

No. 671,199.

Patented Apr. 2, 1901.

W. WHITE.
FIREPROOF CONSTRUCTION.

(Application filed Oct. 8, 1900.)

(No Model.)

Fig. 1.

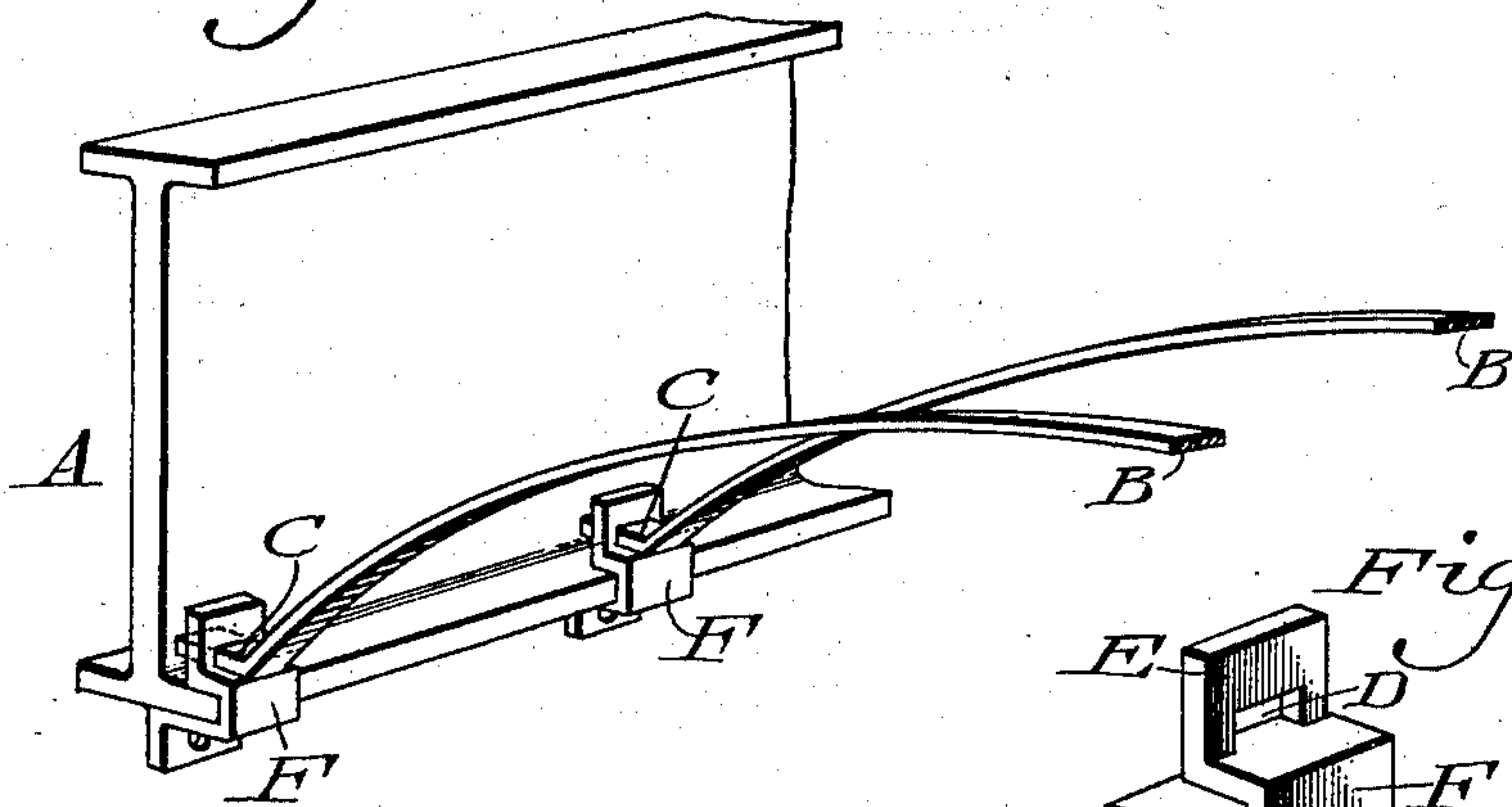


Fig. 6.

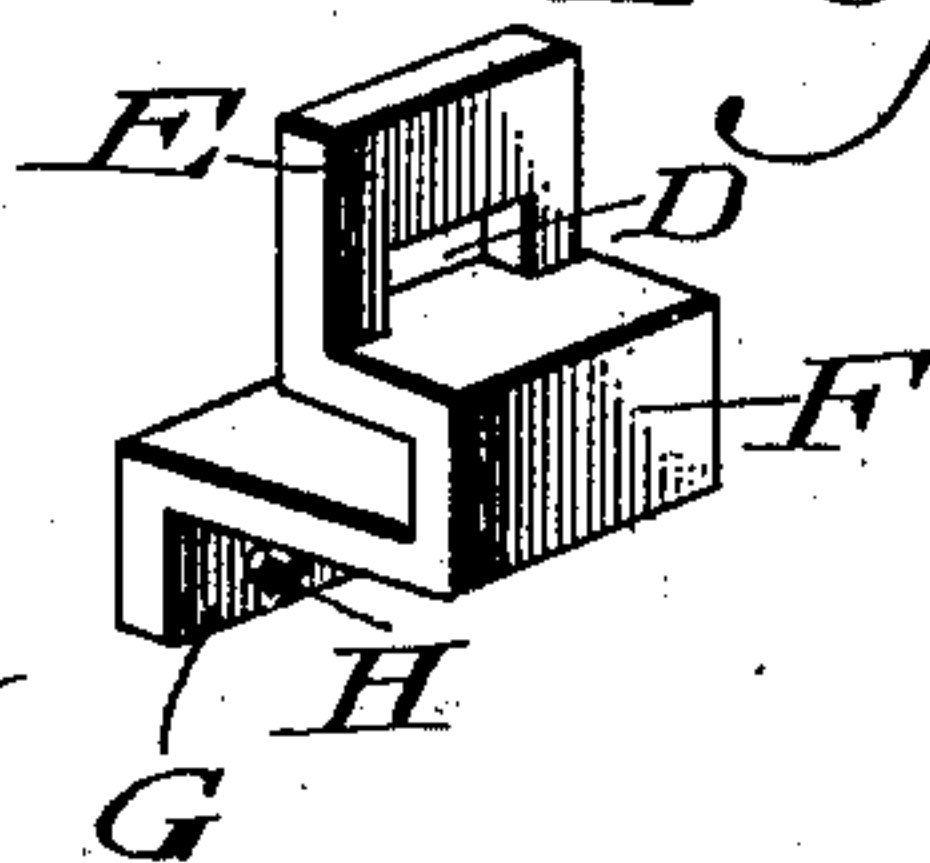


Fig. 5.

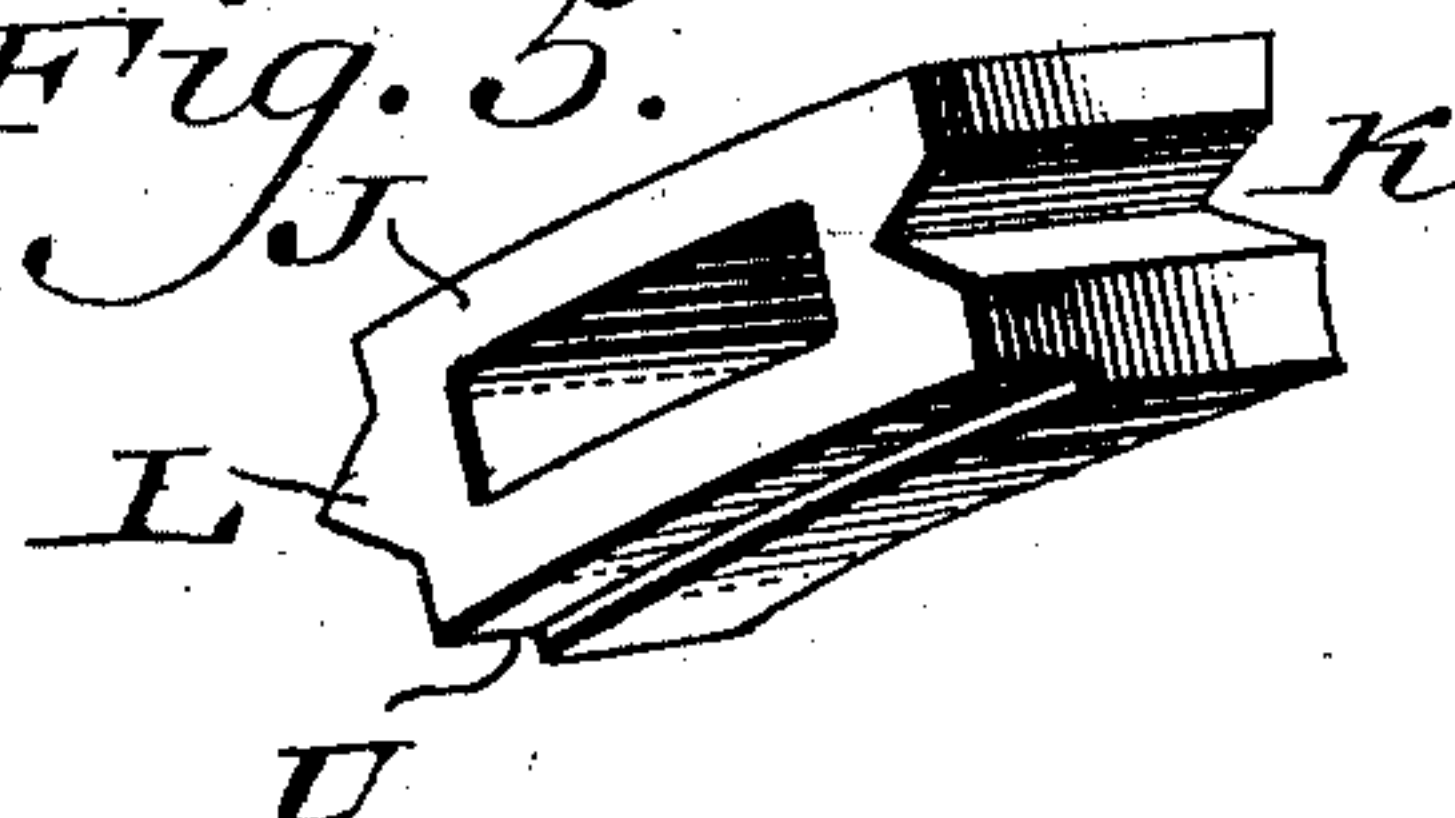


Fig. 2.

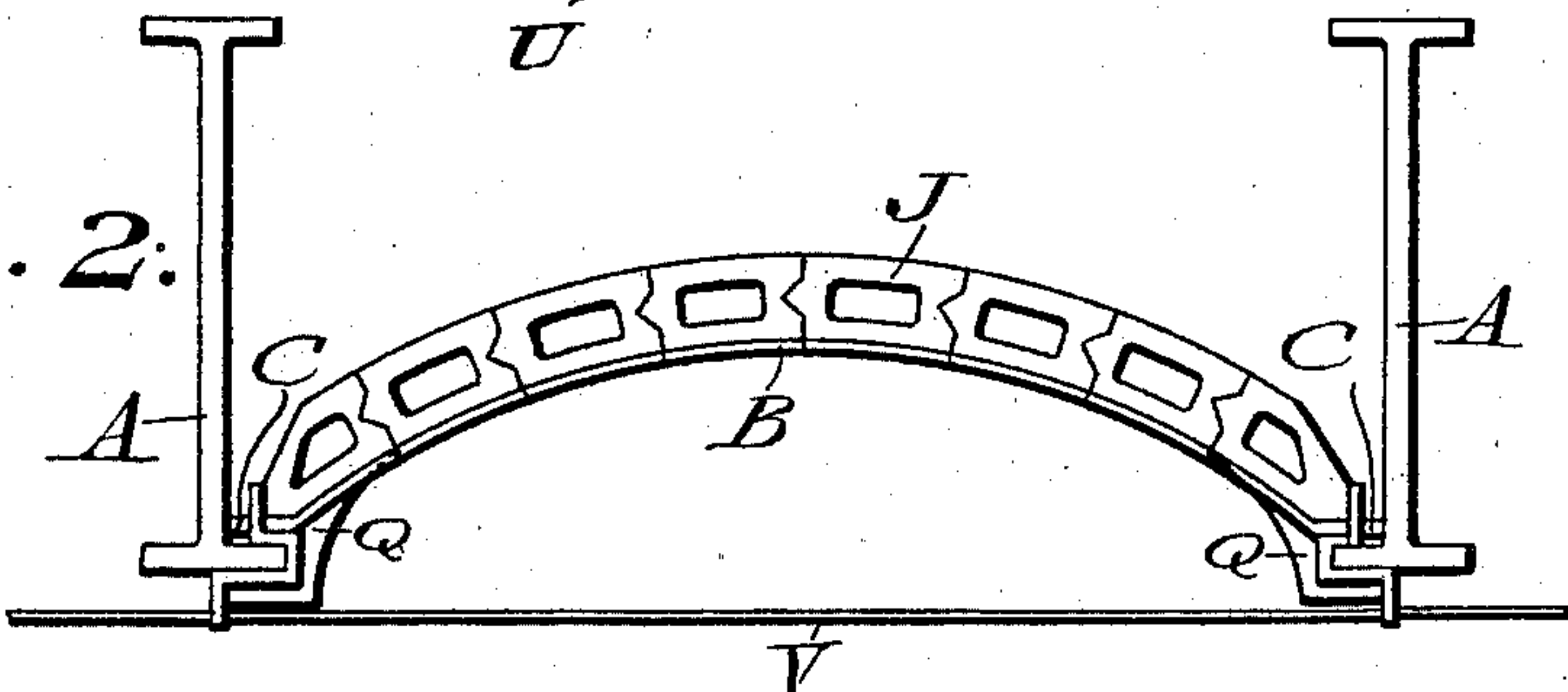


Fig. 3.

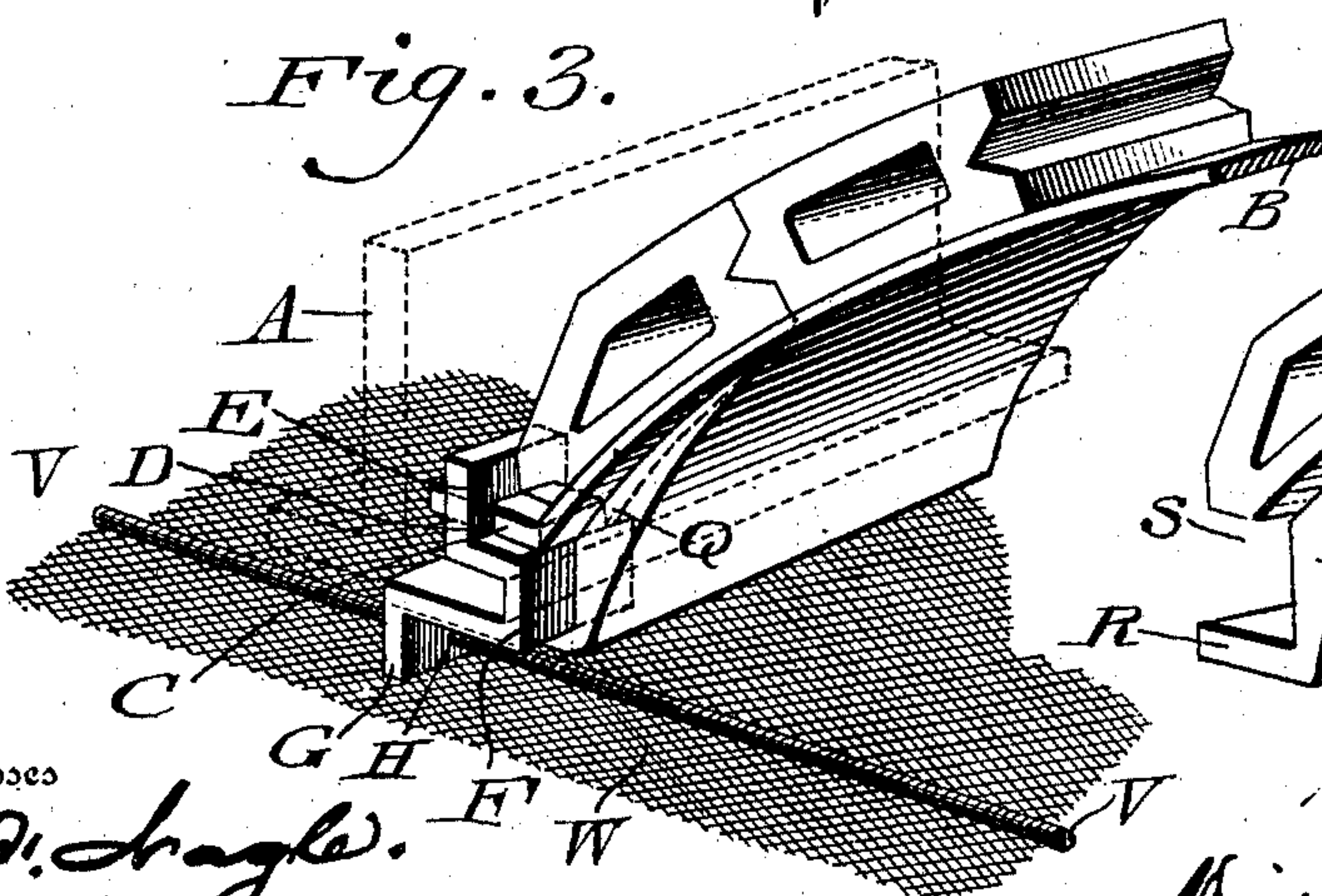
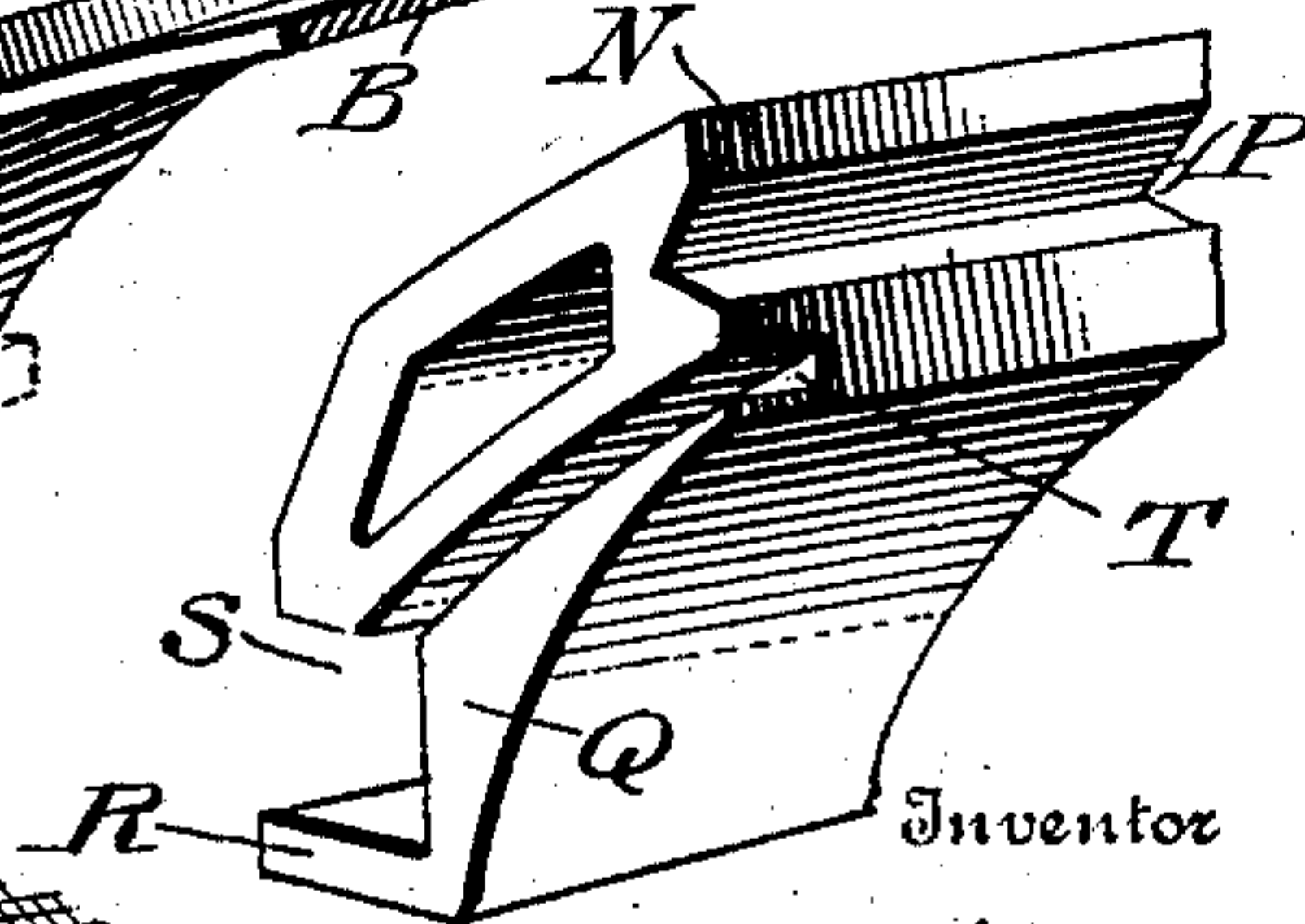


Fig. 4.



Witnesses

P. J. Hagle.
L. Bouville.

By

Inventor

William White.
Biederheim & Fairbanks
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM WHITE, OF PHILADELPHIA, PENNSYLVANIA.

FIREPROOF CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 671,199, dated April 2, 1901.

Application filed October 6, 1900. Serial No. 32,227. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WHITE, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Fireproof Constructions, which improvement is fully set forth in the following specification.

My invention consists of an improvement in fireproof constructions embodying arch-blocks and supports or arches carried by I-beams upon which the arch-blocks are adapted to rest.

It further consists in providing means for engaging said arches, whereby the same will be properly supported on said I-beams.

It further consists of novel details of construction, all as will be hereinafter fully set forth.

Figure 1 represents a perspective view showing a portion of an I-beam and a portion of the arches employed. Fig. 2 represents a side elevation of a portion of the fireproof construction, showing the arch-blocks in position. Fig. 3 represents a perspective view of a portion of an arch, with means for carrying the same on the I-beams, and a portion of the arch-blocks in position. Figs. 4 and 5 represent perspective views of portions of arch-blocks employed. Fig. 6 represents a perspective view of the means for carrying the arches on the I-beams.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates I-beams, and B the arches or supports employed, the same consisting of a strip of metal or other suitable material having the ends C extending at an angle and which are adapted to enter openings D in the tongue E on the angle-irons F, which latter are provided with a depending lug G, having an opening H therein, said angle-irons being adapted to fit on the lower flanges of the I-beams A and a portion of said angle-irons being adapted to project below the same and abut against a similar angle-iron supported on the lower flange on the other side of the I-beam.

J designates arch-blocks employed, one of the abutting faces of which is provided with the groove K and on the opposite side with

the tongue L, the latter being adapted to enter a groove K on the next abutting arch-block and the groove being adapted to receive a tongue L on the next abutting arch-block. The end arch-blocks N are provided on one face with the groove P and are further provided with the curved projection Q, having the tongue R extending therefrom, leaving a space S between the same and the lower edge of the arch-block. A groove T is further provided in said end block N, while the arch-blocks J have a cut-away portion U for evident purposes.

V designates rods which are adapted to pass through the openings H in the tongues G and are supported thereby, said rods B carrying the wire mesh W.

The operation is as follows: The angle-irons F are placed at a suitable distance apart upon the lower flanges of the I-beams A, and arches B are adapted to have their ends seated in the openings D, whereby said arches would be supported and extend from one I-beam to the other. The arch-block N is now placed in position, said groove T receiving one-half of one of the arches B and the tongue R extending beneath the I-beams a sufficient distance to meet a corresponding tongue on the next adjacent arch-block, it being seen that by this means the lower portion of the beams are protected, as well as the angle-irons, the only part being exposed being the edge of the tongue G. The arch-blocks J are now placed in position, the tongues and grooves being adapted to engage with each other, whereby a tight joint is made with each arch-block, it being noticed that the said arch-blocks are uniformly curved and the cut-away portion in said arch-blocks J being adapted to receive one-half the width of the arches, so that each arch supports a portion of the end abutting edges of the arch-blocks. A concrete filling is now placed upon the arch-blocks, it being seen that some of the filling may pass down and fill the space between the tongue R and the lower portion of the flange of the I-beam.

The rods V, which are supported by tongues G, carry the wire mesh W, whereby when properly plastered a straight ceiling is formed. In order to form a curved ceiling, the rods V

and wire mesh W are omitted, and the plastering can be done directly on the arch-blocks and arches, whereby a curved ceiling is formed.

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

1. In a fireproof construction, I-beams, angle-irons adapted to rest on the flanges of the
10 I-beams, arch-blocks and arches therefor adapted to engage with said angle-irons and be held in position thereby, said arches being adapted to support said arch-blocks.

2. In a fireproof construction, I-beams, angle-irons supported on the flanges of said I-beams, arches engaging with and carried by
15 said angle-irons, and arch-blocks supported on said arches and having projections extending below said flanges and said angle-irons in
20 order to protect the same.

3. In a fireproof construction, I-beams, angle-irons supported on said I-beams, arch-blocks, arches for said arch-blocks, and means
25 on said arches for engagement with said angle-irons.

4. In a fireproof construction, I-beams, angle-irons supported on said I-beams, arch-blocks, arches for said arch-blocks, means on
30 said arches for engagement with said angle-irons, and means on said angle-irons for supporting the ceiling.

5. In a fireproof construction, I-beams, angle-irons supported on the flanges of said I-beams and extending beneath said flange,
35 arches suitably connected with said angle-irons, arch-blocks, carried by said arches and means on said arch-blocks for engagement with the next adjacent arch-blocks.

6. In a fireproof construction, an angle-iron
40 having means for engagement with the flange of an I-beam, an upwardly-extending tongue

carried thereby and a depending lug on said angle-iron.

7. In a fireproof construction, I-beams, angle-irons adapted to engage with the flange
45 of said I-beams, arches carried by said angle-irons and an arch-block having an ear adapted to enter beneath said angle-iron and said I-beam.

8. In a fireproof construction, I-beams, angle-irons adapted to be supported on the
50 flange of said I-beams, and having a tongue with an opening therein and arches having ends adapted to enter said opening in said tongue.

9. In a fireproof construction, I-beams, angle-irons supported on the flange of said I-beams, arches carried by said angle-irons,
55 and arch-blocks suitably connected together, the outer one of which is provided with a curved projection and a tongue extending therefrom and adapted to pass beneath said
60 I-beam and said angle-iron.

10. In a fireproof construction, I-beams, angle-irons supported on the flange of said I-
65 beams, arches carried by said angle-irons, arch-blocks carried thereby, a tongue or lug on said angle-irons extending beneath said I-beams, and rods adapted to be supported by
70 said tongue.

11. In a fireproof construction, I-beams, angle-irons supported on the flange of said I-beams, arches carried by said angle-irons,
75 arch-blocks carried thereby, a tongue or lug on said angle-irons extending beneath said I-beams, rods adapted to be supported by said tongue, and a wire mesh carried by said rods.

WILLIAM WHITE.

Witnesses:

JOHN A. WIEDERSHEIM,
C. D. McVAY.