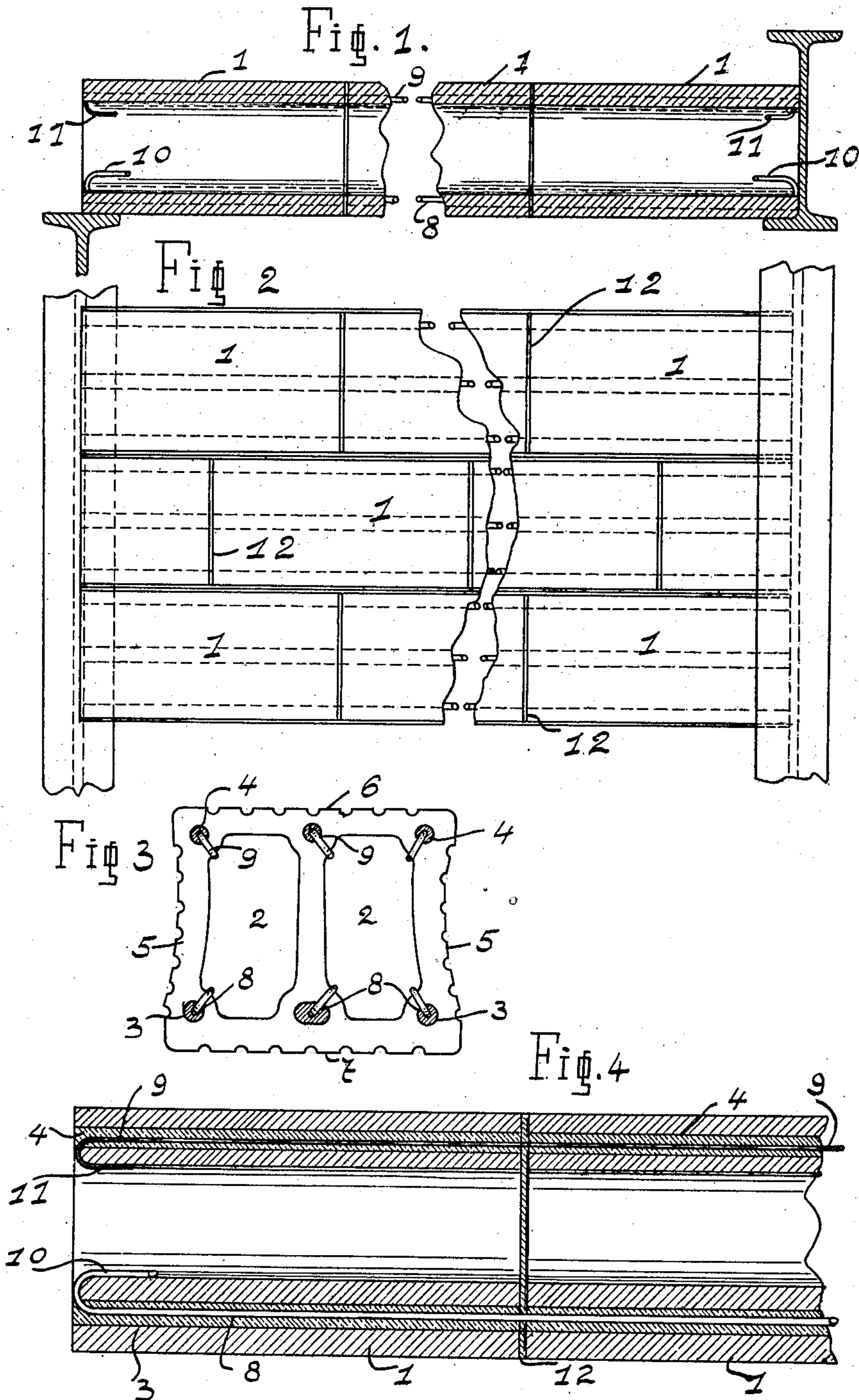


No. 895,605.

PATENTED AUG. 11, 1908.

E. UFENAST.
FIREPROOF FLOOR CONSTRUCTION.
APPLICATION FILED OCT. 23, 1906.



Witnesses:
William Schulz
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UNITED STATES PATENT OFFICE.

EMIL UFENAST, OF ZURICH, SWITZERLAND.

FIREPROOF FLOOR CONSTRUCTION.

No. 895,605.

Specification of Letters Patent.

Patented Aug. 11, 1908.

Application filed October 23, 1906. Serial No. 340,137.

To all whom it may concern:

Be it known that I, EMIL UFENAST, a citizen of Switzerland, residing in the town of Zurich, Switzerland, have invented a new
5 Improved Fireproof Floor Construction, of which the following is a specification.

The present invention relates to a hollow beam made of burnt clay and built up of several pieces or bricks for the construction of
10 ceilings, in combination with iron insertions and cement mortar. Such beams being made before they are inserted between the iron beams of the ceiling can be handled as a whole so that supports in putting them in
15 place are not necessary.

The beam may advantageously be made of a length varying from one to four meters. By laying the beams side by side a continuous ceiling is formed which may be immediately used and loaded. In order to provide
20 for the tensional strains which tend to bend the beam, the latter is armored with longitudinal iron rods or insertions which, as is known, may be very highly loaded in tension. The compressional strains, on the other hand,
25 are taken up by the hollow bricks which possess a comparatively high compressional resistance.

Cement mortar serves well for binding the
30 several bricks with the iron insertions, for as is well-known, this mortar unites intimately both with brick and iron. The abutting joints, that is to say the joints between the separate bricks of which the beam is built up,
35 are also filled with cement mortar.

The invention is illustrated in the accompanying drawings, of which

Figure 1 is a longitudinal section through a beam; Fig. 2 is a plan of several such beams
40 laid side by side to constitute a ceiling; Fig. 3 is a cross section through a beam drawn to an enlarged scale, and Fig. 4 is a longitudinal section of the beam also drawn to an enlarged scale.

45 The beam, which may be of any suitable length, is built up of one or more suitably formed hollow bricks 1 having internal spaces 2 and perforations or channels 3 and 4. The spaces 2 serve for deadening sound and at the same time diminish the weight of the brick. The lower perforations 3 are for the reception
50 of the iron insertions 8 which are to take up the tensional strain. At their outer ends, rods 8 are bent over the ends of the beam and

are then turned inward into perforations 2, 55 to prevent longitudinal displacement of the rods before the ducts 3 have been filled with cement. The upper perforations 4 are also for the reception of iron insertions 9 which, are also turned inwards at their ends and are
60 only intended to give the beam greater strength, so as to facilitate its transport and handling; these insertions therefore do not need to be of any great strength. The sides
5, Fig. 3, of the brick 1 are channeled and
65 diverge downwardly, so that the upper surface 6 is somewhat narrower than the lower surface 7. Owing to this construction, when the beams are laid side by side to construct
a ceiling, longitudinal channels are formed 70 between them into which cement is poured. For the better adhesion of this cement, the sides 5 are fluted as shown in Fig. 3. If
necessary, iron insertions can also be introduced in the said longitudinal channels to in- 75 crease the solidity of the structure.

When the iron insertions 8 and 9 have been introduced into the respective perforations, the latter are filled up with cement mortar. The abutting joints 12 are also filled with
80 cement and as soon as the latter has set and dried, the beam is ready for use.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be per- 85 formed, I declare that what I claim is:—

1. A fire proof floor construction, comprising a series of hollow tiles having upper and lower perforations, upper and lower rods engaging said perforations, and a cement filling 90 surrounding said rods within the perforations, substantially as specified.

2. A fire proof floor construction, comprising a series of hollow tiles having upper and lower perforations, upper and lower rods engaging said perforations and having bent 95 ends that extend into the hollow bodies of the flanking tiles, and a cement filling surrounding the rods within the perforations, substantially as specified. 100

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

EMIL UFENAST.

Witnesses:

A. LIEBERKNECHT,
J. KRAUER.