

No. 685,143.

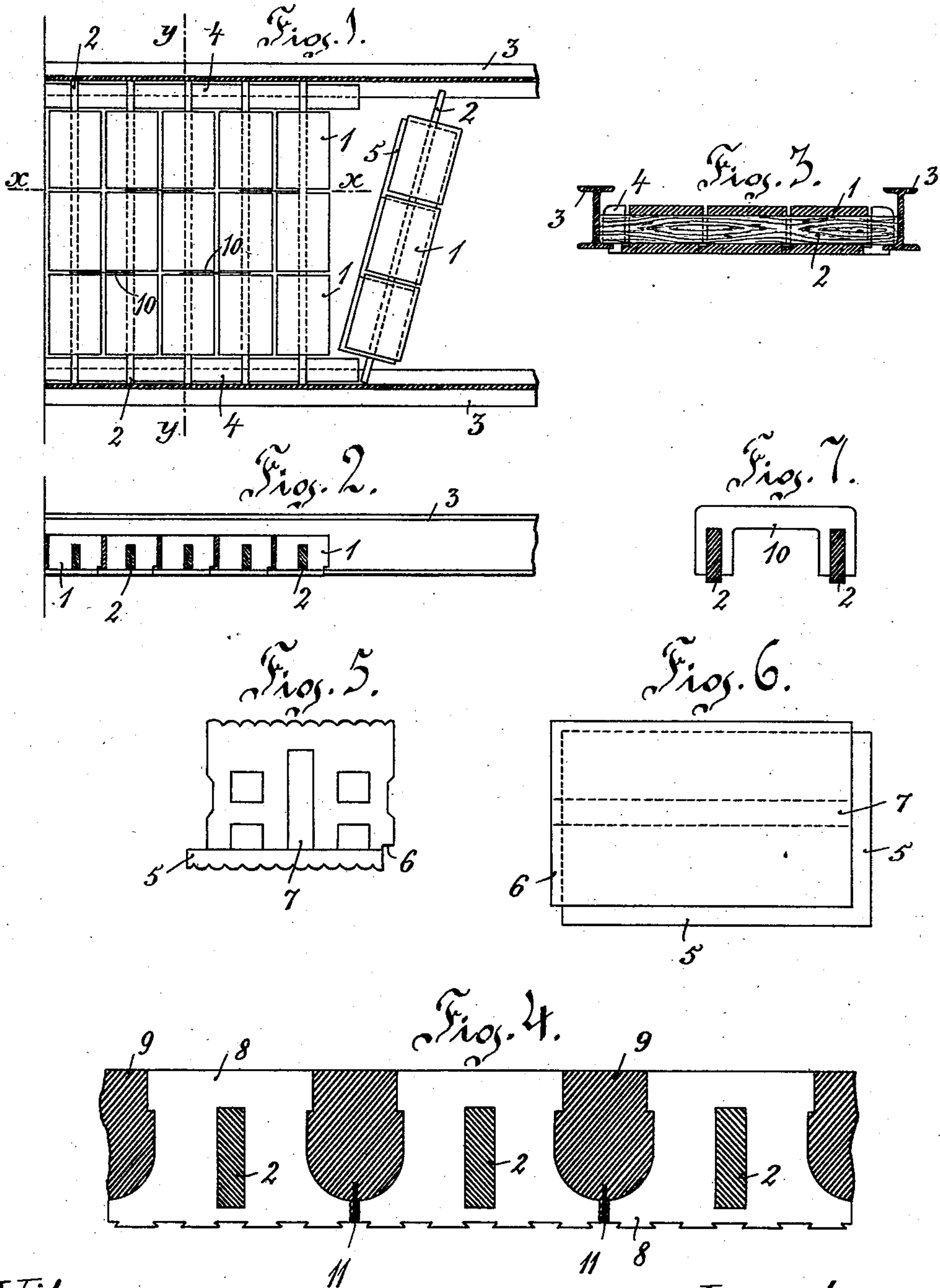
Patented Oct. 22, 1901.

S. HÖYER-ELLEFSSEN.

FIREPROOF FLOOR.

(Application filed Apr. 19, 1901.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

SIGURD HÖYER-ELLESEN, OF CHRISTIANIA, NORWAY.

FIREPROOF FLOOR.

SPECIFICATION forming part of Letters Patent No. 685,143, dated October 22, 1901.

Application filed April 19, 1901. Serial No. 56,555. (No model.)

To all whom it may concern:

Be it known that I, SIGURD HÖYER-ELLESEN, a citizen of the Kingdom of Sweden and Norway, residing at Christiania, Norway, have made certain new and useful Improvements in the Method of Building Fireproof Floors of Stone Blocks without Provisional Boarding, of which the following is a specification.

My method by which a fireproof floor in a rapid and cheap manner can be built without putting up the expensive boarding or provisional floor is substantially characterized thereby that the different bricks or blocks of which the finished floor is composed are threaded in a row upon bars, usually wood bars, which bars, being placed with the blocks transversely between the iron beams, serve as provisional supports for the different block-rows until the mortar cast between the blocks or stones has hardened, thereby connecting the blocks. The bars therefore normally will be retained in the floor; but their purpose by the present method is only preliminary—that is to say, until the vault is joined and rigid in itself—in that they serve as supports for the blocks, whereafter they, for the matter of that, may be removed, if this were possible, or they may completely decay. Besides that the putting up of the floor by my method is simplified and cheap the stones or blocks may also be made of a very simple and cheap form.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 shows a part of a vault in plan view and built according to my invention; Fig. 2, a side view of the same in section after the line xx , Fig. 1; Fig. 3, an end view of the same in section after the line yy , Fig. 1; and Fig. 4, a part of a vault of a construction a little modified. Figs. 5 and 6 represent stones or blocks of a special form in side view and plan view, and Fig. 7 a detail of the arrangement.

The separate stones or blocks 1 are placed, as shown in Fig. 1, upon a wood bar 2, the blocks being threaded or laid upon the same. Hanging upon the bars one block-row after another is now simply placed between two iron beams 3 3, which latter usually are made of I form. The wood bars project from the rows a little at both ends, so that the projecting part may be supported by the iron beams 3. Between the ends of each bar are laid

other stones or blocks 4, which blocks serve partly to fill up the space between the bar ends and partly to keep the bars in place, and thereby also hold the block-rows in proper position to each other with regard to the space between the rows, which is necessary for the casting of the mortar. Having in this manner arranged all the blocks 1 in proper position to each other, the casting of the mortar takes place, after the hardening of which the whole vault is finished. The bars thereby normally will be confined in the floor, whereby consequently no harm is done, but, on the contrary, the bars may also serve as common well-known stayings; but this is not the purpose of the bars used by this invention.

Figs. 5 and 6 represent a form of blocks 1 provided with edges 5, projecting from the lower part of the block on the two sides, which lie in a right angle to each other, while on the other sides the blocks have grooves 6. In the finished floor the edges 5 on the one block will engage the grooves 6 of the adjacent blocks, whereby a bottom for the mortar is formed in the space between the blocks. In order to increase the binding capacity, the stones may be provided with recesses on their sides. (See Fig. 5.) 7 is the channel or opening for the bar 2, which channel may be open in its lower part in order that the blocks may be simply laid upon the bars.

Fig. 4 represents a floor composed of blocks 8, having a smaller top or head and a larger base, between which blocks are formed spaces which are filled with concrete, leaving the top of the blocks bare, whereby is produced a floor having alternating transverse ribs, partly of blocks 8 and partly of concrete 9. A very strong floor is by this arrangement provided, when the ribs of blocks joined by means of the mortar cast between the block ends, as well as the ribs of concrete, serve as bearing parts independent of each other, so if the casting between the block ends should be defective the cast concrete ribs will relieve such defect.

As the blocks shown in Fig. 4 will have a rocking tendency before the concrete is cast, I provide provisional bows 10, Fig. 7, between the block ends, which bows connect two bars and hold them rigidly in position until the casting of concrete is finished. 11 represents

strips of iron stretched between the blocks 8, which strips also serve to strengthen the vault.

5 Other forms of stones may of course be used, the new and characteristic invention being the described method by which the fireproof floor is put up without using the common provisional floor or boarding.

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

A fireproof floor composed of bars 2, blocks 8 thereon, said blocks 8 having a smaller head

and larger base, thereby forming a space 9 between the blocks, the blocks 8 joined to a row with mortar and the space 9 between the rows filled with concrete and strengthened with strips of iron 11, thereby finishing a floor having alternating ribs partly of blocks and partly of concrete substantially as described. 15 20

In witness whereof I have hereunto set my hand in presence of two witnesses.

SIGURD HÖYER-ELLEFSEN.

Witnesses:

AXEL LAHN,

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