

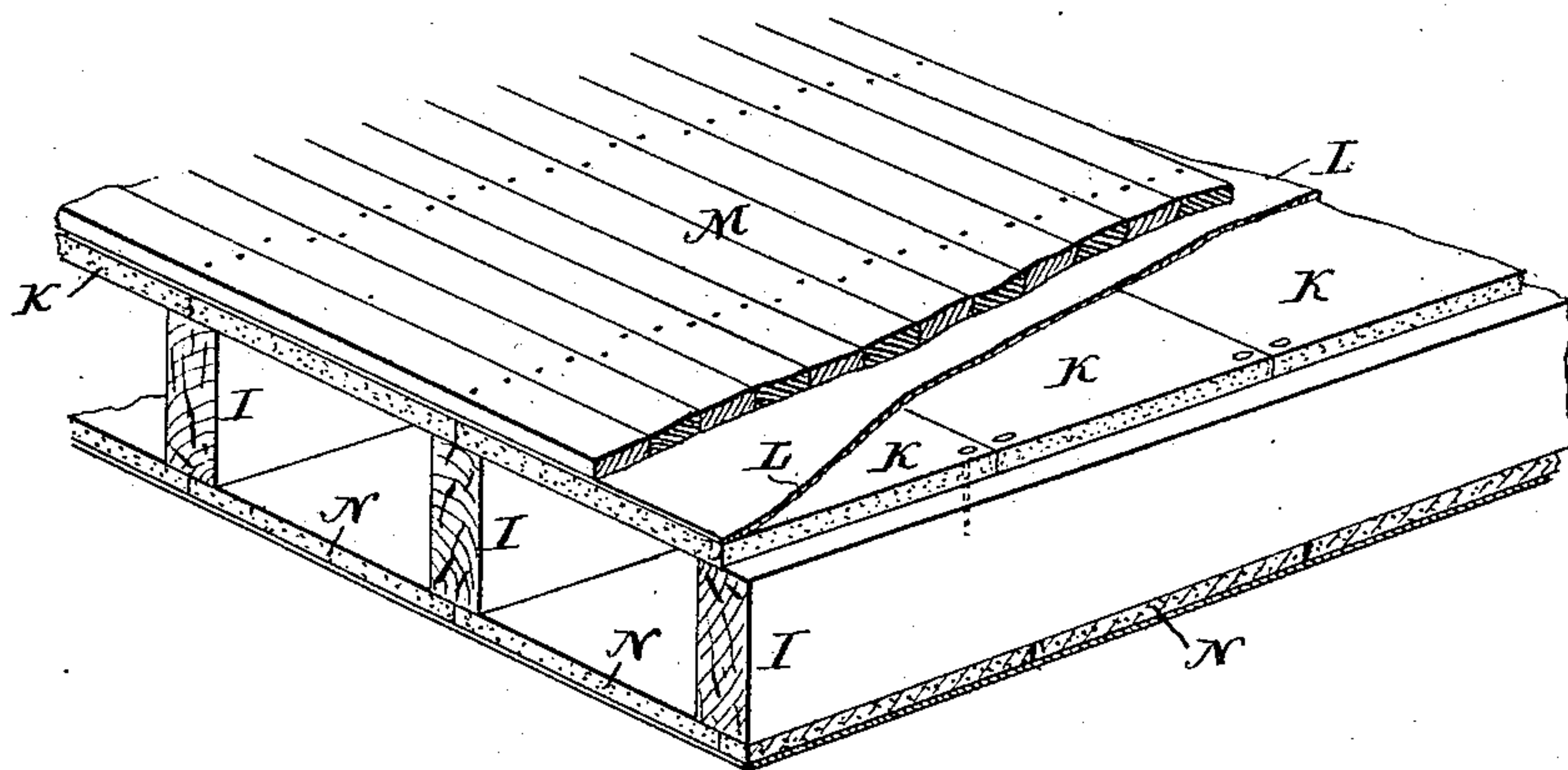
(No Model.)

C. C. GILMAN.

FIRE PROOF FLOOR AND CEILING.

No. 338,513.

Patented Mar. 23, 1886.



Attest:

Geo. H. Graham  
Geo. H. Botts.

Inventor:

Chas. C. Gilman,  
per *Wm. C. Behrens,*  
Atty.

# UNITED STATES PATENT OFFICE.

CHARLES CARROLL GILMAN, OF ELDORA, IOWA.

## FIRE-PROOF FLOOR AND CEILING.

SPECIFICATION forming part of Letters Patent No. 338,513, dated March 23, 1886.

Application filed July 13, 1885. Serial No. 171,457. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES CARROLL GILMAN, a citizen of the United States, residing in Eldora, Hardin county, Iowa, have invented a  
5 new and useful Improvement in the Construction of Fire-Proof Floors and Ceilings, of which the following is a specification.

My invention involves the use of porous or cellular terra-cotta, otherwise known as "terra-cotta lumber;" and it consists in combining  
10 slabs of this material with the other parts or elements hereinafter described and claimed.

In the accompanying drawing, which forms a part of this specification, is represented a  
15 perspective view of a construction embodying my invention.

Terra-cotta lumber, as is well known, is a non-combustible material which more effectually resists the action of fire than brick, is to  
20 a very high degree a non-conductor of heat and cold, and also of sound, is easily sawed and wrought with edged tools, and will receive and hold spikes or nails. This material I apply directly to the wooden joists of a build-  
25 ing, making close joints, and on the slabs of said material I spread a layer of cement, upon which the wooden flooring is laid. This, in connection with the ceiling-slabs, effectually protects said joists against destruction by fire.

Referring to the drawing, I represents the wooden joists, which should be three inches in width; or when two-inch joists are used they should be laid in pairs and placed twelve to sixteen inches apart from center to center.  
30 The floor-slabs K, of terra-cotta lumber, of a corresponding length and two inches thick, are laid on said joists, with their edges dressed so as to closely fit each other, and separately nailed thereto. A thin layer of cement or  
40 lime-mortar, L, is then spread over said slabs, and on this the wooden flooring M is laid, being nailed by nails driven into said slabs. The terra-cotta-lumber slabs N, for the ceil-

ing, are about one and one-half inch thick, are dressed, if necessary, by sawing or by the use  
45 of other edged tools to make close joints, and are nailed to the joists in the same manner as the flooring-slabs. Holes may be punched in the corners of the slabs when in a plastic state, to facilitate the work of nailing, and preferably  
50 a small washer of zinc—say an inch square—is slipped over each nail, to avert the possibility of the nail-head pulling through the slab. The ceiling-slabs are finally plastered,  
55 like the ordinary ceiling of lath and plaster; but this, since the ceiling-slabs are closely fitted, is not essential to protect the joists against fire.

I am aware of United States Patents No. 133,448, to Johnson and Hall, and No. 156,361,  
60 to Sanford E. Loring, and what is described and claimed in said patents is hereby disclaimed.

Having fully described my invention, what I desire to claim and secure by Letters Patent  
65 is—

1. The combination, with wooden floor-joists, of slabs of terra-cotta lumber separately nailed to the upper surfaces thereof, a layer of cement spread over said slabs, and a wooden  
70 flooring laid thereon and secured by nails passing into said slabs, substantially as described.

2. The combination, with wooden floor-joists, of slabs of terra-cotta lumber separately nailed to the upper surfaces thereof, a wooden  
75 flooring bedded in cement secured by nails passing into said slabs, and slabs or sheets of terra-cotta lumber closely fitted together nailed to the under surfaces of said joists, substantially as described.  
8c

In testimony whereof I have signed my name in the presence of two witnesses.

CHARLES CARROLL GILMAN.

Witnesses:

G. E. GILMAN,  
F. W. GILMAN.