

J. Foreman,

Truss Bridge.

No. 104,295.

Patented June 14, 1870.

FIG. 1.

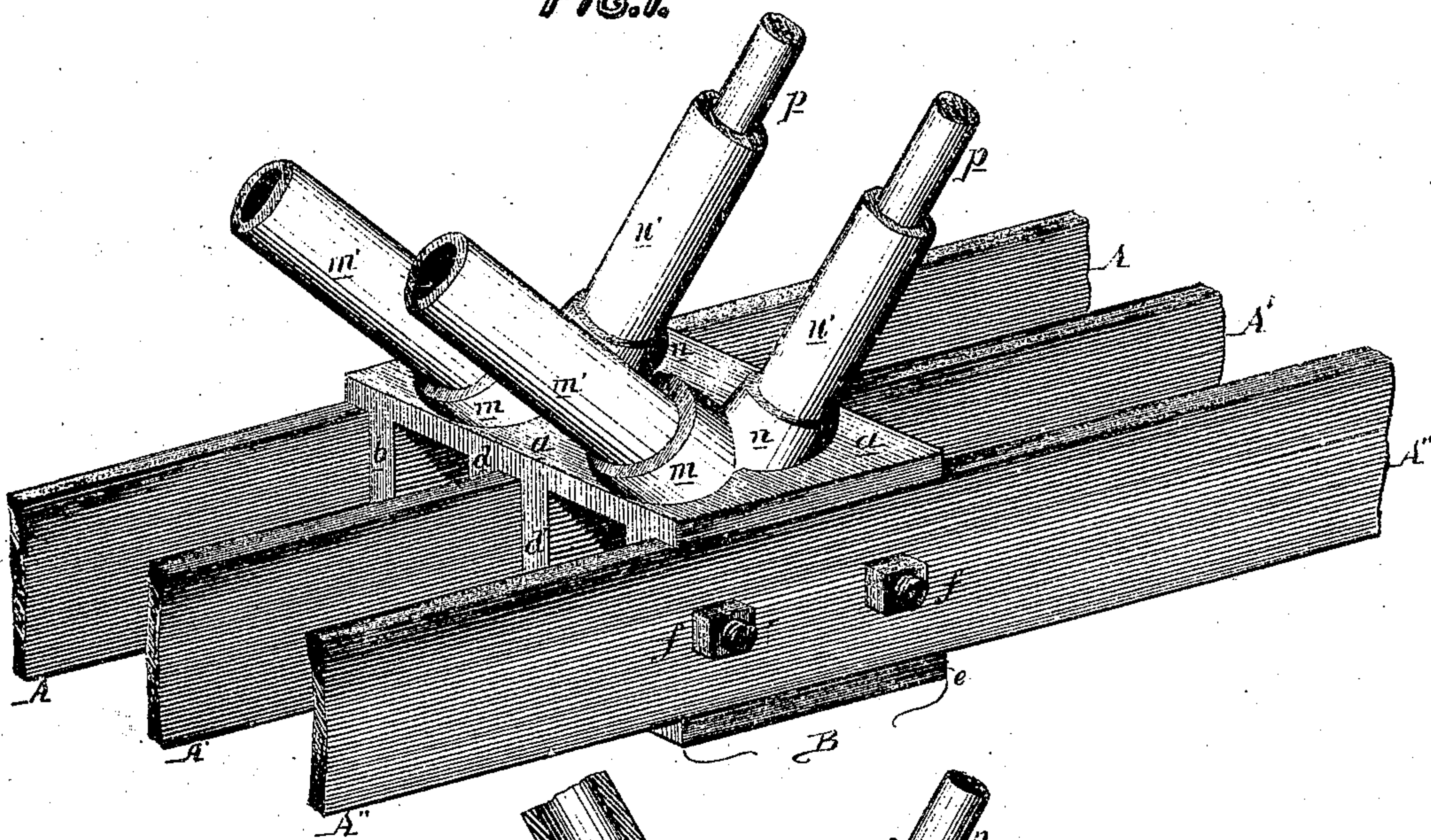


FIG. 2.

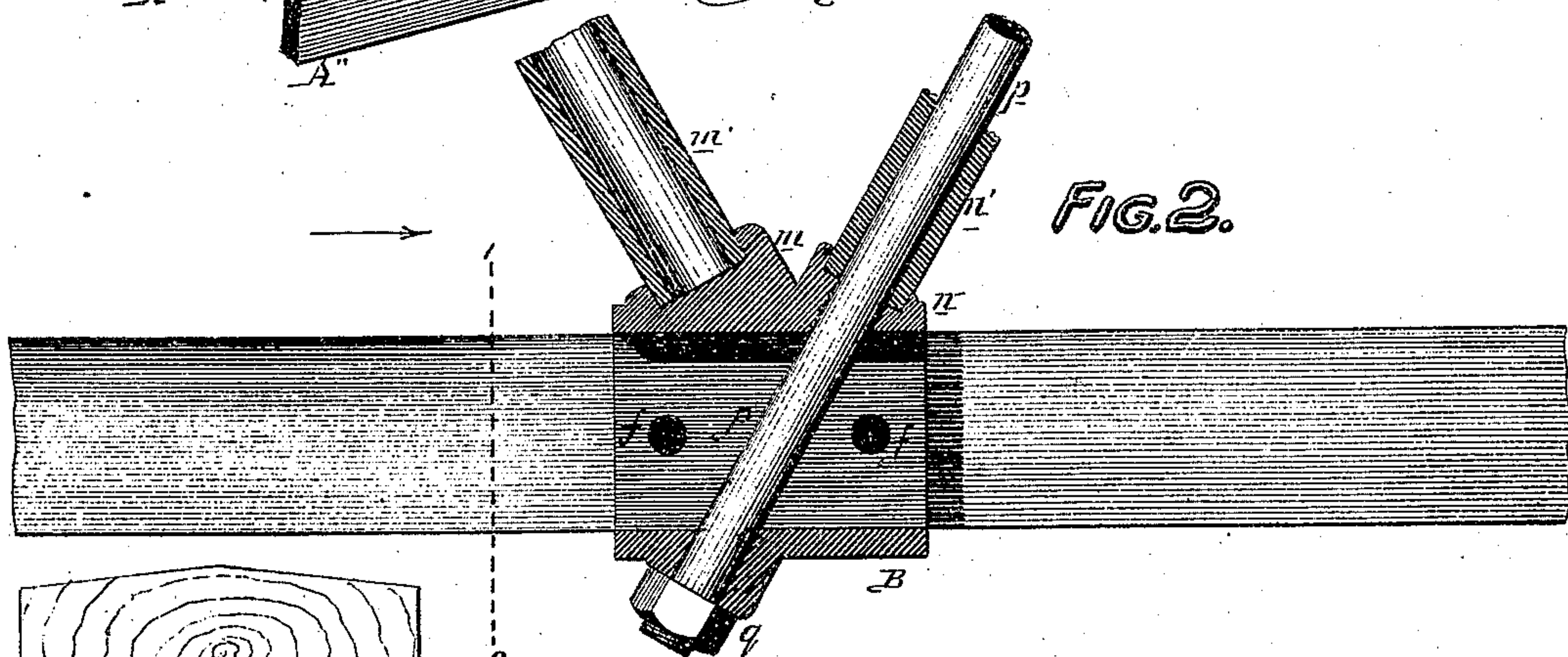


FIG. 4.

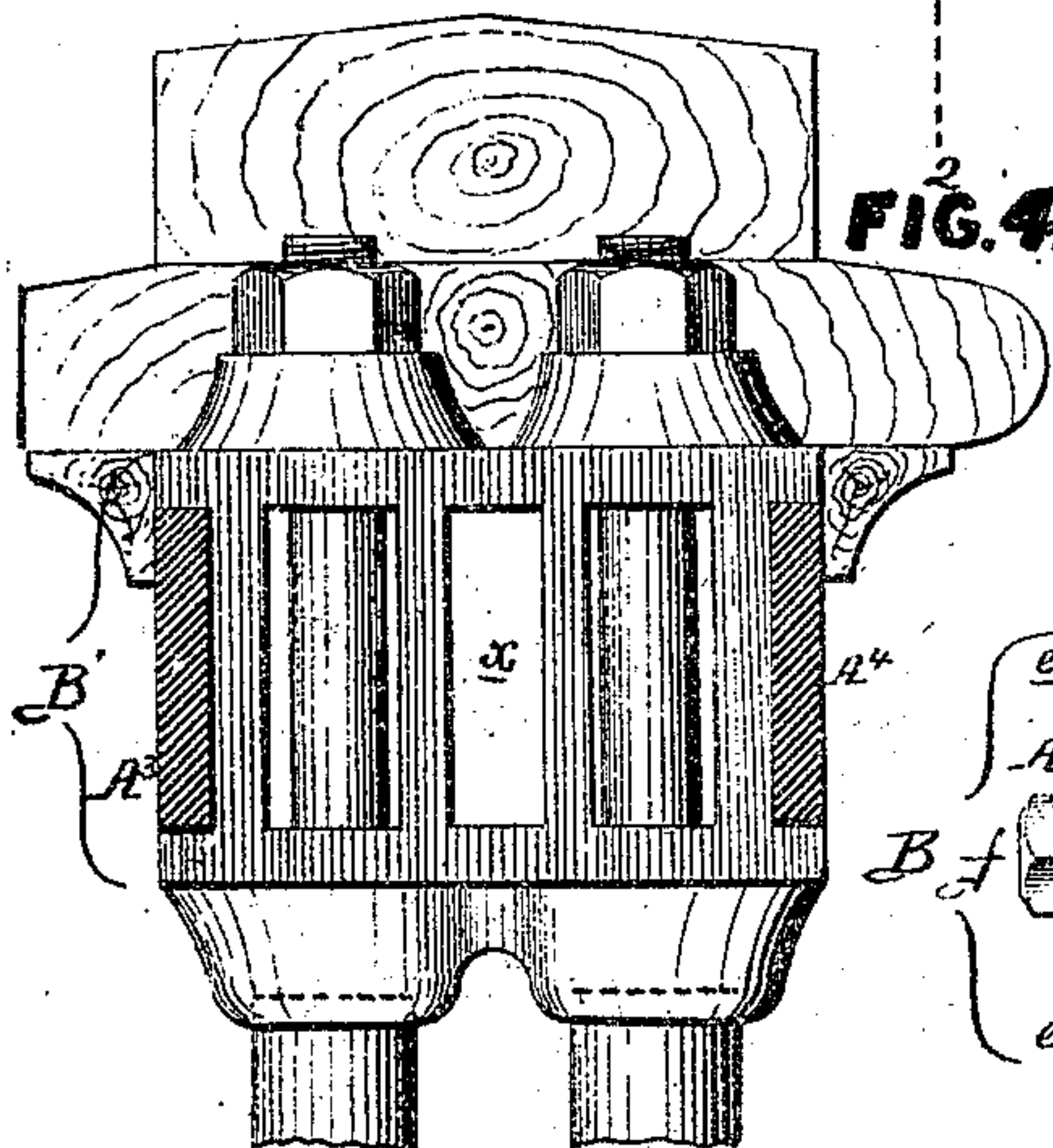
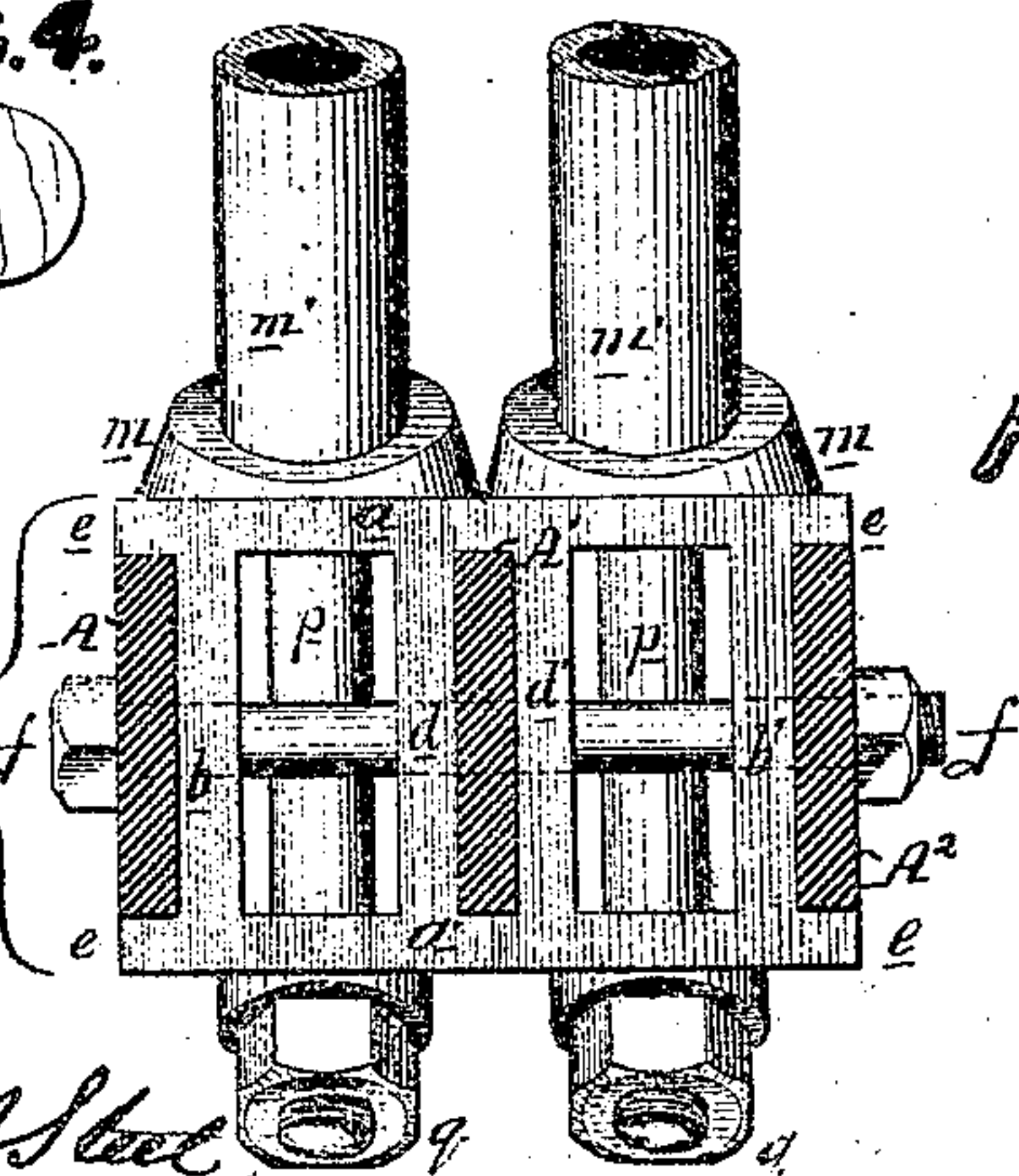


FIG. 3.



*John Foreman
by his Atty²
Howson and Son*

WITNESSES

*Wm. A. Steel
John Parker*

United States Patent Office.

JOHN FOREMAN, OF POTTSTOWN, PENNSYLVANIA.

Letters Patent No. 104,295, dated June 14, 1870.

IMPROVEMENT IN TRUSS-FRAME BRIDGES.

The Schedule referred to in these Letters Patent and making part of the same

I, JOHN FOREMAN, of Pottstown, county of Montgomery, State of Pennsylvania, have invented an Improvement in Truss-frame Bridges, of which the following is a specification.

Nature and Object of the Invention.

My invention consists of a cast-iron box, arranged for the reception and securing together of the lower or upper chord-rods and diagonals and counter-diagonals of a truss-frame bridge, in the manner described hereafter, with a view to general simplicity and economy as regards construction.

Description of the Accompanying Drawing

Figure 1 is a perspective view of sufficient of a truss-frame bridge to illustrate my invention.

Figure 2, a vertical section.

Figure 3, a transverse section on the line 1-2, fig. 2, looking in the direction of the arrow, and

Figure 4, a transverse section of a modified form of box to be applied to the upper chords of a bridge.

General Description.

A, A¹, and A² are three continuous flat bars, forming together the lower chord of a truss-frame bridge, and

B is a cast-iron box, composed of the upper and lower horizontal plates *a* and *a'*, connected together by the end vertical plates *b* and *b'*, and the intermediate vertical plates *d* and *d'*, the whole being cast in one piece.

The outer bars A and A² of the lower chord fit snugly between projecting ribs *e e*, which form parts of the upper and lower plates of the box, and against the outer vertical plates of the latter, while the intermediate bar A¹ of the lower chord passes and fits snugly between the two intermediate plates *d* and *d'* of the box.

Two bolts, *f f*, pass through the box and through

the lower chord rods, thus serving to bind the whole firmly together.

In the top of the box are two inclined projections, *m m*, having circular recesses for receiving the lower ends of the tubular diagonals *m'*, and inclined in a contrary direction on the top of the box are projections *n n*, for receiving the tubular counter-diagonals *n' n'*, through which, and through the box, pass the diagonal rods *p*, furnished at their lower ends with nuts *q*, bearing against inclined projections on the under side of the box, these diagonal tie-rods passing through the box at such points as not to interfere with its vertical plates and transverse bolts.

In fig. 4, B' represents a somewhat modified form of box adapted for application to the upper chords of a bridge; but two chords, A³ and A⁴ are shown in this case, it being intended to use a filling of wood between them at each end of the box, and the space *x* within the latter may also be filled, if desired.

It will be seen, without further description, that one casting of simple character is made the medium of receiving and securing together the chord-rods and diagonals of a truss-frame bridge.

The casting may, in bridges of a large size, be made to receive two, or even more than two, intermediate chord-rods, or three, or more than three, diagonals and counter-diagonals, without any departure from the main characteristics of my invention.

Claim.

The box B, consisting of the upper and lower plates *a a'*, vertical plates *b b' d d'*, and recessed projections *m m'*, all constructed and arranged as described.

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

JOHN FOREMAN.

Witnesses:

JOSHUA BYERS,
MATHIAS GEIST.