

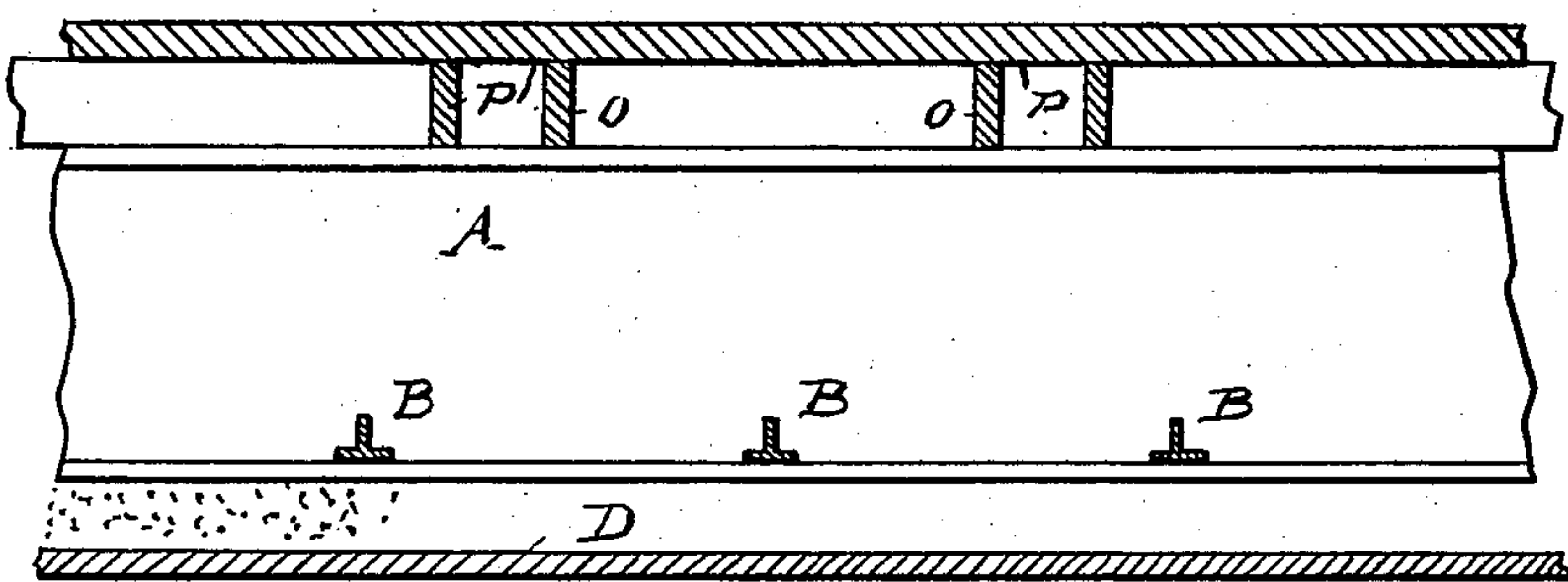
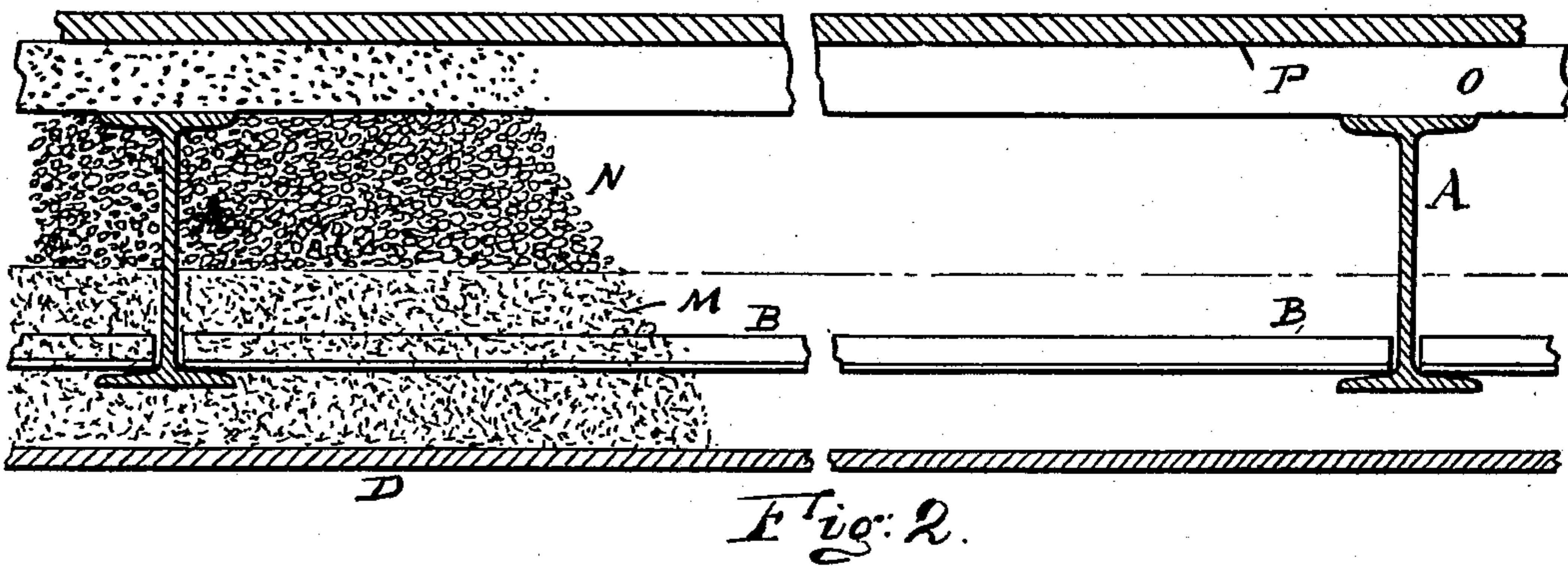
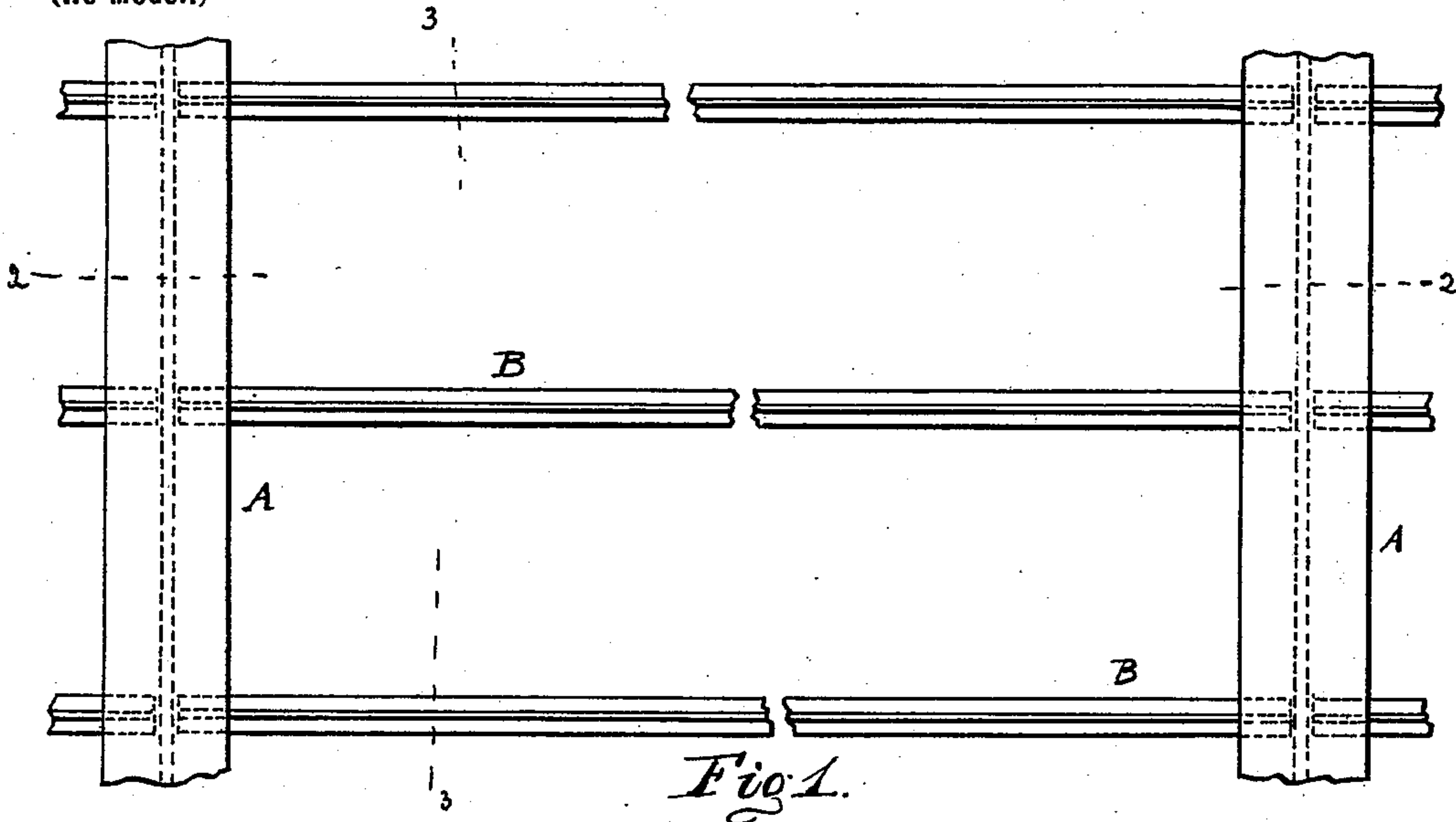
No. 713,994.

Patented Nov. 18, 1902.

J. KROLMAN.
FIREPROOF FLOOR.

(Application filed May 21, 1902.)

(No Model.)



WITNESSES:

F. Stallman
F. Oetjen

Fig. 3.

INVENTOR
J. Krolman
BY *Osbert Green*
ATTORNEY.

UNITED STATES PATENT OFFICE.

JOHN KROLMAN, OF NEW YORK, N. Y.

FIREPROOF FLOOR.

SPECIFICATION forming part of Letters Patent No. 713,994, dated November 18, 1902.

Application filed May 21, 1902. Serial No. 108,338. (No model.)

To all whom it may concern:

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

The object of my invention is to provide a new and improved fireproof floor which is simple in construction, strong, and durable, and requires no lath for the ceiling.

In the accompanying drawings, in which like letters of reference indicate like parts in all the figures, Figure 1 is a plan view of a section of my improved flooring. Fig. 2 is a vertical sectional view of the same on the line 2 2 of Fig. 1. Fig. 3 is a sectional view of the same on the line 3 3 of Fig. 1.

The floor-beams A, which are I-beams of the conventional shape, are spaced from five to eight feet, more or less, as conditions may demand. T-bars B are rested on the bottom flanges of the I-beams A, with the webs projecting upward and the flanges resting on the flanges of the I-beams. Said T-bars B and the lower third, more or less, of the I-beams A are embedded in a concrete composition composed of one part of Portland cement, five parts of cinders, and one part of sand. The bottom surface of this concrete layer M extends about one inch below the under side of the I-beams A, the under side of this layer forming a flat surface on which the ceiling-plaster D is applied. This layer M, of concrete, in which are embedded the T-bars and the lower parts of the I-beams, forms the supporting-arch of the floor. It also serves to hold the T-bars securely in place and prevents any shifting of the same and avoids the use of fastening devices for the ends of the T-bars, and these T-bars in turn give a support to this concrete layer and strengthens it, and thus renders the layer M very strong and fully capable of supporting the load to be placed upon the floor. As this layer M of concrete extends below the I-beams, it also does away with the use of metal or other lath for the ceiling-plaster, and thus reduces the expense and makes the entire floor more homogeneous. Upon this concrete layer M, in which the T-bars and lower parts of the I-beams are embedded, I place a layer N of lighter and

cheaper concrete, composed of one part of cement and eight to ten parts of cinders, which layer is carried up to the tops of the I-beams. Upon the I-beams and this top layer I place the sleepers O, on which the flooring P is nailed.

The bottom concrete layer M need only extend from about an inch below the I-beams to about one-third of the height of the I-beam, as such a layer, with the embedded T-bars, has all the requisite strength. The remaining space between the top of this layer and the upper edges of the I-beams can be filled in with a much lighter and cheaper concrete, as it need not have any great carrying power. The floor is thus very economical, as the material is distributed to the greatest advantage as regards strength, lightness, and insulation. As no metal parts need be fastened together by metal connections and there is no binding or folding of one metal part over the other, the cost of material is reduced, as is also the cost of labor of making the floor.

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

In a fireproof floor, the combination with rolled-metal I-beams, of angle-bars upon the bottom flanges of the I-beams, and extending from one I-beam to the other, and having their ends loosely rested upon said flanges, a layer of heavy concrete in which the lower parts of the I-beams and said T-bars are embedded, said layer extending from about one-third of the height of the I-beams to a plane about one inch, below the bottom flanges of the I-beams, and which heavier layer of concrete entirely envelops and surrounds such bottom flanges of the I-beams and said T-bars, a layer of plaster applied on the under side of this layer of concrete and a layer of lighter concrete placed upon the above-mentioned layer of heavy concrete and extending to the upper surfaces of the beams, substantially as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 8th day of May, 1902.

JOHN KROLMAN.

Witnesses:

ANNA M. KROLMAN,
ALBERT D. KUBIE.