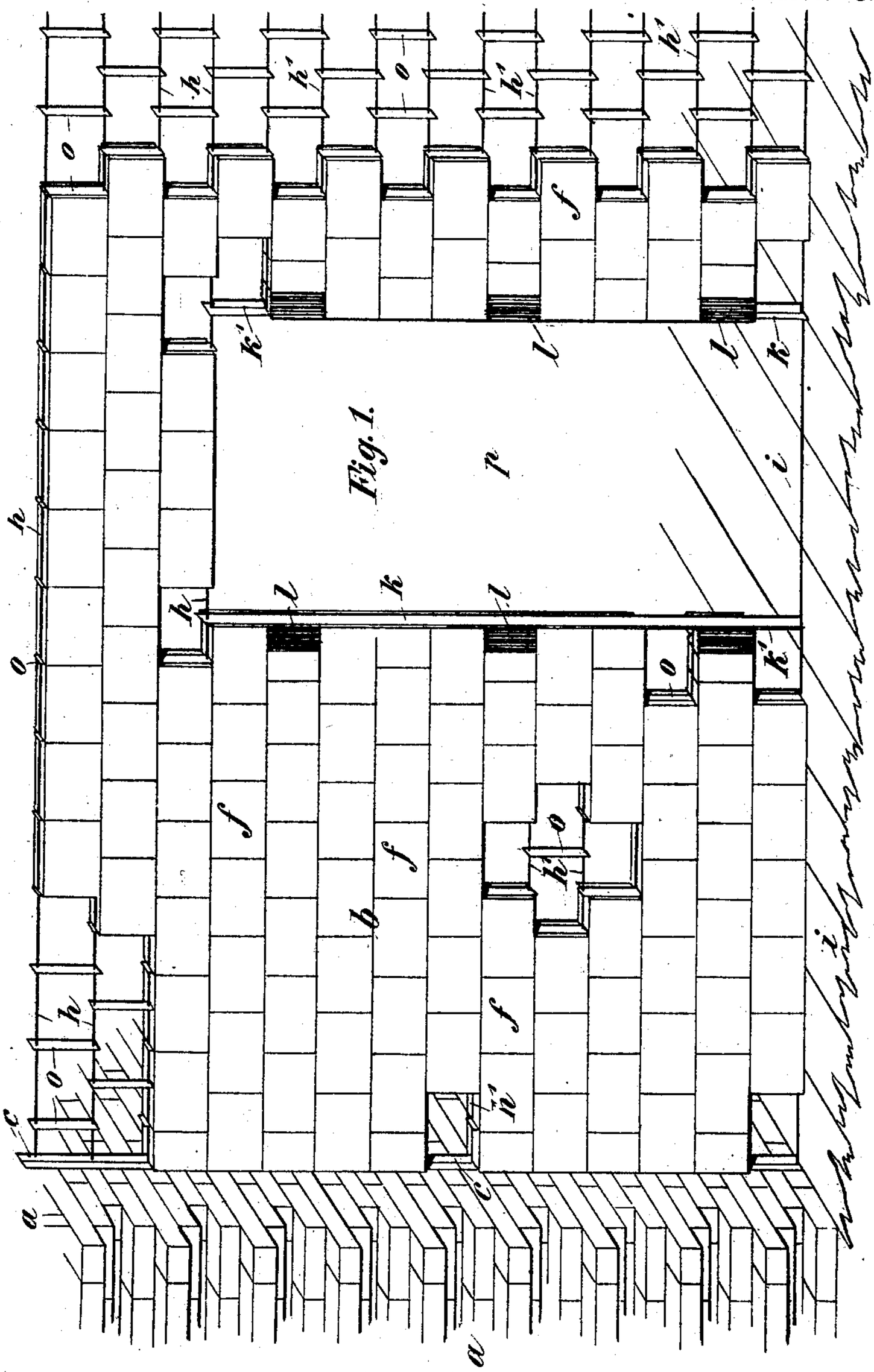
No. 666,079. Patented Jan. 15, 1901.

F. WEHLING.

SUSPENDED CROSS WALL.

(Application filed July 31, 1900.)

(No Model.) 2 Sheets—Sheet 1.



Witnesses:
H. C. Hammond.
A. Zeringer

Inventor:
Fanny Wehling
by Knight Bros.
Attys

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Fig. 3.

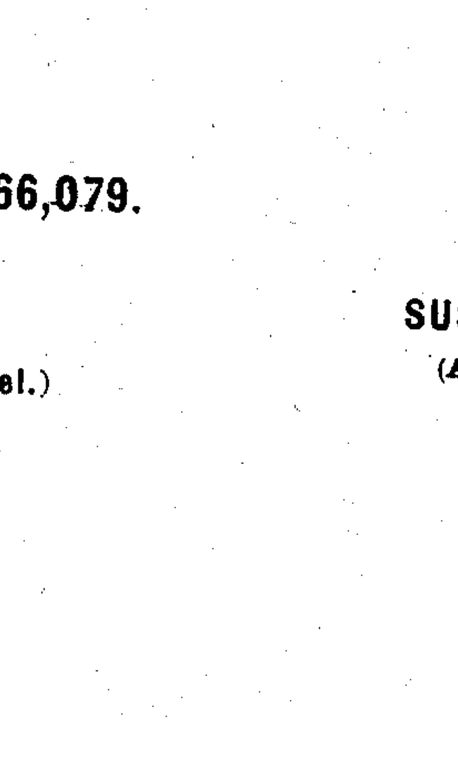
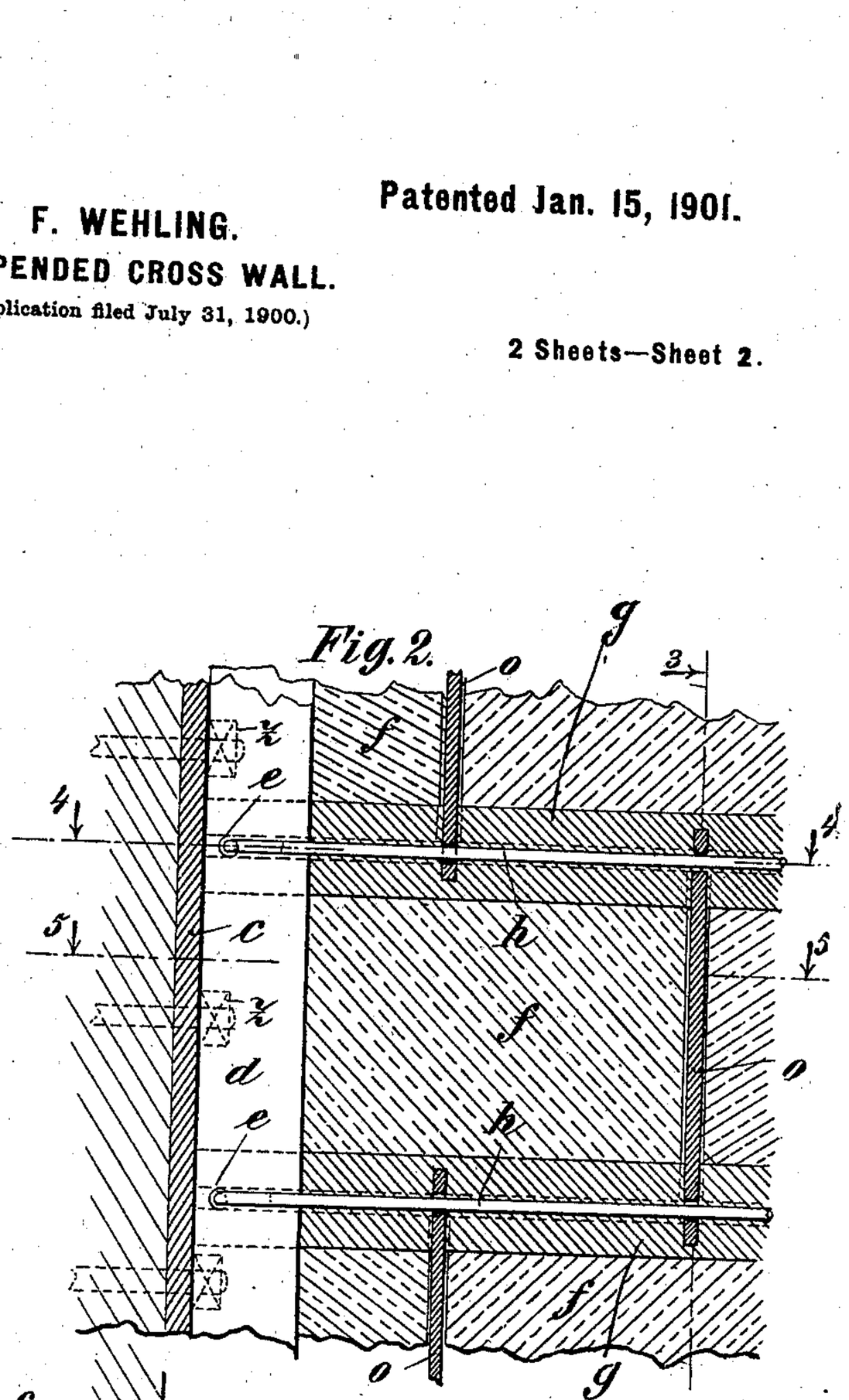


Fig. 2.



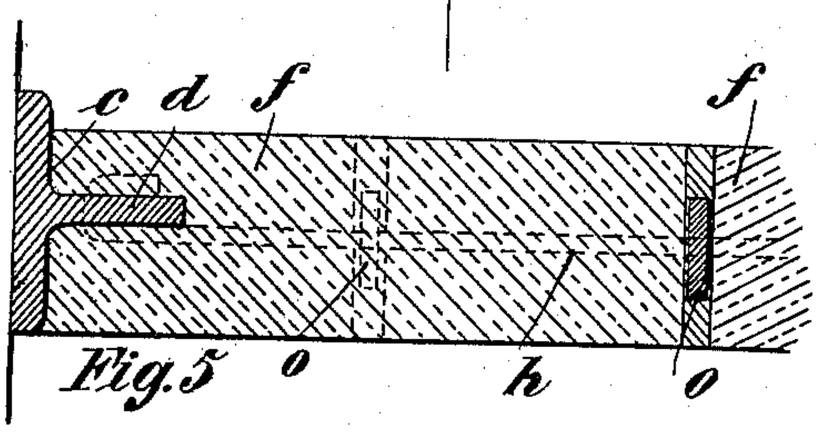


Fig. 5

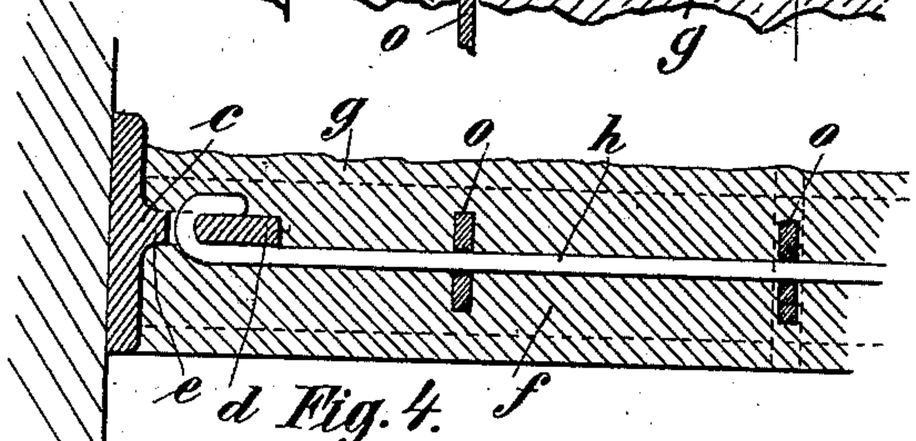
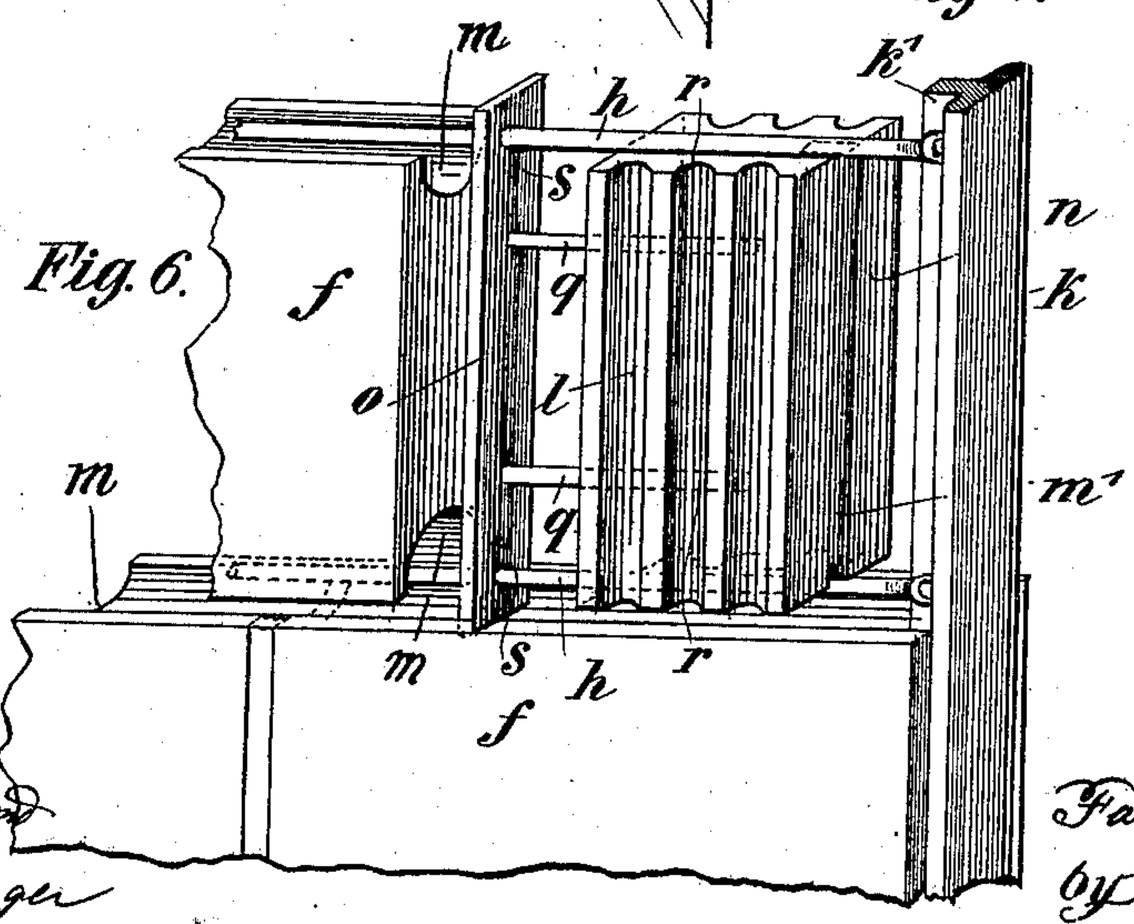


Fig. 4.

Fig. 6.



Witnesses:
H. P. Hammond
A. B. Levinger

Inventor,
Fanny Wehling,
by Knight Bros
Attys.

UNITED STATES PATENT OFFICE.

FANNY WEHLING, OF BERLIN, GERMANY.

SUSPENDED CROSS-WALL.

SPECIFICATION forming part of Letters Patent No. 666,079, dated January 15, 1901.

Application filed July 31, 1900. Serial No. 25,402. (No model.)

To all whom it may concern:

Be it known that I, FANNY WEHLING, a subject of the King of Prussia, Emperor of Germany, residing at Tilsiter street 49, Berlin, in the Kingdom of Prussia and Empire of Germany, have invented certain new and useful Improvements in Suspended Cross-Walls, of which the following is a full, clear, and exact description.

The present invention relates to a cross-wall which consists of bricks set with their longitudinal edges on horizontally-arranged iron wires, the ends of the latter being rigidly secured to T-bars, which are in vertical position attached to two stronger or main walls of a building. The object of so constructing the cross-wall is to transmit its weight immediately to the stronger walls of the building where the beams of the floor above which the cross-wall is to be located are not sufficiently resistible to bear this wall.

In the drawings accompanying this specification, Figure 1 is a perspective view of a wall constructed in accordance with the present invention. Fig. 2 shows, on an enlarged scale, a vertical longitudinal section through a part of the wall. Fig. 3 is a cross-section on the line 3 3, Fig. 2. Fig. 4 is a cross-section on the line 4 4, Fig. 2. Fig. 5 is a cross-section on the line 5 5, Fig. 2. Fig. 6 is a perspective view showing the manner in which the wooden blocks intended to bear the hinges of a door are to be brought in their place.

In the drawings, *a* denotes the one of two strong walls between which the cross-wall *b* is to be located.

The reference-letter *c* denotes one of two vertically-arranged T-bars which are by screw-bolts *z* (see Fig. 2) or the like rigidly secured to the walls *a*. The ribs *d* of these T-bars are provided with holes *e*, the distance between each two of them being equal to the width of each horizontal layer of the bricks *f*, inclusive of the one thickness of concrete *g* forming the joint of the bricks *f*. By the aid of the holes *e* iron wires *h* are straightly stretched out between the T-bars *c*. Each of these iron wires must be strong enough to bear one horizontal layer of the bricks *f*. The lowest of these layers, together forming the cross-wall, rests with its one longitudinal edge upon the floor *i*, from which the cross-wall when finished extends upward, or it rests upon the wire *h*, running closely above the floor *i* from the one T-bar *c* to the other. As soon as the lowest layer of bricks has been laid the upper side of the same is covered by cement *g*, and that in such a manner that the lowest wire *h*, running along just above the lowest layer from one T-bar *c* to the other, is fully inclosed. After that the second layer of bricks is laid upon the first one, the upper side of this latter being also covered by cement, which wholly incloses the second wire *h*, and in this manner the work is to be continued until the top of the cross-wall reaches the under side of the ceiling covering the room to be divided up into two parts by the cross-wall.

The longitudinal edges of the bricks may be provided with notches *m*, so as to facilitate the enwrapping of the wires and to make the width of the joints between the horizontal brick layers independent of the diameter of the wires *h*.

If it is intended to provide the cross-wall with a door, two T-bars *k*, Fig. 1, but respectively shorter than those *c*, are inserted. Through the ends of these bars *k* run the wires *h* already described, while all the other wires *h*, arranged one above another between the end points of the T-bars *k*, run only from a bar *c* to a bar *k*. Also these wires must be rigidly secured to the T-bars *c* and *k*, so as to be able to support the respective layers of bricks. Wooden blocks *l*, Figs. 1 and 6, may be used for fastening the hinges of the door. To keep the blocks sure in their place, the ribs *k'* of the T-bars *k* may fit into a vertical notch *m'*, Fig. 6, cut into the edge *n* of each block *l*.

When it is necessary to make provision for an aperture, such as a door or window, the wires *h'* being cut by the said aperture will, it is evident, be unable to transmit their strains to the walls *a*. I therefore provide links *o*, preferably located at every vertical joint of the bricks and connecting each wire with the ones adjacent to it. In this manner substantially all the strain on the said wire *h'* will be transmitted to the wires *h* and from these latter wires to the walls *a*.

To some of the links *o* nails *q*, Fig. 6, may be secured, fitting into holes *r* at the back

side of the wooden blocks *l*, so as to keep the same rigidly in their place.

What I claim, and desire to secure by Letters Patent, is—

1. A suspended cross-wall of material adapted to be laid in courses, comprising a series of wires stretched between two supporting-walls, and blocks or slabs of material supported upon said wires, the said wires being so arranged that each course of the said material will be provided with an independent supporting-wire, as set forth.

2. A suspended cross-wall of material adapted to be laid in courses, comprising a series of wires stretched between two supporting-walls, and blocks or slabs of material supported upon said wires, links or tie-pieces connecting the adjacent wires at intervals, substantially as and for the purpose set forth.

3. A suspended cross-wall of material adapted to be laid in courses, comprising wires stretched between supporting-walls, and blocks or slabs of material composing the courses and formed with channels in their horizontal faces, for the purposes set forth.

4. A suspended cross-wall of material adapted to be laid in courses, comprising wires stretched between supporting-walls, blocks or slabs of material supported upon said wires, links or tie-pieces connecting said wires, bars of suitable material adapted to receive screws or nails and incorporated in said cross-wall, and pins rigidly secured to certain of said links and adapted to engage corresponding holes in the said blocks, for the purposes described.

5. A suspended cross-wall of material adapted to be laid in courses, comprising ribs or studs, secured to supporting-walls a series of wires stretched between said ribs or studs and corresponding in spacing and number to the courses of said cross-wall, blocks or slabs of material supported upon said wires, links or tie-pieces arranged to fasten each wire to the one adjacent to it, blocks of wood or similar material incorporated in said cross-wall, pins secured to certain of said links or tie-pieces and engaging holes in said blocks, and slots in said blocks to engage flanges on the said ribs or studs, for the purposes set forth.

6. A suspended cross-wall of material adapted to be laid in courses, comprising ribs or studs forming the framework of an aperture in said cross-wall, wires stretched between said ribs or studs and the supporting-walls, wires stretched between the supporting-walls, blocks or slabs supported upon said wires, and links or tie-pieces arranged to fasten each wire to the one adjacent to it, as set forth.

In witness whereof I subscribe my signature in presence of two witnesses.

FANNY WEHLING.

Witnesses:

ALBERT GRÜNFELD,

WOLDEMAR HAUPT.