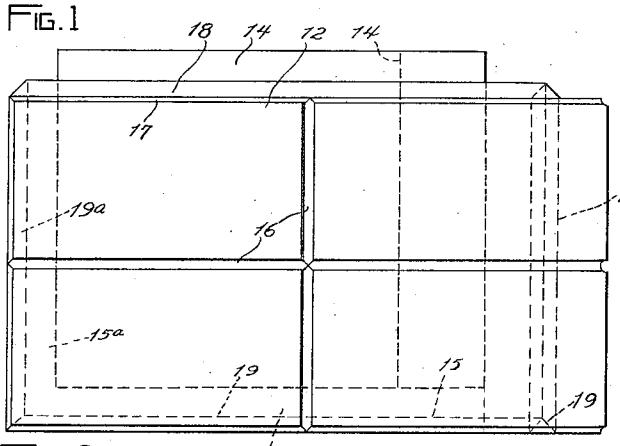
J. E. EVANS.

BRICK.

APPLICATION FILED JUNE 26, 1922.

1,434,378. Patented Nov. 7, 1922.

FIG. 1



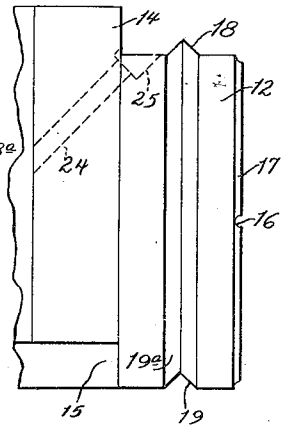


FIG. 3

FIG. 2

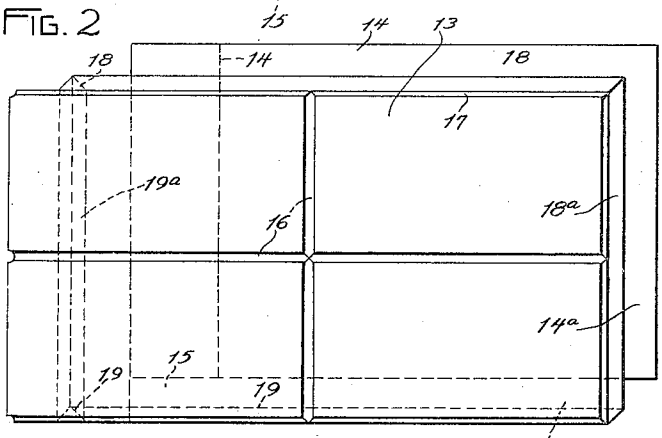


FIG. 5

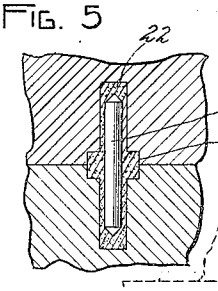


FIG 4

INVENTOR

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ATTYS.

Patented Nov. 7, 1922. 1,434,378

UNITED STATES PATENT OFFICE.

JOHN EDWARD EVANS, OF CHICAGO, ILLINOIS.

BRICK.

Original application filed November 23, 1921, Serial No. 517,159. Divided and this application filed June 26, 1922. Serial No. 570,836.

To all whom it may concern:

Be it known that I, JOHN E. EVANS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Brick, of which the following is a specification.

This invention relates to bricks and has particular reference to the provision of an improved form of facing brick or tile adapted to be applied to a skeleton frame structure in buildings, and which are arranged when placed together in a structure upon a sustaining inner wall to interlock in such a way as to produce a substantially moisture-proof snug fitting outer wall, avoiding the formation of bulges or crevices and loose lapping, to which serious practical objections certain bricks of this kind produced in the past were particularly subject.

One of the principal objects of the invention is to provide right angular corner bricks to be used for the purpose described which have lapping portions and matching edges adapted to be fastened in such a way that a wedging action occurs at the joints between contiguous bricks in the structure resulting not only in the provision of substantially moisture-proof joints, but furthermore, in a certain degree of inward movement of the unattached free edge of the brick toward the inner wall as a result of the special conformation of the brick, thereby making the brick particularly advantageous for use in the facing of the corners of buildings particularly and also piers and columns generally.

A further object of the invention resides in the provision of a novel means for securing accurate alinement of the bricks and for insuring secure bonding thereof.

These and other objects and advantages of the invention will be pointed out more fully in the following description. In the description reference is made to the accompanying drawing illustrating the invention, wherein Figure 1 is a front elevation of one face of the brick presented in one of two adjoining walls at the corner of a building. Fig. 2 is a similar view of the other face presented in the other of the adjoining walls. Fig. 3 is a view looking at one end of the brick disclosing the relative proportionment and conformation of the brick. Fig. 4 is a plan view of Fig. 1, and Fig. 5 is a fragmentary sectional detail of a joint between two superimposed bricks in a structure showing the means employed for effecting alinement and bonding of the courses at the corners of the structure.

Throughout the views the same reference numerals are applied to the same parts.

This application is a division of my copending application serial No. 517,159 filed November 23, 1921.

The bricks are preferably made of concrete or similar material and in sizes such that they may be handled conveniently by a workman or at least by two workmen working together, and comprise a body portion having a comparatively heavy face slab portion 10 and a back slab portion 11 made integral therewith in the form of a right angle presenting a portion 12 in one of two adjoining walls at the corner of a building and another portion 13 similar in appearance in the other of the adjoining walls at the corner of the building. The back slab portion 11 is diagonally offset with respect to the face slab portion as appears perhaps best in Figs. 1 and 2 so that continuous longitudinal flanges 14 and 14ª are provided on two adjoining sides extending substantially from end to end of the brick along the inner edge of the converging portions 12 and 13 and along one end of the portion 13 as shown in Fig. 2. On the opposite adjoining sides of the brick are longitudinal recesses or rabbets 15 and 15ª. The recesses 15 of the bricks are adapted to receive the flanges 14 of other bricks disposed in superimposed contingous relation therewith in a structure. The bricks when thus correlated at the corner of an outer wall on a skeleton frame structure, which comprises the sustaining inner wall, lie flush with one another both on the back presented to the inner wall and on the face of both of the adjoining walls. The flanges 14ª and the recesses 15ª are adapted similarly to interlock by being juxtaposed to other bricks in the wall as indicated in dotted lines in Fig. 4, the bricks shown in dotted lines being either plain bricks of the type disclosed in my copending application aforementioned, or corner bricks of the right angular form herein disclosed, where the bricks are utilized in the facing of piers or columns and the like. The face

portion 10 is formed with criss-cross half round grooves 16 in the faces of the portions 12 and 13, and along the forward peripheral edges, as at 17, has quarter round grooves which, with the criss-cross grooves, serve as ornamentation and to simulate courses of standard bricks.

Wedge-shaped longitudinal tongues or ribs 18 and 18ª are formed on the periphery of the face portion 10 on both of the converging portions 12 and 13 on two adjoining sides of the brick and extend continuously substantially from end to end along the top of the brick and down one end of the portion 13 as shown in Fig. 2. On the opposite adjoining sides are provided continuous longitudinal grooves or channels 19 and 19ª. The grooves 19 of the bricks are adapted to receive the tongues 18 of other bricks arranged in superimposed contiguous relation therewith in a structure. The purpose of having these tongues and grooves wedge-shaped is to produce a wedging action to bind the bricks together at the joints between contiguous bricks which, with the binder of mortar ordinarily spread in between the bricks, will tend to compensate for slight variations in the bricks arising in the manufacture thereof and will make for substantially moisture sealing joints, which of course serve the paramount purpose of shielding against the weather. A further purpose in this provision is to insure that contiguous bricks will stay in alinement under all circumstances and at least provide a continuous wall uninterrupted by crevices or openings which, besides being unsightly, are highly undesirable since they afford access to the inside of the wall for moisture which if admitted results in dampness in the building and consequent rotting or disintegration not only of the facing bricks themselves but of the substructure or inner sustaining wall. One of the principal objects, however, in providing this construction is that the lower end of the brick in each of the converging portions of the brick, which as will later appear has no other means of attachment besides the bond of mortar referred to will, due to the wedging action, be urged inwardly snugly against the inner wall. The action in each of the converging portions of the brick is similar and causes the brick to lie close against the corner of the inner sustaining wall so that bulging and loose lapping of the bricks is avoided.

Where a considerable number of courses of facing bricks are laid a certain amount of misalinement is apt to occur usually because of irregularities in the inner sustaining wall. This is perhaps most noticeable at the corners of the building where the irregularities most frequently arise in the junction of the adjoining walls. I have found it desirable to provide in connection with the corner bricks dowel pins or nails or other suitable means such as that shown at 20 which may be interposed between the superimposed bricks. These pins are entered in sockets 21 provided in the bottom and top of the bricks at the junction of the converging portions thereof. Each of the sockets is arranged in register with another socket in another brick disposed in superimposed contiguous relation in the structure in the manner shown in Fig. 5 so that each of the sockets receives a portion of the pin. Some of the mortar spread between the bricks entering the sockets as shown at 22 serves as a bond between the bricks and seals the pin securely in place. The sockets 21 may be countersunk as at 23 in order that a generous supply of mortar may enter the sockets. With the pins in place the corner bricks are insured of proper alinement as respects the converging portions in the two adjoining walls so that the corner brick will line up and match properly with the bricks juxtaposed in both walls.

The bricks are held to the sustaining inner wall or skeleton frame structure preferably by means of nails or other fastenings which are driven through the flanges of the bricks into the studding or other uprights comprised in the inner wall. For this purpose the bricks have holes 24 in the flange 14 in each of the converging portions of the brick extending through the flange diagonally downwardly from the base of the flange in the general direction of the lower side of the brick remote from the flange substantially as shown in Fig. 3. Each of these holes receiving the nails or other fastenings may be countersunk as shown at 25 to admit the heads of the nails which preferably are driven home into the studding and properly set to fasten each brick securely. By countersinking the holes there is avoided the formation of obstructions to the entering edge of the face portion of the superimposed bricks.

The action resulting from the bricks being fastened in the manner provided for will perhaps be best understood by reference to Fig. 3. It will be assumed for the purpose of illustration that the brick shown in Fig. 3 is to be superimposed upon another brick similar in conformation to this brick. The other brick may be one forming a part of a continuous structure or may be in the first and lowermost course of bricks set preferably upon a sill or a concrete foundation. Assuming that the brick illustrated in Fig. 3 is being superimposed upon another brick of a similar conformation, the brick is placed in position so that the flange 14 of the lower brick enters the recess 15 of the brick being laid. The brick may be tamped lightly so that the tongue 18 of the lower brick is re-

ceived in the groove 19 of the brick being laid. Thereupon nails will be entered in each of the holes 24 and driven either simultaneously or separately into the studding of the inner sustaining wall. Being driven diagonally downwardly the nail exerts a downward and inward pressure upon the brick on each of the converging portions resulting in a wedging action at the lower edge of the brick as a result of the coaction between the wedge-shaped tongue 18 and the groove 19. As a further consequence of driving the nails diagonally downwardly producing the wedging action referred to, the lower unattached edge of the brick is urged inwardly noticeably toward the inner sustaining wall thus preventing the formation of bulges and loose lapping. The tendency toward inward movement may be described as acting in line with each of the adjoining walls of the structure, that is, the action of the tongue and groove of one of the converging portions of the brick urges that portion inwardly toward the one adjoining wall in a line parallel with the other adjoining wall, and in a similar manner, the other converging portion is urged inwardly toward the last mentioned of the adjoining walls in a line parallel with the first mentioned adjoining wall. Furthermore, as a consequence of the use of the dowel pins there is avoided to a certain degree misalinement which would otherwise result from one of the converging portions of the brick being nailed tighter than the other, since the superimposed bricks are held quite firmly in aligned and matched relation by the dowel pins.

I claim as my invention:

1. A brick of the character described comprising converging portions for the corner at two adjoining walls of a structure, a flange provided on an inner peripheral edge of said converging portions extending substantially from end to end of said brick, and a recess formed in the opposite inner peripheral edge of said converging portions extending substantially from end to end of said brick and adapted to receive the aforementioned flange of another contiguous brick when arranged in superimposed relation therewith in a structure, a groove formed in the periphery of said brick extending substantially from one end to the other of one side thereof, and a wedging tongue formed on the periphery of said brick extending substantially from one end to the other on the opposite side thereof adapted to be received in interfitting wedging relation in the aforementioned groove in another contiguous brick when arranged in superimposed relation therewith in a structure.

2. A brick of the character described comprising converging portions for the corner at two adjoining walls of a structure, a flange provided on an inner peripheral edge of said converging portions extending continuously from end to end of said brick, a recess formed in the opposite inner peripheral edge of said converging portions extending continuously from end to end of said brick adapted to receive the aforementioned continuous flange of another brick when arranged in superimposed contiguous relation therewith in a structure, a groove formed in the periphery of said brick extending continuously from end to end on one side thereof, a wedging tongue formed on the periphery of said brick extending continuously from one end to the other on the opposite side thereof adapted to be received in interfitting wedging relation in the aforementioned groove in another brick when arranged in superimposed contiguous relation therewith in a structure, said continuous flange being provided with openings in each of the converging portions of said brick for nails or other fastenings extending through said flanges diagonally in the general direction of the side of the brick remote from said flange to secure the brick in a structure.

3. A brick of the character described comprising converging portions for the corner at two adjoining walls of a structure, a flange provided on an inner peripheral edge of said converging portions extending substantially from end to end of said brick, a recess formed in the opposite inner peripheral edge of said converging portions extending substantially from end to end of said brick and adapted to receive the aforementioned flange of another brick when arranged in superimposed contiguous relation therewith in a structure, said bricks being provided with sockets at the junction of said converging portions in the top and bottom thereof adapted each to register with similar sockets of other bricks when arranged in superimposed contiguous relation therewith in a structure whereby to receive in union therewith bonding and aligning means.

4. A brick of the character described comprising converging portions for the corner at two adjoining walls of a structure, a flange provided on an inner peripheral edge of said converging portions extending substantially from end to end of said brick, a recess of similar proportions to said flange formed in the opposite inner peripheral edge of said converging portions extending substantially from end to end of said brick and adapted to receive the aforementioned flange of another brick when arranged in superimposed contiguous relation therewith in a structure, said flange being provided with openings in each of said converging portions of said brick for nails or other

fastenings extending through said flange diagonally in the general direction of the side of said brick remote from said flange.

5. A brick of the character described comprising converging portions for the corner at two adjoining walls of a structure, a flange provided on an inner peripheral edge of said converging portions extending substantially from end to end of said brick, a recess of similar proportions to said flange formed in the opposite inner peripheral edge of said converging portions extending substantially from end to end of said brick and adapted to receive the aforementioned flange of another brick when arranged in superimposed contiguous relation therewith in a structure, said flange having openings therein in each of said converging portions of said brick for nails or other fastenings extending through said flange diagonally in the general direction of the side of said brick remote from said flange, said brick being provided with sockets at the junction of said converging portions on the top and bottom thereof adapted each to register with another socket of another brick when arranged in superimposed contiguous relation therewith in a structure whereby to receive in union therewith bonding and aligning means.

In testimony whereof, I have hereunto affixed my signature.

JOHN EDWARD EVANS.