Jan. 14, 1941. R. PATTERSON 2,228,362

SHINGLE COVERING

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Fig. 1.

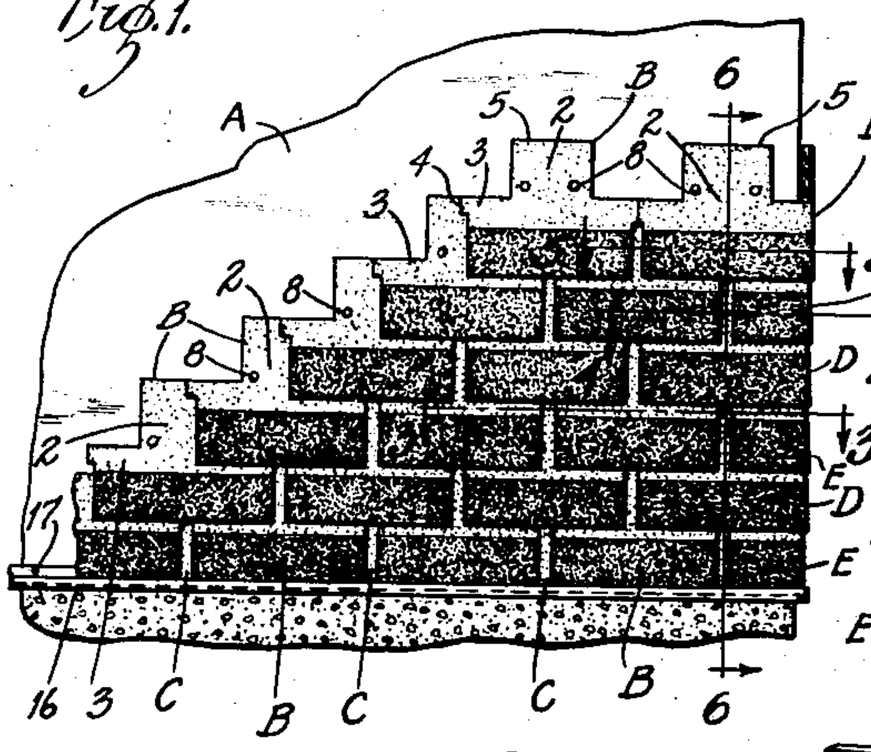


Fig. 2.

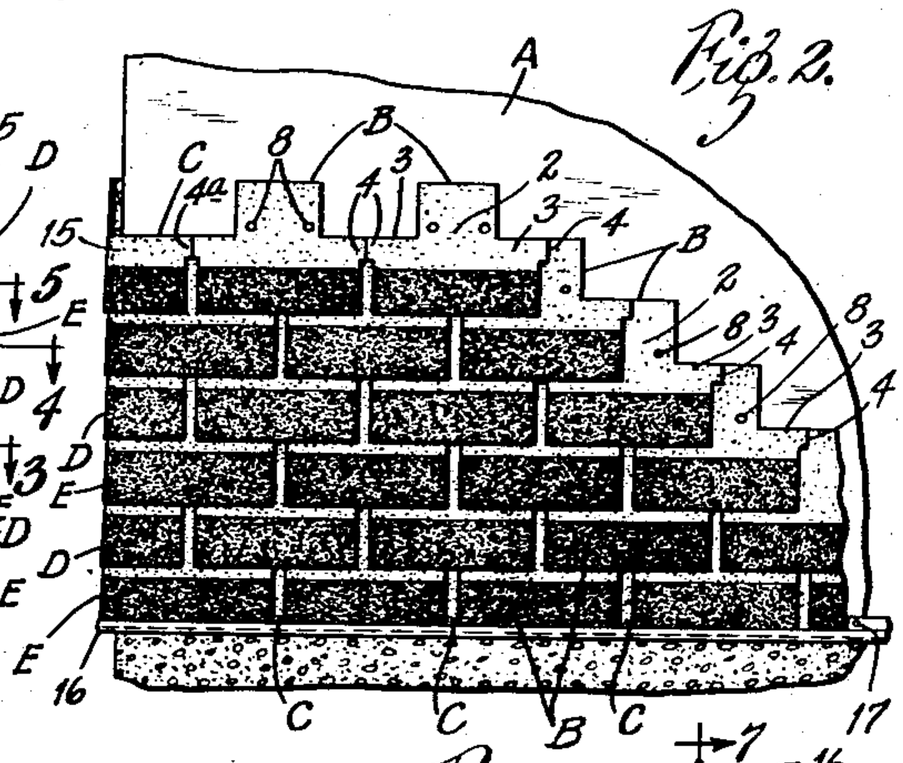


Fig. 8.

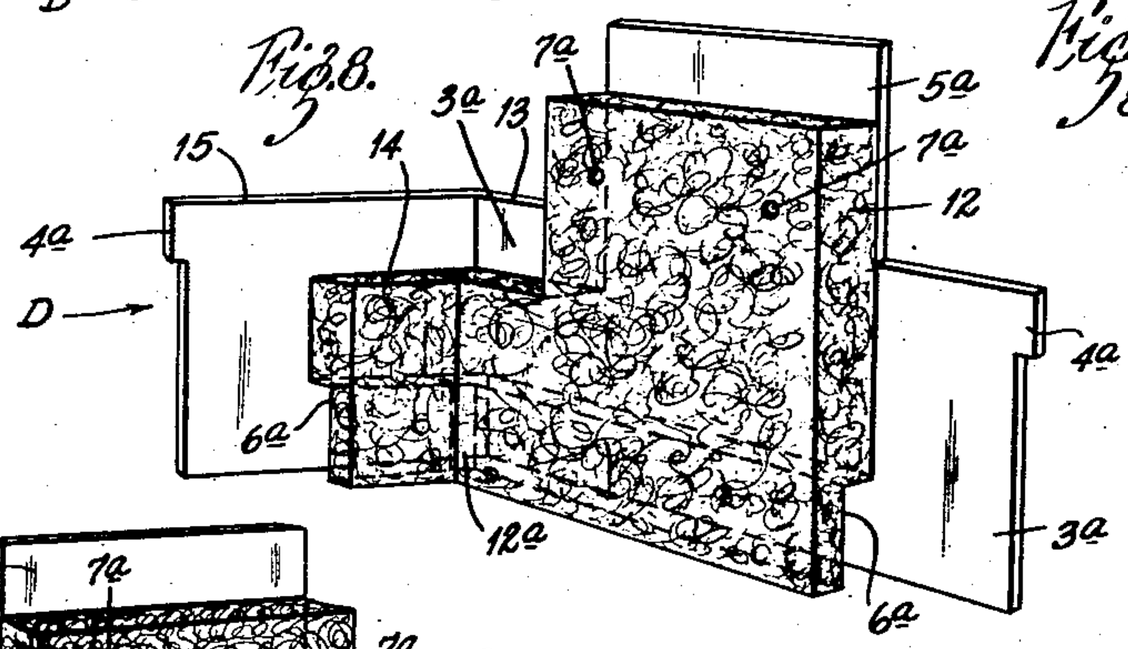


Fig. 9.

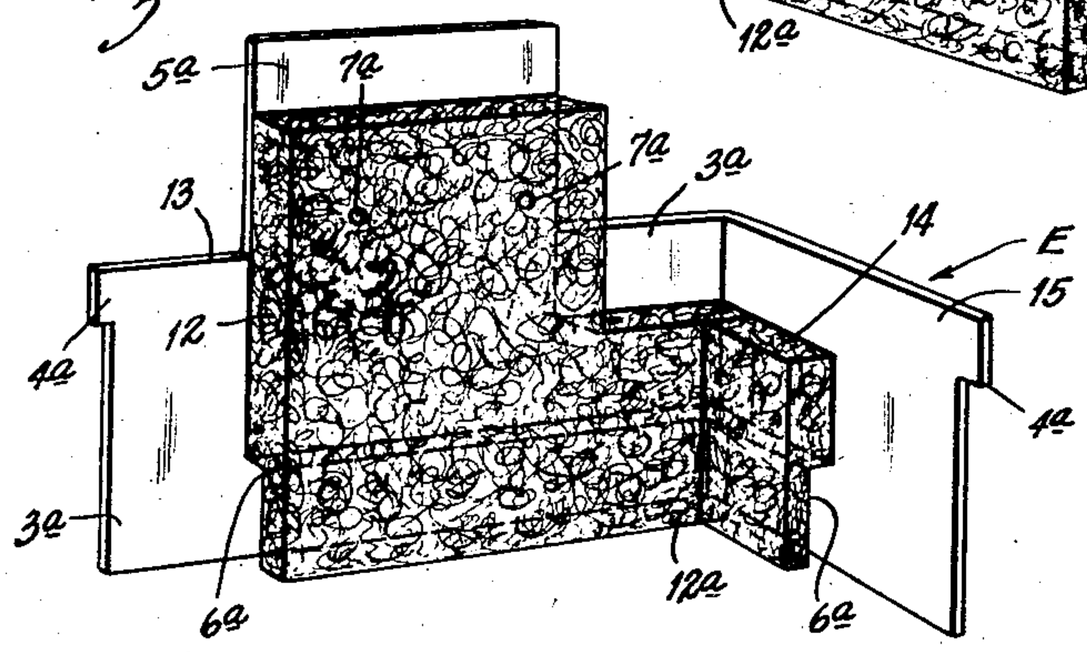
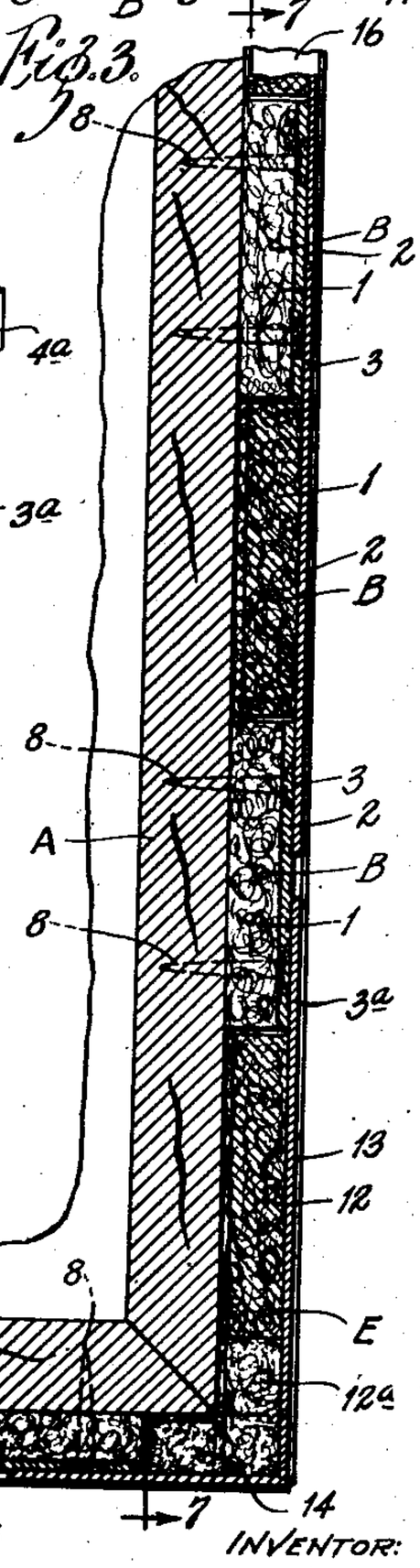
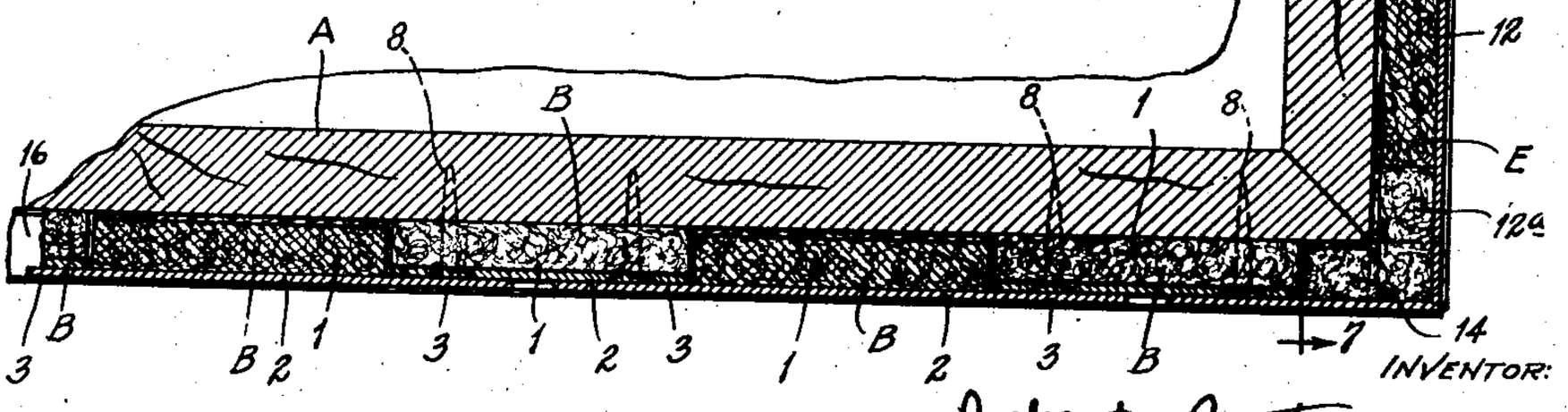


Fig. 3.





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SHINGLE COVERING

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Fig. 5.

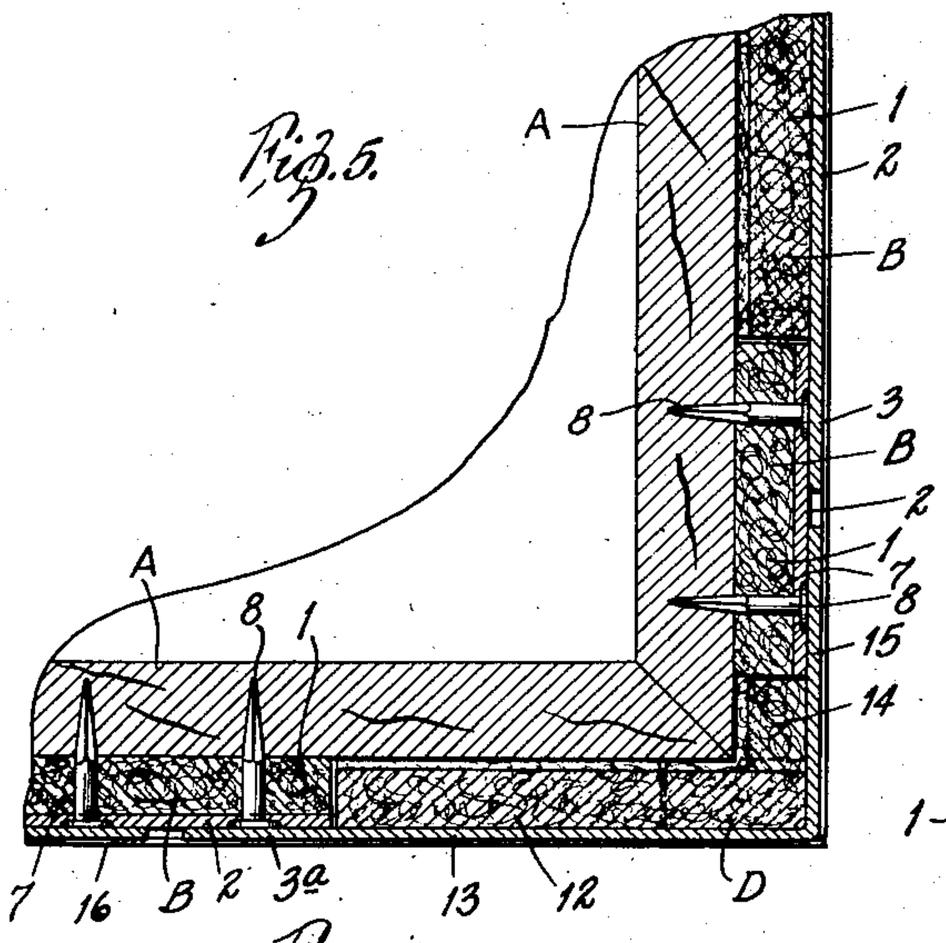


Fig. 4.

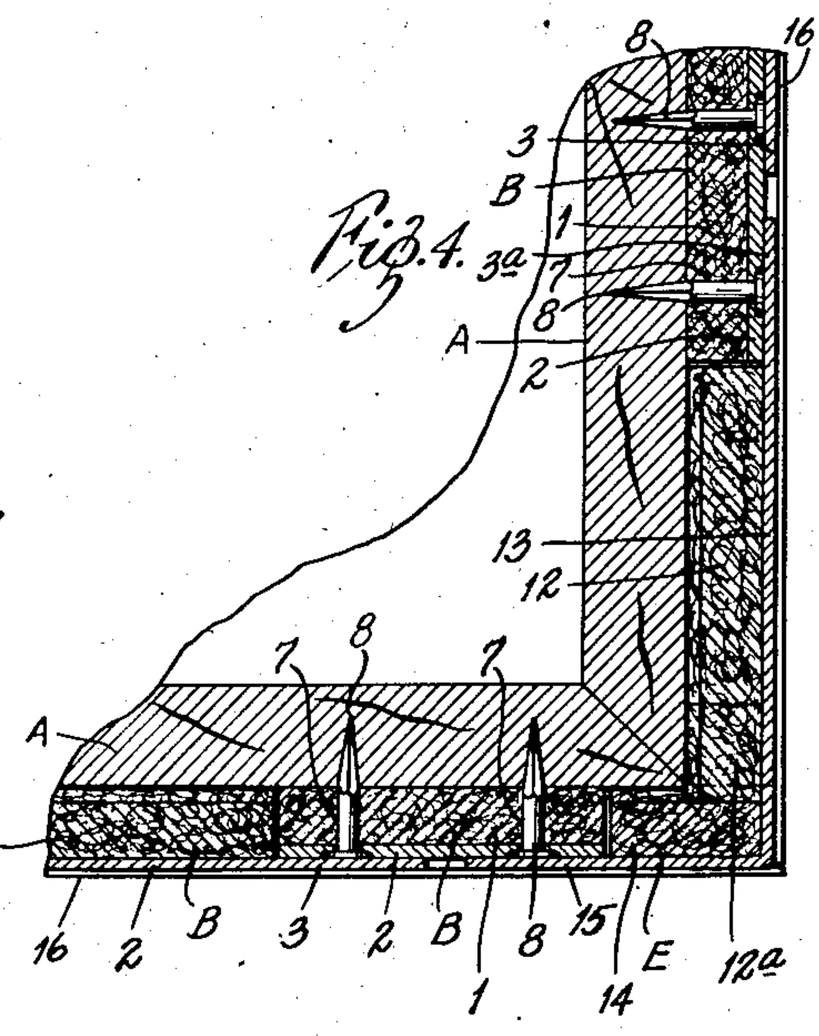


Fig. 13.

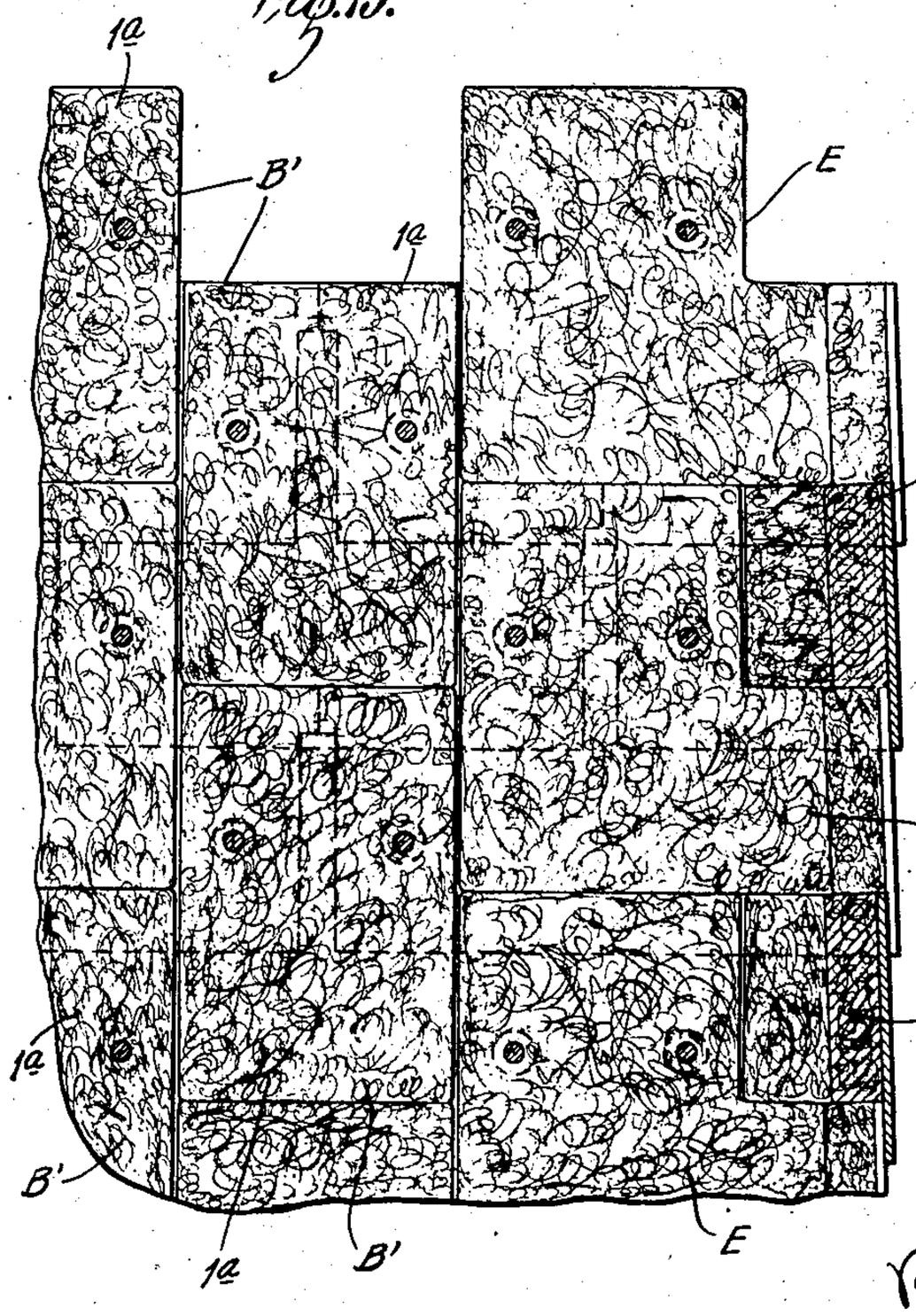
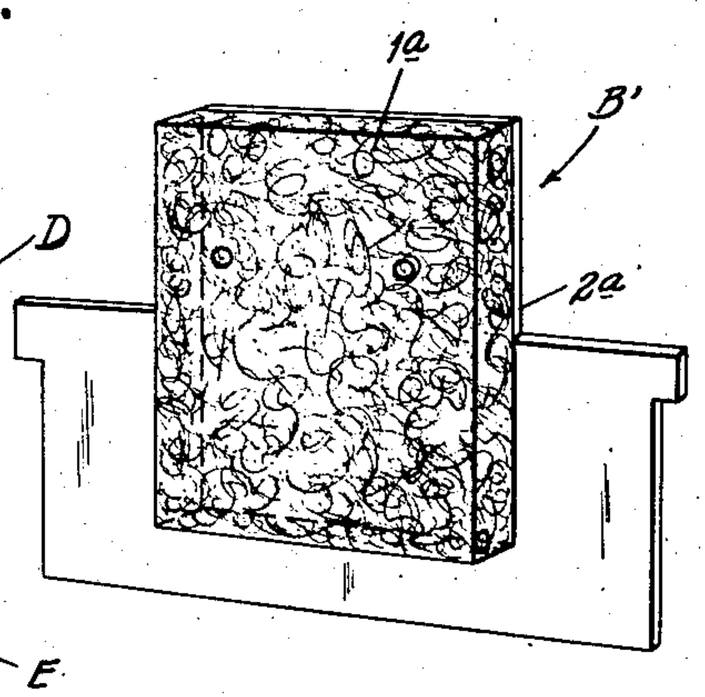


Fig. 12.



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SHINGLE COVERING

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Fig. 6.

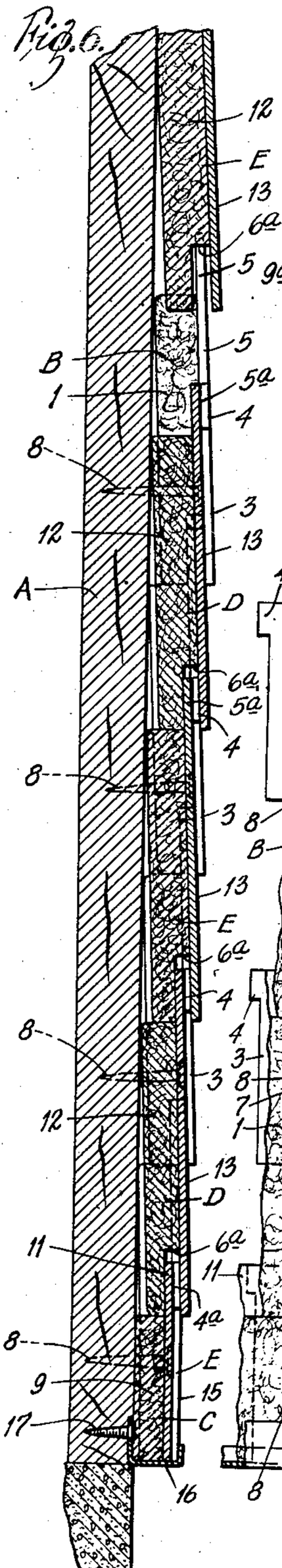


Fig. 11.

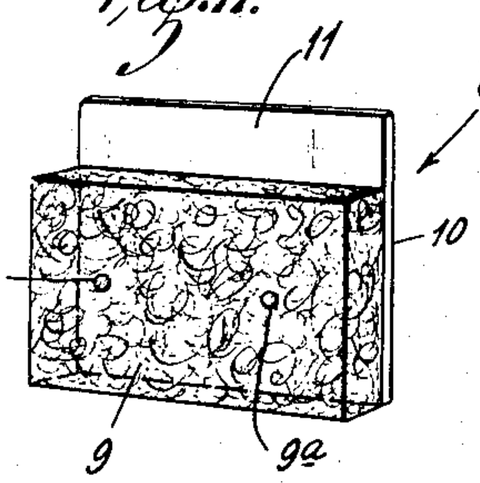


Fig. 10.

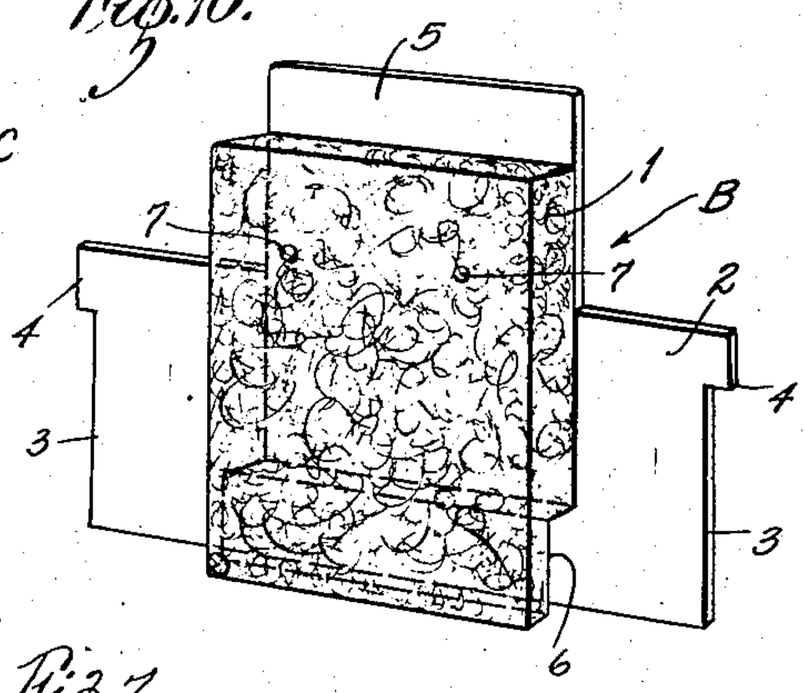
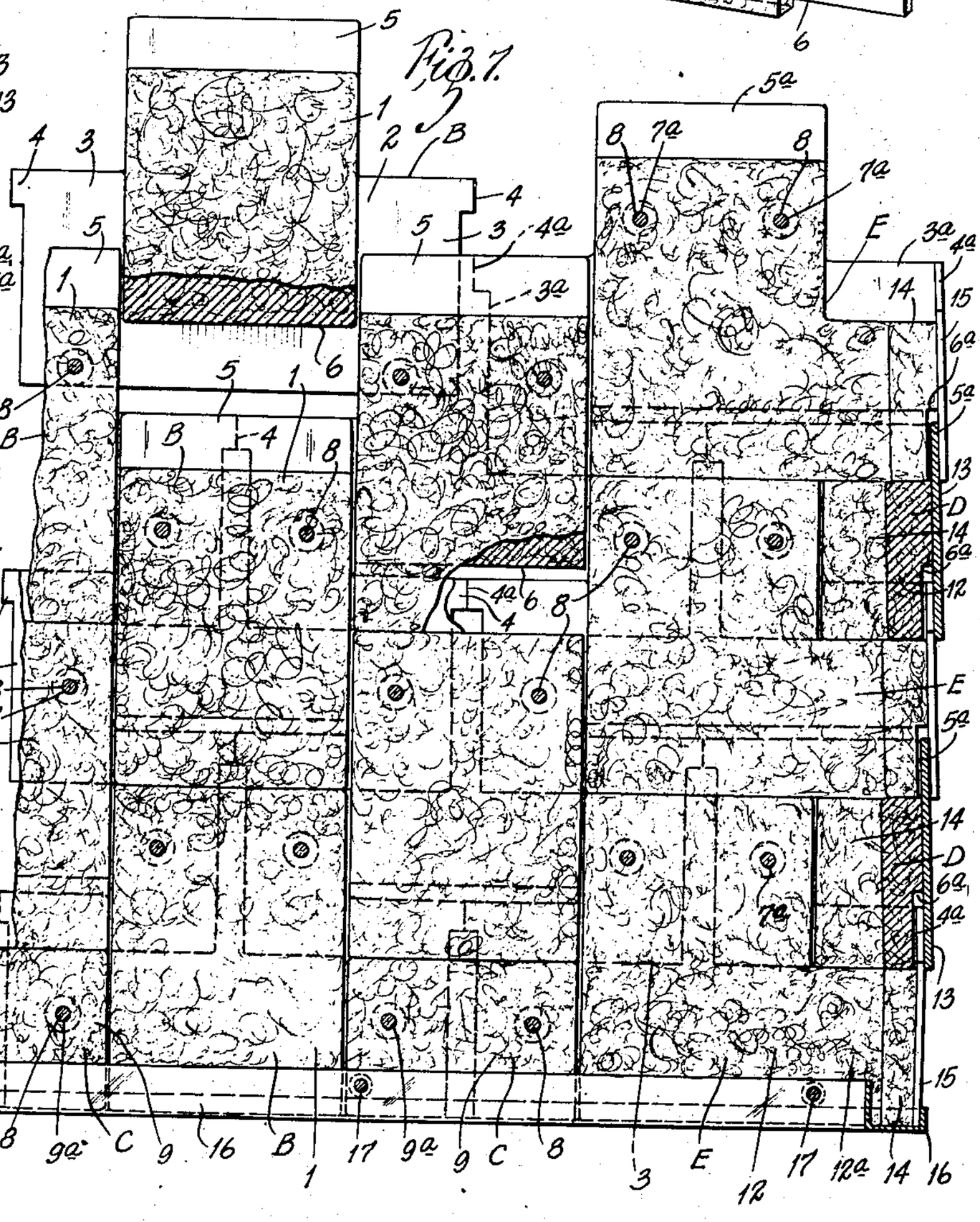


Fig. 7.



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SHINGLE COVERING

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Fig. 14.

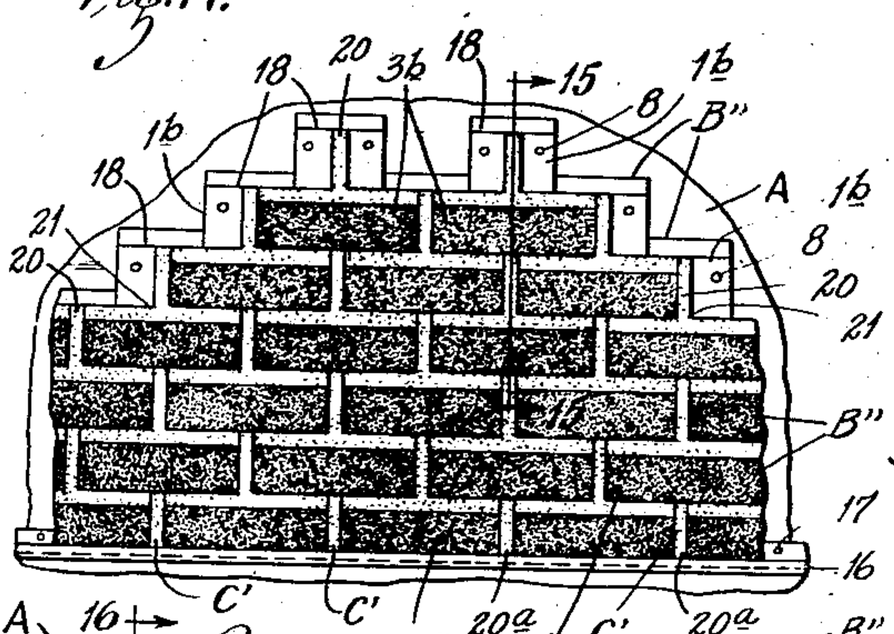


Fig. 17.

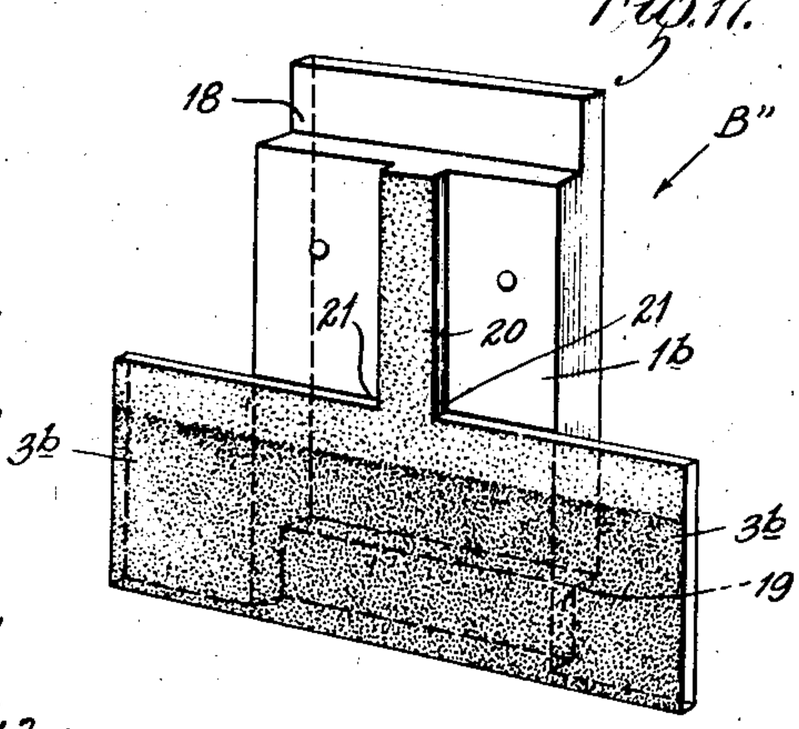


Fig. 15.

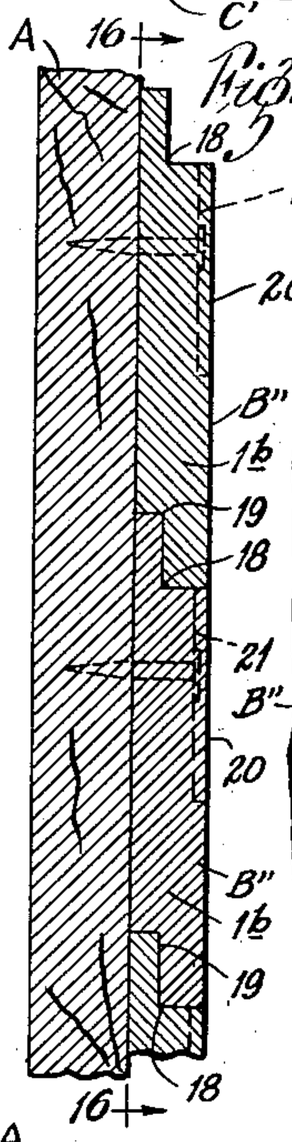


Fig. 16.

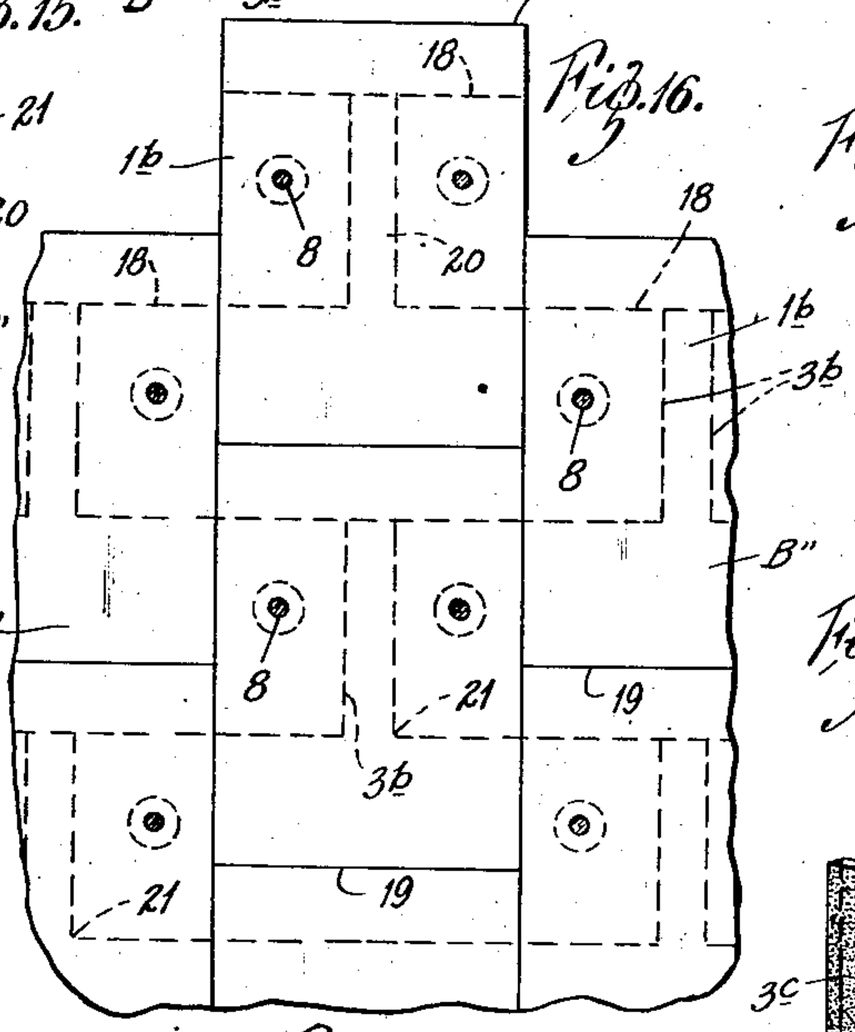


Fig. 18.

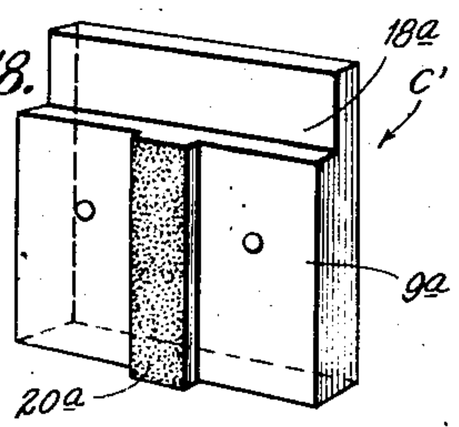


Fig. 21.

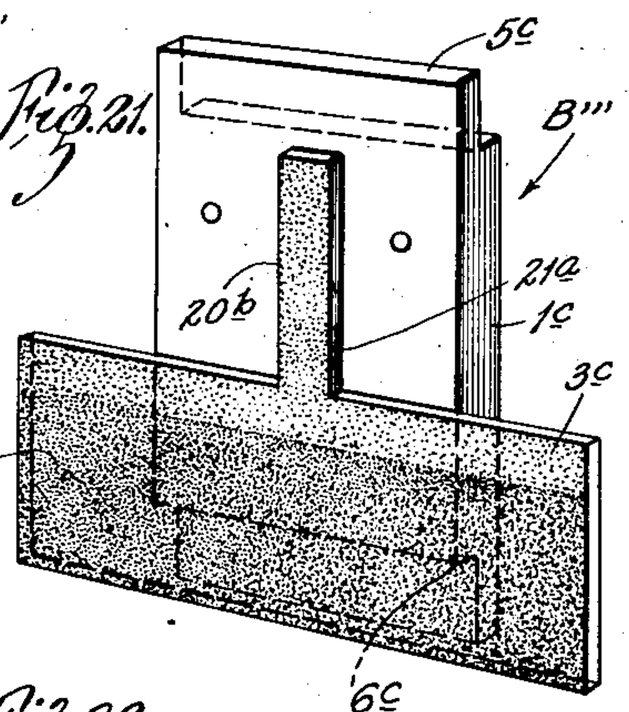


Fig. 19.

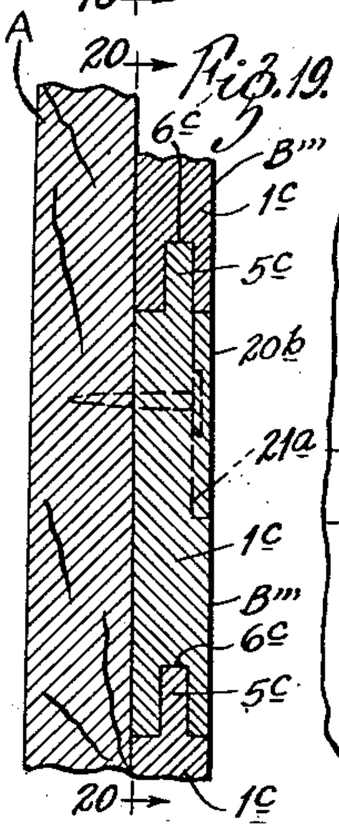


Fig. 20.

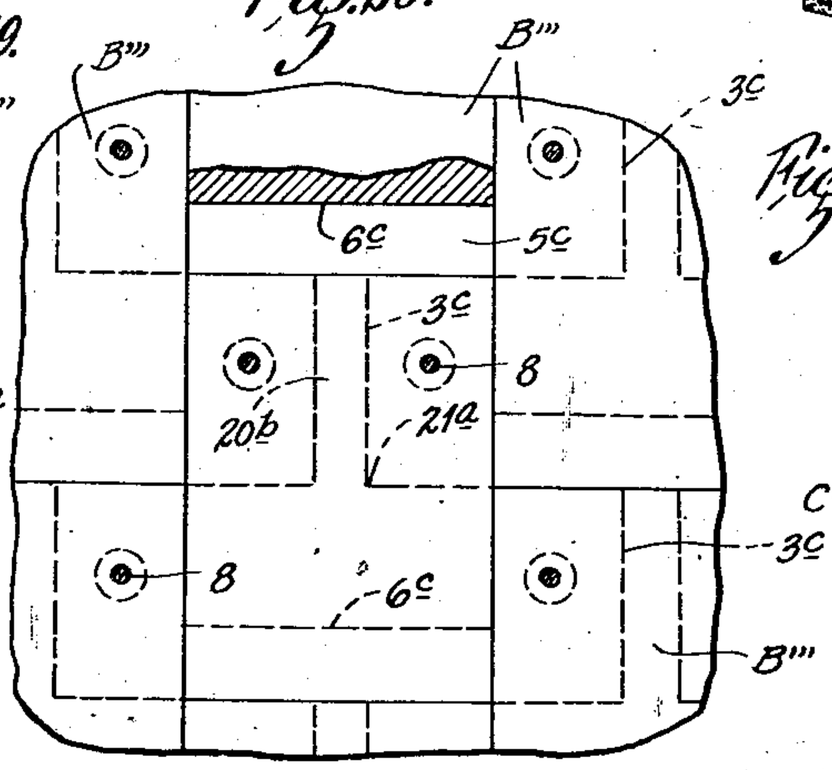
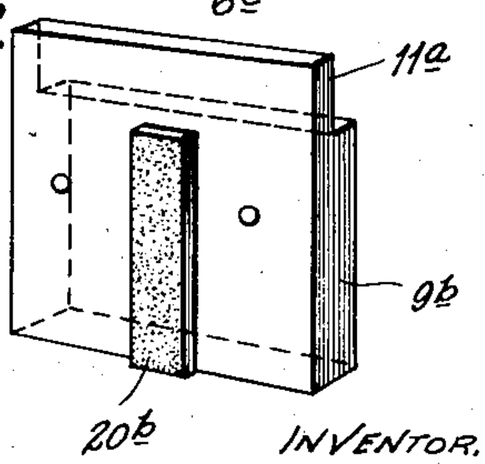


Fig. 22.



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2,228,362

UNITED STATES PATENT OFFICE

2,228,362

SHINGLE COVERING

Robert Patterson, St. Louis, Mo.

Application July 3, 1939, Serial No. 282,628

20 Claims. (Cl. 20—5)

This invention relates to shingle coverings for the sides or roofs of buildings. One of the principal objects of the present invention is to provide a simple and economical decorative, heat insulated and waterproof shingle covering which can be quickly and easily applied over an uneven base and which will provide for accurate alinement of the shingle courses despite slight dimensional variations in the individual shingles. Another, more specific, object is a siding or roofing shingle having a comparatively rigid base portion of insulating material and an outer covering of flexible roofing material and wherein the base portion serves to support and reinforce the flexible covering material and to prevent the exposed part of the latter from curling or raising in the wind. The invention consists in the shingle covering and in the parts and in the combinations and arrangement of parts hereinafter described and claimed.

In the accompanying drawings which form part of this specification and wherein like symbols refer to like parts wherever they occur,

Fig. 1 is a side elevation of the corner portion of a building shingle siding embodying my invention applied to one side thereof,

Fig. 2 is a view similar to Fig. 1 showing the shingle siding applied to the other side of said corner portion,

Figs. 3, 4 and 5 are horizontal sections taken on the lines 3—3, 4—4 and 5—5, respectively, in Fig. 1,

Fig. 6 is a vertical section on the line 6—6 in Fig. 1, also showing a corner shingle being placed in position,

Fig. 7 is a vertical section taken on the line 7—7 in Fig. 3, also showing one of the main shingles being placed in position,

Fig. 8 is an inside perspective view of one of the left-hand corner shingles,

Fig. 9 is a similar view of one of the right-hand corner shingles,

Fig. 10 is an inside perspective view of one of the main shingles,

Fig. 11 is a similar view of one of the starting shingles,

Fig. 12 is a view similar to Fig. 10 illustrating a modified form of main shingle,

Fig. 13 is a section similar to Fig. 7 showing a siding composed of shingles of the kind shown in Fig. 12,

Fig. 14 is a fragmentary side elevation of another modified form of shingle siding applied to one side of a building,

Fig. 15 is a vertical section on the line 15—15 in Fig. 14,

Fig. 16 is a vertical section on the line 16—16 in Fig. 15,

Fig. 17 is an outside perspective view of one of the main shingles of the siding shown in Fig. 14,

Fig. 18 is a similar view of one of the starting shingles for the siding shown in Fig. 14,

Fig. 19 is a section similar to Fig. 15 showing another modified form of shingle siding,

Fig. 20 is a vertical section on the line 20—20 in Fig. 19,

Fig. 21 is an outside perspective view of one of the main shingles of the siding shown in Figs. 19 and 20; and

Fig. 22 is a perspective view of one of the starting shingles for the siding shown in Figs. 19 and 20.

The shingle covering shown in Figs. 1 to 11, inclusive, of the accompanying drawings is shown applied to the two sides A of a building forming the corner thereof. Said shingle covering is made up of main shingles B, starting shingles C and left and right-hand corner shingles D and E, respectively.

As shown in Fig. 10, each of the main shingles B comprises a central, relatively thick and rigid rectangular or oblong block 1, preferably of heat insulating material, and a relatively thin and flexible T-shaped covering 2, preferably of ready made or prepared slate surfaced roofing material, adhesively or otherwise secured flatwise to the outer face of said block. The covering 2 has wings 3, of less height than the supporting block 1 therefor that project equal distances from the opposite side edges of the lower portion of said block and terminate at their upper corners in spacing lugs 4. The portion of the covering above the level of the wings 3 is disposed with its side edges substantially flush with the corresponding edges of the block and extends above the upper edges of said block to form an upstanding tongue 5 along the outer face of said block; and said block is rabbeted along its lower outside corner to form between said block and said covering a downwardly opening groove 6 of a depth equal to or slightly greater than the height of said upstanding tongue. As shown in the drawings, the distance between the lower edge of the shingle and the lower edges of the lugs 4 is substantially the same as the distance between the upper edges of the wings 3 and the upper edge of the upstanding tongue 5; and the length of each wing, including the lug 4 thereof, is ap-

proximately one-half the width of the portion of said shingle above the level of the wings. The shingle has one or more holes 7 extending through the narrow upper portion thereof adapted to receive nails 8 for securing the shingle to the sides A or roof of the building.

Each of the starting shingles C preferably comprises a relatively thick and rigid block 9 of insulating material and an outer covering of roofing material 10 that is adhesively or otherwise secured to said block. The block 9 is of the same width and thickness as the block 1 of the main shingle B and of a height corresponding to the distance from the lower edge of the main shingle to the lower edge of the lug at the upper corners of the wings thereof. The covering 10 is of the same width as the block 9 and extends from the lower edge of said block beyond the upper edge thereof where it forms an upstanding tongue 11 of the same height as the tongue 5 of the main shingle. The shingle is provided midway of the top and bottom edges of the block 9 with holes 9*a* for the nails 8.

As shown in Fig. 8, each of the angle-shaped left-hand corner shingles D has a long and a short side. The long side of said shingle comprises a relatively thick and rigid block 12 of insulating material and an outer covering 13 of roofing material; and the short side comprising a block 14 of insulating material and a covering 15 of roofing material. The long side of the shingle is similar in size and shape to the main shingle; that is, the covering 13 extends on opposite sides of the block 12 to form wings 3*a*, the wing at the free end terminating at its free upper end corner in a spacing lug 4*a*. The covering extends above the upper edge of the block 12 to form an upstanding tongue 5*a* and the lower edge of said block is rabbeted to form a downwardly opening groove 6*a*. The block 12 is provided midway between its upper edge and the level of the upper edges of the wings 3*a* with holes 7*a* for the securing nails 8. On the corner opposing side of the block 12, the lower portion 12*a* extends clear to the short side of the shingle with its upper edge spaced below the upper edge of the adjacent wing 3*a* a distance equal to slightly less than the depth of the bottom groove 6*a*. On the short side of the corner shingle, the covering 15 also terminates at its free upper corner in a spacing lug 4*a*, and the block 14 is also rabbeted to form a downward groove 6*a* in its lower edge. The covering 15 is of the same height as the wings 3*a* and one-half the length of the covering on the long side, and the upper edge of the block 14 is disposed flush with the upper edge of the extension 12*a* of the block 12 on the long side of the corner shingle, and is disposed in abutting relation thereto with its outer end terminating substantially midway of the ends of the short side covering. As shown in Fig. 9, the right-hand corner shingle E is similar in construction to the left-hand shingle shown in Fig. 8, but the positions of the long and short sides are reversed.

As shown in the drawings, the main, starting and corner shingles forming the bottom or starting course of the shingle siding seat in a longitudinal channel provided therefor in a metal straight edge 16 which is secured by screws or other fasteners 17 to the side wall A of the building and affords proper support for said shingles until they can be secured to the wall by the nails 8. In each shingle course, the main shingles B are arranged with their wings 3 down and with their spacing lugs 4 in abutting relation. In the first or bottom course, lower halves of the spaces between the blocks 1 of adjacent main shingles are filled by the blocks 9 of the starting shingles and the upper halves of said spaces are filled by the lower halves of the blocks 1 of the main shingles in the course immediately above said bottom course. The upstanding tongues 11 of the starting shingles extend into the downwardly opening bottom grooves 6 in the main shingles in the second course and cover the horizontal joints between the blocks of said starting and main shingle; and the wide lower portions of the outer covering layers of the main shingles cover vertical joints between the blocks 5 or body layers of said starting and main shingles. In all of the courses, each main shingle is arranged centrally with respect to the abutting end lugs 4 of two adjacent shingles located therebelow, with the upper margins of adjacent wings 3 of said adjacent main shingles and the upstanding tongue of the main shingle in the course therebelow fitting in the downwardly opening groove 6 in said first mentioned main shingle, and with the space between the blocks of adjacent main shingles in one course filled by the lower half of the main shingle in the course thereabove and by the upper half of the course therebelow.

The left and right-hand corner shingles are alternately arranged in the respective course with block 12 on the long side of each corner shingle abutting against the blocks on the short sides of the corner shingles located above and below said first mentioned corner shingle, and with the covering of the corner shingle seated in the groove 6*a* of the corner shingle located thereabove and with the tongue 5*a* of each corner shingle seated in the groove 6 of an adjacent main shingle. The lugs 4*a* of the corner shingles abut against the lugs 4 of adjacent main shingles, and the remote vertical edges of the blocks 12 and 14 abut against the adjacent vertical edges of blocks of the main or the starting shingle.

By the arrangement described, the straight edge serves to support the bottom or starting row of shingles in proper position until they are secured in place, after which proper alinement of the remaining courses is assured merely by seating the lower edge of the backing of each shingle on the upper edge of the backing of the shingle therebelow. The abutting blocks of the shingles form a substantially continuous rigid backing for the flexible covering which completely covers the joints between said blocks. The shingles are firmly interlocked, and their blocks or backing portions serve to prevent the exposed lapping portions of the flexible covering from curling or raising in the wind and to hold said portions down on the lapped portions of the outer covering of the shingles in the lower course until they have had an opportunity to seal themselves thereto. The depth of the grooves in the lower edges of the shingles is sufficient to allow for slight variations in the depth of the upstanding tongues at the upper edges of the shingles. The blocks or body layers of the shingles are preferably made of fibrous, solid or laminated material that will serve as an insulator of heat. As shown in the drawings, the slate surface of the shingles may be colored and arranged to simulate brick-shaped areas separated by mortar joint areas, or they may be given any desired color, shape or pattern and made in individual or strip form.

In the modification shown in Figs. 12 and 13,

the block portion 1*a* of the shingle B' is disposed flush with the upper edge of the narrow central portion of the flexible outer covering 2*a* and its lower edge terminates short of the lower edge of said covering. As shown in Fig. 13, these shingles are assembled by seating the lower edge of the block of one shingle on the upper edge of the block of the shingle located therebelow and with the outer coverings overlapping the joints between said blocks, but without the tongue-and-groove connections 5 and 6 hereinbefore described.

In the modification of the drawings shown in Figs. 14 to 18, inclusive, the shingle B'' is a one-piece shingle made from clay or terra-cotta and has a main body portion 1*b*, which corresponds to the block portion 1 of shingle B, and is rabbeted for its full width on both upper and lower edges, but on opposite sides, so as to form an outwardly and upwardly opening recess 18 along its upper edge and an inwardly and downwardly opening recess 19 on its lower edge. The block 1*b* is provided with a raised outer portion, providing a wide wing forming portion 3*b* and an upright central rib 20 extending to the bottom of the recess 18 in the upper edge of said block and forming recesses 21 on opposite sides of said rib. These shingles are assembled in the manner hereinbefore described with the tongue formed by the recessed upper edge of the lower shingle fitting within the recess in the lower edge of the shingle located thereabove and with the wing portions 3*a* of one shingle seated in the recesses 21 of the two adjacent shingles in the course located therebelow. As shown in Fig. 18, the starting shingle C' is also made in one piece and has a block portion 9*a* with a recess 18*a* at its upper edge and an upright central rib 20*a* on its front face.

Figs. 19 to 22, inclusive, illustrate one-piece shingles similar to the shingles shown in Figs. 14 to 20. Thus, the main shingle B''', like the main shingle B, has a block portion 1*c*, wings 3*c*, an upstanding tongue 5*c* and a groove 6*c*; the shingle B''' is also provided with a central rib 20*b* and recesses 21*a* similar to the rib 20 and recess 21 of the one-piece shingle B''. The starting shingle C'' comprises a block 9*b* with a tongue 11*a* and a central rib 20. The shingles B''' and C'' are assembled in the same manner as the shingles shown in Figs. 14 to 18, with the wings 3*c* of one shingle seated in the recesses 21*a* of adjacent shingles.

Obviously, the hereinbefore described shingle covering admits of considerable modification without departing from the invention. Therefore, I do not wish to be limited to the precise arrangement shown and described.

What I claim is:

1. A covering composed of shingles laid in parallel courses, each of said shingles comprising a body with wings of less length and height than said body projecting from opposite sides of the lower portion thereof substantially flush with the bottom edge thereof, the shingles of each course having their bodies spaced apart and extending into the spaces between the bodies of the shingles in the next adjacent courses, the wings of the shingles of each course covering the joints between the spaced bodies thereof and the bodies of the shingles extending therebetween and the lower marginal portions of the shingles of each course overlapping the upper margins of the wings of adjacent shingles in the course therebelow.

2. A covering composed of shingles laid in parallel courses, each of said shingles comprising a relatively rigid heat insulating body and wings of less length and height than said body projecting from opposite sides of the lower portion thereof substantially flush with the bottom edge thereof, the shingles of each course having their bodies spaced apart and extending into the spaces between the bodies of the shingles in the next adjacent courses, the wings of the shingles of each course being disposed in endwise abutting relation and covering the joints between the spaced bodies thereof and the bodies of the shingles extending therebetween and the lower marginal portions of the shingles of each course overlapping the upper margins of the wings of adjacent shingles in the course therebelow.

3. A covering composed of shingles laid in parallel courses, each of said shingles comprising a relatively thick and rigid body and a covering of prepared roofing material with wings of less length and height than said body projecting from opposite sides of the lower portion thereof substantially flush with the bottom edge thereof, the shingles of each course having their bodies spaced apart and extending into the spaces between the bodies of the shingles in the next adjacent courses, the wings of the shingles of each course covering the joints between the spaced bodies thereof and the bodies of the shingles extending therebetween, and the lower marginal portion of each shingle between the wings thereof covering the upper margins of the wings of adjacent shingles in the course therebelow.

4. A covering composed of shingles laid in parallel courses, each of said shingles comprising a body with wings of less length and height than said body projecting from opposite sides of the lower portion thereof substantially flush with the bottom edge thereof, the shingles of each course having their bodies spaced apart and extending into the spaces between the bodies of the shingles in the next adjacent courses, the wings of the shingles of each course covering the joints between the spaced bodies thereof and the bodies of the shingles extending therebetween, each of said shingles having a downwardly opening groove along the bottom edge of its body and an upstanding tongue along the upper edge of its body adapted to extend into the groove of a shingle located thereabove.

5. A covering composed of shingles laid in parallel courses, each of said shingles comprising a relatively thick and rigid body and a covering of prepared roofing material with wings of less length and height than said body projecting from opposite sides of the lower portion thereof substantially flush with the bottom edge thereof, the shingles of each course having their bodies spaced apart and extending into the spaces between the bodies of the shingles in the next adjacent courses, the wings of the shingles of each course covering the joints between the spaced bodies thereof and the bodies of the shingles extending therebetween, each of said shingles having its body rabbeted along its lower edge and its covering extended beyond the upper edge of its body to form a tongue adapted to extend into the rabbet in the body of the shingle thereabove the upper edge of the body of each shingle being disposed in edgewise abutting relation to the bottom of the body of the shingle in the course therebelow.

6. A covering composed of shingles laid in parallel courses, each of said shingles comprising a

beyond the end thereof to form a tongue, the oblong layer having a rabbet in its end adjacent to the wide end of the covering layer, the covering layers of all the shingles in a course being substantially flush and with their wide ends close together, and with their tongue extensions beyond the oblong layers extending into the rabbet in the adjacent shingle in the next course and with the wide end of the covering layer of each shingle lapping the adjacent portions of the covering layers of two shingles in the course next adjacent thereto.

14. A covering composed of shingles, each shingle having an oblong body layer of heat insulating material and a T-shaped covering layer of prepared roofing material whose wide end is substantially flush with one end of the oblong layer and whose other end portion is of substantially even width with the oblong layer and extends beyond the end thereof to form a tongue, the oblong layer having a rabbet in its end adjacent to the wide end of the covering layer, the covering layers of all the shingles in a course being substantially flush and with their wide ends close together, and with their extensions beyond the main blocks extending into the rabbet in the adjacent shingle in the next course and with the wide end of the covering layer of each shingle lapping the adjacent portions of the covering layers of two shingles in the course next adjacent thereto.

15. A siding composed of main shingles, each shingle having an oblong body layer of heat insulating material and a T-shaped covering layer of prepared roofing material whose wide end is substantially flush with one end of the oblong layer and whose other end portion is of substantially even width with the oblong layer and extends beyond the end thereof to form a tongue, the oblong layer having a rabbet in its end adjacent to the wide end of the covering layer, the covering layers of all the shingles in a course being substantially flush and with their wide ends close together, and with their extensions beyond the main blocks extending into the rabbet in the adjacent shingle in the next course and with the wide end of the covering layer of each shingle lapping the adjacent portions of the covering layers of two shingles in the course next adjacent thereto and corner shingles having a long side with an oblong body layer and a T-shaped covering corresponding to the main shingles and a short side with a covering layer of the same length and one-half the width of the wide ends of a main shingle and a body layer that extends from the corner of said shingle and terminates midway of the ends of the short side thereof.

16. A covering composed of shingles, each shingle having a relatively thick body layer and a relatively thin covering layer having portions extending beyond said body layer, said shingles being laid in courses with their body layers substantially flush and with their edges close together, and with the covering layers of the shingles of one course lapping the covering layers of the shingles in the next adjacent course and covering the joints between the body layers of the shingles in said courses, the lower margins of the covering layer of the shingles of each course overlapping the upper margins of the extensions of the covering layers of adjacent shingles in the course therebelow.

17. A shingle comprising a body with wings of less length and height and thickness than said body portion projecting from opposite sides of the lower portion thereof flush with a lower edge at the outer face thereof a distance corresponding substantially to one-half the width of said body, the height of said wings being greater than the distance between the upper edges thereof and the upper edge of said body.

18. A shingle comprising a body with wings of less length and height and thickness than said body portion projecting from opposite sides of the lower portion thereof at the outer face thereof a distance corresponding substantially to one-half the width of said body, said body having a tongue along the upper edge thereof and a recess along the lower edge thereof adapted to accommodate the tongue and upper portions of similar shingles, the height of said wings being greater than the distance between the upper edges thereof and the upper edge of said body.

19. A shingle, having an oblong body layer and a T-shaped covering layer whose wide end is substantially flush with one end of the oblong layer and whose other end portion is of substantially even width with the oblong layer and projects beyond the end thereof to form a tongue, the height of said wings being greater than the distance between the upper edges thereof and the upper edge of said body, the oblong layer of said shingle having a rabbet in its end adjacent to the wide end of the covering layer adapted to receive the tongue of a similar shingle.

20. A shingle having an oblong body layer of rigid heat insulating material and a T-shaped covering layer of flexible roofing material whose wide end is substantially flush with one end of the oblong layer and whose other end portion is of substantially even width with the oblong layer and projects beyond the end thereof to form a tongue, the height of said wings being greater than the distance between the upper edges thereof and the upper edge of said body, the oblong layer having a rabbet in its end adjacent to the wide end of the covering layer adapted to receive the tongue and upper portions of the wide ends of similar shingles.

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