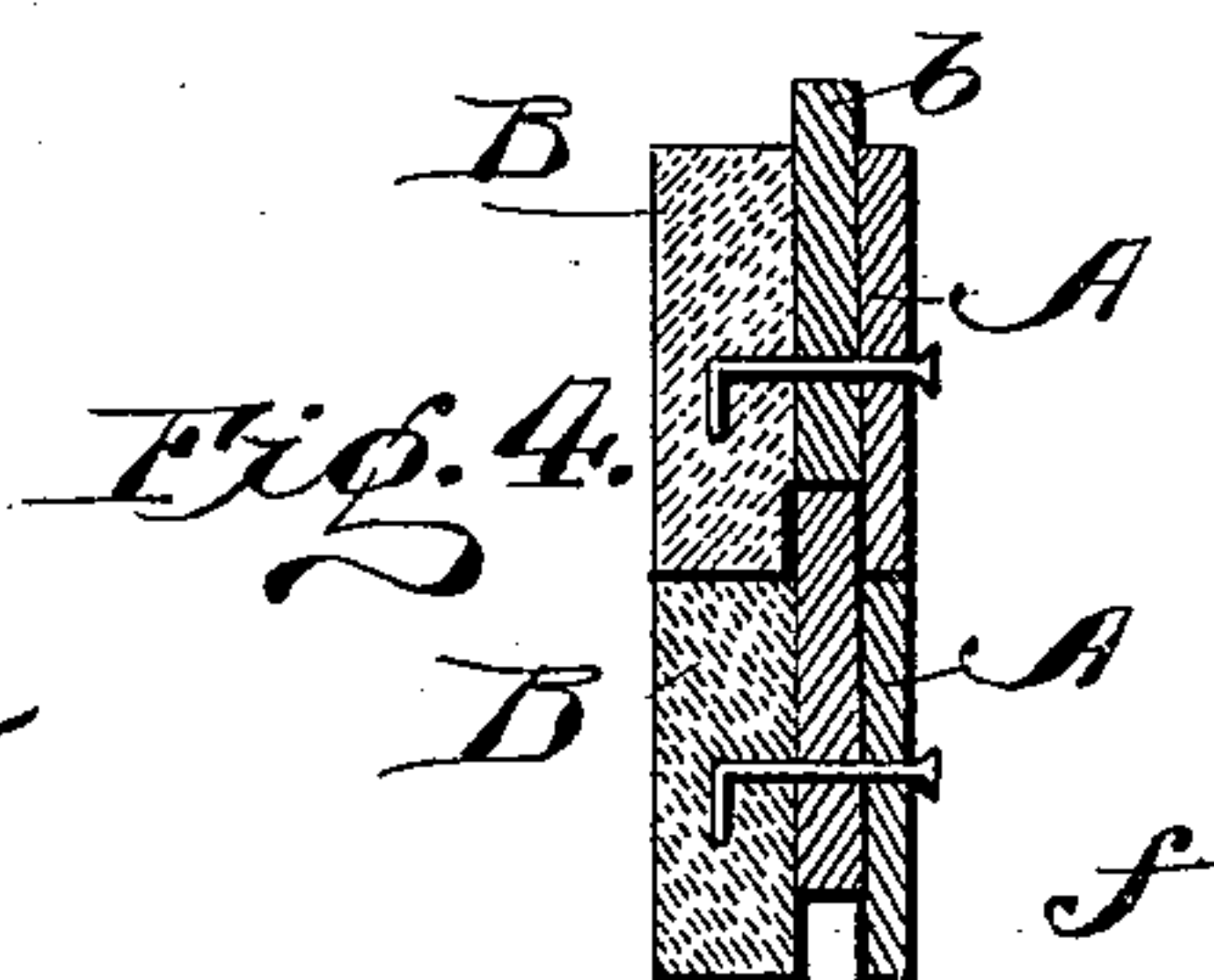
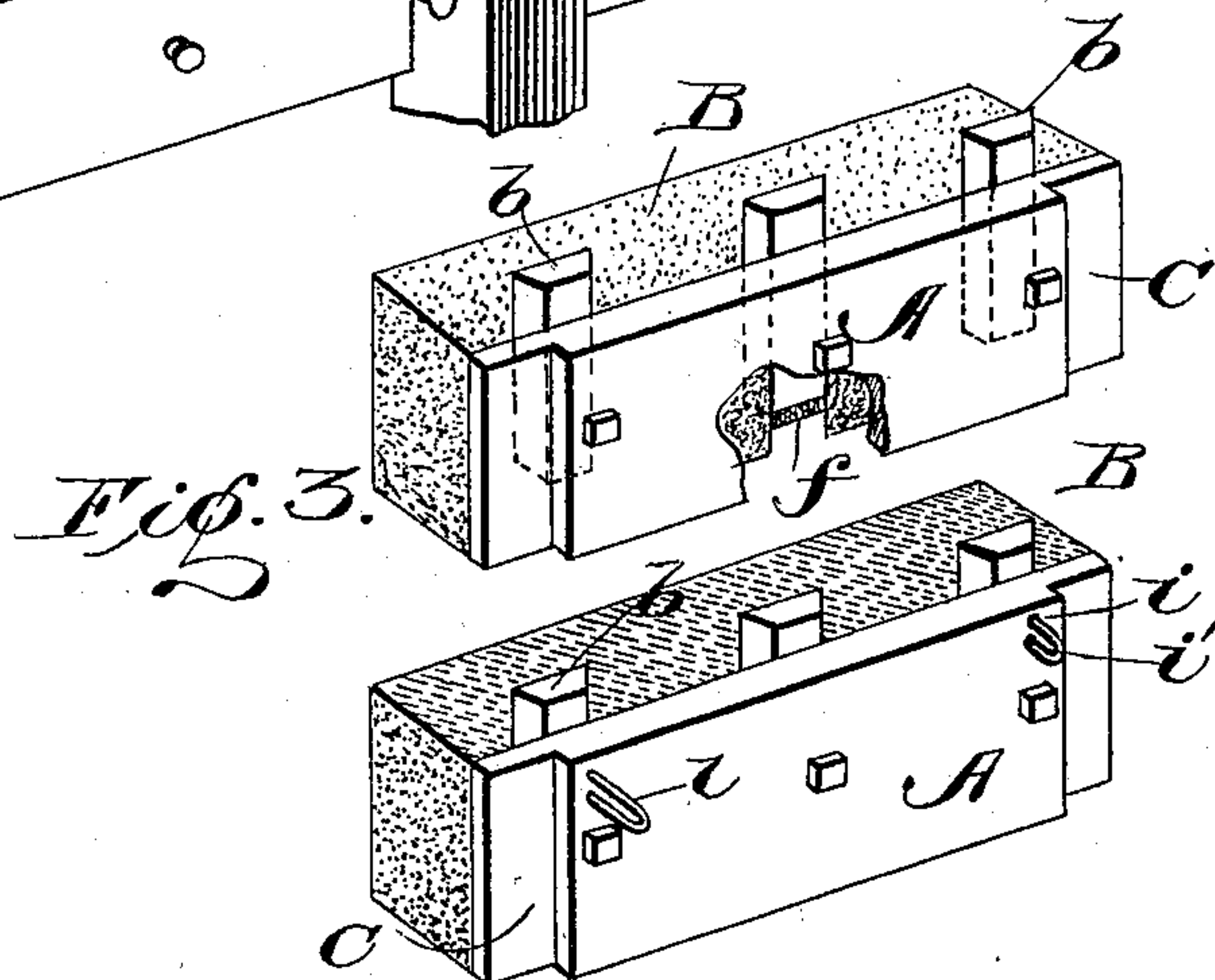
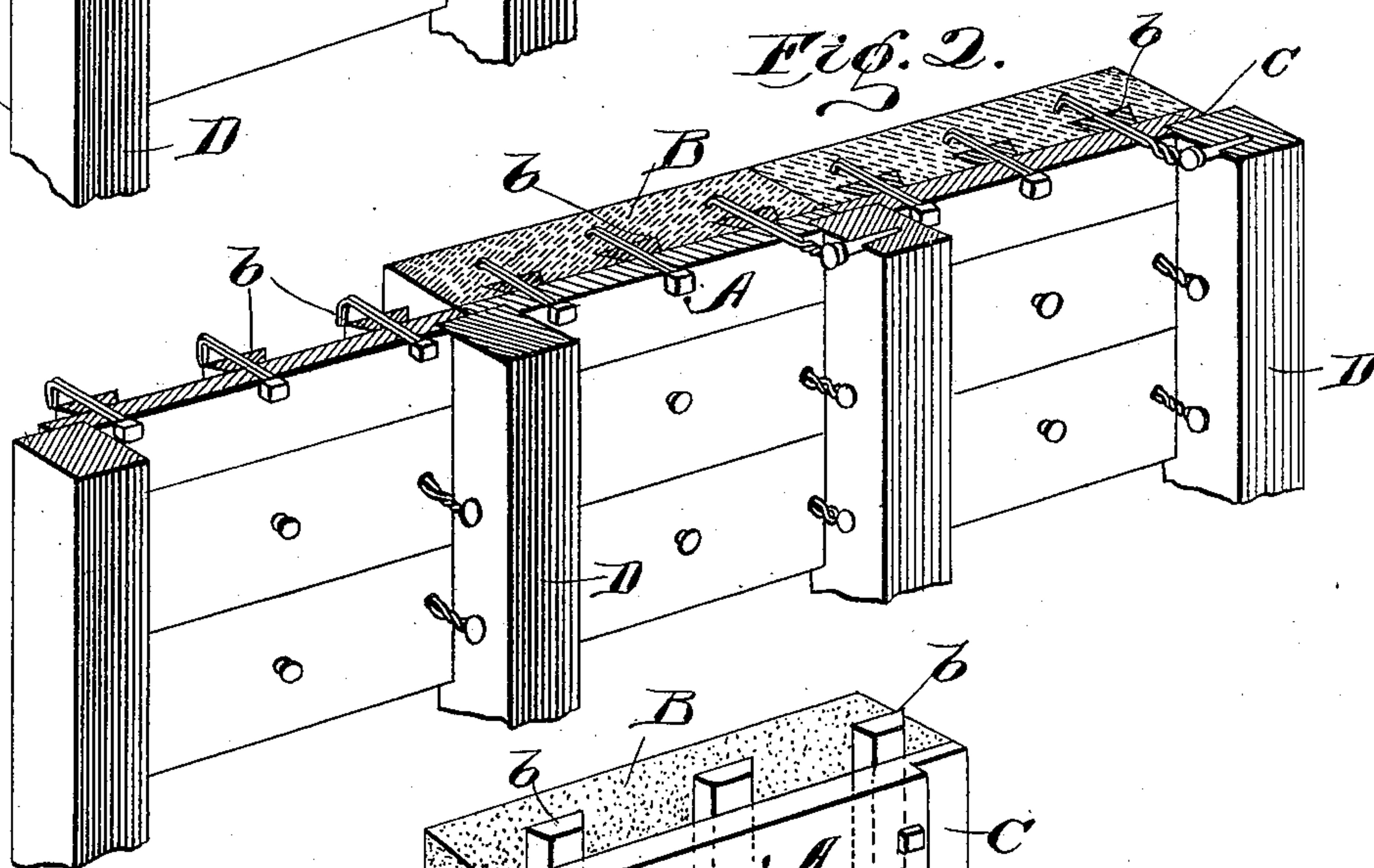
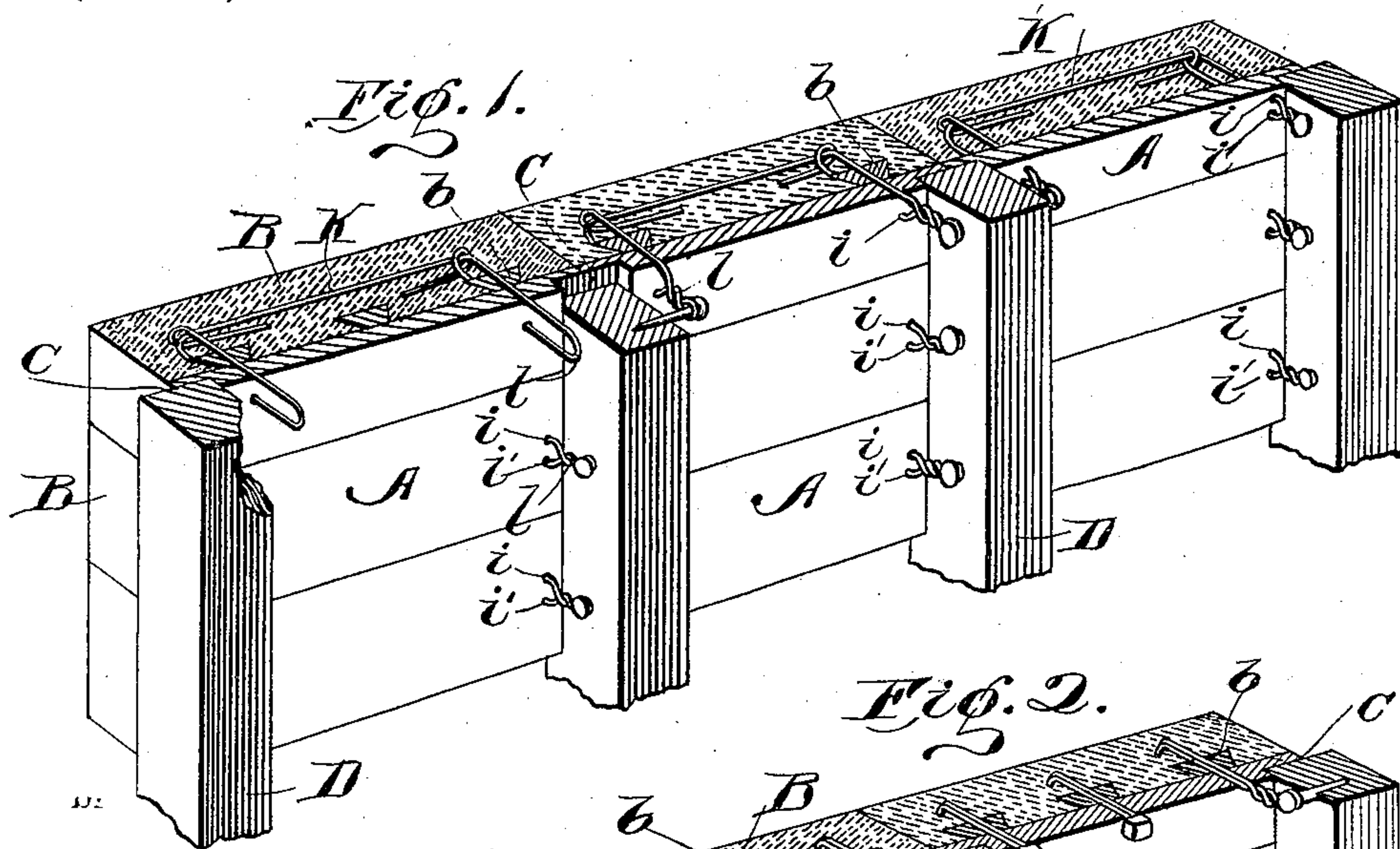


No. 627,960.

Patented June 27, 1899.

J. BROWER.  
WALL FOR BUILDINGS.  
(Application filed May 12, 1898.)

(No Model.)



Witnesses:  
J. M. Fowler Jr.  
Grace P. Brenton

Inventor,  
John Brower,  
By E. F. Mudlock & Co.  
Attorneys.



# UNITED STATES PATENT OFFICE.

JOHN BROWER, OF SAN FRANCISCO, CALIFORNIA.

## WALL FOR BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 627,960, dated June 27, 1899.

Application filed May 12, 1898. Serial No. 680,513. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN BROWER, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented certain new and useful Improvements in Walls for Buildings; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

My invention relates to walls and the construction of walls, and more particularly to the siding of exterior walls of buildings, whereby a wooden framework can be sided up and inclosed by an outside wall or facing of artificial stone, thereby superficially producing a stone structure, which is in fact only a wooden structure with a stone weather-boarding.

In the formation and construction of my improved wall I use as a substitute for board siding or weather-boarding a composite slab of wood or cement, to which I have given the name of "litho-rustic." It consists of a block of wood plank, strip or piece of board, upon one side of which I form and secure a thin sheet or body of artificial stone by taking a plastic compound or substance that sets and hardens on being exposed to the air. This plastic compound or substance can be adhered to the board backing by various mechanical means, and it may be applied with or without pressure, and when thus applied, adhered, and hardened it forms a composite weather-board or siding-strip which can be secured to the wooden frame by nailing the wooden backing of the litho-rustic block to the studding, posts, or woodwork of the frame or by other mechanical means, all as herein- after more fully described.

Referring to the accompanying drawings, Figure 1 is a rear view of a wall in perspective, showing the litho-rustic siding secured to the studding of a frame, the upper course being broken away along the middle line of the blocks to show the application of a wire anchor and fastener. Fig. 2 is a rear view of a wall in perspective, showing the litho-rustic siding with its beveled cross-cleats secured to the studding of a frame, the upper course being broken away along the middle

line of the blocks to show the nail fastening. Fig. 3 is a perspective view of two of my composite building-blocks separated, one of them being broken away to show the dowel-hole. Fig. 4 is a vertical section of the blocks, showing them doweled together.

In the construction of a wall I first prepare my litho-rustic or composite siding-slabs. To do this, I take rough unplanned boards and saw them into lengths A as desired. I prefer that the length of each slab should be equal to the distance between the middle of each two adjoining posts or studding of the frame, as represented in the drawings; but this is not essential. I then take a narrow strip of wood and bevel its opposite sides in opposite directions, so that one side, which we will call the "bottom," is narrow, while the opposite side or top is wide. This strip I then saw into lengths b, equal to the width of the board A, and nail or otherwise secure these short strips across one side of the board A in a direction transverse to the grain of the wood with the narrow side down and the wide side uppermost. Usually I shall employ three of these strips b on each board A, one near each end and one in the middle, as represented at Figs. 1, 2, and 3. They thus serve not only as dovetail-shaped strips to key and hold the stone compound on the surface of the board, but they also serve as cleats to prevent the board from splitting or warping. The nails used for securing these cleats upon the board may be bent at their ends after passing through the cleats, as shown at Figs. 2 and 4. The plastic compound of cement and sand or other stone-forming ingredients B is then spread upon and over the cleated surface of the board to the desired thickness in a proper mold and either condensed under pressure or allowed to harden by exposure to the air, according to the character of the substance or compound used, until it forms a stone-like vitreous or hard surface upon the board, where it will be firmly and immovably held by the dovetail cleats and the bent nails.

In the preparation of the board A, I shall usually form an angular groove or rabbet C on the underside of the board, at each end, which will fit over the corner of the post or studding D of the framework, as shown at Figs. 1, 2,



and 3. Another feature in the construction of this composite slab or tile is shown at Figs. 3 and 4, where the dovetail cross-strips *b* are secured to the board with one end projecting beyond the edge of the board on the one side, while its opposite end is an equal distance from the edge toward the middle of the board. In this case I supply a temporary short strip of like character to extend over the distance between the end of the strip and edge of the board during the process of applying and hardening the plastic compound, and after the compound has set or become sufficiently hard I withdraw and remove the temporary piece, so as to leave a cavity or dowel-hole *f*, into which the projecting end of the strip on the adjoining block or tile enters and fits as a dowel when the blocks or tiles are being built into place.

In building a wall I first erect the frame structure with studding or posts *D*, which are usually placed at an equal distance apart. I then take the composite slabs or tiles, when properly finished and hardened, and fit them against and between the posts or studs on the outside of the framework, in place of the ordinary weather-boards or rustic, and secure them by nailing through the wood block or board *A* into the posts or studding, in which case the nails will have to be driven through the edges of the board at an angle, in the manner known in carpentry as "toe-nailing." I provide, however, a fastening device, which is preferable to the nailing above described, by boring two holes *ii'* close together through the board *A* near each end. I bore these holes before I apply the plastic compound. I then take a wire *K* and pass each of its ends down through one of the holes at each end of the board, so as to leave the length and loop of the wire on the cleated side of the board. The ends after passing through the board are doubled or bent back and the extremities passed through the other hole *i*, where it is wound about the main wire on the outer side of the board. This leaves a loop *l* projecting on the rear side of the board at or near each end. When the cement or plastic compound is applied to the cleated surface of the board, the wire on that side will be embedded and fixed immovably in the cement or stony compound. A nail is then placed in the bight of the loop *l* at each end, and the loop is twisted, so as to form a tie, after which the nail is driven into the post or studding, as shown at Figs. 1 and 2, which solidly and securely fastens the tile or slab to the studding.

The artificial stone or litho-rustic slabs such as are herein referred to can be made and applied quite cheaply, and they provide a complete and greatly superior siding to wood, as they are far more durable and sightly. They can be made in any desired design or color and will furnish an exterior finish that requires no attention or painting. The joints between the slabs can be filled with putty or cement or the meeting edges may be

formed so as to overlap each other like ordinary board-rustic, in which case no jointing or filling will be necessary.

A house-wall constructed in this way and of this material will have the superficial appearance of a stone structure or building and can be built at a small part of the cost of an ordinary stone building of the same size and character. A building thus sided is protected in a large measure from fire and will save considerable expense in insurance.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a composite slab, or tile, for wall-siding, a wooden back piece having dovetail-shaped cleats nailed across its face transversely to the grain of the wood, and a thin facing of concrete applied over the cleats and hardened in place, so as to be held to the board by the key of the dovetail strips, substantially as described.

2. A composite slab or tile comprising a back piece, cleats upon one face of said back piece, securing members engaging the back piece and passing through the cleats to extend from the outer side thereof, the securing members having an engaging portion at their outer ends, and a layer of plastic material applied about and over the cleats and the ends of the securing members, whereby said cleats and the engaging portions of the ends of the securing members engage and hold the plastic material to the back piece; substantially as described.

3. A composite slab or the like comprising a back piece, cleats upon one face of said back piece, nails or the like engaging the back piece and passing through and extending beyond the outer face of the cleats, the said extending ends of the nails being bent to form engaging portions, and a layer of plastic material applied about and over the cleats and the bent nail ends, whereby said cleats and bent nail ends engage and hold the plastic material to the back piece; substantially as described.

4. A block or tile composed of a back piece provided with anchoring devices extended from the one face thereof, a facing composed of a material adapted to be laid on the said back in a plastic condition to set or harden about the said anchoring devices; and fastening devices secured to the said backing to attach the same to building structures; substantially as described.

5. In a composite slab or tile, a back piece, anchoring devices extending from one face thereof and adapted to be engaged from the opposite face, whereby the slab can be secured to studding or the like by connection between said studding and the anchoring devices, and a layer of plastic material upon the face of the back piece from which project the anchoring devices; substantially as described.

6. In a composite slab a back piece, anchoring devices extending through the same



and projecting from both faces thereof, and a layer of plastic material applied to one face of the back piece about the projecting anchoring devices; substantially as described.

5 7. In a composite slab or tile, a back piece, a wire passing through the same and having a loop upon one side of the back piece and its ends upon the other side thereof, and a layer of plastic material applied to the face of the  
10 back piece from which the said ends project; substantially as described.

8. In a composite slab or tile, a back piece, a single wire passing through the back piece at two points thereof, the projecting portions  
15 of the wire upon one side of the back piece being looped, and the wire ends projecting upon the side of the back piece opposite the loops, and a layer of plastic material applied to the face of the back piece from which the  
20 wire ends project; substantially as described.

9. In a composite slab, or tile, for wall-siding, a wooden back piece: transverse dove-tail-shaped strips secured across the back piece transversely to the grain of the wood:  
25 a thin facing of concrete applied over the cleats and hardened in place and a wire embedded in the concrete and having each of its ends passing through the board and formed into a loop on the rear side of the board near  
30 each end, substantially as described.

10. In a composite slab, or tile, for wall-siding, a wooden back piece: a concrete facing adhered to one side of the board by mechanical means, and one or more wires partially  
35 embedded in the concrete, while the remaining portion passes through holes in the wooden back piece and is formed into loops on the opposite side of the board, substantially as described.

40 11. A composite slab or tile comprising a

back piece, cleats projecting from one face thereof, said cleats extending partially across said face and projecting at one end beyond the edge of the back piece, and a facing of plastic material adhered to the cleated face  
45 of the back piece and about said cleats, said facing having grooves in line with the cleats and at that portion of the face of the back piece over which the cleats do not extend; substantially as described. 50

12. A building block or tile composed of a wooden plate, provided with a surface of artificial stone anchored to the wood by being set or hardened about anchoring devices set out from the face of the wood, the said artificial stone being flush or set back from the  
55 edge of the wood substantially as described, whereby the wood may be used for nailing the block on building structures; substantially as described. 60

13. In a composite slab, or tile, for wall-siding, a wooden back piece: transverse strips, or cleats partially secured across the back piece transversely to the grain, and projecting at one end beyond the edge of the board:  
65 a concrete facing adhered to the board by mechanical means: a groove or socket in the concrete in line with each of the strips, or cleats, corresponding with the projecting ends of the cleats, at the opposite edge, and means  
70 for fastening and securing the tile or slab to the posts or studding, substantially as described.

In witness whereof I have hereunto set my hand this 3d day of May, 1898.

JOHN BROWER.

Witnesses:

CHAS. J. ARMBRUSTER,  
THEO. G. LINTON.