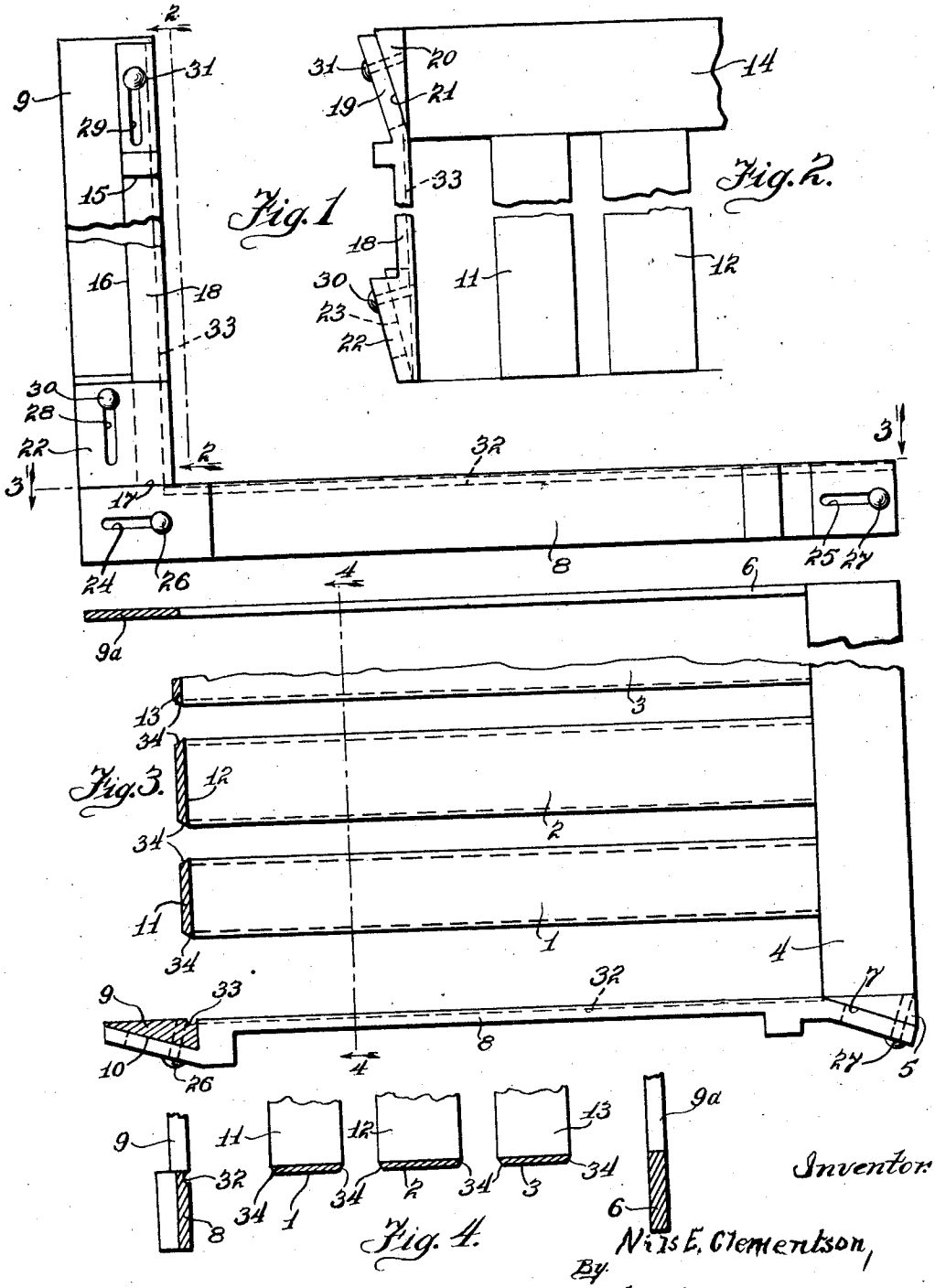
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MORTAR SHIELD

Filed June 29, 1927 2 Sheets-Sheet 1



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MORTAR SHIELD

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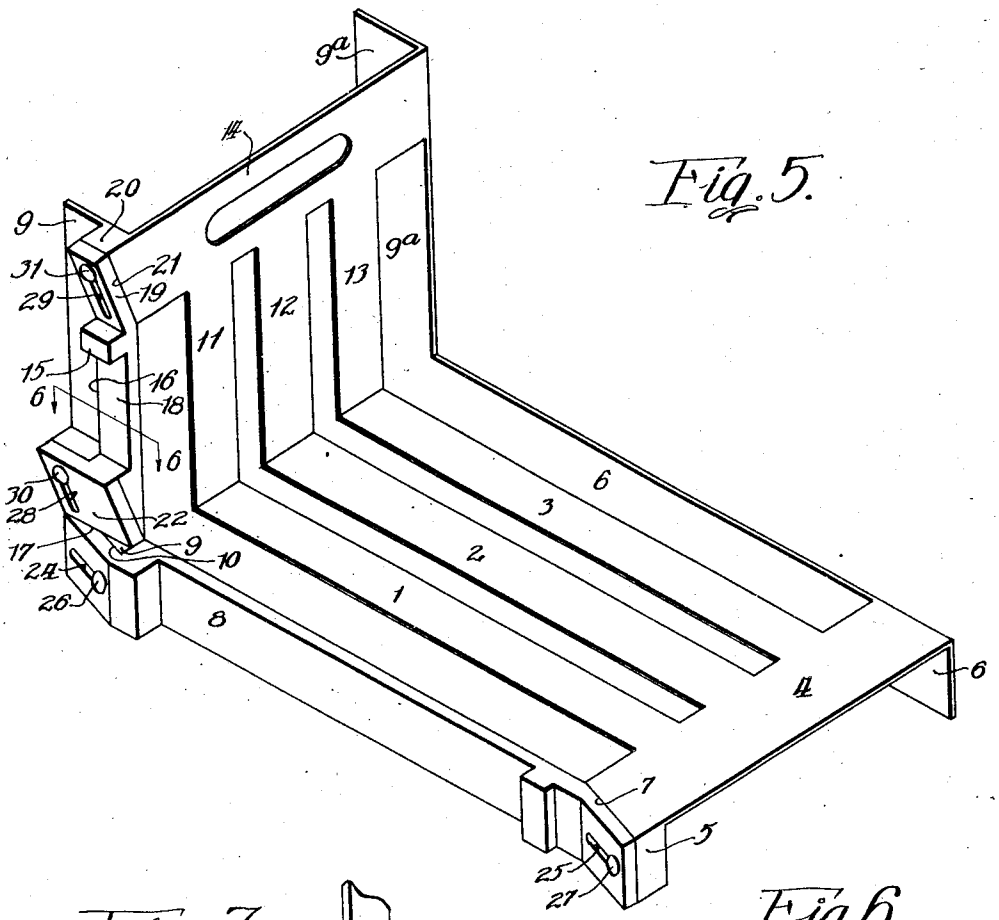


Fig. 5.

Fig. 6.

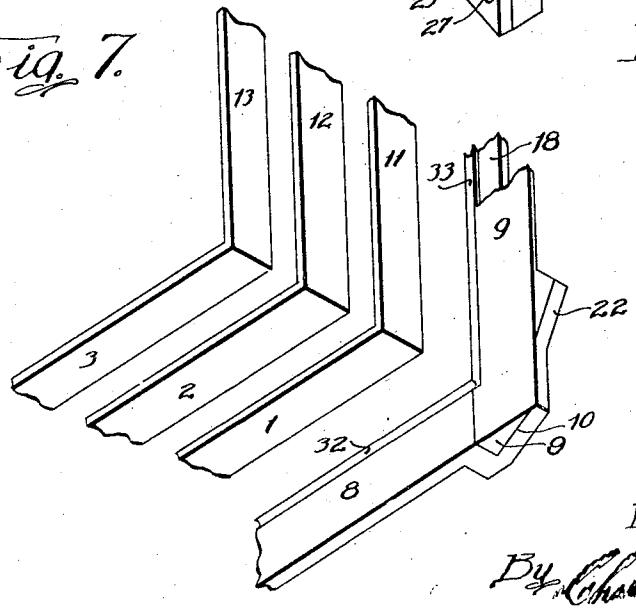
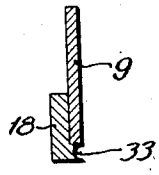


Fig. 7.



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UNITED STATES PATENT OFFICE.

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MORTAR SHIELD.

Application filed June 29, 1927. Serial No. 202,402.

This invention relates to a shield to be used in the construction of walls, partitions, and the like, from hollow concrete blocks.

Among the objects of the invention is to obtain a shield by the use of which a uniform and determined thickness of mortar may be laid on the horizontal upper faces of the several vertical outer walls and inner partition walls of a hollow concrete block in a given course, and on the vertical faces of the ends of the outer walls and inner partition walls of a block already in place in the course which is being laid on the given course above named. An additional object is to obtain a shield by the use of which, in the applying of mortar to the several faces above named, no mortar need be dropped or allowed to fall into the vertical spaces or recesses of the several blocks which are being built into the wall or partition. An additional object is to obtain a shield which is simple in construction, the manipulation of which is readily understood, and which is easily operated. An additional object is to obtain a shield which is cheaply made, is durable, and not liable to break or get out of order.

In the drawing referred to Fig. 1 is a side elevation of a device embodying the invention.

Fig. 2 is an elevation taken on line 2—2 of Fig. 1, and viewed as indicated by arrows, of the vertical member of the construction illustrated in Fig. 1.

Fig. 3 is a top plan view of the horizontal member of the construction illustrated in Figs. 1 and 2, showing the vertical member of shield in horizontal section.

Fig. 4 is a vertical section taken on line 4—4 of Fig. 3, viewed as indicated by arrows.

Fig. 5 is an isometric perspective of a mortar shield embodying the invention.

Fig. 6 is a cross section taken on line 6—6 of Fig. 5, viewed as indicated by arrows; and

Fig. 7 is a fragmentary perspective viewed from the rear, showing the grooves in the movable members of the shield.

A reference character applied to designate a given part indicates said part throughout the several figures of the drawing wherever the same appears.

This mortar shield comprises a horizontal member and a vertical member, both said members being provided with flanges by means of which the shield is positioned laterally on a concrete block of an already "set" course of blocks, and against a block which has been put in place in the course which is being laid; and both the horizontal and vertical members are provided with spaces through which mortar may be applied to the portions of the block which are exposed to view by said spaces. And the members of the shield which form the spaces are of substantially the thickness it is desired to give the layer of mortar which is applied therethrough, and the flanges of said horizontal and vertical members extend to the plane of the exposed faces of said space forming members.

1, 2 and 3 represent parallel elements of the horizontal member of the shield, and 4, (Fig. 3), represents an additional element, at one end of the horizontal member, which is illustrated as integral with the ends of the several parallel elements 1, 2 and 3. 5, 6, represent vertical flanges which extend at substantially right angles to the plane of elements 1, 2, 3 and 4. Flange 6 is preferably integral with element 4, and is so illustrated in Fig. 4, and extends the entire length of the horizontal member of the shield. Said flange 6 is also, preferably, integral with a flange, hereinafter described, on the vertical member of the shield, and where the front face of the wall which is being built up is not desired to be "pointed" the flange 5 is also integral with element 4 and with a flange on the vertical member.

Where the front face of the wall which is being built up is to be pointed on the front face thereof the flange 5 is substantially of the same width as the element 4, and is beveled or inlined on the outer face thereof, as is illustrated at 7, Fig. 3, and an additional element, 8, which is not integral with either flange 5 or with the flange of the vertical member, hereinafter designated and described; but which is movably joined to said flanges, is used. 9 represents the flange on the front edge of the vertical member of the shield, and 9^a a similar flange on the rear edge of said vertial member. Flange 6 is illustrated as integral with the portion of flange 9^a which extends below the plane of the horizontal member, and where the front face of the wall is not to be pointed the flange 5 may be integral with the portion of flange 9 which extends below said horizontal member.

Where it is desired to "point" the front

face of a wall, member 8 is mounted on the flange 5, at one end, and at the other end on the portion or part of flange 9 which extends below the plane of the horizontal member. Where member or element 8 is used the front face of flange 5 is inclined, as is illustrated by numeral 7, Fig. 3, and the front face of the portion or part of flange 9 which extends below the plane of the horizontal member is also inclined, as is illustrated by numeral 10 in said Fig. 3. The portion of flange 5 between the part thereof which is illustrated in Fig. 3 and the part of flange 9 which extends below the plane of the horizontal member of the device is cut away, and element 8 is substituted therefor, when the front of the wall is to be pointed.

The vertical member of the shield comprises the parallel elements 11, 12 and 13, which are preferably integral with the elements 1, 2 and 3, at their adjacent ends. The upper ends of elements 11, 12 and 13 are, preferably, integral with element 14, of said vertical member. The height of members 11, 12, and 13 is substantially the same as the height of the concrete blocks which are being used to build up the wall or partition.

Where the front face of the wall is to be pointed the flange 9 is cut away, as on lines 15, 16 and 17, and the cut away portion or part is replaced by the element 18. When element 18 is used the upper end, (designated by numeral 19) extends on to the upper end of flange 9, (designated by numeral 20), and the meeting faces, 19, 20, are inclined, as is indicated by the numeral 21, Fig. 2. 22 represents what may be termed, although it is integral with element 18 when the shield is made of cast metal as is preferred, a cleat or bar, near the lower end of element 18, and extending over on to the part or portion of flange 9 which is adjacent thereto. The meeting faces of element 18 and flange 9 are inclined, as is indicated by the numeral 23, Fig. 2.

The element 8 is provided with slots, 24, 25, adjacent to its ends, and 26, 27, respectively, represent screws or bolts, which extend through said slots and into flanges 5 and 9. Said element 8 is thus held closely to said flanges, at its ends, and between said ends the front face thereof is in the same plane, when in the position illustrated in Figs. 2 and 4, as the front face of said flanges; and when said element 8 is moved longitudinally it is retracted from said plane; but is at all times substantially parallel thereto, when so moved.

The upper end, 19, of element 18, and cleat 22 are, respectively, provided with slots 28, 29, and 30, 31, respectively, represent screws or bolts which extend through said slots and into the flange 9. Said element 18 is thus held closely to said flange 9, at its ends, and between said ends the front face thereof is in the same plane, when in the position illustrated in Figs. 2 and 4, as the front face of said flange; and when said element is moved longitudinally it is retracted from said plane; but is at all times parallel thereto.

The element 8 is provided with the groove 32 along and adjacent to the upper edge thereof, Fig. 4, (also indicated by broken lines in Figs. 1 and 3). The element 18 is provided with a similar groove along and adjacent to the front edge thereof, which is indicated by the numeral 33, with lead line to the broken perpendicular line parallel to the forward edge of said element, Fig. 1. Groove 33 extends from the lower end of the element 18 to a height substantially equal to the height of the concrete blocks which are being laid, that is, to the lower edge of element 14.

Horizontal elements 1, 2 and 3 are bevelled or inclined at the edges, as are also elements 11, 12 and 13. These inclined faces are to permit the removal of the shield from mortar after it has been spread between said parallel members or elements, and are indicated by the numeral 34.

The manner in which the shield is used is: Elements 8 and 18 being in the position in which they are illustrated in the several figures, the horizontal member of the shield is laid on the horizontal upper face of a block in the course below the one which is being laid, and the vertical member thereof is moved into contact with the vertical face of a block in the course which is being laid, and which has already been put in place in said course. Mortar is then applied in the spaces between the elements 1, 2, 3, and between the outer ones of said elements and the upper edges of the flanges 5 and 6, (where no pointing of the front face of the wall is desired), and where pointing is desired the mortar is laid between the outer edge of element 1 and the upper edge of element 8, and into the groove 32. Mortar is also applied between the elements 11, 12 and 13, and between the outer edges of elements 11 and 13 and the forward edges of flanges 9 and 9a. Where the vertical joint on the front of the wall is to be pointed and the element 18 is built into the shield, mortar is applied between the outer edge of element 11 and the forward edge of element 18, and into the groove therein.

The elements 8 and 18, respectively, are then moved longitudinally and so retracted from the mortar in the grooves and the shield can be removed from the mortar without disturbing the same. The proper concrete block is then put in place in contact with the freshly applied mortar, and the same actions are repeated.

I claim:

1. A mortar shield consisting of a horizontal and a vertical member respectively consisting of parallel elements and end elements joined to said parallel elements, to hold said parallel elements in spaced relation, in combination with flanges joined to said end elements and at substantially right angles to said end and parallel elements, all arranged to obtain spaces in which mortar may be applied to determined faces of blocks which are being built into a wall.

2. A mortar shield consisting of a horizontal and a vertical member respectively consisting of parallel elements and end elements joined to said parallel elements, to hold said parallel elements in spaced relation, in combination with flanges joined to said end elements and at substantially right angles to said end and parallel elements, and additional members mounted on determined ones of said flanges, said additional members provided with longitudinally extending grooves, said parallel elements, flanges, additional members and grooves all arranged to obtain spaces in which mortar may be applied to determined faces of blocks which are being built into a wall, and said additional members longitudinally movable, and means to retract them from said mortar when so moved in a determined direction.

3. A mortar shield consisting of a horizontal and a vertical member respectively consisting of parallel elements and end elements joined to said parallel elements, to hold said parallel elements in spaced relation, in combination with flanges joined to said end elements and at substantially right angles to said end and parallel elements, and additional members mounted on determined ones of said flanges and said additional members provided with longitudinally extending grooves, said parallel elements, flanges, additional members and grooves all arranged to obtain spaces in which mortar may be applied to determined faces of blocks which are being built into a wall, inclined faces at the ends of said additional members, correspondingly inclined faces on the surfaces of said determined flanges contacting therewith, and means to hold said inclined faces in slidable contact.

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