

A. F. LEITER.  
 COMBINATION FLOOR JOIST AND CEILING.  
 APPLICATION FILED JUNE 30, 1909.

955,338.

Patented Apr. 19, 1910.

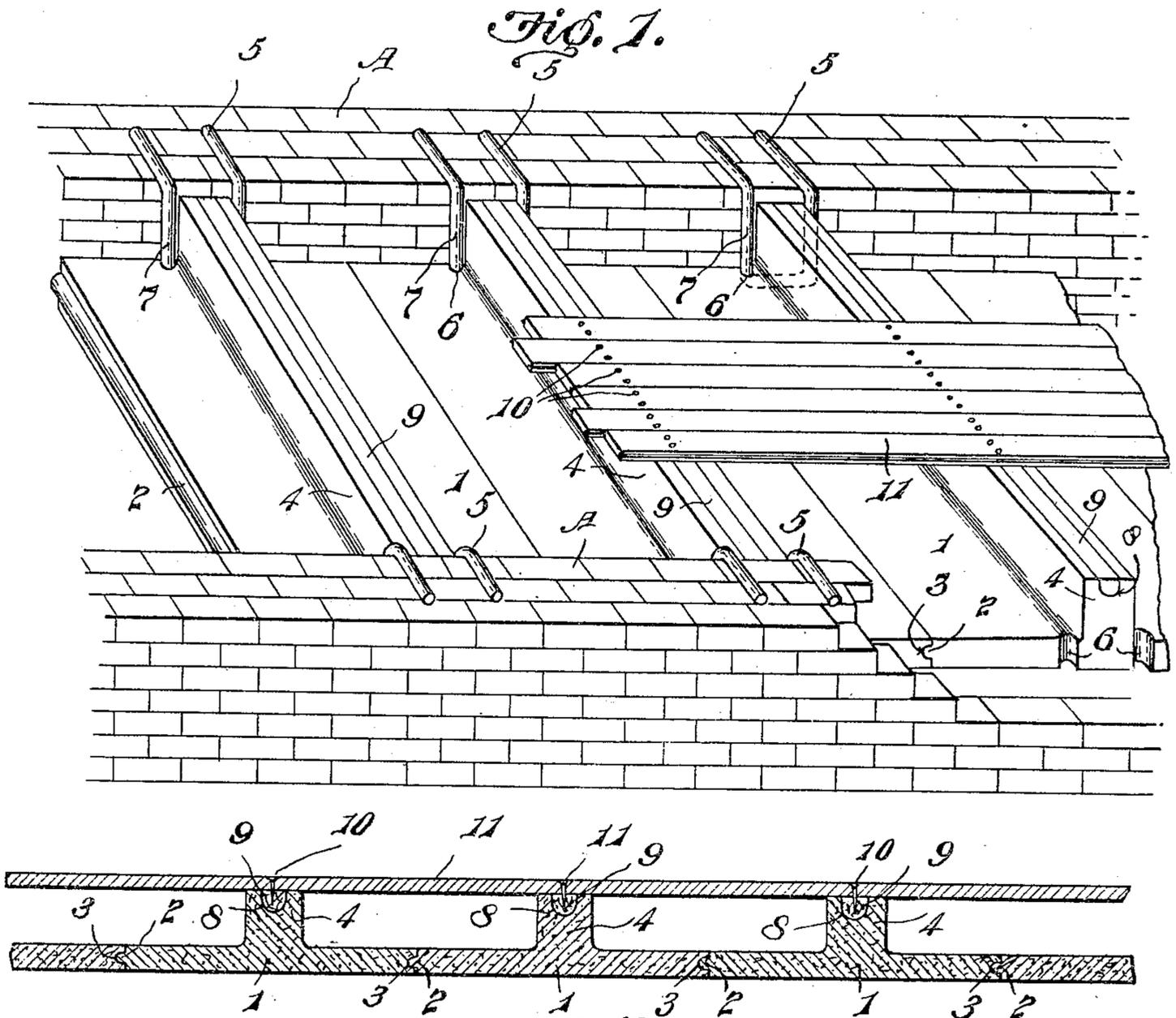
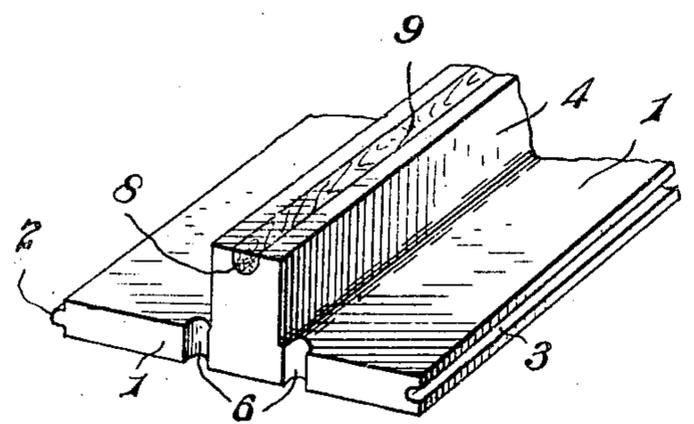


Fig. 2.

Fig. 3.



Witnesses  
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# UNITED STATES PATENT OFFICE.

AARON FRANKLIN LEITER, OF DAYTON, OHIO.

COMBINATION FLOOR-JOIST AND CEILING.

955,338.

Specification of Letters Patent. Patented Apr. 19, 1910.

Application filed June 30, 1909. Serial No. 505,177.

To all whom it may concern:

Be it known that I, AARON F. LEITER, a citizen of the United States, residing at Dayton, county of Montgomery, and State of Ohio, have invented certain new and useful Improvements in a Combination Floor-Joist and Ceiling, of which the following is a specification.

My invention relates to fire proof building construction and particularly to the floor and ceiling construction thereof.

The object of my invention is to provide an improved ceiling and floor construction of the class mentioned wherein the ceiling and the floor joists shall be formed integrally and wherein provision is made for ample ventilation between the ceiling and the floor.

A further object of my invention is to provide a device as mentioned in which the several elements of which the ceiling is composed shall be tightly jointed together.

Other objects will appear hereinafter.

My invention will be more readily understood by reference to the accompanying drawing forming a part of this specification and in which:

Figure 1 is a perspective view illustrating a portion of the walls of a building with several of the combination ceiling slabs and floor joist arranged in position, Fig. 2 is a transverse section through the ceiling and floor, and Fig. 3 is a perspective view of one end of one of my combination ceiling and floor joist.

In carrying out my invention I form the ceiling of a plurality of similar slabs 1 formed of cement or other fire proof material and preferably of uniform width and thickness throughout their length. The slabs are provided with a tongue 2 along one edge and a groove 3 along the other edge whereby tight joints may be formed between them when placed in position. Formed upon the upper face of the slab 1 is a vertically extending longitudinally disposed flange or rib 4 which constitutes the floor joist. This is formed integrally with the slab 1 and extends from end to end thereof, the slab and the joist together extending the full span of the ceiling and the ends thereof may rest directly upon the walls A or upon joist hangers 5. In Fig. 1 I have illustrated the device supported upon the hangers and in Fig. 3 have illustrated the end of the device such as is used when the hangers are employed for support-

ing the same, the ends of the slab 1 adjacent the joist 4, and upon each side thereof, being provided with vertically disposed recesses or notches 6 to receive the vertical portions 7 of the hangers 5.

The joist 4 is preferably centrally disposed on the slab 1 in order that the slabs may be as wide as desired and uniformly supported, the slabs projecting laterally a minimum distance each side of the joist.

The joist 4 is provided with a longitudinally extending groove 8 in its upper face in which is arranged a nailing strip 9 to receive the nails 10 of the flooring 11 when a wooden floor is used. The strip 8 is cast in the joist when the same is molded but may be dispensed with when a floor formed of slabs of cement or other fire proof material is used instead of the wooden floor.

With the combination ceiling and floor joist above described the advantages of the old construction of thin horizontal ceilings and vertically disposed floor joist, and that of the present form of substantially solid ceiling forming a floor support is obtained; the first affording ample ventilation between the floor and ceiling but which has heretofore been formed of separate ceiling and floor supporting members secured together, and the latter the integral construction of floor support and ceiling.

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

1. A member for fire proof building construction consisting of a comparatively thin horizontal cement slab comprising a ceiling portion, and a centrally and longitudinally disposed floor joist portion formed integrally therewith and extending upwardly from the top face of said slab, said slab being provided with vertically disposed grooves formed upon each side of said joist portion and adjacent the ends thereof and one edge being formed with a tongue and the other edge with a groove, and said joist portion being provided with a groove in its upper face, substantially as described.

2. In fire proof building construction a plurality of similar ceiling members each formed of a single slab of fire proof material of uniform thickness and a floor joist formed integrally with each of said slabs, the edges of the slabs being connected by tongue and groove joints and said joists being arranged centrally of said slabs and extending up-

wardly from the upper face thereof, said  
joists being provided with grooves in their  
upper faces for nailing strips and the slabs  
being provided at each end with vertically  
5 disposed grooves or notches adjacent the  
sides of said joists, substantially as described.  
In testimony whereof I have signed my

name to this specification in the presence of  
two subscribing witnesses.

AARON FRANKLIN LEITER.

Witnesses:

GEO. LIERMANN,  
A. S. McINTIRE.