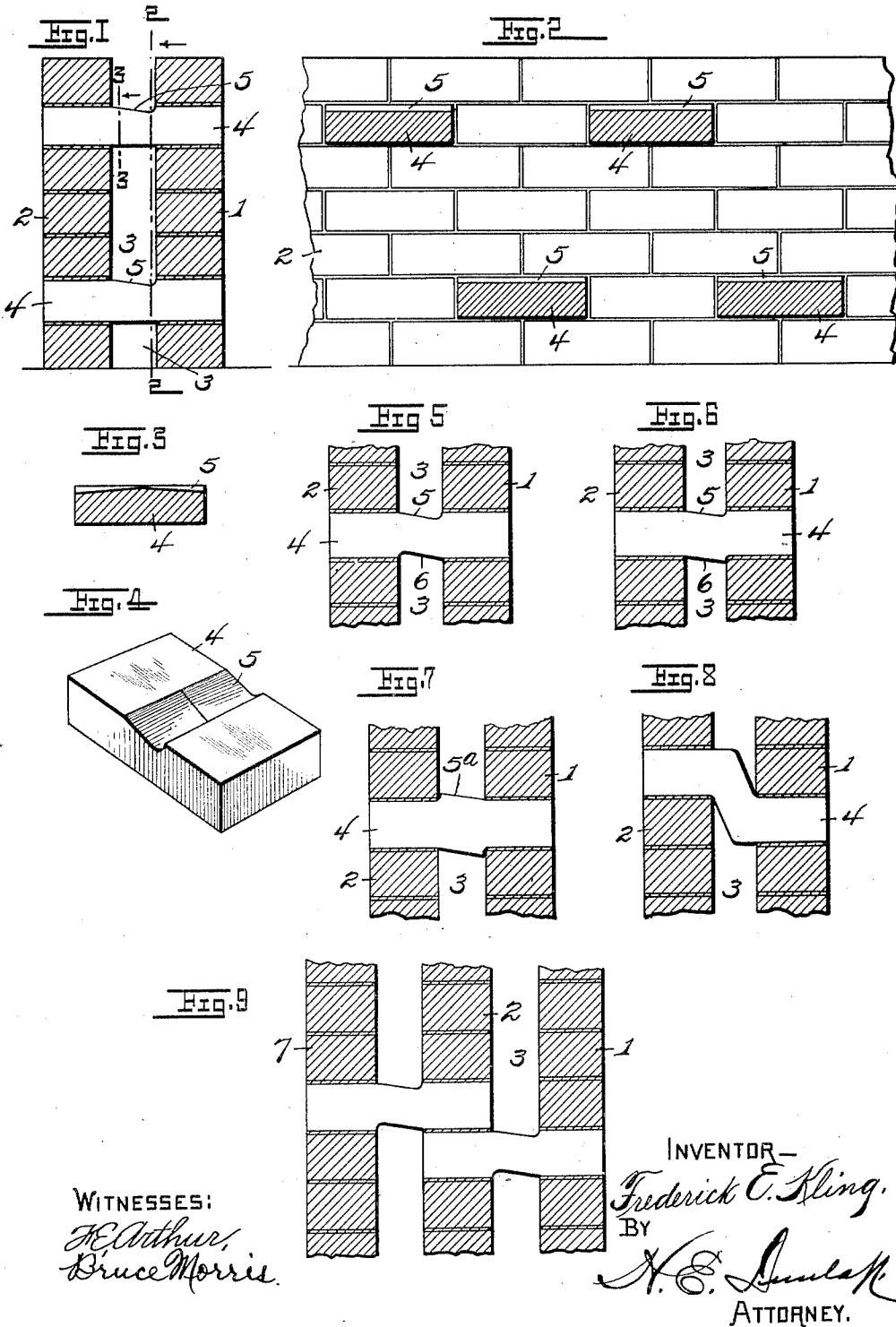


F. E. KLING.
WALL CONSTRUCTION.
APPLICATION FILED SEPT. 24, 1910.

1,009,754.

Patented Nov. 28, 1911.



UNITED STATES PATENT OFFICE.

FREDERICK E. KLING, OF YOUNGSTOWN, OHIO.

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Specification of Letters Patent.

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Application filed September 24, 1910. Serial No. 583,580.

To all whom it may concern:

Be it known that I, FREDERICK E. KLING, a citizen of the United States of America, and resident of Youngstown, county of Mahoning, and State of Ohio, have invented certain new and useful Improvements in Wall Construction, of which the following is a specification.

This invention relates to improvements in wall construction, and more particularly to a wall composed of a plurality of separated walls having open air-spaces between them.

The primary object of the invention is to provide a building wall which is proof against the passage of dampness or moisture therethrough.

A further object is to provide a wall composed of two or more separate narrow walls which are connected or united in such manner as to give it the strength of a solid wall construction of equal thickness.

A still further object is to construct a wall wherein is provided open spaces which admit of a continuous circulation of air for absorbing and removing any moisture which permeates the outer divisional portion thereof. And a still further object is to provide a novel form of header, or tie, by means of which adjacent wall-sections are united or joined to constitute a solid rigidly related structure.

With these and other objects in view, the invention accordingly consists in the features of construction, arrangement and combinations of parts which will hereinafter be exemplified, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a transverse vertical section of a wall constructed according to my invention; Fig. 2 is a longitudinal sectional view of the same taken on the line 2—2, Fig. 1; Fig. 3 is a cross-section of a header taken on the line 3—3, Fig. 1; Fig. 4 is a detail perspective view of a header; Figs. 5, 6, 7 and 8 are sections similar to Fig. 1, illustrating modified forms of header; and Fig. 9 is a section similar to Fig. 1, showing a triple wall construction.

Referring to said drawing, in which like designating characters distinguish like parts throughout the several views—1 and 2 respectively indicate the outer and inner parallel members of a wall, said members being separated so as to leave between them an open space 3 for the free circulation of air

whereby any moisture which permeates the said outer member 1 may be absorbed and pass from the wall. Each of said wall-members 1 and 2 is preferably formed of a single row of superposed tiers of bricks, blocks, or stretchers, which are disposed lengthwise, and said members are joined or united at spaced intervals by headers 4 which displace a brick, block, or stretcher, in each member, extending from the outer face of the outer member 1 across the open space 3 to the outer face of the inner member 2.

On the upper face of each header 4 and extending from the inner face of the inner wall-member 2 to the inner face of the outer wall-member 1 is an inclined face 5, preferably formed by the provision of a transverse furrow in said upper face, as is clearly shown in Fig. 4, said furrow having its greatest depth at a point adjacent to the inner face of the outer wall member 1. Any moisture which may collect upon and run down the inner face of the inner wall-member 2 will engage said inclined face 5 of one of said headers 4, the latter being arranged in staggered relation, and will thereby be conducted toward the outer member 1. Further, any water or moisture leaking through the outer member 1 will be prevented by the inclined faces 5 of the headers from reaching the inner member 2. The furrow in the upper face of each header is preferably inclined downward from a median point toward each of the lateral edges of the latter, as is clearly shown in Figs. 3 and 4, for directing such moisture as is collected in said furrow to points whence it will pass down the inner face of the outer wall member. Thus it will be seen that the inner wall member will at all times be kept practically free from moisture.

The forms of header depicted in Figs. 5 and 6 differ from the preferred form illustrated in Figs. 1 to 4, inclusive, only in having inclined under face portions 6 instead of the straight flat faces shown in the last-mentioned figures.

In Fig. 7 the upper face of the header is modified by the provision of an elevated inclined face 5^a.

In Fig. 8 is illustrated a header whose opposite ends occupy different horizontal planes, adapting it for mounting in opposing wall members 1 and 2 with the end in the outer member located one tier of bricks,

blocks, or stretchers, lower than the position in the inner member occupied by its opposite end.

5 As is obvious, water or moisture entering through the outer member 1 is more effectually prevented from reaching the inner wall by having the under face portions of the headers inclined as shown in Figs. 5 to 8, inclusive.

10 The wall depicted in Fig. 9 consists of three separate wall members, the inclusion of the member 7 being merely an addition which constitutes an extension of the idea involved and which might be carried on indefinitely; but which would, for obvious reasons, cease to be practicable, under ordinary circumstances, if carried farther than the triple wall shown in said figure.

15 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

20 1. A wall comprising a plurality of separate wall-members composed of blocks and having an air-space between adjacent members, and headers extending across said air-space and having their opposite ends mounted in the opposite members; displacing a block in each member, each header being of uniform width throughout and having a transverse furrow across its upper face extending substantially from the inner face of the inner wall-member to the inner face

of the outer wall-member, said furrow increasing in depth from the former to the latter and having a downward and outward inclination from a substantially median line to the lateral edges of the header. 35

2. A wall comprising a plurality of separate wall-members with an air-space between adjacent members, and headers extending across said air-space and having their opposite ends mounted in the adjacent members, each header having a transverse furrow across its upper face extending substantially from the inner face of the inner wall-member to the inner face of the outer wall-member, said furrow increasing in depth from the former to the latter and being inclined downward from a substantially median point to the opposite lateral edges of the header. 40 45 50

3. As an article of manufacture, a header having a transverse furrow across its upper face, one of the sides constituting said furrow having a materially greater inclination than the opposing side, and said furrow being increased in depth from a substantially median line to the ends thereof. 55

In testimony whereof I affix my signature in presence of two subscribing witnesses.

FREDERICK E. KLING.

Witnesses:

WM. W. ZIMMERMAN,
ROBT. O. KIELING.