No. 805,478. PATENTED NOV. 28, 1905.

E. L. LORSCHEIDER.

CONCRETE BUILDING BLOCK.

APPLICATION FILED FEB. 16, 1905.

Fig. 1.

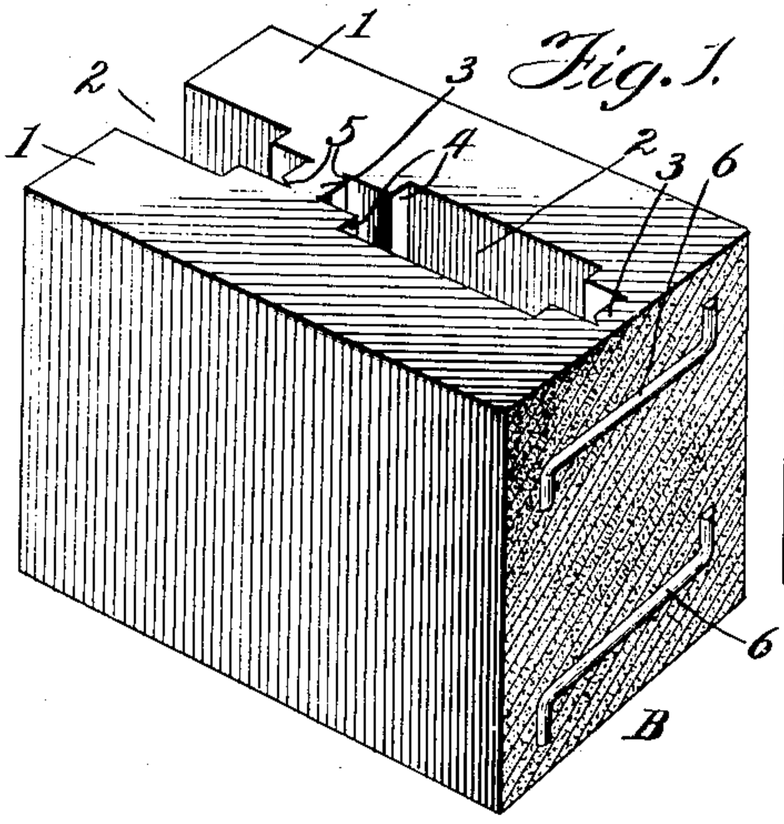


Fig. 3.

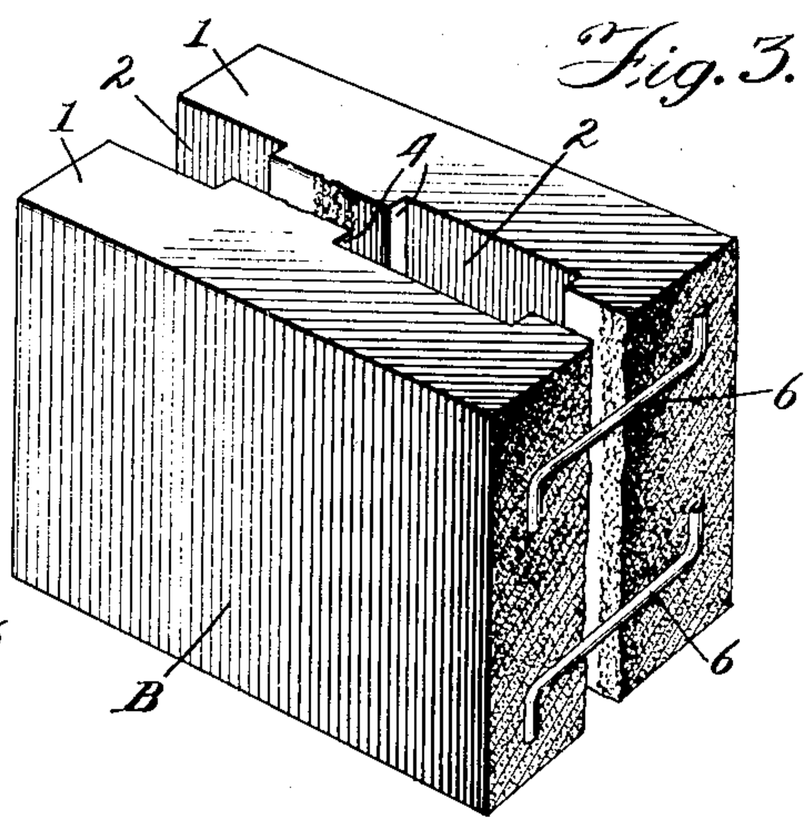


Fig. 2.

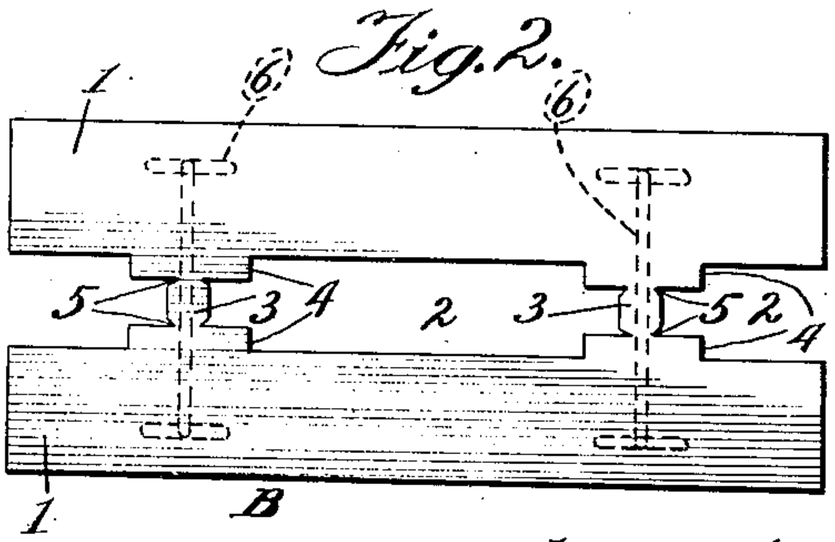


Fig. 4.

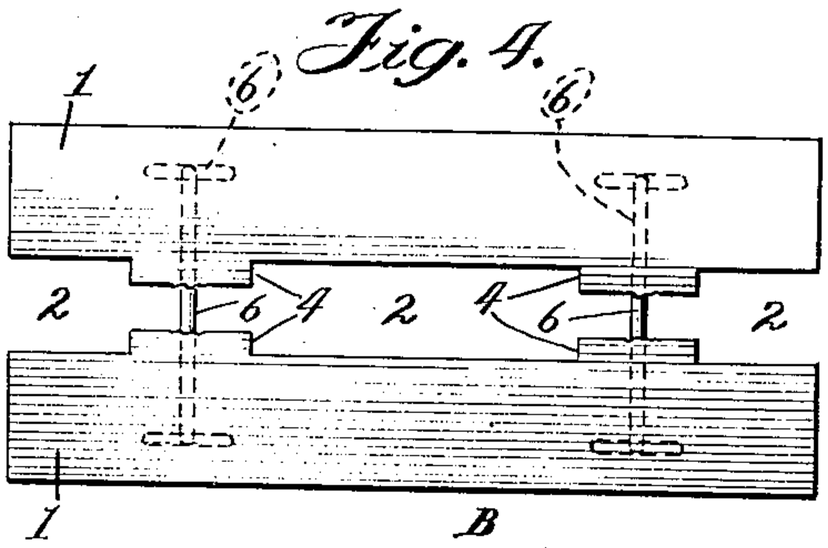
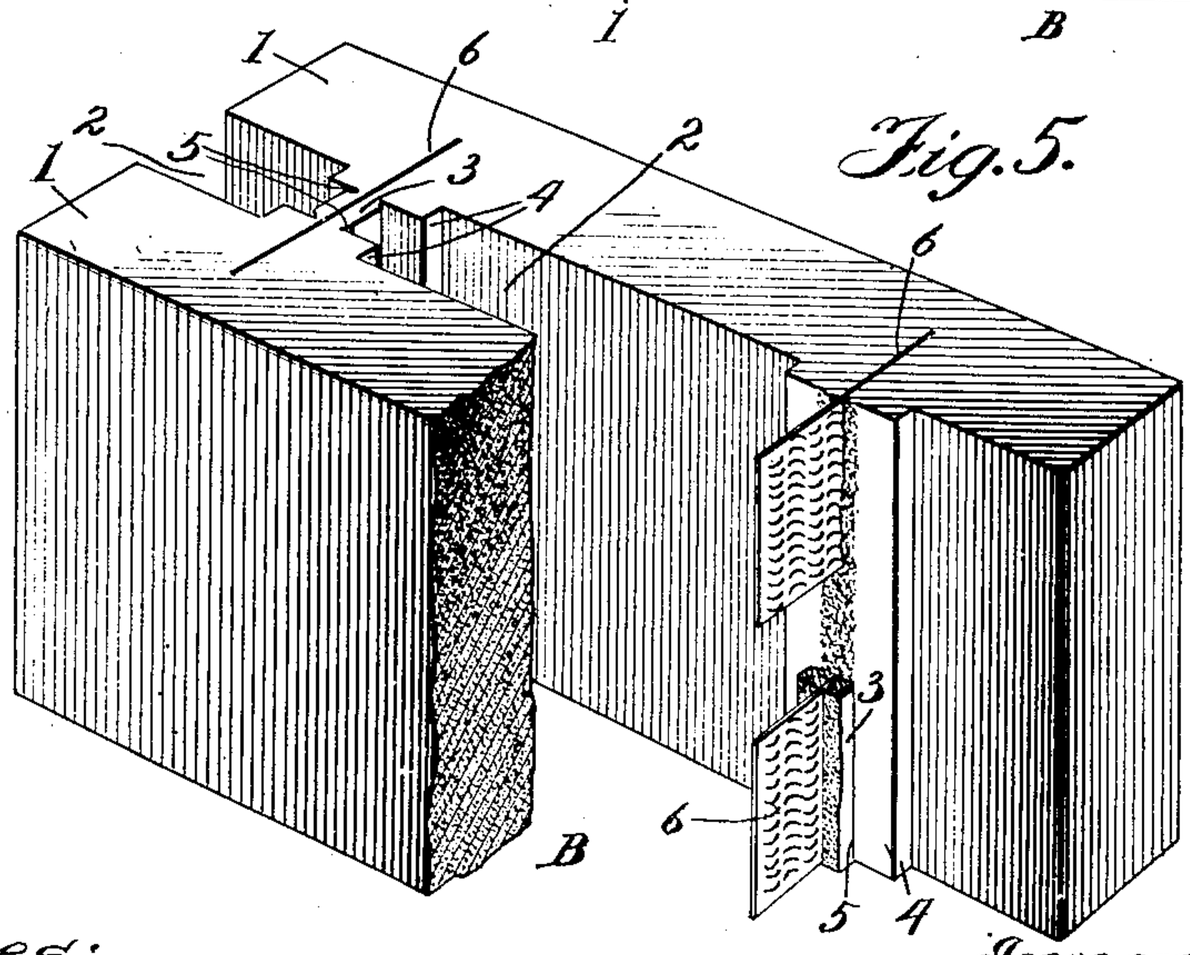


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

EDGAR L. LORSCHEIDER, OF CHICAGO, ILLINOIS.

CONCRETE BUILDING-BLOCK.

No. 805,478. Specification of Letters Patent. Patented Nov. 28, 1905.

Application filed February 16, 1905. Serial No. 245,867.

To all whom it may concern:

Be it known that I, EDGAR L. LORSCHEIDER, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Concrete Building-Blocks, of which the following is a specification.

In the manufacture of concrete building-blocks or artificial building-stone it is at present customary to mold the blocks with a double wall and intervening air-space, which air-space, however, is interrupted at intervals by connecting-webs of concrete that serve to bind the two sections or double walls of the blocks together. The object of the air-space is to insulate the outer from the inner wall, as far as practicable, against the passage of both heat and cold and of moisture; but while this is accomplished to a considerable degree in the construction referred to the concrete connecting-webs of the blocks still serve as conductors between the walls to a considerable extent and permit a transference of heat or frost and of moisture from the one wall to the other to a very perceptible and objectionable degree.

The object of the present improvement is to do away with these concrete connecting-webs and leave the air-space which intervenes between the sections practically uninterrupted and continuous and free to serve as a substantially perfect insulator between the walls, while at the same time producing a block which can be made and handled with no greater or even less danger of breakage than exists where the permanent concrete connectors or connecting-webs are provided.

To this end my improvement contemplates a concrete building-block originally molded with outer and inner walls connected by integral connecting portions or webs, which latter, however, are so proportioned and constructed as to be capable of being readily broken away by the mason before the block is placed in the wall, and it further contemplates that to prevent the two sections of the wall from separating from each other when the webs are broken away and to maintain permanent the original relation of the two sections to each other the block will also be molded with embedded irons, ties, or the like, which extend between the two sections of walls of the block, and will remain in place and undisturbed after the concrete connecting-webs have been broken away. These embedded irons are of such small relative cross-section that the amount of heat transmitted through them will be immaterial, and they obviously cannot transmit any moisture whatever, so that the two sections of the block after its concrete connecting-webs are broken away will be almost perfectly insulated from each other by the air-space which will intervene between them, which air-space in each individual block and in the wall of the building when completed will be substantially continuous in all directions and free from any considerable interruption.

The invention consists in the matters thus and hereinafter set forth and particularly pointed out in the appended claims, and will be fully understood from the following description of the construction illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view, partially in section, of a concrete building-block constructed in accordance with my invention in one form and showing the construction of the block as it is originally molded. Fig. 2 is a top plan view thereof, but showing a somewhat-different form of tie-iron. Fig. 3 is a similar view showing the block after the concrete connecting-webs have been broken away to place the block in readiness for insertion in the wall. Fig. 4 is a top plan view thereof, but showing the same form of anchor-iron disclosed in Fig. 2. Fig. 5 is a perspective view, with parts broken away, of a similar concrete building-block embodying my invention, but in which the tie-iron is made of perforated sheet metal.

In said drawings, Figs. 1 and 2, B designates a concrete building-block constructed in accordance with my invention in one form. Such block consists of two principal sections or walls 1, separated for the most part by an intervening air-space 2. As originally molded this air-space is divided by integral concrete connecting portions or webs 3, which, however, are so formed that they can be readily broken away by the mason without danger of cracking the main sections 1 of the block. As herein shown, the webs 3 that are designed to be broken away do not project directly from the sections 1, but are provided on each side with widened base portions 4, which in part bridge the space between the sections and the juncture of the webs with these base portions 4 at each side is marked by grooves 5, which determine the line of cleavage and enable the breaking of the web to be readily

accomplished by the mason's hammer. The sections 1 of the block are furthermore connected by ties 6, which, as shown in Figs. 1 and 2, are simply rods of iron bent over at their ends, so as to permanently and rigidly connect its opposed sections. As herein shown, also, these tie-irons 6 are so located that they originally extend through the connecting-webs 3, so that after the block is completed and until the web is broken away preliminary to its being placed in the wall the ties are entirely concealed and the block does not vary noticeably in appearance from the ordinary concrete building-blocks heretofore known. When, however, the concrete connection-webs are broken away, the tie-irons will be exposed after the manner shown in Figs. 3 and 4, and the block will be placed in the wall in this condition.

Obviously the exact form of the tie employed is largely immaterial. They may consist of a bent rod of any suitable shape, such as are shown in Figs. 1 and 2 and 3 and 4, for example, or may consist of iron plates or expanded or perforated sheet metal or the like, or of coarse-wire screening, as indicated in Fig. 5. To prevent corrosion of the anchor where it is exposed, it will desirably be galvanized or otherwise coated with a non corrosive or corroding covering or compound, metallic or otherwise, and with this precaution a wall made of building-blocks of the construction described will not only be proof against the transmission of heat and moisture, but will be practically as permanent and indestructible as though made of solid concrete. Furthermore, such a block, during preliminary handling and shipment, will be as rigid and durable and as free from breakage as though made with permanent concrete webs.

I claim as my invention—

1. A concrete building-block comprising sections connected by readily-destructible webs and by permanent ties serving to maintain the rigidity of the block after the connecting-webs have been destroyed, substantially as described.

2. A concrete building-block comprising opposed sections connected by readily-destructible webs and by permanent ties embedded in the sections and extending through the webs and serving to maintain the rigidity of the block after the connecting-webs have been destroyed, substantially as described.

3. A concrete building-block comprising opposed sections and integral concrete webs proportioned and designed to be readily destroyed preliminary to the use of the block, and permanent tie-irons embedded in the sections and serving to maintain the rigidity of the block after the webs have been destroyed, substantially as described.

4. A concrete building-block consisting of the opposed wall-sections 1 originally molded with readily-destructible integral concrete connecting portions 3 formed with weakening-grooves 5 and permanent tie-irons 6 embedded in the sections 1 and maintaining the sections in rigid connection notwithstanding the destruction of said connecting portions, substantially as described.

5. A concrete building-block consisting of the opposed wall-sections 1 originally molded with readily-destructible integral concrete connecting portions 3 formed with weakening-grooves 5 and permanent tie-irons 6 embedded in the sections 1 and maintaining the sections in rigid connection notwithstanding the destruction of said connecting portions, the destructible webs or connecting portions being joined to the sections 1 by widened base portions 4, substantially as described.

6. A concrete building-block consisting of the opposed wall-sections 1 originally molded with readily-destructible integral concrete connecting portions 3 and permanent tie-irons 6 embedded in the sections 1 and maintaining the sections in rigid connection notwithstanding the destruction of said connecting portions, the destructible webs or connecting portions being joined to the sections 1 by widened base portions 4, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two subscribing witnesses, this 14th day of February, A. D. 1905.

E. L. LORSCHEIDER.

Witnesses:
HENRY W. CARTER,
K. A. COSTELLO.