

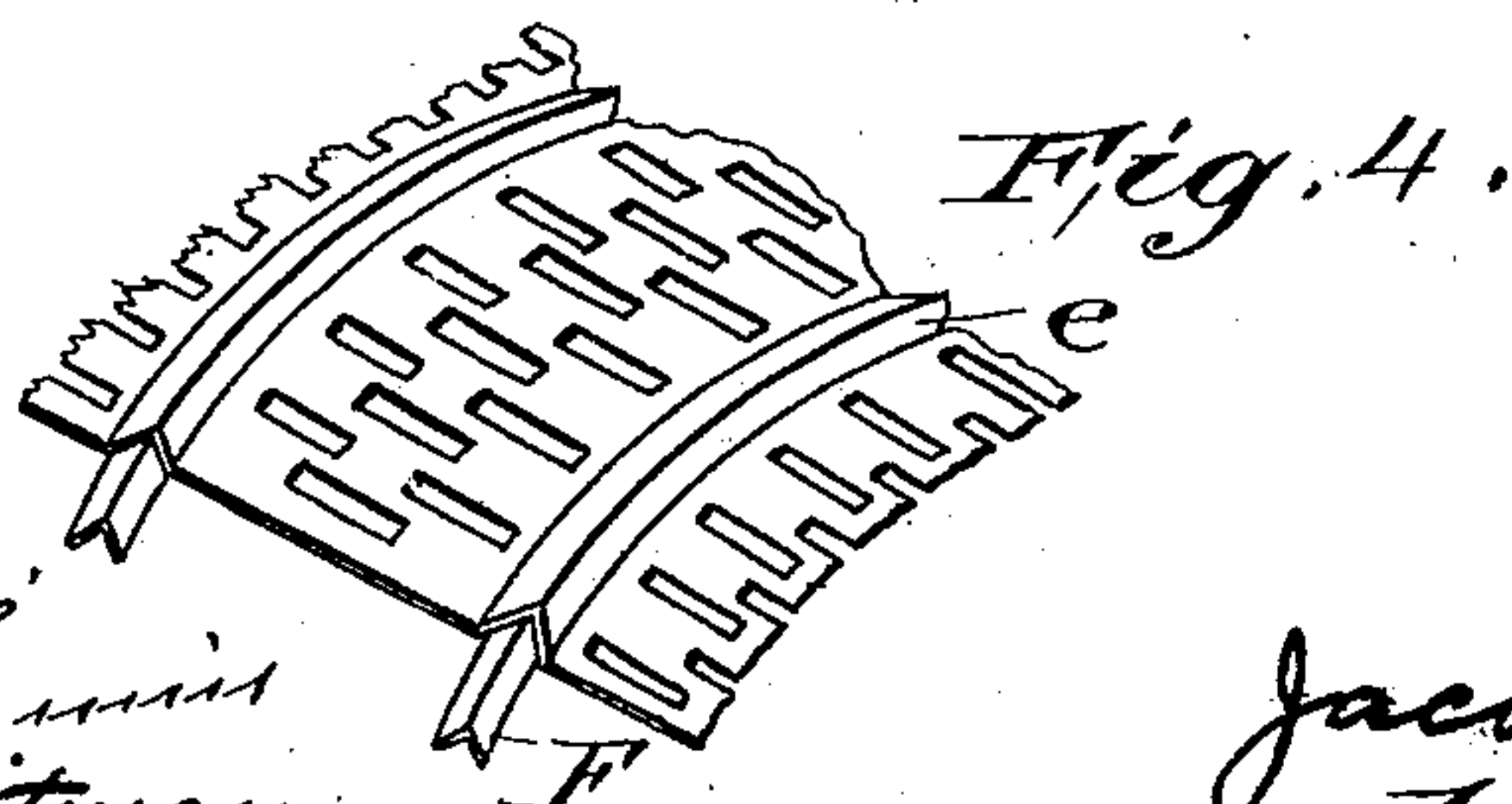
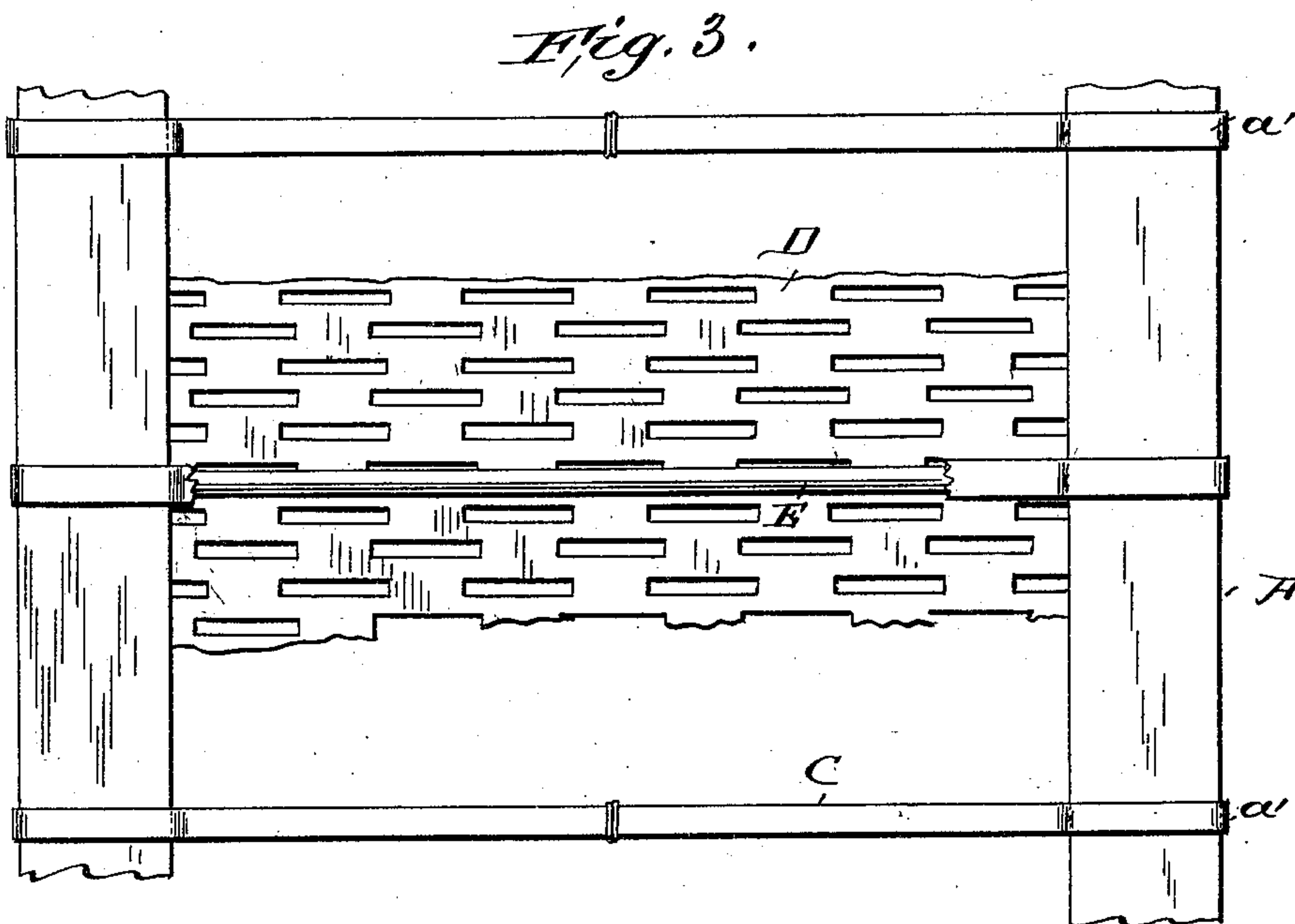
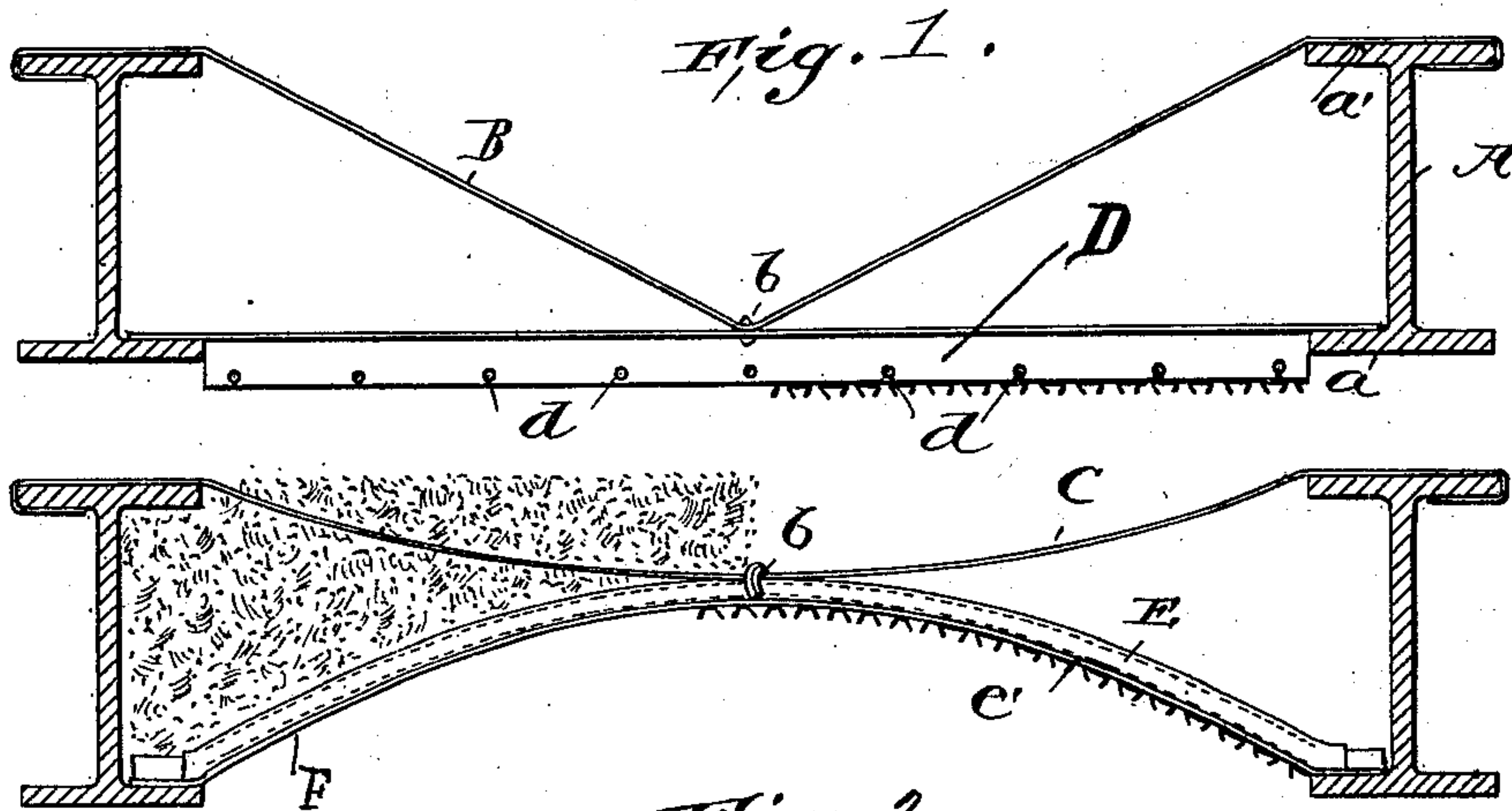
**No. 690,621.**

**Patented Jan. 7, 1902.**

**J. SCHRATWIESER.**  
**FLOOR AND CEILING CONSTRUCTION.**

(Application filed Mar. 29, 1900.)

(No Model.)



Witnesses;  
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att'y

# UNITED STATES PATENT OFFICE.

JACOB SCHRATWIESER, OF BROOKLYN, NEW YORK.

## FLOOR AND CEILING CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 690,621, dated January 7, 1902.

Application filed March 29, 1900. Serial No. 10,679. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB SCHRATWIESER, a citizen of the United States, residing at the city of New York, in the State of New York, have invented certain new and useful Improvements in the Construction of Floors and Ceilings, of which the following is a specification.

My invention relates particularly to the construction of "fireproof" floor-arches and ceilings, or, in other words, that class of construction in which the joists, girders, and intermediate supports and braces are composed of iron or steel and the framework thus formed filled with concrete or like substance, so that the whole will form a solid mass for the support of the floors and ceilings. Its objects are, among others, to provide a light, strong, and inexpensive construction of this character.

To these ends it consists of the combination of parts and arrangement of details hereinafter described and claimed, and illustrated in the accompanying drawings, in which like letters refer to like parts in each figure thereof.

In the said drawings, Figure 1 is a vertical cross-section of a construction showing my improvements with parts cut away. Fig. 2 is a like view of a modification. Fig. 3 is a plan view of the construction shown in Fig. 2. Fig. 4 is a detached portion of the same.

To the upper double flanges *a'* of the joists or I-beams A the tension brace-rods B are secured by passing over and having their outer ends turned over the outer edges of the same, forming hooks. The rods extend downwardly between the two beams and are secured to the cross-pieces D.

The cross-pieces D are preferably composed of angle-iron of L or T cross-section, with one flange resting upon the lower flange *a* of the beam and the other flange, which is cut away at this point, extending downwardly and provided at intervals with holes *d*, through which rods may be passed to serve as furring, to

which the metal lath *d'* may be laced or otherwise secured.

In the modified construction, Fig. 2, the cross-pieces F rest upon the lower flanges of the beams and are bent upwardly, forming arches upon which the sheet-metal lath E is spread and to which the rods *c* are secured. This lath is of ordinary form, having perforations and flanges and is provided at intervals corresponding to the cross-pieces with ribs or ridges *e*, which are adapted to fit over the said cross-pieces. Upon the cross-pieces and lath the concrete or other filling is spread, filling in the space between the beams, so that the brace-rods are embedded therein.

What I claim is—

1. A construction of floors and ceilings comprising beams, cross-pieces composed of angle-iron extending from one lower flange to the other of said beams and sheet-metal lath provided with ribs adapted to receive said cross-pieces.

2. In the construction of floors and ceilings, the combination of beams, secured to the lower flanges of which and extending across from beam to beam, are cross-pieces, sheet-metal lath supported upon said cross-pieces and provided with ribs corresponding to the same and tension-rods suspended from the upper part of said beams and secured to said cross-pieces.

3. A construction of floors and ceilings comprising beams, arched cross-pieces composed of angle-iron extending from one lower flange to the other of said beams and sheet-metal lath provided with ribs corresponding to said cross-pieces and tension-rods connecting said cross-pieces with the upper parts of said beams.

Signed at the city of New York, county and State of New York, this 15th day of March, 1900.

JACOB SCHRATWIESER.

Witnesses:

M. K. WHITMAN,  
J. SIEBECKER.