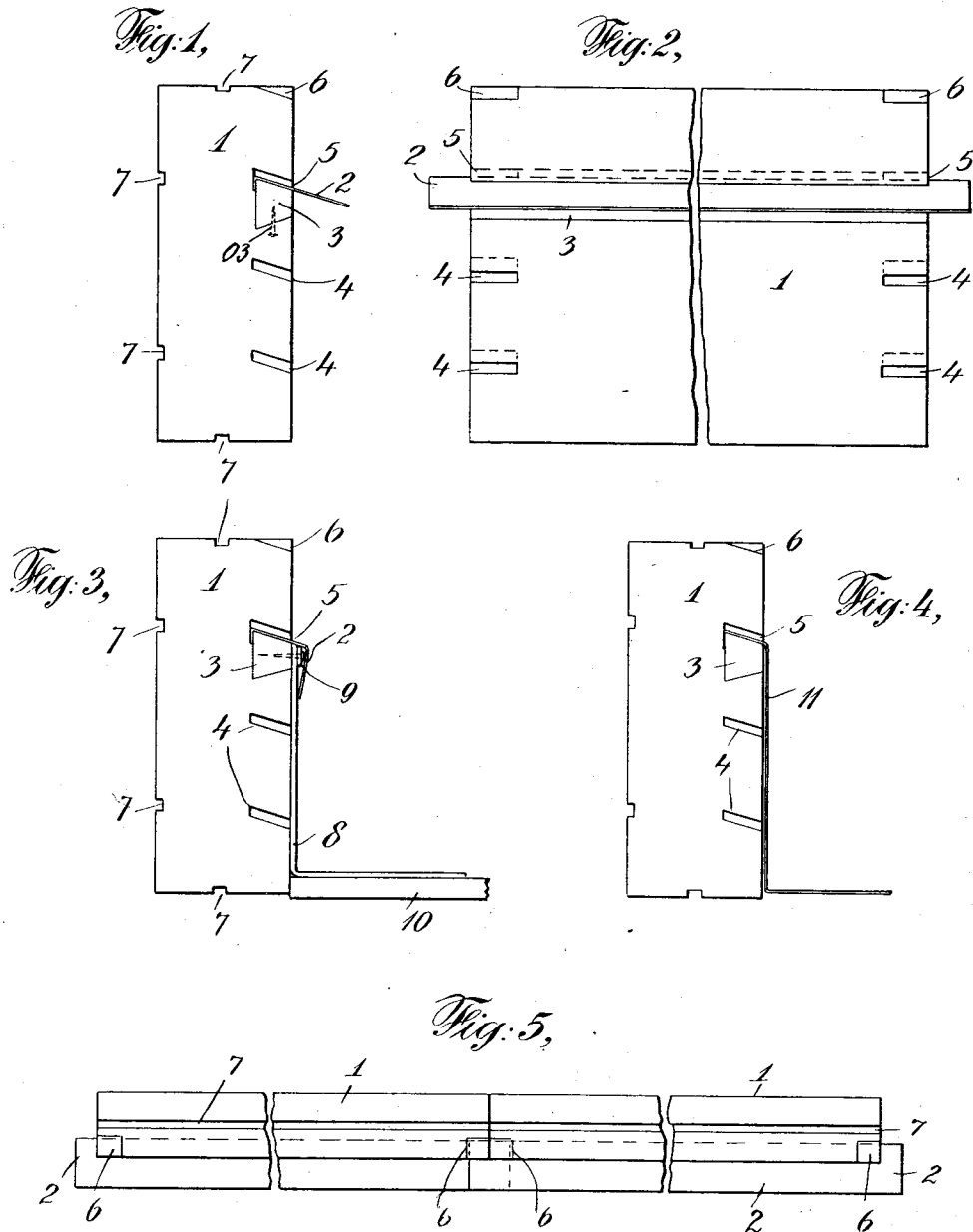


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APPLICATION FILED MAR. 18, 1912.

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Patented June 17, 1913.

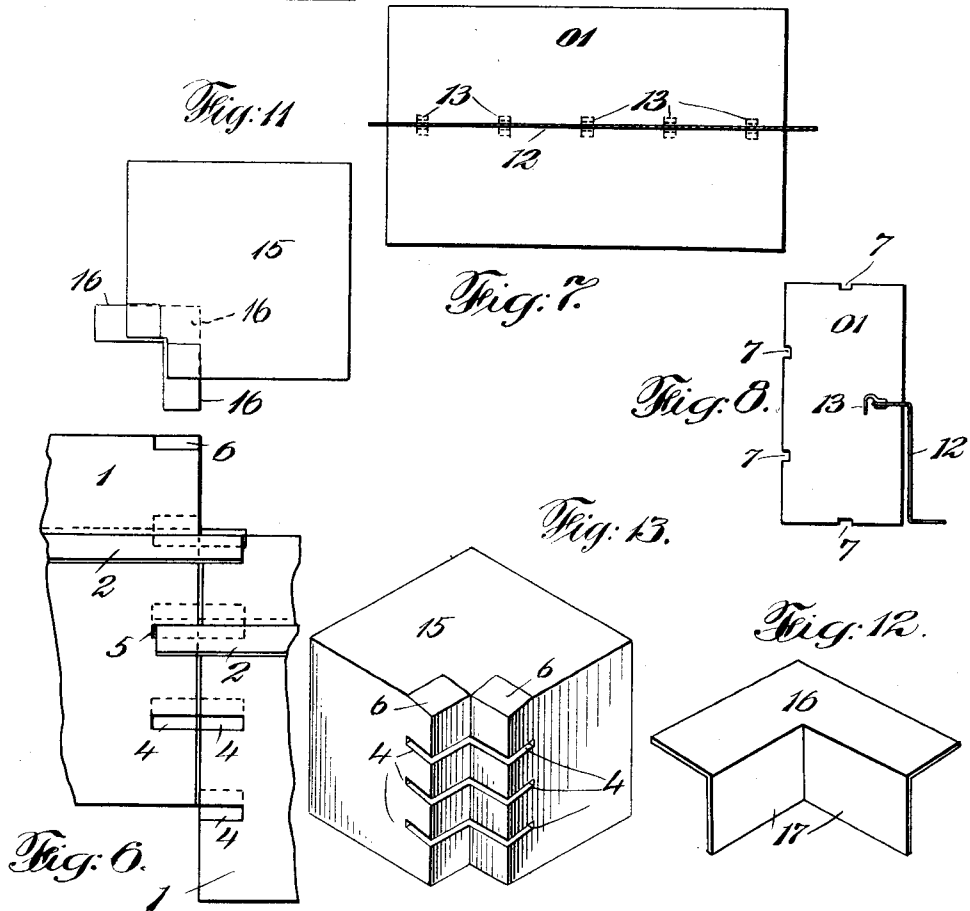
2 SHEETS—SHEET 1.



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# UNITED STATES PATENT OFFICE.

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## WALL-BLOCK WITH FLASHING.

1,064,753.

Specification of Letters Patent.

Patented June 17, 1913.

Application filed March 18, 1912. Serial No. 684,654.

*To all whom it may concern:*

Be it known that I, RALPH R. MABIE, a citizen of the United States, residing at New Rochelle, in the county of Westchester and State of New York, have invented a certain new and useful Wall-Block with Flashing; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of my invention is to provide a suitable block to be inserted in the walls of structures having surfaces exposed to water or moisture, and requiring waterproof covering on such exposed surfaces, which covering is to be carried upward and secured in position.

One of the particular uses of my invention is the securing and protecting of roof coverings properly in position.

In the drawings Figure 1 is an end view of a block containing one example of my invention; Fig. 2 is a side view of the same; Fig. 3 is a view of one end of the block showing the cap flashing turned down over the roof covering; Fig. 4 is a similar view, showing another form of flashing piece applied; Fig. 5 is a top view of this example of my invention; showing two blocks placed end to end; Fig. 6 is a front view of two of the blocks of Figs. 1 to 5, in position, showing one stepped to the other; a course of mortar between them; Fig. 7 is a front view of another example of my invention; Fig. 8 is an end view of Fig 7; Figs. 9 to 13 are views of blocks adapted to form the exterior and interior corners of walls on which the other blocks are used.

Similar characters of reference indicate like parts in all the drawings.

The object of my invention is to provide means for a suitable connection between waterproof coverings for roofs, floors, etc., and the walls of structures which extend above the lines of the roofs or floors. These connections have commonly been made by the use of various metal strips known as flashings, and inserted in two parts, one known as cap flashing, to be incorporated in the wall by the mason, and the other known as base flashings, to be built into the roof covering and incorporated between the various layers of the same by the roofer. In some cases the roof coverings consisting of felt, paper, or similar materials, have

been carried upward against the walls of the building and secured to the same by nailing into the brick work. This method of providing connections between the roofs and the walls has been found to be inadequate, as nails driven into the mortar, especially in new buildings, become loose, and permit water to run down between the walls and the roofing material. In some instances flat strips of wood have been inserted between the courses of bricks in the wall for the purpose of affording a nailing surface, to which the roofing material might be better secured, but it has been found that flat strips so inserted soon shrink, and become loose, and are liable to be pulled or fall out.

The cap flashings of metal commonly used heretofore have been designed of a flat piece of metal bent at right angles, one portion intended to lie in the wall flat, and the other bent down on the exposed surface of the same and over the edge of the roofing material, if the roofing material is nailed to the wall, or over the top of a metal base flashing, if such has been used to turn up against the wall. If incorporated with the roofing material these flat metal edges extending into the wall have been found not sufficient to securely hold the cap flashing in place, as it frequently falls or is drawn out and permits leaks at this point. I have learned from practical experience that by none of these devices heretofore known, of securing flashings to walls after the walls have been constructed and the roof covering is to be applied, can the connection be practically made uniform and water tight, so that the roof will be properly protected during changes of temperature and other climatic conditions. In case the flashing, as heretofore inserted, either in openings in the wall made by scraping out the mortar between the courses of the bricks, etc., or otherwise, is of metal, it will be less tightly packed in at some points than at others, and in case it is of fibrous water-proof materials which are affected and softened by the heat of the sun, these also draw out of the groove or slot and buckle, in either case there will be lines of suture developing defects which the weather will search out, and through which it will cause leaks, and damage building and contents. It can be readily seen that the work of joining these two different materials—a building stone

or a brick wall on one side, and weather proof flashing material on the other, the work to be done on the roof, the most exposed place, and in all kinds of weather, presents practical difficulties of peculiar character. The most desirable building block would be one which extends unbrokenly over the entire length of wall with an undivided flashing piece formed integrally therewith, and without any line of suture, and my invention contemplates a block of that character where the length of the block required makes that practicable; the most practically successful building block would be one of less length but formed with the flashing piece similarly embodied, and provided with means to unite the flashing pieces in a substantially unbroken strip for the entire length of the roof; and the most economically successful building blocks would be those having the characteristics mentioned and constructed so that they may be attached in place to or in the wall by the ordinary skill of the brick layer or mason, and when so attached leave the wall in proper condition so that the roof covering can be brought up to and joined with the flashing piece by the ordinary skill of the roofer,—for the requirements of craftsmanship must be taken into account. The building blocks of my invention comprise all of these requirements and include all of these advantages, and so far as known to me are the only articles in which they are to be found, and I describe several examples of my invention, and figure them in the drawings.

In the block of one example, my invention may be carried out by the use of a wooden nailing strip which does not project beyond the ends of the block, attached to a flashing piece which is longer than the block, and projects about two inches beyond each end of the block. This nailing strip and flashing piece is to be inserted in a suitable mold, or form, the flashing piece held stretched out, and the wet mass of cement poured around it evenly and smoothly, so that just the desired width of the flashing piece will project from the mass, and when that has set, the flashing piece will be so anchored that it cannot possibly be drawn out of the block, and so that the weather cannot work in to impair it, but that it constitutes a part of the very block itself. The wooden nailing strip to which the flashing has been secured may be of wedge shape, or it may be provided with projections to take into the block itself, neither of which would permit insertion between the bricks in a brick wall. The material of which the block is composed is locked around the same in such a manner that the nailing strip and flashing cannot be removed without the entire destruction of the block. In the case of a roof

covered with tin or other material, the nailing strip would not be necessary, as the turned up ends of the roof covering would be held sufficiently stiff to retain their place under the cap flashing which, can be turned down over the same.

In the drawings, 1, is the block of one example of my invention; 2, is a form of cap flashing used with this example, and one edge of this flashing is bent around a nailing strip, 3, as clearly shown in Fig. 1. The ends of the block are provided with slanting slots, 4, 4, 5 and 6, and when the ends of the blocks are joined together the projecting ends of the flashing piece, 2, enter the slots, 4, 5, or 6, as the case may be. If the adjoining blocks are upon the same level the ends of the flashing pieces will lie against each other and pass into the slots, 5, 5, whereas, if one block is stepped the end of one flashing piece will enter either one of the slots, 4 or 5, as the case may be, and as shown in Fig. 6. The nailing strip, 3, as above stated may be of wedge shape, which will be sufficient to retain it in place, and it may also have nails or other projections, O<sup>3</sup>, to still further secure it in position, or it may be flat and have projecting nails or screws, or other engaging portions to hold it firmly in the block. The upper, lower and back portions of the block may be provided with grooves, 7, 7, to take in the mortar when they are formed into the wall. In this example of my invention I show, in Fig. 3, the nailing strip, 3, in place; the roof covering, 8, carried up, so that when the end of it is opposite the outer end of the nailing block, 3, a lath or similar holding strip, 9, may then be nailed over the roof covering, 8, and into the nailing block, 3, securing the roof covering firmly in place, and the flashing plate, 2, is then bent down and over the joint as is clearly shown in Fig. 3. In Fig. 4, which shows another form of flashing applied to this example of my invention, a wide pliable flashing, 11, is shown which is wide enough to extend from the nailing strip down to and upon the roof. One edge of this may be secured to a nailing strip, as 3, and the other edge extended downward, and to the roof surface, and there incorporated with and between the various layers of the roof covering. When this form of flashing is used the face of the block, 1, would be coated with pitch, or other suitable adhesive material, to the point at which the roof covering is carried. Then the roof covering would be similarly coated and the flashing piece, 11, turned down against the coated portion of the roof covering, and thus be held securely in place and protected from water or moisture.

In Fig. 7, I show a front view of another example of my invention, which may be employed with a flexible flashing that is adapt-

ed to act both as a cap and as a base flashing. In this example of my invention no nailing strip is shown or needed, but the flashing piece, 12, is provided with hooks, 13, 13, or other holders of any suitable form that will take into and securely retain the edge of the material firmly in the block when the same has hardened.

In Figs. 9 to 13 I show blocks adapted to be used in wall corners. Fig. 9 is a perspective view of a block 14, to be of rectangular form, for exterior corners, and this is also provided with slots, 4, 4, 5, 6, to take in the projecting ends of the flashing pieces of the adjacent blocks. The flashing piece for this form of block may be conveniently rectangular as shown at O<sup>2</sup>, Fig. 10. The corner block and flashing piece shown in Figs. 11 to 13 is adapted for the interior corner of walls. A top view is shown in Fig. 11, and a perspective view in Fig. 13. This form of block is also provided with slots similar to the slots, 6, 6, 4, 4, which are adapted to take in the ends of the flashing pieces, 2, 2, of the adjacent blocks, but as these ends, 2, 2, when inserted in such slots and bent down into place would leave an open space through which water or moisture might penetrate to the roof or other surfaces designed to be protected, I provide a corner shield shown in Fig. 12, which may be made of any suitable material, and this is to be placed upon the top of the block at the corner angle, or in one of the slots, 4, 4, of the corner angle, wherever it will rest over and upon the ends of the flashing pieces, as, 2, 2, inserted in such slots; the part, 16, resting upon the top of the block or upon and over the ends of, 2, 2, of the flashing pieces, and the parts, 17, 17, fitting into and against the sides of the corner angle and thus protecting that portion of the structure against the entrance of water or moisture.

It will thus be seen from the drawing and description that my invention consists essentially of a suitable building block in or into which a flashing piece has been suitably secured so that the flashing piece and block form one complete and inseparable structure.

The best form of carrying out my invention consists in constructing a cement block, having incorporated therein and formed integral therewith, a flashing piece securely anchored therein. The nailing strip, 3, when one is used, is of the length of the block, while the flashing piece, in any case, extends slightly beyond it on each side, to admit of the extended portions being inserted in the adjoining blocks and across the strip of mortar securing the blocks in the wall, thereby covering the entire face of the wall, and providing a continuous waterproof cap.

My blocks may be made of any desired

size. A convenient size is the thickness of two bricks and the course of mortar between them, and for length, the length of two bricks, and the course of mortar between them, and any desired multiple of such size. By making them thus they can be readily inserted in any wall, and the exact number of my wall blocks required can be readily contracted for.

The large blocks made according to my invention are provided with two or more slots, 4, 5, 6, adapted to receive the projecting ends of the flashing pieces upon different levels, so that they may be readily stepped in the wall, to conform to the inclined surfaces of the roof. The smaller blocks would not require these slots, as they may be stepped to the levels of the adjoining bricks.

My invention also contemplates the method of manufacturing wall blocks integral with suitable flashings, but that feature of my invention has been reserved for a separate application.

The blocks of my invention can be readily and cheaply made, and be delivered at the structure where required complete in all respects, so that they can be inserted in position as readily as a bricklayer inserts a window sill or lintel. And when the roofer comes to do his part of the work he finds the flashing piece all ready and firmly fixed in place, so that all he has to do is to bring up the ends of the roofing material and nail the same to the nailing strip, if one is used, and bend the flashing piece over the ends, if the same is of metal, or if a flexible flashing piece of fibrous waterproof felt, cloth or similar material without a nailing strip is used, he coats the wall beneath it with pitch, etc., brings up the ends of the roofing material against the coated wall, coats the ends of the roofing material in like manner, and then brings the flashing piece down to the roof and secures it there in a proper manner. No tools or intelligence in either case is required, other than such as is available in the ordinary workman now engaged in the trades of building and roofing.

It will thus be seen that my invention comprehends a flashing for use on walls of structures having surfaces exposed to water or moisture and requiring waterproof covering for such exposed surfaces, such flashing being inserted in the mass of concrete or other suitable plastic material from which a suitable building block is in process of formation, which flashing thereby becomes inseparably embedded in and forms a part of such block when the mass has set, and furnishes suitable means by which a permanent watertight bond can be established between the flashing and the wall of the structure on which it is used; such bond not being subject to separation of the wall from the flashing piece by the ordinary processes

of nature which affect all other forms of flashings heretofore used; and also includes a novel method of forming waterproof connections between the ends of the flashings of adjoining building blocks containing the same.

I am aware that it has been proposed to form wall blocks with longitudinal grooves, in which to insert flashing pieces after the wall block has been manufactured, and I do not claim any such devices, but

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

1. As a new article of manufacture, a flashing part inserted in and combined with the mass of plastic material in process of forming a building block therefrom, and constituting an inseparable part thereof when the same has hardened.

2. As a new article of manufacture, a building block including a flashing part inserted in and inseparably connected with such block, the ends of such flashing part projecting beyond the ends of the block, and adapted to form overlapping connections with adjoining blocks.

3. As a new article of manufacture, a building block including a flashing part inserted in and inseparably connected with such block, the ends of such flashing part projecting beyond the ends of the block, and adapted to form overlapping connections with adjoining blocks, such blocks provided with slots adapted to take in the projecting ends of such flashing parts.

4. As a new article of manufacture, a building block including a flashing part in-

serted in and inseparably connected with such block, the ends of such flashing part projecting beyond the ends of the block, and adapted to form overlapping connections with adjoining blocks, such blocks provided with a series of slots adapted to take in the projecting ends of such flashing parts upon different levels.

5. The combination with a wall of a series of composite building blocks each provided with a flashing part inseparably connected with the same and incorporated in the plastic mass thereof before the same has set, such flashing parts extending beyond the ends of such blocks, and such blocks provided with suitable slots adapted to take in the projecting ends of said flashing parts.

6. A wall provided with one or more linear building blocks having flashing parts inseparably connected with the same and incorporated in the plastic mass thereof before the same has set, such flashing parts projecting beyond the ends of such blocks, and the same provided with suitable slots adapted to take in the projecting ends of such flashing parts, in combination with angular corner blocks similarly provided with corresponding flashing parts and slots, and adapted to take in the projecting ends of the flashing parts of two angular lines of such linear blocks near their meeting points, the corner block adapted to be taken into the slots of such linear blocks.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."