

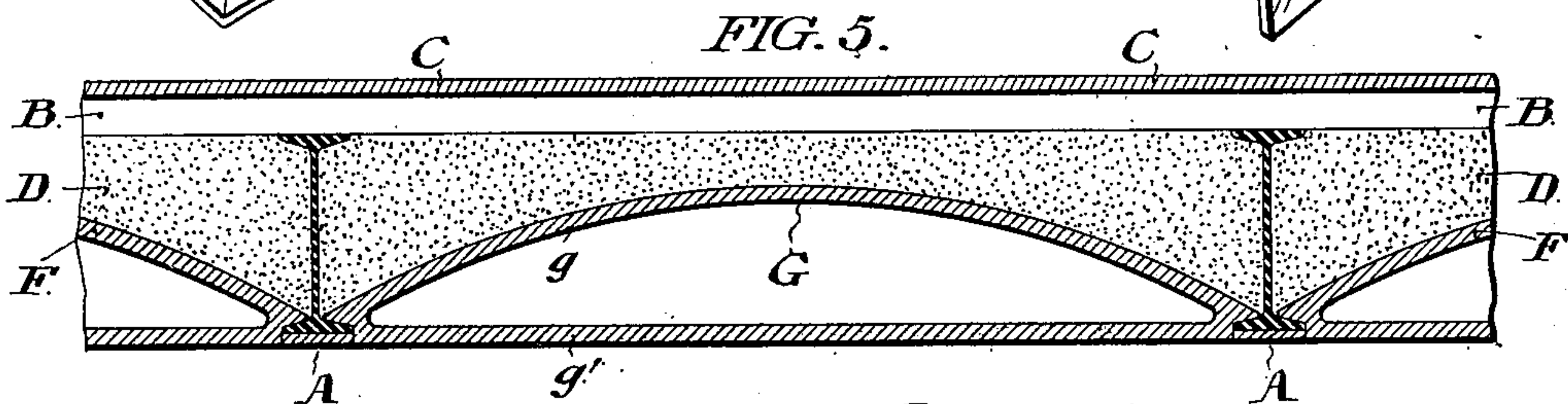
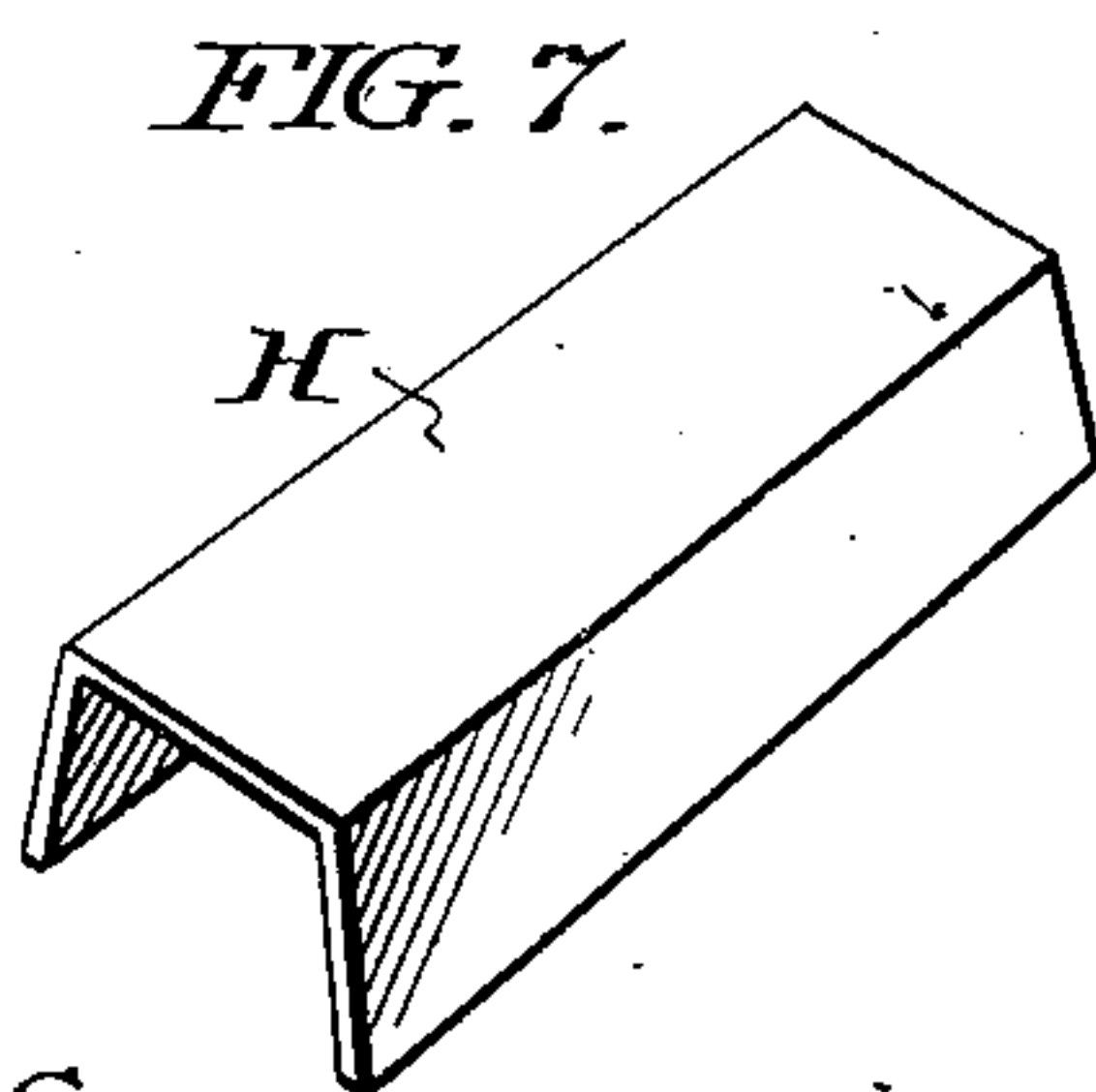
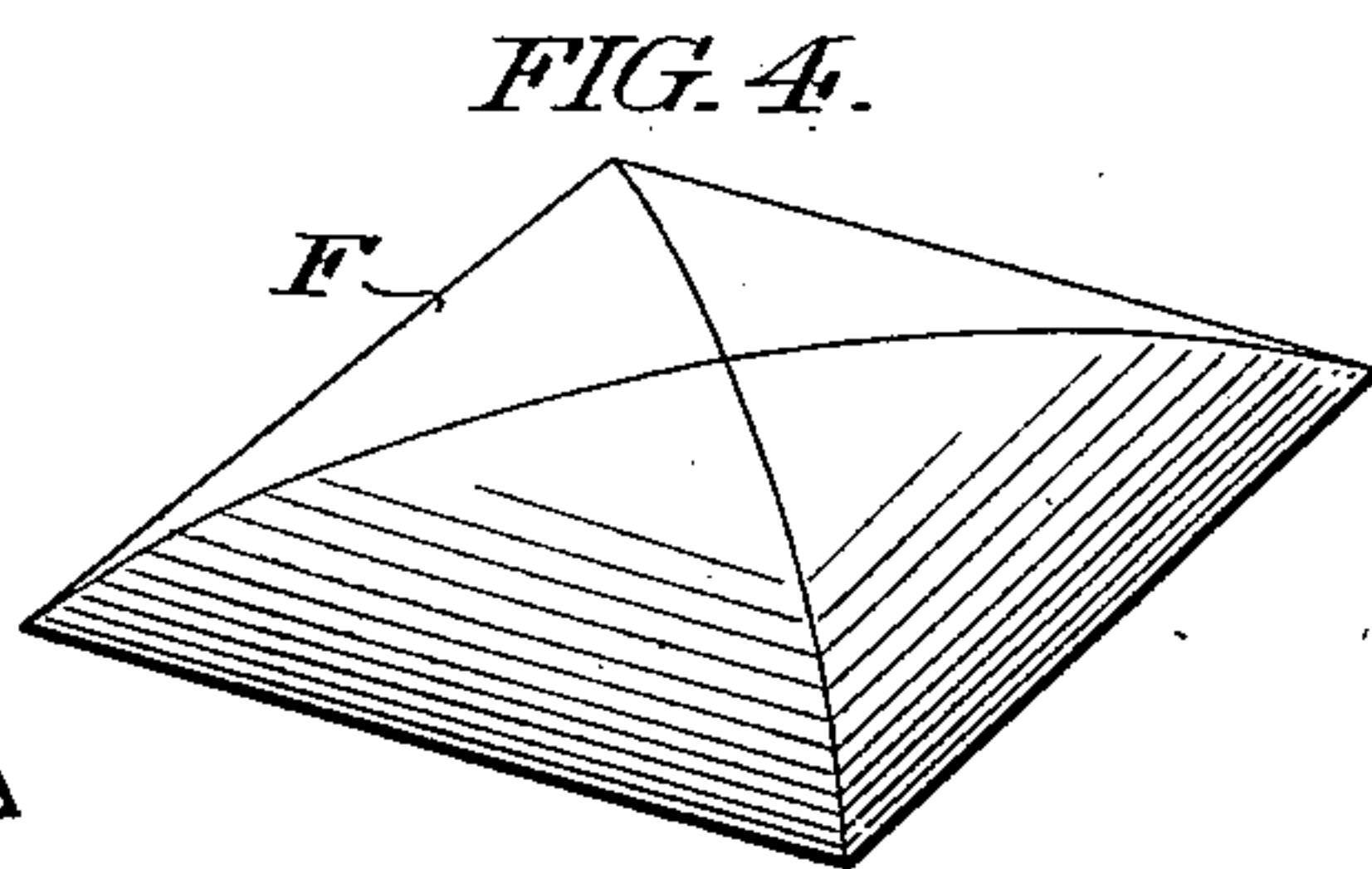
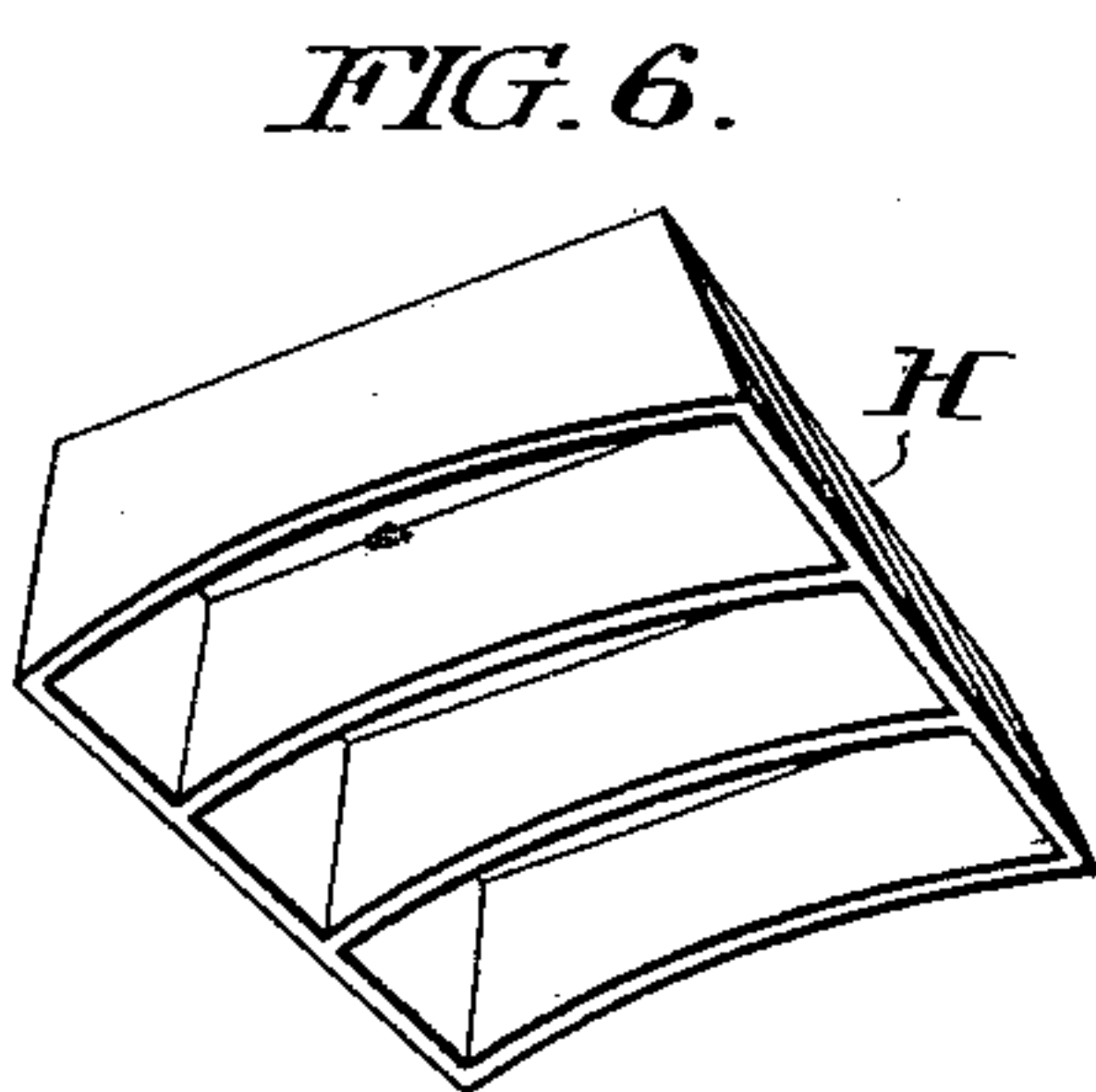
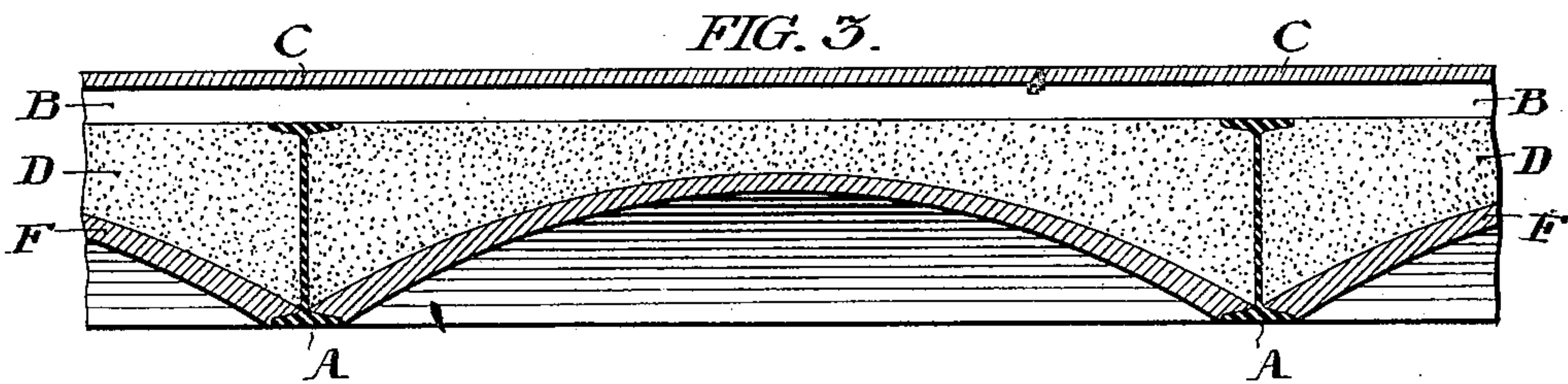
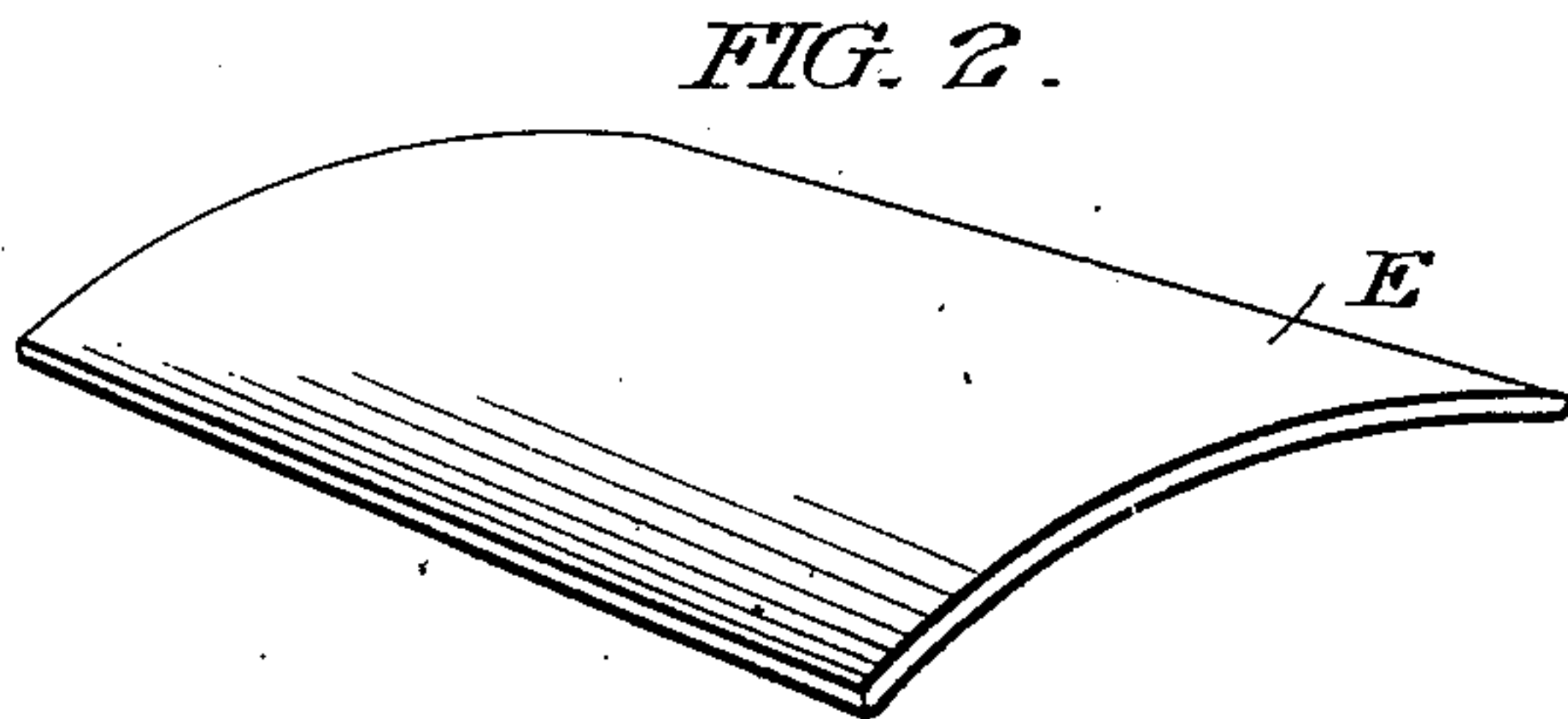
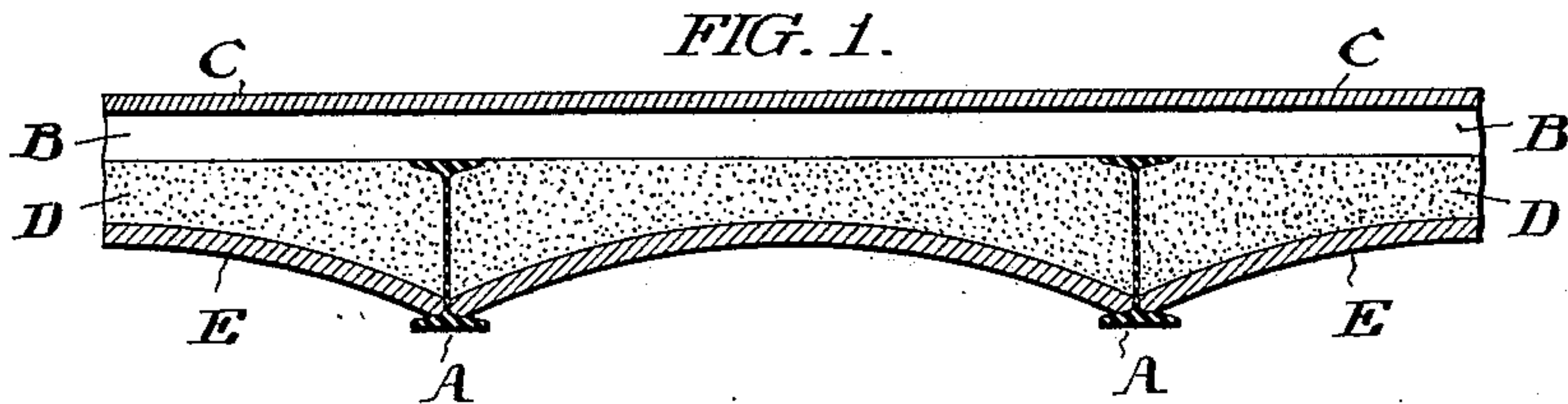
No. 631,105.

Patented Aug. 15, 1899.

A. H. BROMLEY, JR.
CENTER.

(Application filed Sept. 29, 1898.)

(No Model.)



WITNESSES:

Arthur E. Paige.
J. Norman Dixon.

A. H. Bromley Jr.

INVENTOR:

By his Attorney,
Wm. E. Straubridge
Bonsau Taylor

UNITED STATES PATENT OFFICE.

ALBERT H. BROMLEY, JR., OF PHILADELPHIA, PENNSYLVANIA.

CENTER.

SPECIFICATION forming part of Letters Patent No. 631,105, dated August 15, 1899.

Application filed September 29, 1898. Serial No. 692,176. (No model.)

To all whom it may concern:

Be it known that I, ALBERT H. BROMLEY, Jr., a citizen of the United States, residing in the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Centers, of which the following is a specification.

My invention relates to a class of devices employed in the builders' art, and termed "centers", in the nature of arciform bodies designed to be placed upon the piers or between the girders or other foundations upon which an arch or cognate superstructure is to rest, and to serve to support the arch during the process of construction until it becomes self-supporting.

My invention is of especial utility,—although not restricted to such use,—in the construction of the floorings of fire proof buildings in which masses of cement are employed to fill in the spaces between the girders.

Heretofore centers have been built up of wood, formed of wire cloth, or of wire cloth covered with cementitious material, or of various other woven or manually formed constructions, which have involved considerable expenditures of time and money.

It is the object of my invention to provide a center, which shall be strong, inexpensive, and easily made and handled.

Generally stated, my invention resides in the provision of a center formed of a plastic or kindred material, which, without dies or presses may be easily shaped to the required form, and which, when shaped, will readily set or harden into condition for immediate use.

A desirable type of a plastic quick-setting material from which the centers may be made, is plaster of paris combined if necessary with a suitable binder such, for instance, as papier mâché or hair.

It will, however, be understood that my invention is not restricted to a plastic quick-setting material formed of these materials but that it includes other suitable materials.

The form to which the center is shaped, as well as the especial application of it when made, may vary widely.

In the drawings I show several distinct forms alike embodying my invention.

Figure 1 is a sectional elevation of a typical floor.

Figure 2 is a view in perspective of the center employed in the construction of the floor of Figure 1.

Figure 3 is a sectional elevation of a typical floor.

Figure 4 is a view in perspective of the modified form of center employed in the construction of the floor of Figure 2.

Figure 5 is a sectional elevation of a typical floor illustrating the employment of still another modified form of my improved center.

Figures 6 and 7 are views in perspective of additional forms of modified centers.

Similar letters of reference indicate corresponding parts.

In Figs. 1, 3, and 5, of the drawings, A represent girders or I-beams, B the floor joists laid upon the same, C the flooring boards, and D the cement filling, all of any ordinary character.

In the use of the centers in the construction of fire proof flooring, the centers, as is well known, are first put in place with their respective side-edges resting upon the opposing lower flanges of adjacent girders, and the cement is laid upon them in such quantity as may be desired, and usually until it is approximately level with the upper faces of the I-beams.

As is also well-known, the cement will harden, set, and become self-supporting, after it has been placed in position, and the centers may thereupon, if desired, be removed, by cutting it through the middle with a saw or breaking it out with a hammer or other implement.

When, however, the centers are made of plaster, or kindred material, in accordance with my invention, they afford a very convenient surface for ornamentation, and their lower faces may be formed or provided with any desired surface to form a permanent ornamental ceiling for the apartment below.

The center E shown in Figures 1 and 2, is a long strip in the form of a segment of a cylinder, that is to say, straight from end to end, but curved or arched from edge to edge.

The center F shown in Figures 3 and 4, is in the form (in plan) of a square, is arched

upward on all sides, and is of a breadth equal to the distance between the lower flanges of the adjacent I-beams in connection with which it is to be used,—a series of these centers being disposed in succession from end to end of the beams.

The center G shown in Figure 5, corresponds to that of Figures 1 and 2, with the addition of a flat horizontal web g' preferably of the same material as the arched web g , which extends from edge to edge of said arched web, and is arranged to be approximately flush with the lower face of the I-beams, so that upon covering being applied to the lower faces of the I-beams, a uniform flat horizontal ceiling will be formed for the apartment below.

The centers may, of course, be, in section, of forms other than that of an arch, as illustrated by the modified forms H shown in Figures 6 and 7,—the essence of my invention consisting not in any particular form of center, but in the employment in the construction of centers of various forms whether arched as in Figures 1 to 5, or quasi-arched as in Figures 6 and 7, of plastic quick-setting material.

My improved centers of the form shown in Figure 1 may be quickly and easily formed by supplying a sufficient quantity of the selected plastic material within an open-topped trough-like receptacle the bottom of which has the form it is desired to impart to the lower face of the center, and the wall of which is of height corresponding to the thickness it is desired that the center shall possess,—by then resting a straight edge upon the end walls of the trough and moving the same transversely from edge to edge of said trough, thus leveling off the upper surface of the plastic material flush with the upper edge of the wall of the trough,—and by finally removing any excess of the material.

My improved center formed of a quickly-molded and set mass of plastic material constitutes a very great improvement over existing devices of the same class which are built up of several parts and require much labor in their formation and erection and the use of quite expensive materials.

The materials of which my improved center is made are inexpensive, the time required for its production is very short, and the apparatus required very simple.

When finished the center is very easily

handled and transported, and where any fitting to adjust it to its supports is required, it may be very quickly and easily cut with a saw or otherwise.

The essence of my invention may be stated to consist in the formation of centers and similar devices from plastic quick-setting material, such centers being molded or formed in advance of being placed in position in the structure in which they are used.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. As an article of manufacture, a center completed in advance of being placed in position, formed of plastic quick setting material, and adapted to support an overlying mass of building material, substantially as set forth.

2. A center formed of plaster of paris and papier mâché, substantially as set forth.

3. As an article of manufacture, a center, completed in advance of being placed in position, formed of plaster of paris, or equivalent substance, and adapted to support an overlying mass of building material, substantially as set forth.

4. As an article of manufacture, a center completed in advance of being placed in position, formed of plastic quick setting material combined with a suitable binding material, and adapted to support an overlying mass of building material, substantially as set forth.

5. As an article of manufacture, a center completed in advance of being placed in position, formed of plaster of paris combined with a suitable binder, and adapted to support an overlying mass of building material, substantially as set forth.

6. A flooring structure composed of I-beams, centers formed in advance of being placed in position, of plaster of paris or similar quick setting material combined with a suitable binder, resting on said beams and forming the ceiling of an apartment below, and a cement filling in the space above said centers and extending from I-beam to I-beam, substantially as set forth.

In testimony that I claim the foregoing as my invention I have hereunto signed my name this 17th day of September, A. D. 1898.

ALBERT H. BROMLEY, JR.

In presence of—

F. NORMAN DIXON,
THOS. K. LANCASTER.