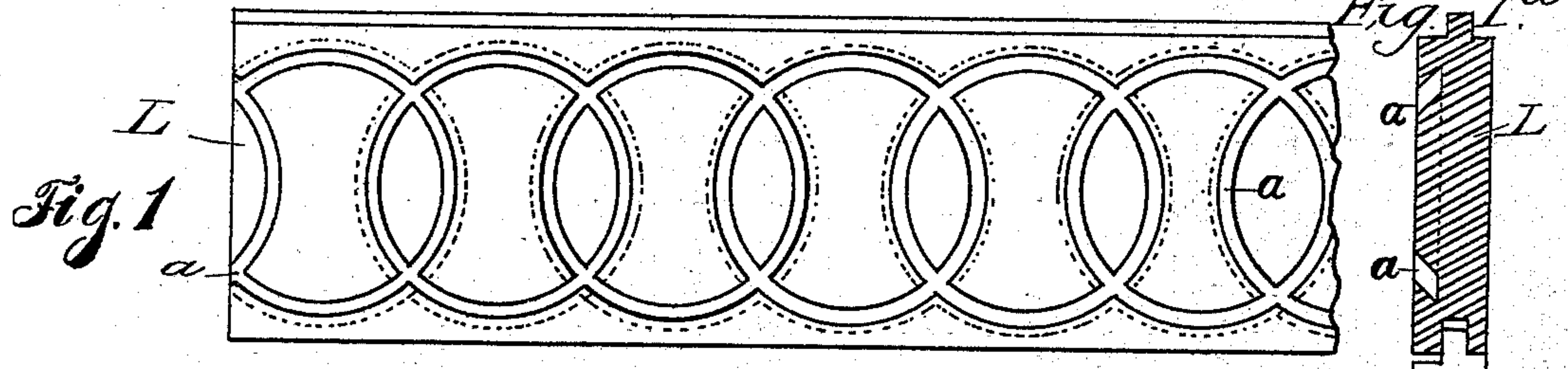
(No Model.)

T. MASON.

COMBINED SHEATHING AND LATH.

No. 413,259.

Patented Oct. 22, 1889.



Witnesses:

*John Norton*  
*H. D. Martin*

*Thomas Mason*  
*Inventor.*



# UNITED STATES PATENT OFFICE.

THOMAS MASON, OF TOPEKA, KANSAS.

## COMBINED SHEATHING AND LATH.

SPECIFICATION forming part of Letters Patent No. 413,259, dated October 22, 1889.

Application filed December 21, 1888. Serial No. 294,300. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS MASON, residing at Topeka, in the county of Shawnee and State of Kansas, have invented a new and useful Improvement in a Combined Sheathing and Lath, of which the following is a specification, reference being had to the accompanying drawings.

This improvement relates to combined sheathing and lath in which the boards or lath are grooved to serve as holders for plaster. Such sheathing is intended to be nailed either to the outside or to the inside of a brick, stone, or frame building to receive the plaster.

My invention consists in giving the grooves a particular shape; and the object is to provide a combined sheathing and lath or sheathing-lath which will hold the mortar or plaster more securely, which will be strong and easily made, and on which the plastering can be put with a less amount of labor.

In the drawings, Figure 1 is a face view of my combined sheathing and lath or sheathing-lath provided with curved grooves for holding plaster. Figs. 2, 3, and 4 are face views of examples of my invention, showing curved grooves variously arranged. Figs. 1<sup>a</sup>, 2<sup>a</sup>, and 3<sup>a</sup> are sections through Figs. 1, 2, and 3, respectively; and Fig. 4<sup>a</sup> is a section similar to Fig. 1<sup>a</sup>, showing the inclination of the grooves reversed. Fig. 5 is a face view of a wall with both outside and inside sheathing, the inside sheathing at the right-hand side of the view having been removed to show the outside sheathing.

In the drawings, L designates the board or body of the combined sheathing and lath.

*a* designates the curved undercut grooves for the keys of the plaster. In Fig. 1 the curves are worked in circles overlapping each other. In the modification shown in Fig. 2 the circular grooves are arranged as in Fig. 1, with the addition of interior concentric circular grooves, the inner circles touching one another and overlapped by the adjacent outer circles. The arrangement of grooves shown in this figure is intended for wider boards or laths. The sheathing-lath shown in Fig. 3 has grooves of radii greater than half of the width of the board or lath. Different arrangements of the grooves are clearly illustrated at A, B, and C in Fig. 3, and any of these

or other arrangements may be used, either separately or together. In Fig. 4 the curved grooves shown are elliptical instead of circular. For the purpose of forming better keys, the grooves *a* are undercut, with the slant outward, as shown in Fig. 1<sup>a</sup>, or inward, as shown in Fig. 4<sup>a</sup>. The lath may be made with some of the curves slanting inward and some of them outward, as shown at *a' b* in Fig. 2<sup>a</sup>, or with the curved grooves dovetailed or undercut both outwardly and inwardly, as shown at *c*, Fig. 3<sup>a</sup>.

Fig. 5 shows this improved sheathing and lath as applied to both the inside and outside of frame buildings or roofs, preferably at an angle of forty-five degrees, as shown at D and E. When applied to the outside, as shown at E, the grooves are put next to the scantling, and the mortar is put between the scantling, thus giving great stiffness to the building and greatly increasing the protection from either heat or cold.

The lath may be applied at any desired angle, with the scantling of the frame-work vertical, horizontal, or at any angle between the two. It may also be applied to the inside of brick or stone walls where it is desirable to insulate the plastering from the moisture absorbed by the masonry of the walls. In such cases it is greatly desirable to apply it vertically, fastening it to strips of wood built into the horizontal courses of the walls.

Combined sheathing and lath has heretofore been made with the grooves running parallel to the edges of the boards and substantially parallel with the grain of the wood, in consequence of which, when the mortar is put on, the water penetrating the wood has the immediate effect of loosening the keys, from the fact that it must swell at right angles to their direction, and as the weakest points are all in line with the grain of the wood, the swelling causes it to bulge outward, thus making an uneven surface and causing cracks in both plastering and lath; and the grooves running continuously throughout the length of the boards deprive it of a large proportion of its stiffness, and thus its utility as sheathing is impaired. This defect also makes it impracticable where the boards are desired to stand vertical in brick or stone buildings, as the grooves and keys would



then be in continuous vertical lines, and the weight of the mortar when first applied would cause it to fall to the bottom.

5 In my improved combined sheathing and lath the grooves for receiving the keys are cut in curves at continuously-varying angles with the edges of the boards, and consequently with the grain of the wood, thus securing or maintaining a much larger proportion of the  
10 strength of the wood and increasing its utility as sheathing. For the same reason the boards are less affected by the water from the mortar, and the swelling and shrinking do not impair the hold of the keys. The grooves  
15 being cut in curves, the boards are not weakened in lines running parallel with their edges and with the grain of the wood, and consequently their liability to warp is materially lessened, thus leaving the wall entirely  
20 straight and smooth on its surface, and grooves thus cut are more readily filled with the mortar, thus securing more perfect keys and adding to the stability and solidity of the wall, and as the grooves thus cut are more readily  
25 filled the labor of putting on the mortar is lessened. In boards thus worked, the keys and spaces between the keys constantly vary-  
ing in their directions and the spaces con-

stantly varying in size, the danger of the plastering cracking along the edges of the grooves and spaces is avoided, and when laid either horizontal or vertical, or at any angle whatever, the grooves, being curves, do not allow the mortar to run in any direction and thus destroy the keys. 30 35

In Fig. 1<sup>a</sup> I have shown the lath or grooved board, which I call a "combined sheathing and lath," or "sheathing-lath," tongued and grooved at the edges to fit it to be joined with others to form a sheathing, as indicated at the lower part of said figure, where a second sheathing-lath is shown fitted on. I do not limit myself to a lath which is tongued and grooved or otherwise specially fitted to make a tight joint with another lath to form a continuous sheathing. 40 45

Having described my invention as above, what I claim is—

A combined sheathing and lath wherein the grooves for keying the mortar are cut in curved lines, substantially as shown and specified. 50

THOMAS MASON.

Witnesses:

JOHN NORTON,  
H. D. MARTIN.