

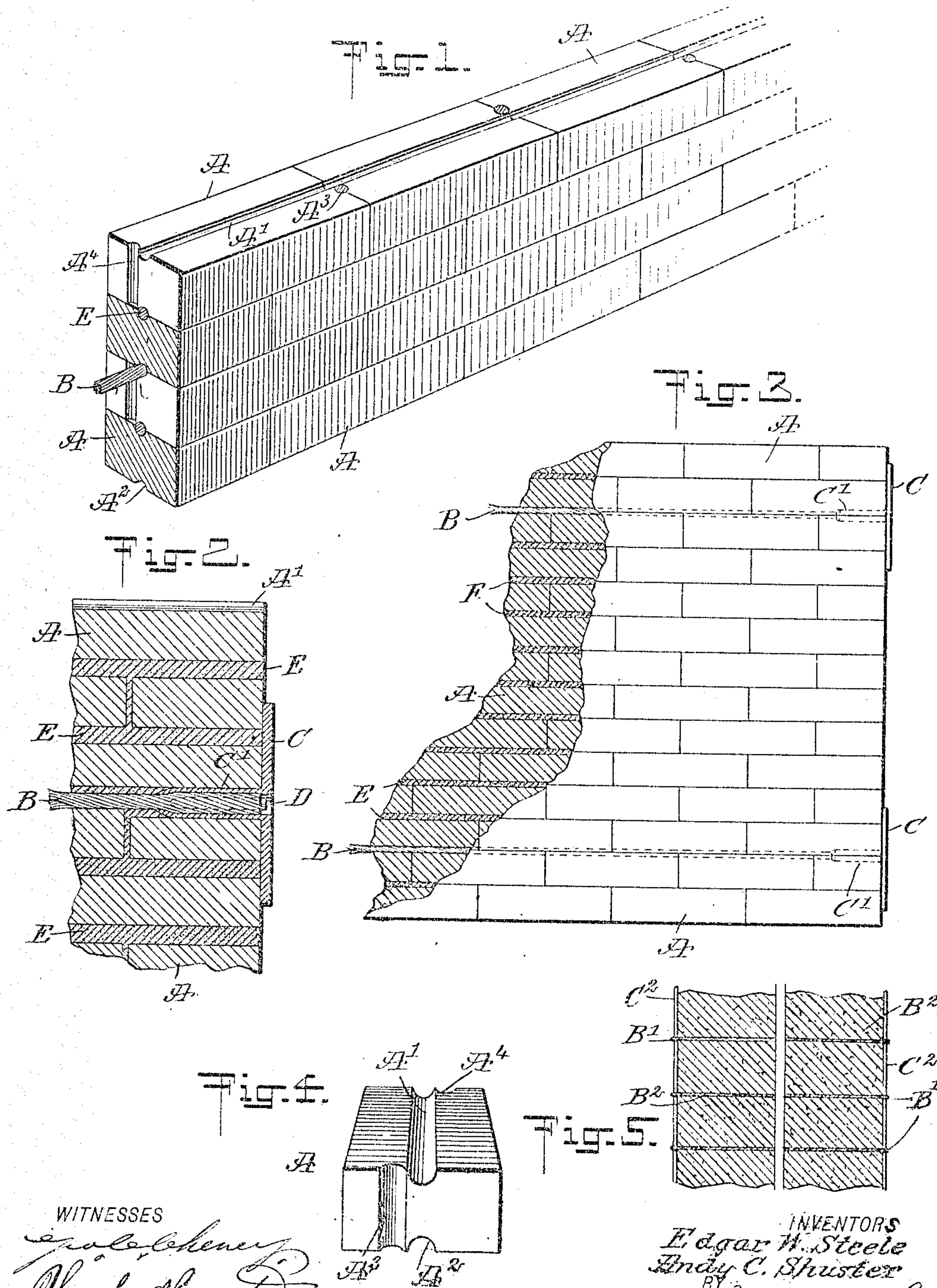
No. 872,262.

PATENTED NOV. 26, 1907.

E. W. STEELE & A. C. SHUSTER.

WALL CONSTRUCTION.

APPLICATION FILED JAN. 23, 1907.



WITNESSES

Edgar W. Steele
Andy C. Shuster

INVENTORS

Edgar W. Steele
Andy C. Shuster

BY *Mumma & Co.*
ATTORNEYS

UNITED STATES PATENT OFFICE.

EDGAR W. STEELE AND ANDY C. SHUSTER, OF EDNA, CALIFORNIA.

WALL CONSTRUCTION.

No. 872,262.

Specification of Letters Patent.

Patented Nov. 26, 1907.

Application filed January 23, 1907. Serial No. 353,604.

To all whom it may concern:

Be it known that we, EDGAR W. STEELE and ANDY C. SHUSTER, both citizens of the United States, and residents of Edna, in the county of San Luis Obispo and State of California, have invented a new and Improved Wall Construction, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved wall construction of brick, concrete blocks or the like, bound in place by wire cables, to render the wall exceedingly strong and durable, and capable of withstanding the action of earthquakes or other forceful jars.

The invention consists of novel features and parts and combinations of the same, which will be more fully described hereinafter, and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the improvement; Fig. 2 is an enlarged longitudinal sectional elevation of one end of the wall; Fig. 3 is a face view of the wall, part being broken out; Fig. 4 is a perspective view of one of the bricks or concrete blocks, and Fig. 5 is a longitudinal section of a modified form of the improvement.

The bricks or blocks A for forming the main portion of the wall are laid in courses, joined in the usual manner and as indicated in the drawings. Each of the bricks or blocks A is provided on the top with a longitudinally extending groove A', and a similar groove A² is formed in the bottom of the brick or block, so that when the wall is formed and the courses are laid, then the grooves A', A² in the opposite faces of successive courses are in register with each other, thus forming longitudinally extending openings throughout the length of the wall. Sundry of such openings in the wall are engaged by a cable B, fastened in place at its ends by suitable fastening means, such, for instance, as illustrated in Figs. 2 and 3, each fastening device consisting essentially of a plate C abutting against the end of the wall and provided with an inwardly extending socket C' fitting into the end portion of an opening and receiving the terminal of the cable B. Now the terminal of the cable is expanded within the socket C' by driving

into the end of the cable a pin or wedge D, as plainly indicated in Fig. 2.

The ends of each brick or block A are provided with vertically disposed grooves A³, A⁴ located on opposite sides of the longitudinal top and bottom grooves A', A² shown in Fig. 1 and 4, and when the bricks or blocks are laid in courses then the end grooves in the faces of adjacent bricks or blocks in a course form a vertical opening to one side of the top and bottom grooves A', A², either of which may contain a cable B, as before explained.

Now in laying the bricks or blocks suitable binding material E, such as cement, mortar and the like, is used in the usual manner, and this binding material fills the longitudinal openings not occupied by the cables B and it also fills the vertical openings formed by the registering end grooves A³ and A⁴. Now when the binding material hardens it firmly binds the several bricks or blocks in place and holds the same against both longitudinal as well as against transverse movement, owing to the binding material forming pins between adjacent bricks or blocks, and in addition the wall is greatly strengthened by the cables B held in position at their ends on the ends of the wall.

Instead of using the plates C as described, use may be made of tie rods C² extending through eyes B' formed at the ends of each cable B², as indicated in Fig. 5; the tie rod C² on each end of the wall engaging the corresponding eyes B' of the several cables B², as will be readily understood by reference to Fig. 5. The cables B, B² and their tie plates C and tie rods C² may also be used in solid concrete walls instead of brick or block walls, as indicated in Fig. 5. The cables used are preferably of the coreless type.

A wall constructed in the manner described is exceedingly strong and durable, and capable of readily withstanding earthquakes and other forceful jars, besides the wall can be cheaply built, and the individual bricks or blocks can be readily and economically formed.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:

1. A wall construction comprising building bricks or blocks laid in courses and provided at top and bottom with longitudinally extending grooves, the grooves in the opposite faces of successive courses being in reg-

ister to form lengthwise openings, spaced cables extending through sundry of the said openings, means for holding the ends of the cables in place, and comprising plates each
5 having a socket engaging an end of a cable, and a device for expanding the end of the cable within said socket, and a binding material filling the remaining lengthwise openings.

10 2. A wall construction comprising building blocks laid in courses and provided at top and bottom with longitudinal grooves, the grooves in the opposite faces of successive courses being in register to form longitudinal openings extending from one end
15 of the wall to the other end thereof, a cable extending through one of the said openings, and a fastening device for each end of the cable, the said fastening device having a plate resting against the end of the wall, a
20 socket integral on the plate and extending into the end of the groove and containing the end of the cable, and an expanding pin driven into the end of the cable within the
25 said socket.

3. A wall construction comprising a wall, cables extending through the wall in the direction of the length thereof, and fastening devices for the ends of the cables, the
30 said fastening device each comprising a plate resting against the end of the wall, a socket on the plate and extending into the wall and engaging the end of the cable, and means for expanding the end of the cable within the
35 said socket.

4. A wall construction comprising building bricks or blocks laid in courses and provided at top and bottom with longitudinal grooves, the grooves in the opposite faces
40 of successive courses being in register to form longitudinal openings extending from

one end of the wall to the other end thereof, each brick or block having a vertical groove at one end located to one side of the said top and bottom grooves, and a vertical groove
45 at the other end located at the opposite side of said top and bottom grooves, cables extending through sundry of the said longitudinal openings, means for fastening the ends of the cables in place, and a binding
50 material between the courses and filling the remaining longitudinal openings and the said end grooves.

5. A wall construction comprising building bricks or blocks laid in courses and provided at top and bottom with centrally
55 arranged longitudinal grooves, the grooves in the opposite faces of successive courses being in register to form longitudinal openings extending from one end of the wall to
60 the other end thereof, the ends of each brick or block having vertical grooves located on opposite sides of the said top and bottom grooves and spaced an equal distance from the sides of the block, the grooves on the
65 opposite faces of adjacent bricks or blocks of a course being in register to form vertical openings, cables extending through sundry of the said lengthwise openings, means for fastening the ends of the cable in place in
70 the wall, and a binding material in which the courses are laid, the binding material filling the remaining lengthwise openings and the said vertical openings.

In testimony whereof we have signed our
75 names to this specification in the presence of two subscribing witnesses.

EDGAR W. STEELE.
ANDY C. SHUSTER.

Witnesses:

BELLE WILLIAMSON,
PAUL M. GREGG.