No. 690,609. Patented Jan. 7, 1902.

J. W. RAPP.

FLOOR CONSTRUCTION.

(Application filed Apr. 19, 1900.)

(No Model.) 2 Sheets—Sheet 1.

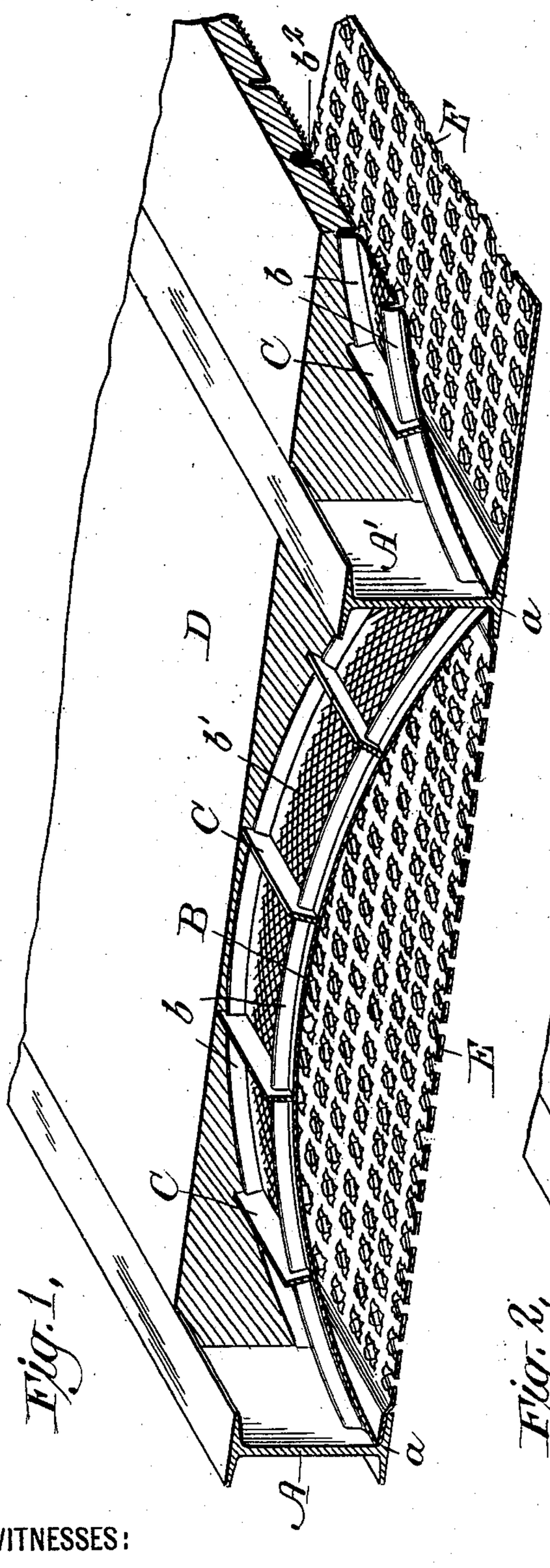

Fig. 1.

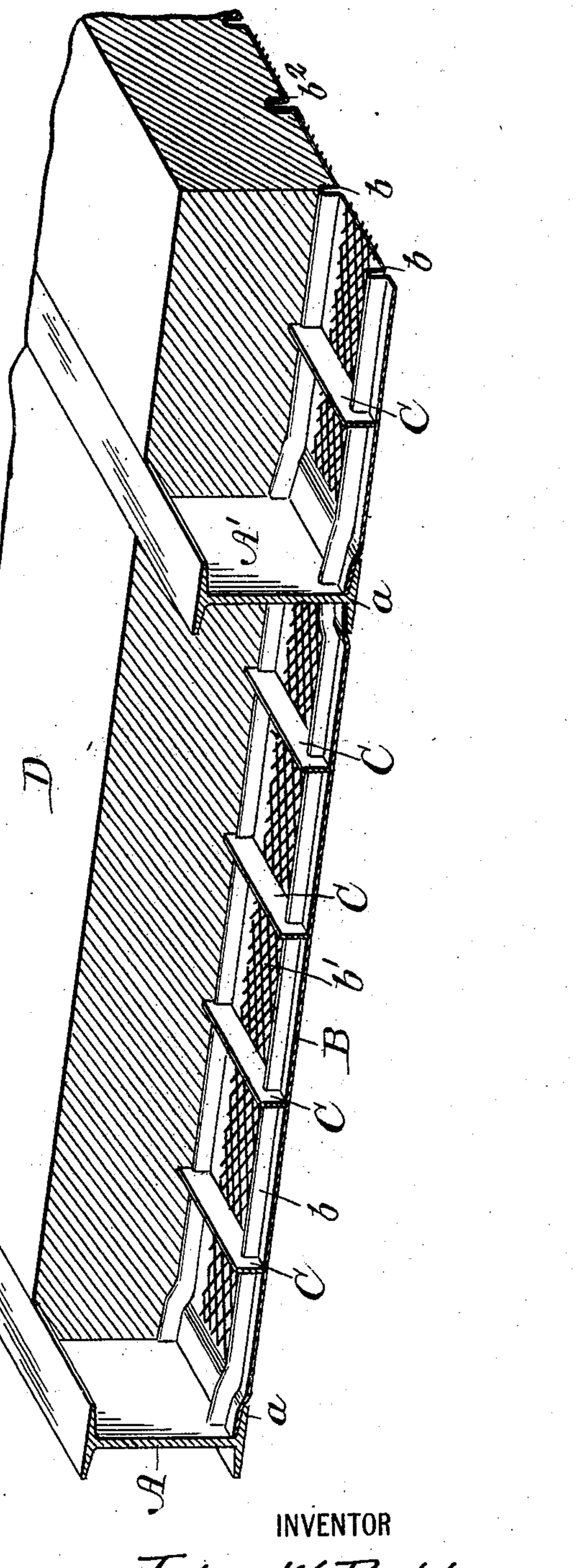

Fig. 2.

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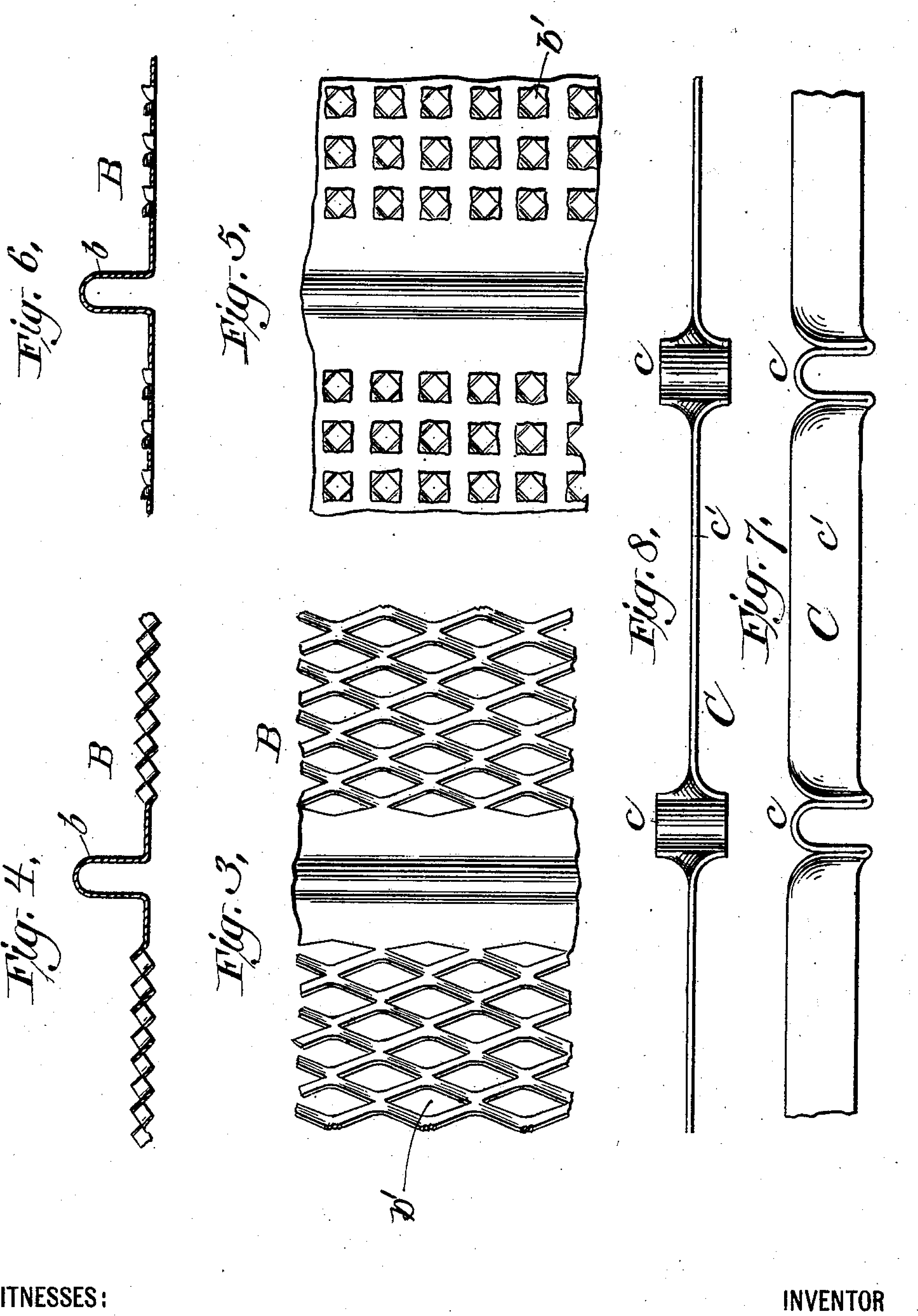

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FLOOR CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 690,609, dated January 7, 1902.

Application filed April 19, 1900. Serial No. 13,421. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. RAPP, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Floor Construction, of which the following is a specification.

My invention relates to a floor construction.

I will describe a floor construction embodying my invention and then point out the novel features thereof in the claims.

In the accompanying drawings, Figure 1 is a perspective view, partly in section, of a floor construction embodying my invention. Fig. 2 is a view similar to Fig. 1, but showing a modification. Fig. 3 is a detail top view of a portion of an expanded metal lath used in the floor construction. Fig. 4 is a sectional view of the same. Fig. 5 is a view similar to Fig. 3, but showing a perforated metal lath. Fig. 6 is a sectional view of Fig. 5. Fig. 7 is a side elevation of a spacing-strip used in the floor construction. Fig. 8 is a bottom view of Fig. 7.

Similar letters of reference designate corresponding parts in all of the figures.

A A′ represent I-beams, which may be supported or suspended in any desired manner and between which a portion of the floor construction is supported. There may be any number of I-beams.

B represents the supporting-lath, the ends of which rest on the flanges *a* of the I-beams. The supporting-lath is in sections. Each section is provided with one or more loop portions *b*, which extend from one edge to the opposite edge, and openings *b′* intermediate the loop portions. In the drawings I have shown each section of lath as having three loops—one at each edge and one in the middle. It will be understood that any number of loops may be used. The loop portions are for the purpose of giving strength and rigidity to each section of lath, thereby enabling each section to withstand a greater load than if used without the loops. The openings between the loops may be formed by punching the metal, as shown in Figs. 5 and 6, or by slitting the metal and then stretching or expanding it to produce the appearance shown in Figs. 3 and 4. The expanded metal is preferable, for the reason that the edges of the slits turn upward and downward when the metal is being expanded, which materially adds to the strength of the lath. It will be understood that the loops are without openings. In forming the floor construction the end loops on the adjacent lath-sections are placed over one another, as shown at b^2 in Figs. 1 and 2. I also use spacing-strips C for the loop portions *b* of the lath-sections. These spacing-strips are for the purpose of holding the loops straight against the strain of the floor-filling D. The spacing-strips may be either straight bars having recessed portions, as shown in Figs. 1 and 2, or they may be made from ribbon metal, as shown in Figs. 7 and 8. In this case the strip is provided with loop portions *c*, and the metal *c′* intermediate the loop portions is turned upward for the purpose of stiffening the spacing-strip.

In Fig. 1 the lath-sections are shown as being arched. The under side of the lath-sections may be finished, and thus produce an arched ceiling. If a flat ceiling is desired with the arch, perforated lath E is suspended between the I-beams A A′. The lath E is held in place on the flanges *a* by the ends of the lath-sections B. In Fig. 2 the lath-sections are shown as being flat.

What I claim as my invention is—

1. In a floor construction, the combination of supporting-beams, a floor-filling between the beams, a support for said filling, said support being made up of sections each of which has formed in it a plurality of loop portions, and spacing-strips for said loop portions.

2. A spacing-bar for use in floor constructions, made from a strip of metal and consisting of a number of loops and intermediate connecting portions which are turned upward.

3. In a floor construction, the combination of supporting-beams, a floor-filling between the beams, and a support for said filling, said support consisting of sections of expanded metal, each of which is provided with a plurality of loop portions.

4. In a floor construction, the combination of supporting-beams, a floor-filling and metallic sections intermediate the beams for supporting said floor-filling, said sections being each provided with loop portions, and openings intermediate the loop portions, and spacing-strips for bracing the loop portions.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN W. RAPP.

Witnesses:
GEO. E. CRUSE,
DONALD CAMPBELL.