

T. T. STUVERUD,
 CONCRETE BLOCK.
 APPLICATION FILED MAR. 3, 1919.

1,319,731.

Patented Oct. 28, 1919.

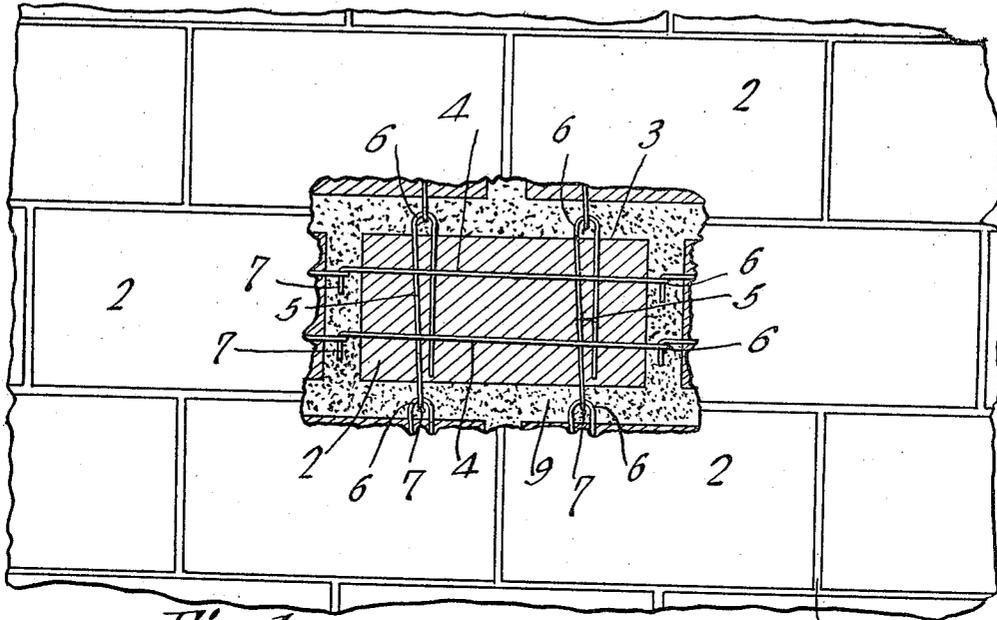


Fig. 1.

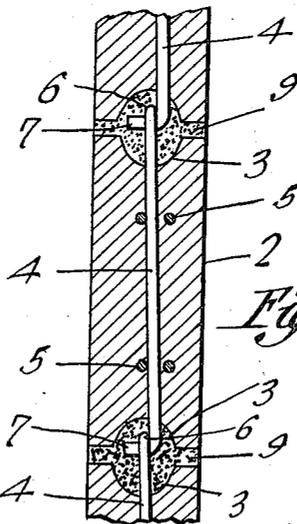


Fig. 2.

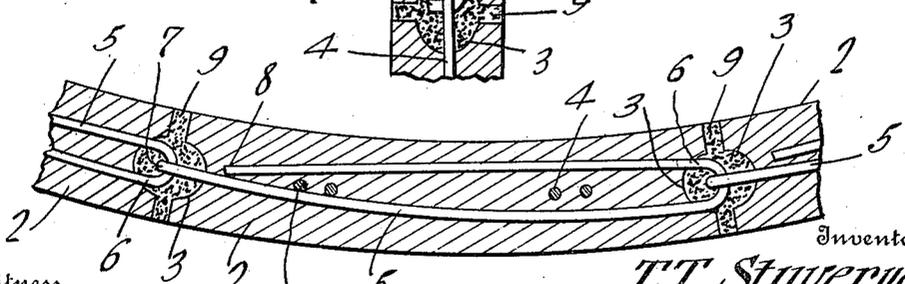


Fig. 3.

Witness
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UNITED STATES PATENT OFFICE.

TORKEL T. STUVERUD, OF ELBOW LAKE, MINNESOTA.

CONCRETE BLOCK.

1,319,731.

Specification of Letters Patent.

Patented Oct. 28, 1919.

Application filed March 3, 1919. Serial No. 280,236.

To all whom it may concern:

Be it known that I, TORKEL T. STUVERUD, a citizen of the United States, residing at Elbow Lake, in the county of Grant and State of Minnesota, have invented a new and useful Concrete Block, of which the following is a specification.

This invention relates to improvements in concrete block construction, the primary object of the invention being to provide a reinforcing and interlocking means for such blocks whereby when a tier of blocks are assembled together in interlocking relation no further reinforcement is necessary and the blocks form practically a unitary structure.

A further object of the invention is the provision of a reinforced block of this character which is especially adapted for the construction of silos, culverts and other structures which are usually made circular and by means of which block the necessity of providing steel hoops around such structures is entirely eliminated.

With these and other objects in view, the invention consists in the novel features of construction and combination of parts as will be more fully described hereinafter, and finally pointed out in the claims.

In the drawings accompanying and forming part of this specification,

Figure 1 is a side view, broken away, of a portion of a building constructed of blocks formed in accordance with the present invention, the central block being shown in section in order to better illustrate the reinforcing and interlocking means;

Fig. 2 is a transverse sectional view, broken away at its ends and showing the connection between three contiguous blocks; and

Fig. 3 is a longitudinal sectional view, also broken away at its ends and showing a curved form of block adapted for circular buildings, such as silos, etc.

The same characters of reference designate the same parts in the different figures of the drawings.

In the embodiment of the invention herein shown, 2 designates a concrete block of any suitable size and shape, which is molded in the usual manner and provided in its edges with a semi-circular or other form of groove 3. It is the principal object of this invention to provide such blocks with a novel form of reinforcing means which serves also to interlock contiguous blocks in such a man-

ner that a structure formed from these blocks becomes practically a unitary structure. This interlocking means comprises two pair of metallic members 4 and 5 arranged respectively longitudinally and transversely of the blocks, these members being embedded in the block while the latter is in a plastic state. The members 4 and 5 are each formed of a single piece of metal bent upon itself so as to form a loop or eye 6 at one end and a hook 7 at its opposite end, the end of the member opposite the hook-carrying end being extended backwardly to within a short distance of said hook and pressed inwardly toward that portion of the member carrying the hook, as shown at 8, Fig. 3, whereby a wedge-shaped space is formed between these portions of the metallic member so that when the members 4 and 5 are embedded in a block the block will be provided with a pair of hooks at one end and one side edge and a pair of eyes at the opposite end and side edge, while the wedge-shaped formation of the material of the block between the lengthwise portions of the metallic members will render it impossible for these members to be withdrawn. Moreover, as shown in the drawings, the lengthwise extending portions of one pair of metallic members pass between the lengthwise extending portions of the other pair, thus forming an additional means for preventing withdrawal of the members 4 and 5.

It will be understood, of course, that this form of interlocking means is applicable to any form of block. It is, however, particularly applicable to blocks which are intended to form a circular building, since it has always been found necessary to provide steel hoops around such structures as an additional reinforcement. In Fig. 3 I have shown a block which is specially formed for this style of building, and it will be observed that by the use of my improved interlocking means each tier of blocks is provided with a pair of practically continuous metallic bands extending entirely around the structure, while a practically continuous pair of bands also extends from top to bottom of the structure through each block of each tier.

The blocks are all similarly formed, each having a pair of hooks projecting within the groove at one of its end edges and a pair of eyes at the opposite end edge, while a similar pair of hooks projects into the groove at one of its side edges and a pair of eyes at the

opposite side edge, and in the construction of a building with this form of block the first tier is laid by engaging the hooks and eyes at the adjacent end of the blocks and then filling the vertical grooves with cement mortar, as shown at 9, Fig. 3. The grooves in the upper edges of this tier are then filled with mortar and the hooks at the side edges of the next tier engaged with the eyes in the lower tier of blocks in such manner that the blocks break joint in the usual way, the cement filling automatically locking all joints and securing the reinforcing metal against displacement within the cement.

It will thus be seen that I have provided a block having a reinforcing and interlocking means formed of rods having parallel leg portions extending through the block, and which rods when hooked together form a continuous reinforcing band encircling the entire structure and also a continuous band extending from top to bottom of the building through each block of every tier, thereby forming what is practically a unitary structure.

While I have referred particularly to circular structures, I do not desire to limit my invention to such structures, as it will be understood that whatever the form or size of the blocks or of the building into which they are to be incorporated the action of the reinforcing and interlocking means is the same, and therefore many mechanical changes may be made without departing from the spirit and scope of the invention as set forth in the claims appended hereto.

Having thus described my invention, what I claim is:

1. In a cement block, pairs of metallic reinforcing members extending longitudinally of the block, and pairs of metallic reinforcing members extending transversely through the block, and each of the reinforcing members including spaced parallel leg portions, the transversely extending reinforcing members being positioned between the leg portions of the longitudinal extending leg portions, a hook formed at one end of each of the reinforcing members, and an eye formed substantially intermediate the length.

2. In a concrete block, pairs of metallic reinforcing members extending longitudinally through the block, and pairs of metallic reinforcing members extending transversely through the block, the reinforcing members including spaced leg portions, said leg portions being curved throughout their lengths, in opposite directions, the leg portions of one reinforcing member being positioned between the leg portions of the opposite reinforcing member, a hook formed at one end of each of the reinforcing members and an eye formed substantially intermediate the length.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

TORKEL T. STUVERUD.

Witnesses:

ERICK K. LEE,
R. J. STROMME.

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