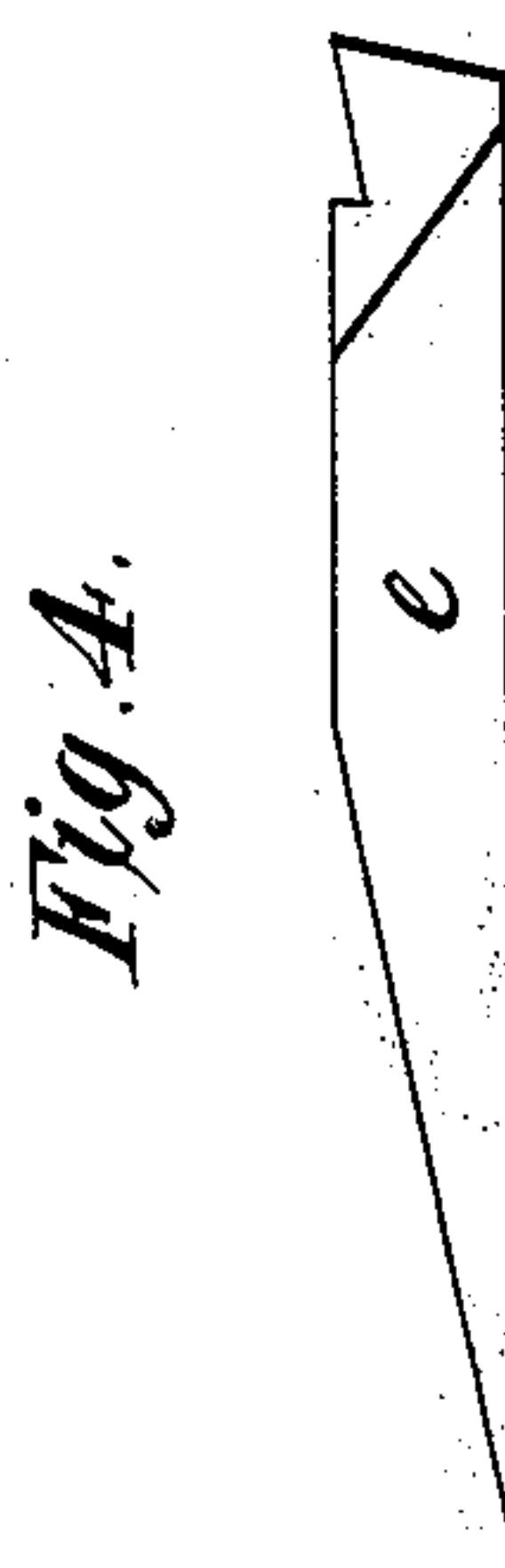
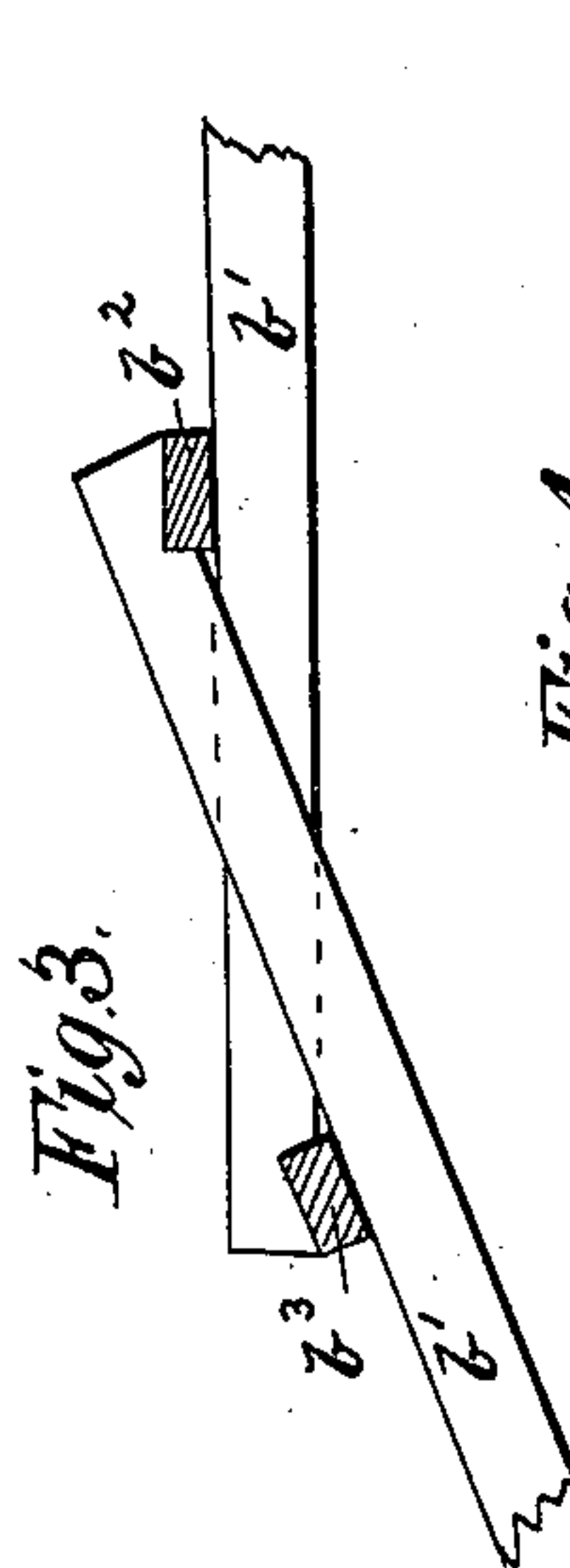
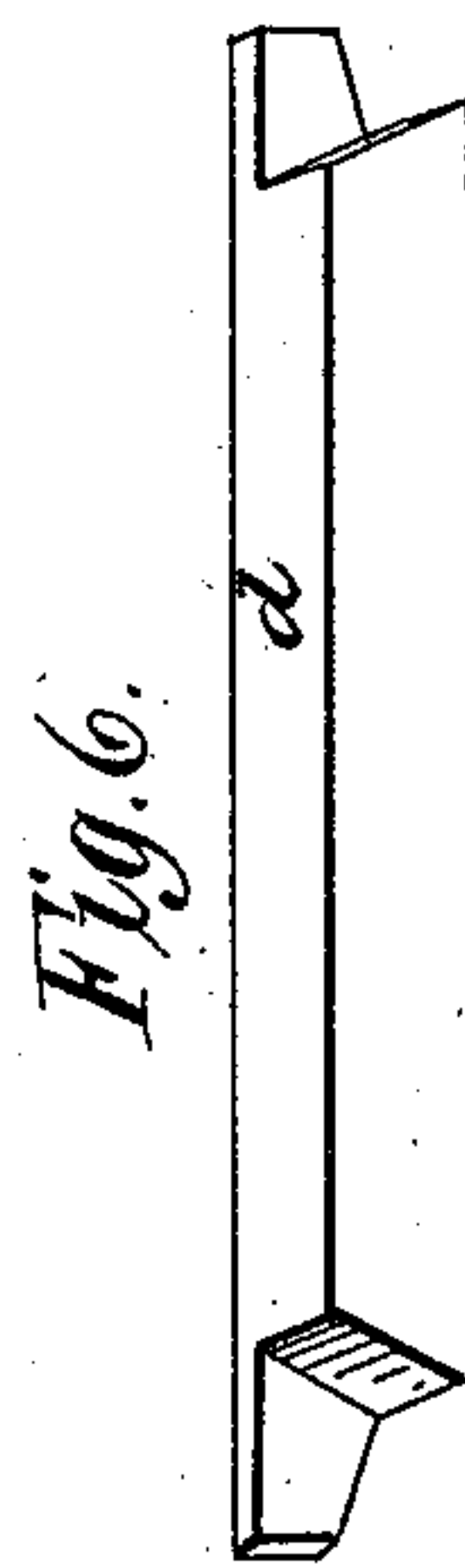
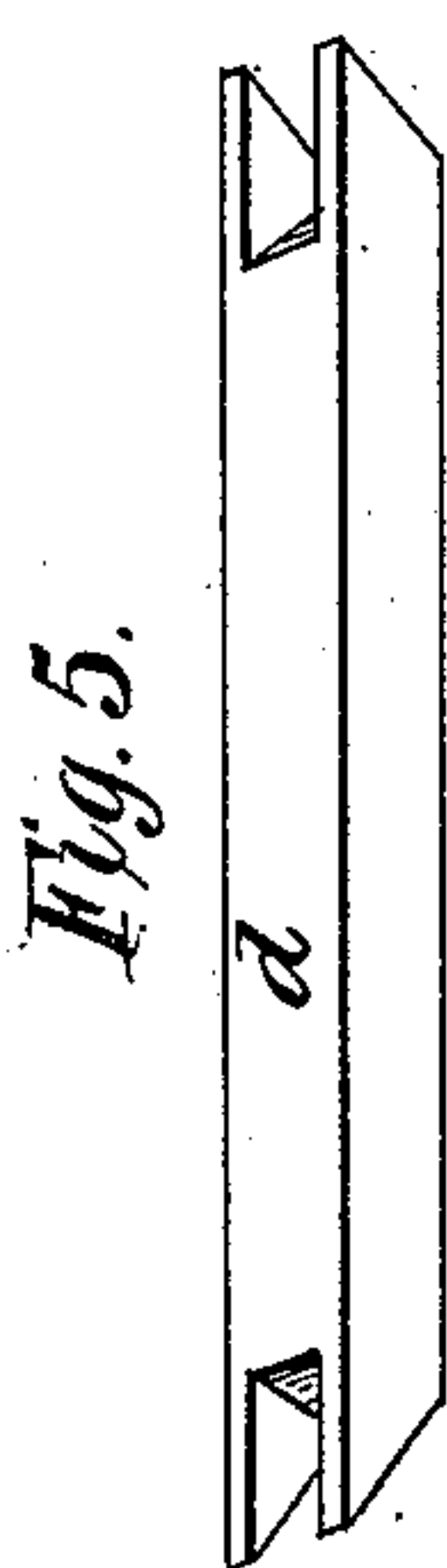
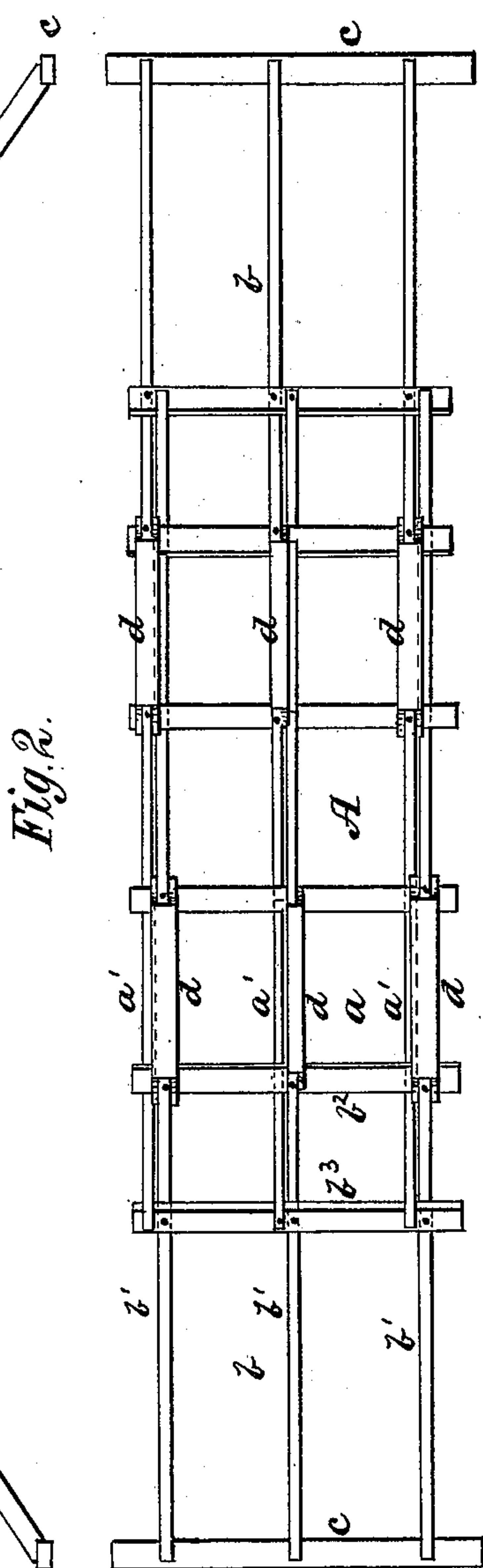
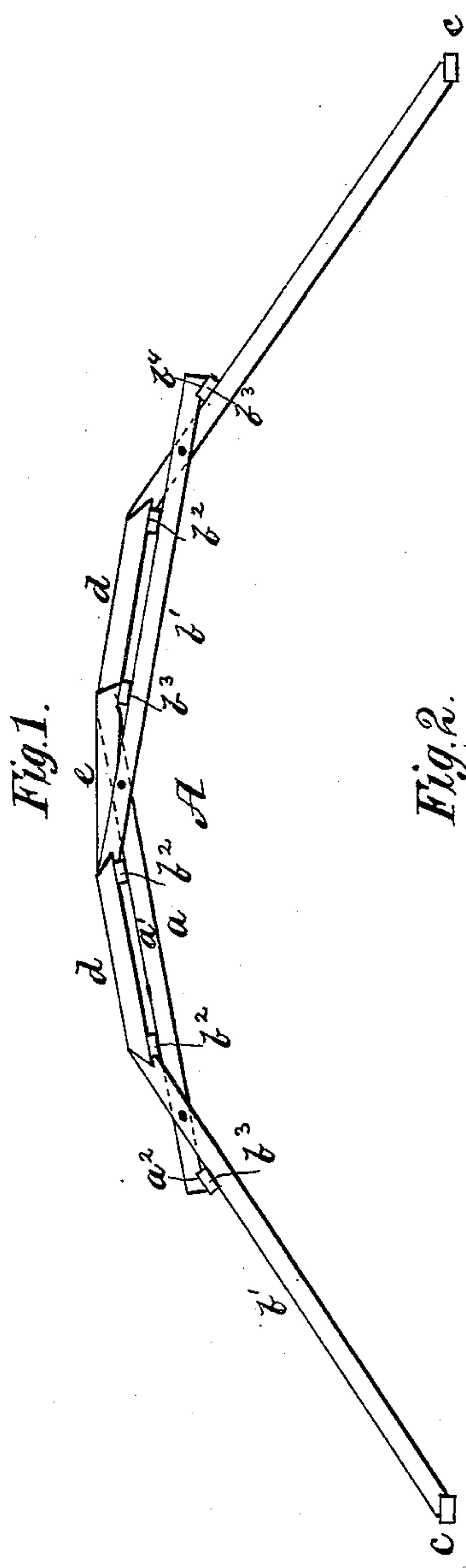


(No Model.)

E. DIXON.
Truss Bridge.

No. 230,929.

Patented Aug. 10, 1880.



Witnesses:
P. B. Turpin
Wm. C. McMillan, Jr.

Inventor:
Ephraim Dixon
by R. S. & A. P. Lacey
Attys.

UNITED STATES PATENT OFFICE.

EPHRAIM DIXON, OF EVERGREEN, ASSIGNOR OF ONE-HALF OF HIS RIGHT
TO MIDDLETON RILEY, OF CONECUH, ALABAMA.

TRUSS-BRIDGE.

SPECIFICATION forming part of Letters Patent No. 230,929, dated August 10, 1880.

Application filed June 19, 1880. (No model.)

To all whom it may concern:

Be it known that I, EPHRAIM DIXON, a citizen of the United States, resident at Evergreen, in the county of Conecuh and State of Alabama, have invented certain new and useful Improvements in Truss-Bridges; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention has for its object to construct a bridge by having a series of sections which may be united and form a self-supporting span.

It consists in the construction and arrangement of the several parts, hereinafter fully described, and pointed out in the claim.

In the drawings, Figure 1 is a side elevation of a span composed of sections made after my invention. Fig. 2 is a plan of the same; and Figs. 3, 4, 5, and 6 are detail views.

The span is composed of one key or top section and a series of lateral sections connected and interlocked, as hereinafter described.

A represents a span of a bridge, composed of a key-section, *a*, and a series of lateral sections, *b*. The key-section *a* is composed of straight bars *a'* *a'*, having notches *a*² on their under edges, near their ends, which engage on the cross-bars of the sections *b*, as hereinafter explained. Each lateral section *b* is composed of the same number of longitudinal bars *b'* as the key-section, which number is, by preference, three, though I do not confine myself to any particular number.

At one end and on the under side of the bars *b'*, I fix the supporting cross-bar *b*², which is slightly let into the bars *b'*, as shown. On the upper side, and removed about one-fourth of the length of the bars *b'* from the bar *b*², I fix an upper supporting cross-bar, *b*³. The ends of the bar *b'*, opposite to the cross-bar *b*², have notches *b*⁴ cut on their under edges, as shown.

The end sections of the span are not furnished with notches *b*⁴ in their bars; but their ends are set in mortises in mud-sills *c*, as shown.

In the construction of an arch I prefer to

employ what I term a "key" or "top" section, for with it I can increase the arch a span in both directions by adding sections *b* at the opposite ends of said key-section.

If preferred, all the sections may be made like section *b*, in which case the span would be increased by additions at one end only.

In raising the span I pass the larger or open end of one section under the end cross-bar, *b*², and over the cross-bar *b*³, the notches *b*⁴ resting on the said cross-bar *b*³. By using the key-sections *a*, I can add sections *b* on the opposite end, and thus more rapidly and with greater ease raise the span.

The key-section is composed of three bars, the opposite ends of which interlock with the sections *b* in the manner above described.

When the several sections are put together I put braces *d*, having mortises *d'*, between the upper ends of the bars *b'* of one section and the rear ends of the bars *b'* of the third section from it. When these braces are inserted, as shown, the span is complete, and will not only be self-sustaining, but will possess great strength and durability.

To prepare the span to receive the plank, I employ filling-pieces *e*, which will bring the low places up to a proper level.

The bars are secured together, when desired, by bolts or other suitable fastenings.

Having thus fully described my invention, what I claim is—

In a self-sustaining span for a bridge, the sections *b*, composed of bars *b'*, with the under cross supporting bars, *b*², and upper supporting cross-bar, *b*³, arranged as described, the sections being interlocked by passing the end of the bars of one section under the bar *b*² and over the bar *b*³ of the next section, and supported longitudinally by the braces *d*, placed between the ends of the side bars of one section and the rear ends of the side bars of the third section from it, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 15th day of June, 1880.

EPHRAIM DIXON. [L. S.]

Witnesses:

JOHN D. BURNETT,
SAMUEL E. MCCREARY.