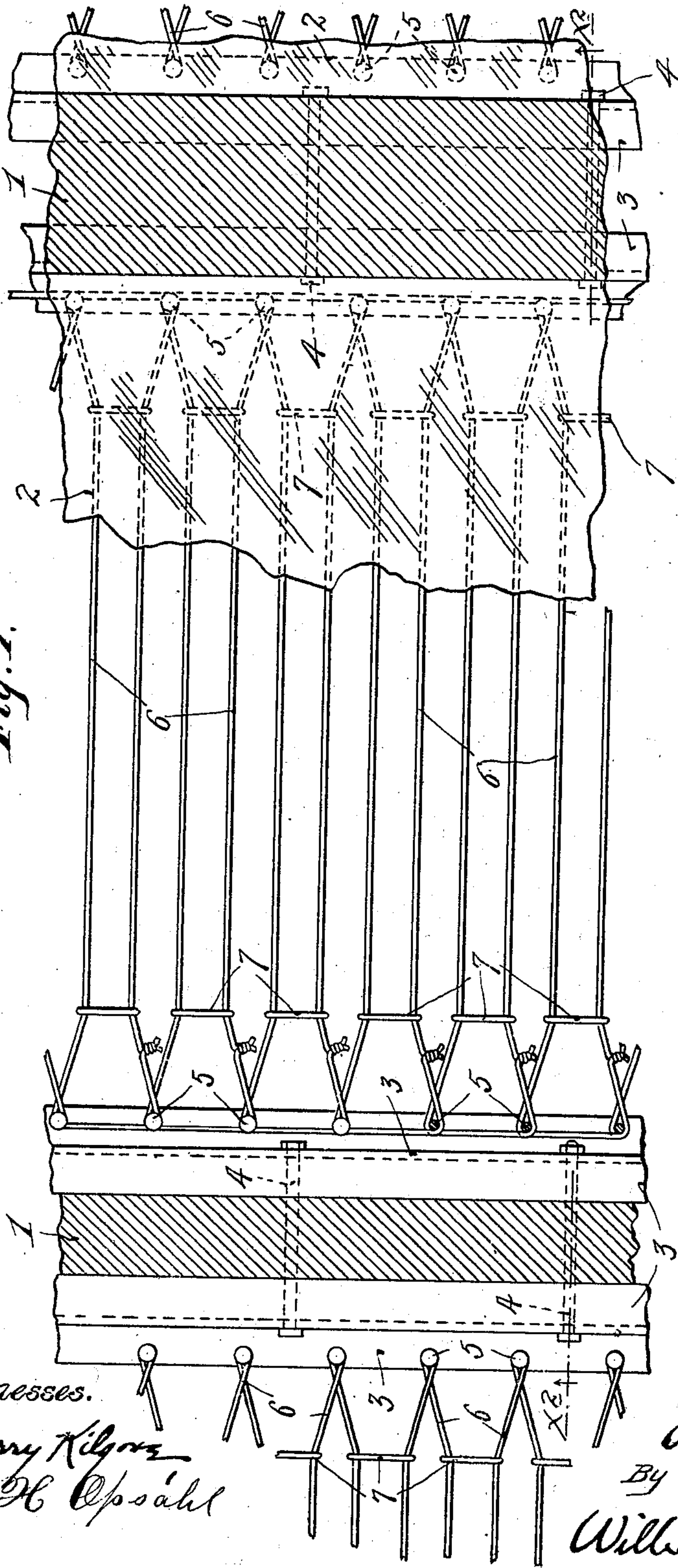


C. F. HAGLIN.
FIREPROOF FLOORING.

(Application filed May 23, 1901.)

(No Model.)

Fig. 1.



Witnesses.
Harry Kilgore
a H Opsahl

Fig. 2.

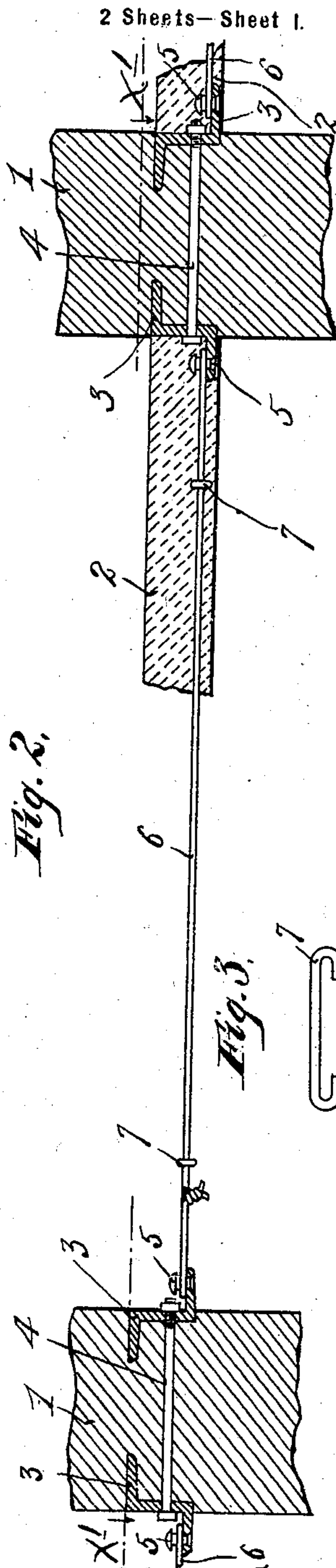
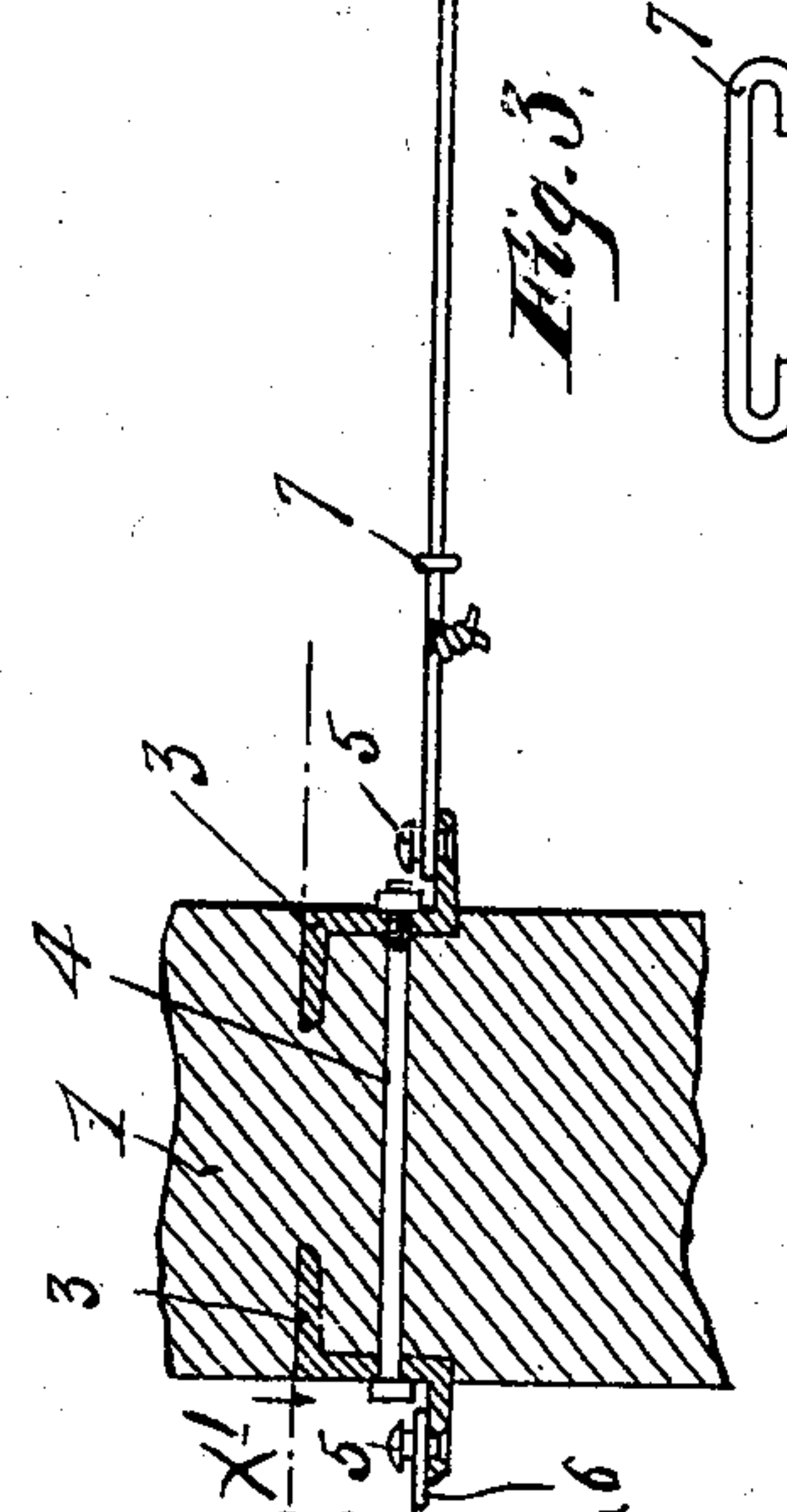


Fig. 3.



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2 Sheets—Sheet 2.

Fig. 4.

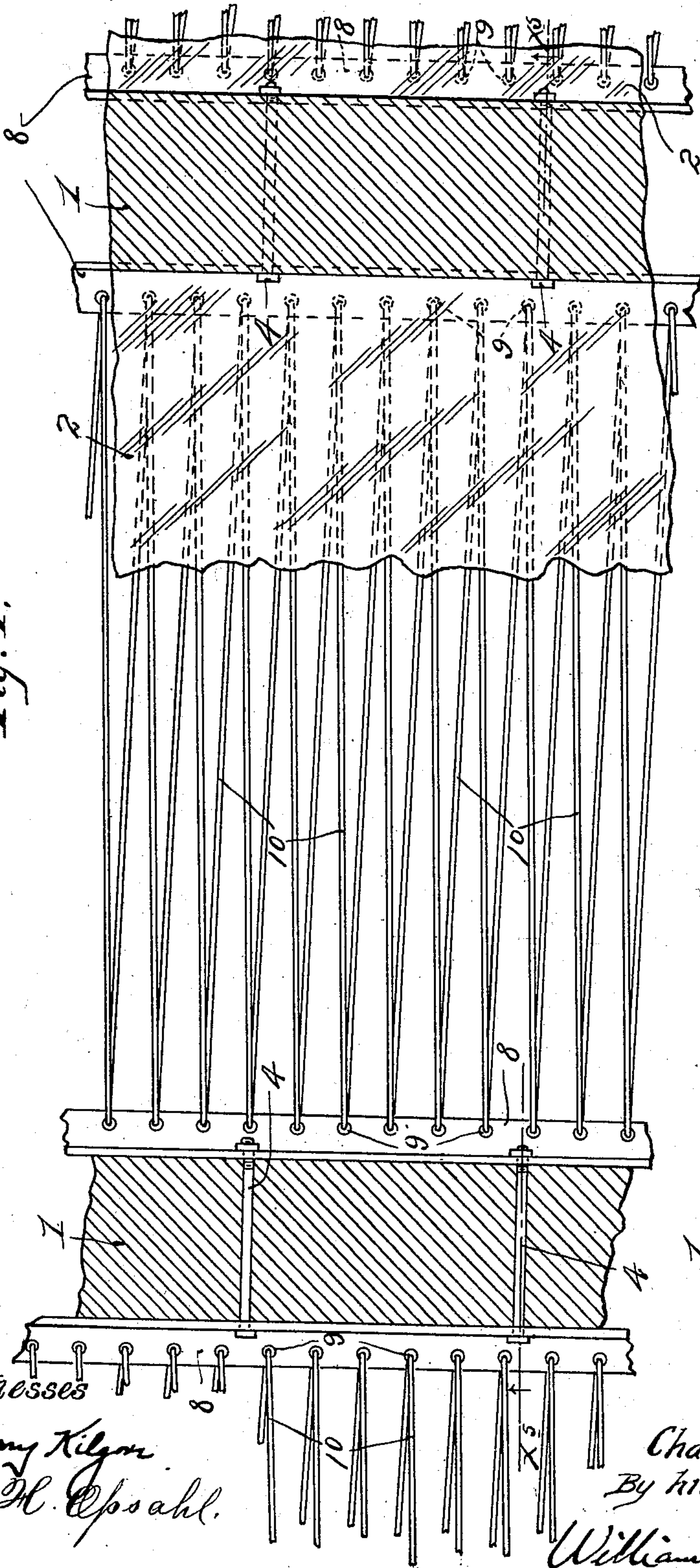
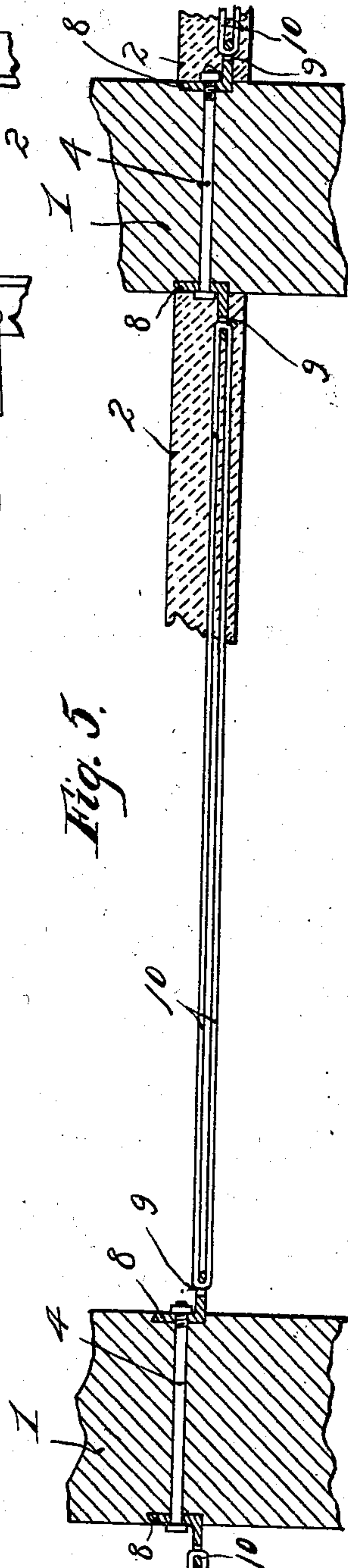


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHARLES F. HAGLIN, OF MINNEAPOLIS, MINNESOTA.

FIREPROOF FLOORING.

SPECIFICATION forming part of Letters Patent No. 708,764, dated September 9, 1902.

Application filed May 23, 1901. Serial No. 61,497. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. HAGLIN, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Fireproof Flooring; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My present invention has for its especial object to improve the construction of fireproof floors wherein concrete is reinforced and supported by embedded wires.

To the above ends the invention consists of the novel devices and combinations of devices hereinafter described, and defined in the claims.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout the several views.

Figure 1 is a view, partly in plan and partly in horizontal section, on the line $x'x'$ of Fig. 2, some parts being broken away, showing the floor and walls of a building, the same being connected and constructed in accordance with my invention. Fig. 2 is a vertical section on the line x^2x^2 of Fig. 1. Fig. 3 is a detail of one of the so-called "tightening-links." Fig. 4 is a view corresponding to Fig. 1, but illustrating a modified construction; and Fig. 5 is a vertical section on the line x^5x^5 of Fig. 4.

My present invention is directed more particularly to the means for securely connecting or anchoring the composition floor to the walls of a building.

In the drawings the numeral 1 indicates the walls of the building, and the numeral 2 indicates the concrete body of the floor.

In the construction illustrated in Figs. 1 to 3, inclusive, horizontally-extended Z-shaped floor-beams 3 are partially embedded in the walls 1, with one flange of each beam projecting from the walls and serving as ledges upon which rest the adjacent edges of the cement floor 2. The beams 3 on the opposite sides of the walls 1 extend in the same planes, and at intervals they are securely tied together by nutted tie-bolts 4, passed through the bodies thereof and through the

embraced wall. The projecting flanges of the said floor-beams 3 are provided at suitable intervals with headed studs or pins 5. The floor-wires 6 are stretched over the pins 5 in any one of several different ways—as, for instance, by using a series of loops, as shown in Fig. 1, and then tightening the said loops by driving the tightening-links 7 thereon toward the said pins 5. This arrangement of the floor-wires is not herein claimed, as the same is claimed broadly in my pending application, Serial No. 37,229, filed November 21, 1900, and allowed April 24, 1901, entitled "Fireproof floors." The said wires 6 are of course embedded in the body of the concrete floor 2, and they are preferably stretched to more than their normal lengths, so as to resist the initial downward-springing tendency of the floor.

In the construction illustrated in Figs. 4 and 5 the floor-beams 8 are connected and clamped to the wall 1 by the nutted clamping-bolts 4 in the same manner as are the beams 3, previously described; but in this instance the said beams are afforded by angle-irons, the outwardly-projecting flanges of which are perforated, as indicated at 9. The floor-wire 10 is threaded through the said perforations 9 in the manner illustrated in said Figs. 4 and 5.

The walls 1, it will of course be understood, may be either of brick, concrete, or any other suitable construction, and the floor-beams may be more or less embedded therein. The said floor-beams may take other forms than those described, but should in all cases be flanged beams having flanges which project so as to form shelves for the adjacent edges of the cement floor and a convenient device to which the floor-wires may be anchored or secured.

In the illustration given a single section or span of the floor is shown as extended from one wall to another. In practice very frequently intermediate floor-sections would be interposed between the walls.

With the above-described construction, it will be seen that the tension of the floor-wires on the opposite sides of one of the walls pull against each other, through the tie-bolts 4, so that the floors of a series of rooms are rigidly tied together.

The above construction is extremely strong and it is quickly put together and, furthermore, is of comparatively small cost. It will of course be understood that many other modifications (not above illustrated) may be made within the scope of my invention. It would be within the scope of my invention as defined in the claims to turn the concrete body, designated as a "floor," into a vertical position, and thereby make the same serve as a wall.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. The combination with a wall and the concrete body of a floor, of parallel flanged beams on the opposite sides of said wall, bolts or rods passed through said wall and through the bodies of said floor-beams, which floor-beams have laterally-projecting flanges, and floor-wires anchored to said projecting flanges and embedded in the concrete floor-body, substantially as described.

2. The combination with a wall and the concrete body of a floor, of a flanged beam se-

cured to said wall, and floor-wires bent upon themselves and threaded over and over through perforations in the flange of said beam, which wires are embedded in the concrete body of the floor, substantially as described.

3. The combination with laterally-spaced walls and the concrete body of a floor extending between said walls, of flanged beams secured to said walls and provided with laterally-projecting flanges, and floor-wires bent successively in one direction and then in the other and threaded over and over through perforations in the projecting flanges of said two beams, which wires are embedded in the said concrete floor-body, substantially as described.

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

CHARLES F. HAGLIN.

Witnesses:

ELIZABETH KELIHER,
F. D. MERCHANT.