

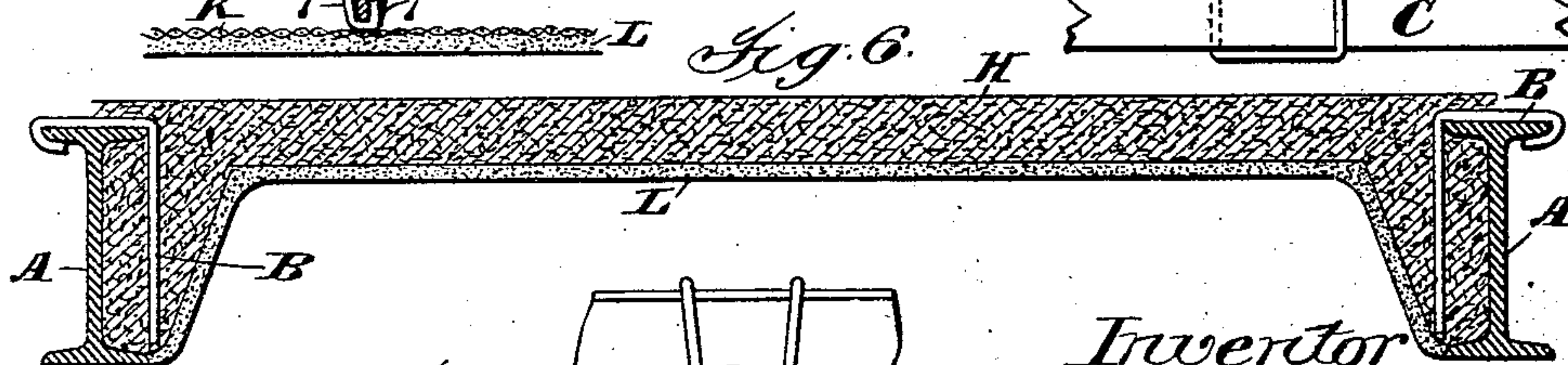
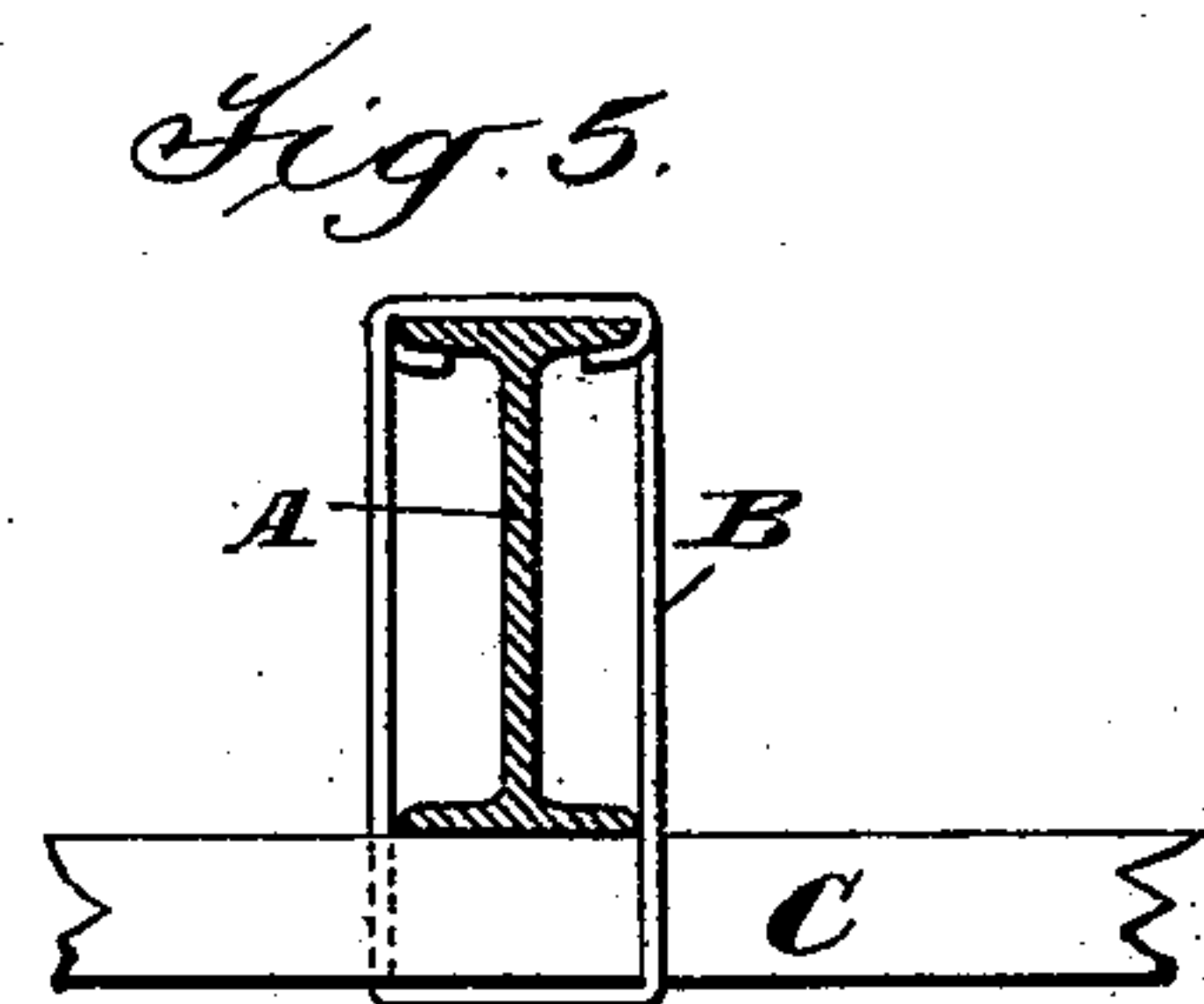
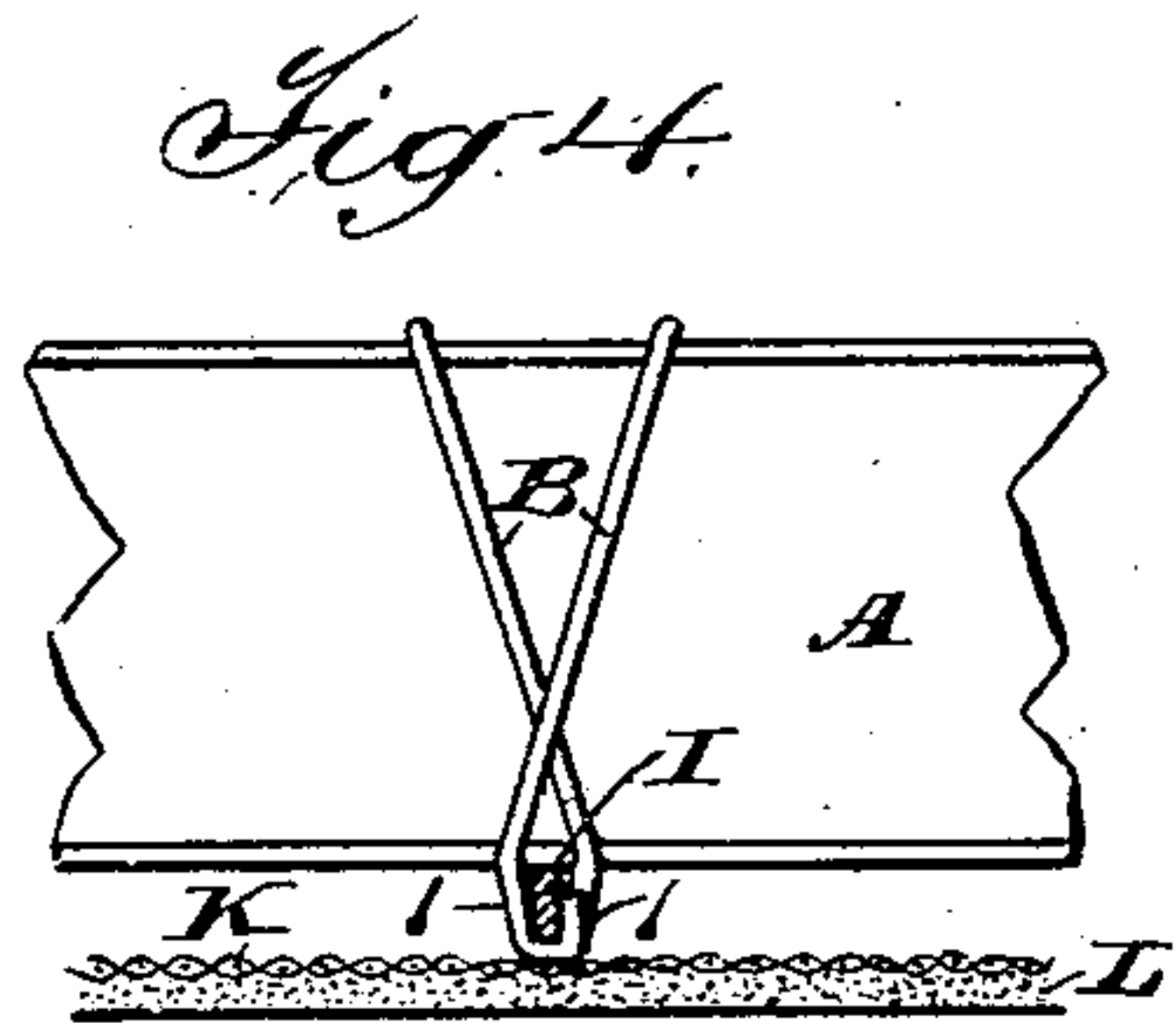
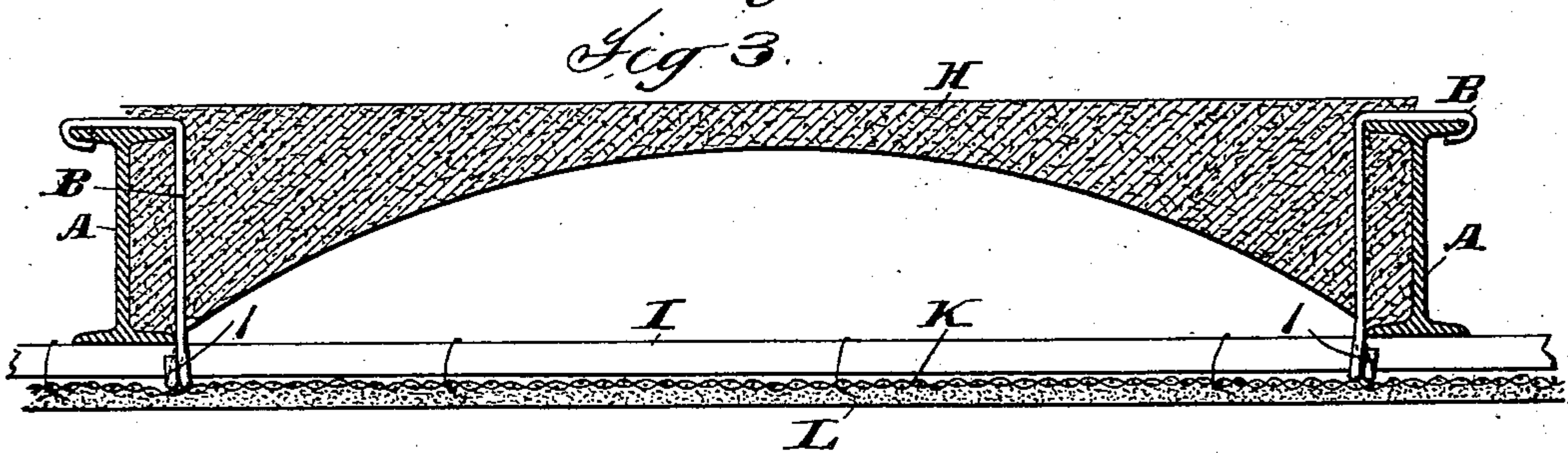
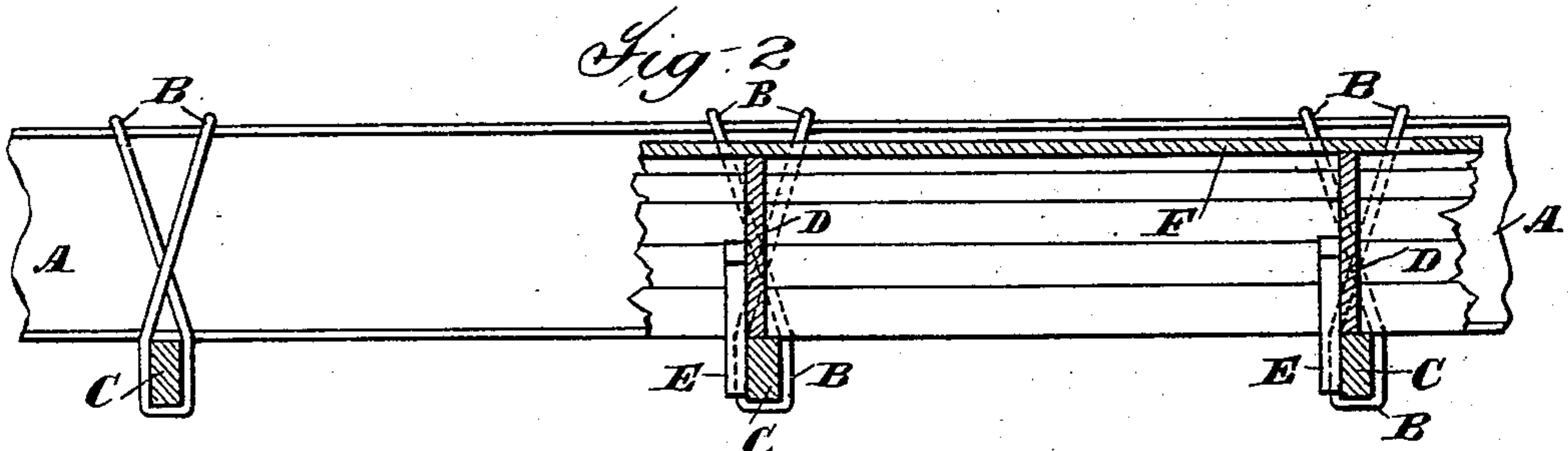
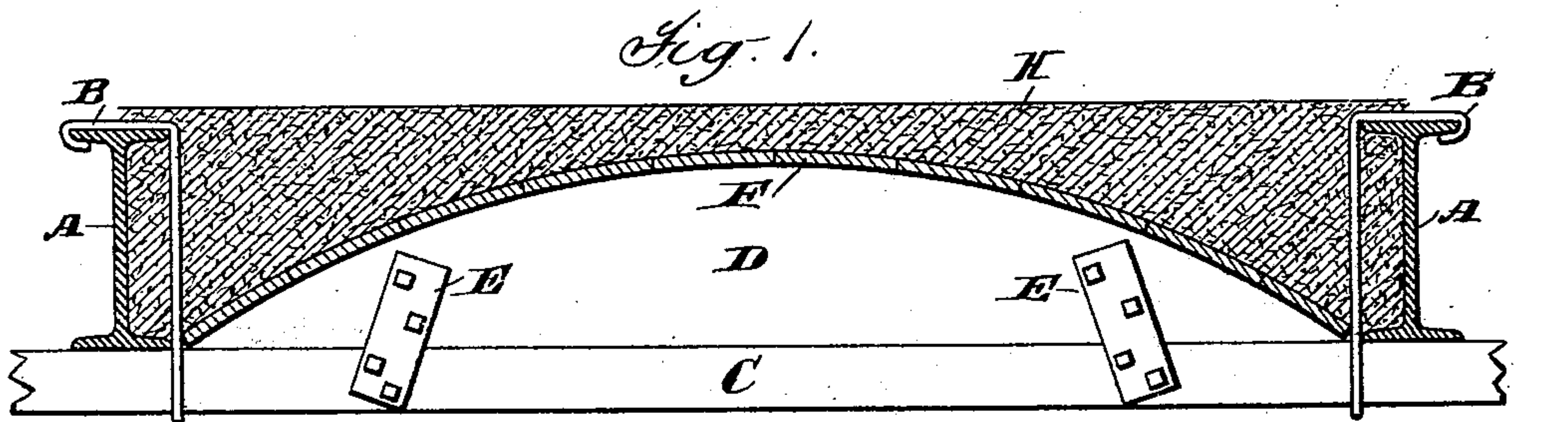
No. 751,181.

PATENTED FEB. 2, 1904.

G. H. KUNNEKE.
CENTERING SUPPORT.

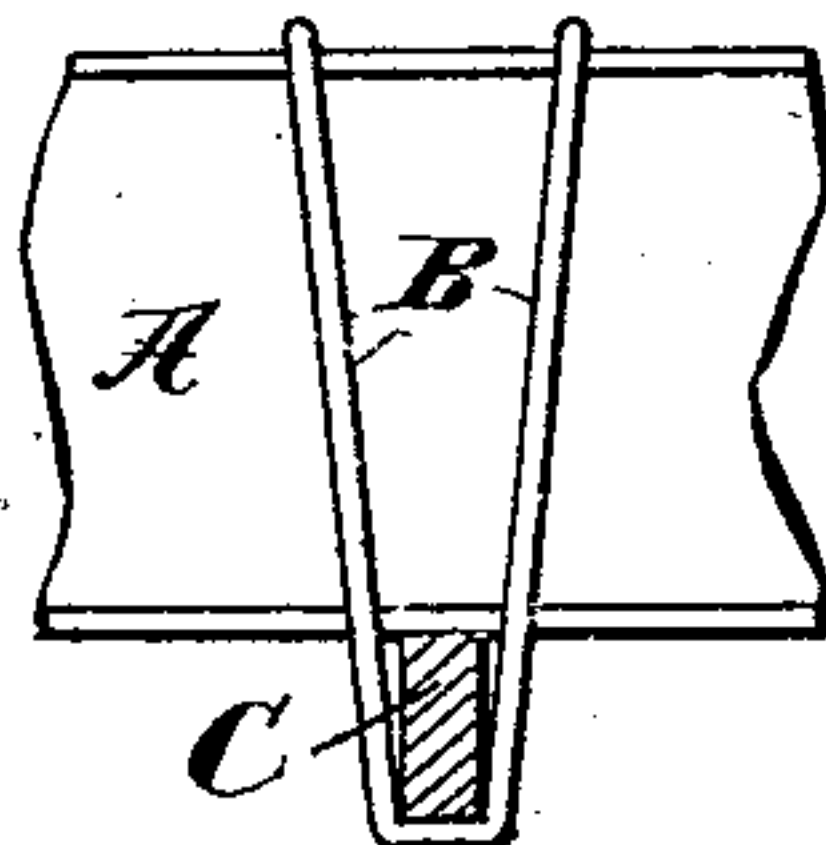
APPLICATION FILED MAY 29, 1901.

NO MODEL.



Attest:
Geo H Bott
S. Mitchell

Fig. 7.



Inventor
George H. Kunneke
By Philip Sawyer Rice &
Kennedy Attys

UNITED STATES PATENT OFFICE.

GEORGE H. KUNNEKE, OF NEW YORK, N. Y., ASSIGNOR TO THE NEW JERSEY WIRE CLOTH COMPANY, OF TRENTON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

CENTERING-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 751,181, dated February 2, 1904.

Application filed May 29, 1901. Serial No. 62,308. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. KUNNEKE, a citizen of the United States, residing at New York, county of New York, and State of New York, have invented certain new and useful Improvements in Centering-Supports and Fireproof Constructions, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates especially to the construction of fireproof floors, ceilings, arches, and similar structures in which a temporary framework or centering is used to support the material of the structure during the making of the same and during the offsetting of the concrete or other plastic material, if such plastic materials be used, the general object of the invention being to provide a simple, cheap, and efficient means of supporting the centering in place and enabling the centering to be quickly and conveniently placed in proper position and removed.

Certain features of the invention also relate especially to fireproof constructions in which a ceiling suspended below the beams is used in combination with a fireproof floor, the present invention providing a simple, cheap, and efficient centering-support, which also serves as a means for suspending the ceiling after the centering is removed.

As the invention can best be understood by a detailed description of a construction embodying the same, such a description will now be given in connection with the accompanying drawings, forming a part of this specification, and in which the invention is shown as applied in connection with the construction of two fireproof floor constructions, with and without a suspended ceiling, and the features forming the invention will then be specifically pointed out in the claims.

In the drawings, Figure 1 is a section transverse to the beams of a concrete fireproof floor in process of construction with the centering in place. Fig. 2 is a section at right angles to Fig. 1 with the concrete removed, showing the centering in section at the right

of the figure and the centering removed at the left of the figure. Fig. 3 is a section similar to Fig. 1, showing the completed construction with suspended ceiling. Fig. 4 is a detail view showing the suspended-ceiling support. Fig. 5 is a cross-section of a beam, showing a modified form of hanger supporting the centering. Fig. 6 is a section similar to Fig. 3, showing a floor construction without the suspended ceiling. Fig. 7 is a detail section of the beam-hanger and centering-bar similar to Fig. 2, showing a slightly-modified construction.

Referring now especially to Figs. 1 to 4, A represents the floor-beams, these being shown as of the common I form, although it will be understood that this is immaterial so far as the present invention is concerned. Over these beams are hooked hangers B, which consist of bars or rods of metal of sufficient strength to support the load desired, these hangers in the construction now being described having both ends passing over the tops of the beams from the same side and hooked about the top flanges of the beams and with a depending loop on the opposite side of the beam from the hooks which extends below the beam and incloses the centering-bars C, which extend below and at right angles to the beams. The upwardly-extending arms of the loops are preferably crossed, as shown in Fig. 2, for a purpose presently to be described. Upon these centering-bars C is supported the centering proper, which is shown as consisting of cross-pieces D, secured on and above the bars C, being preferably secured to the latter by cleats E, nailed to the bars and cross-pieces, as shown, this being a simple and cheap construction, while at the same time enabling the centering to be raised to any desired level above the bars C with the same cross-pieces D by securing the cross-pieces more or less above the bars C. Upon the cross-pieces D is the moldboard or centering proper, which is shown as formed of boards F, laid side by side upon the cross-pieces D and extending longitudinally of the beams.

The bars C may be first secured in place

and the centering then built thereon, or the centering structure may be built complete and then placed in position with the bars C passing through the loops of the hangers B. The hangers B may first be put in position and then the bars C put through the hanger-loops, but preferably the hangers B will be formed with both arms of the loop straight and the hangers slipped upward from below with the loop embracing the bars C, while the latter are held in position against the bottom flanges of the beams, the arms of the loop then crossed, as shown in Fig. 2, and the ends of the hangers then bent over the tops of the beams and hooked about the flanges, which bending over of the hangers may be made to draw the bars C up against the bottoms of the beams. It is desirable, however, that the bars C shall be drawn up quite tightly against the beams, so as to assure the proper position and firm support of the centering, and this result is best assured by forcing the ends of the hangers B apart on the tops of the beams after the centering is in place, as shown in Fig. 2. In connection with this forcing apart of the ends of the hangers B the crossing of the arms of the hanger is desirable, as the sides of the loop are thus drawn tighter upon the bar C below the beam and all danger of breakage or weakening of the hanger at the angles below the bar C which might result from spreading the loop, if the hanger-arms were not crossed is avoided. As shown in Fig. 7, however, such hangers may be used and the ends spread for tightening without crossing the arms (but the construction shown in Figs. 1 to 4 is much preferable,) this forcing apart of the hanger ends giving a strong leverage in drawing the centering up and the separated ends of the hangers acting to hold the centering firmly in position with the bars C pressed against the bottoms of the beams. The centering thus having been placed and secured in position, the filling H, of concrete or similar plastic material, is filled in on the centering, as shown in Fig. 1. When the concrete has set sufficiently and the centering is to be removed, it is necessary only to cut the hangers below the concrete, which entirely releases the centering for removal. If the hangers are not to be used to support a suspended ceiling, they will be cut at the lower flanges of the beams, as shown in Fig. 6, in which case the ordinary plaster finish L used in such structures will then completely cover the lower ends of these portions of the hangers left in the concrete, as shown in Fig. 6, or the same concealment of the ends of the hangers may be secured in any other manner or the ends left exposed.

If a suspended ceiling is to be used in combination with the floor construction, the hangers are preferably used to support the ceiling, and such a construction is shown in Fig. 3. In this construction the hanger is cut at the

lower end of the loop, so as to release the centering, and then the two lower ends of the hanger thus formed are bent upward to form ceiling-bar supports 1, inclosing and supporting the ceiling-rods I, carrying the ceiling, which in the construction shown consists of the ordinary wire-netting K and plaster covering L. By putting the ceiling-rods in place against the bottoms of the beams and then bending the ends 1 of the hangers about them the ceiling-rods may be drawn up tight against the beams or the ceiling-rods may be dropped somewhat below the beams, if desired, by correspondingly forming the ceiling-bar supports on the lower ends of the hangers.

A slightly-modified form of hanger B is shown in Fig. 5, in which the loop of the hanger incloses the beam, as well as the centering-bar C, the ends of the hanger being hooked over the tops of the beams on opposite sides; otherwise the construction is the same as shown in Figs. 1 to 3 and 6 and previously described, as will be readily understood from the drawings.

It will be understood that my improved centering construction may be used either with an arched or flat centering and that the structure built thereon may be formed of concrete or other plastic material or of previously-molded tiles, bricks, or other materials, it being understood that the invention is applicable in all structures, either permanent or temporary, in which it is desired to support material by a temporary centering.

What I claim is—

1. The combination with beams or the like and a centering, of hangers consisting of metal loops inclosing a part of the centering and extending upward and having their ends hooked over the tops of the beams and adapted to be cut for the removal of the centering, substantially as described.

2. The combination with beams or the like and a centering, of metal hangers consisting of metal loops inclosing a part of the centering and extending upward and having their ends hooked over the tops of the beams and adapted to be cut for the removal of the centering, and having their ends forced apart to draw up the centering, substantially as described.

3. The combination with beams or the like and a centering, of metal hangers consisting of metal loops inclosing a part of the centering and extending upward and having their ends hooked over the tops of the beams and adapted to be cut for the removal of the centering, said hangers having the upwardly-extending loop-arms crossed, and having their ends forced apart to draw up the centering, substantially as described.

4. The combination with beams or the like and a centering, of hangers consisting of metal loops inclosing a part of the centering below

the beams and extending upward on one side of the beams and having their ends hooked over the tops of the beams, and adapted to be cut for the removal of the centering, substantially as described.

5. The combination with beams or the like and a centering, of hangers consisting of metal loops inclosing a part of the centering below the beams and extending upward on one side of the beams and crossed on the side of the beams and having their ends hooked over the tops of the beams, and adapted to be cut for the removal of the centering, substantially as described.

6. The combination with beams or the like, of temporary bars C extending below the beams and transversely thereto, metal hangers B having loops inclosing the bars to support the latter and extending upward and over the tops of the beams with their ends hooked about the beams, and centering carried by said bars, substantially as described.

7. The combination with beams or the like and a centering, of metal hangers inclosing a part of the centering below the beams and extending upward on one side of the beams, and

having their ends hooked over the tops of the beams, substantially as described.

8. A floor and ceiling construction having hangers extending over the tops of the beams 30 and passing through the floor construction and having their lower ends bent to form ceiling-bar supports, and a suspended ceiling carried by said supports, said hangers being of such construction as to form centering-sup- 35 ports for temporary centering during the construction of the floor, substantially as described.

9. The combination with the beams A, of the floor H, centering-supports B hooked over 40 the tops of the beams and cut at their lower ends to release the centering, ceiling-bars I supported by the lower ends of said centering-supports, and a plastic-material ceiling carried by said bars, substantially as described. 45

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

GEORGE H. KUNNEKE.

Witnesses:

T. F. KEHOE,

C. J. SAWYER.