

W. H. Elliot,

Bedstead Fastening,

N^o 59,794

Patented Nov. 20, 1866

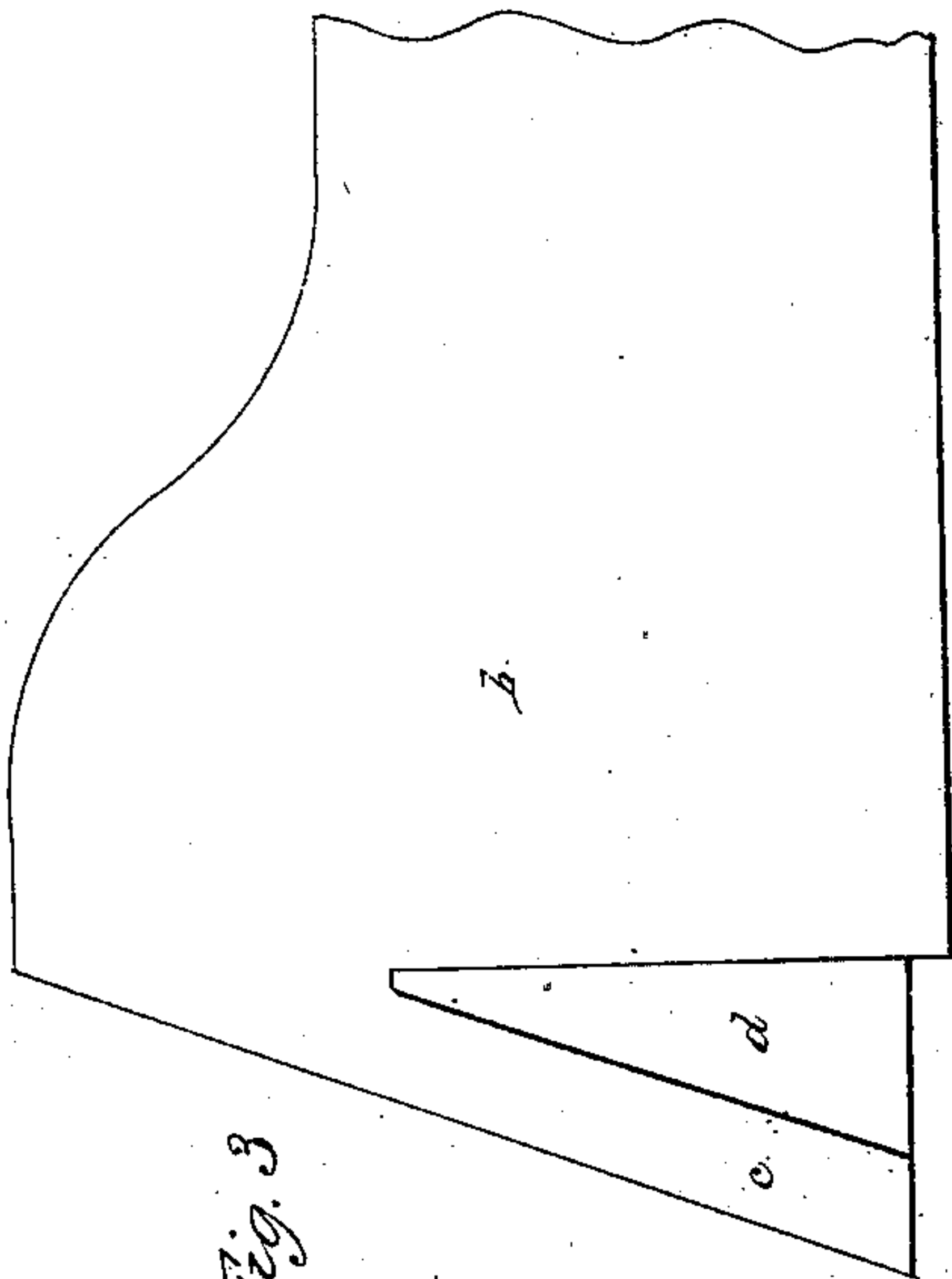


Fig. 3

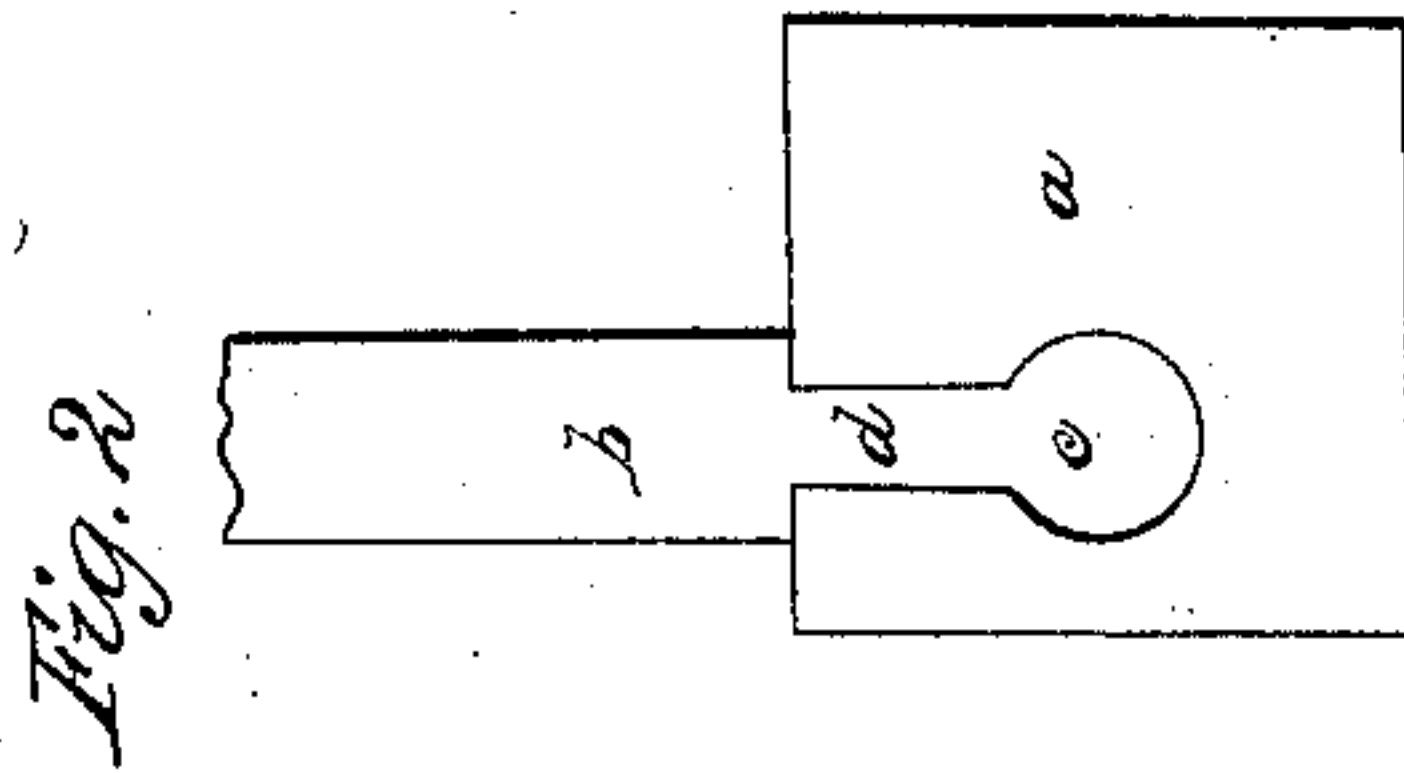


Fig. 2

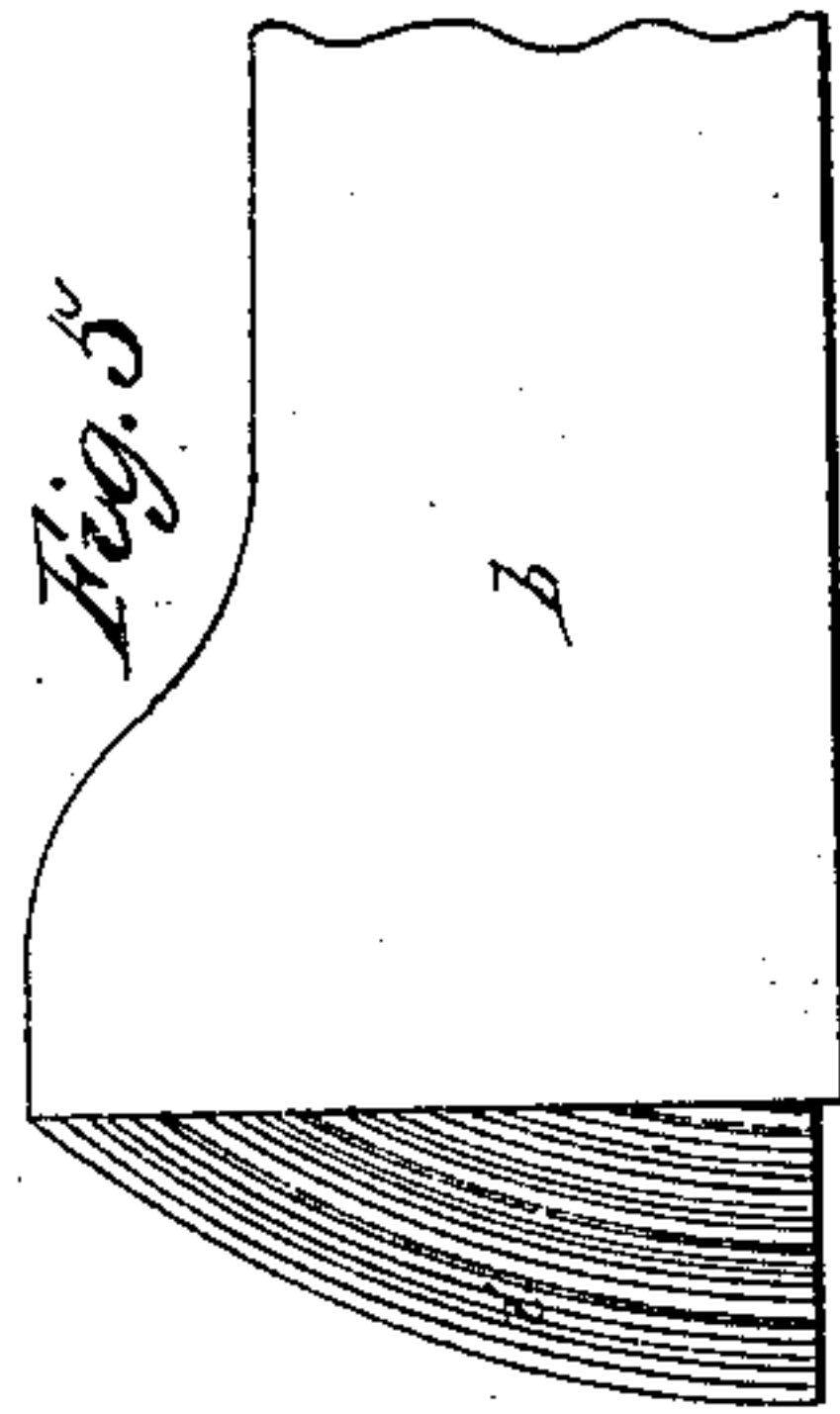


Fig. 5

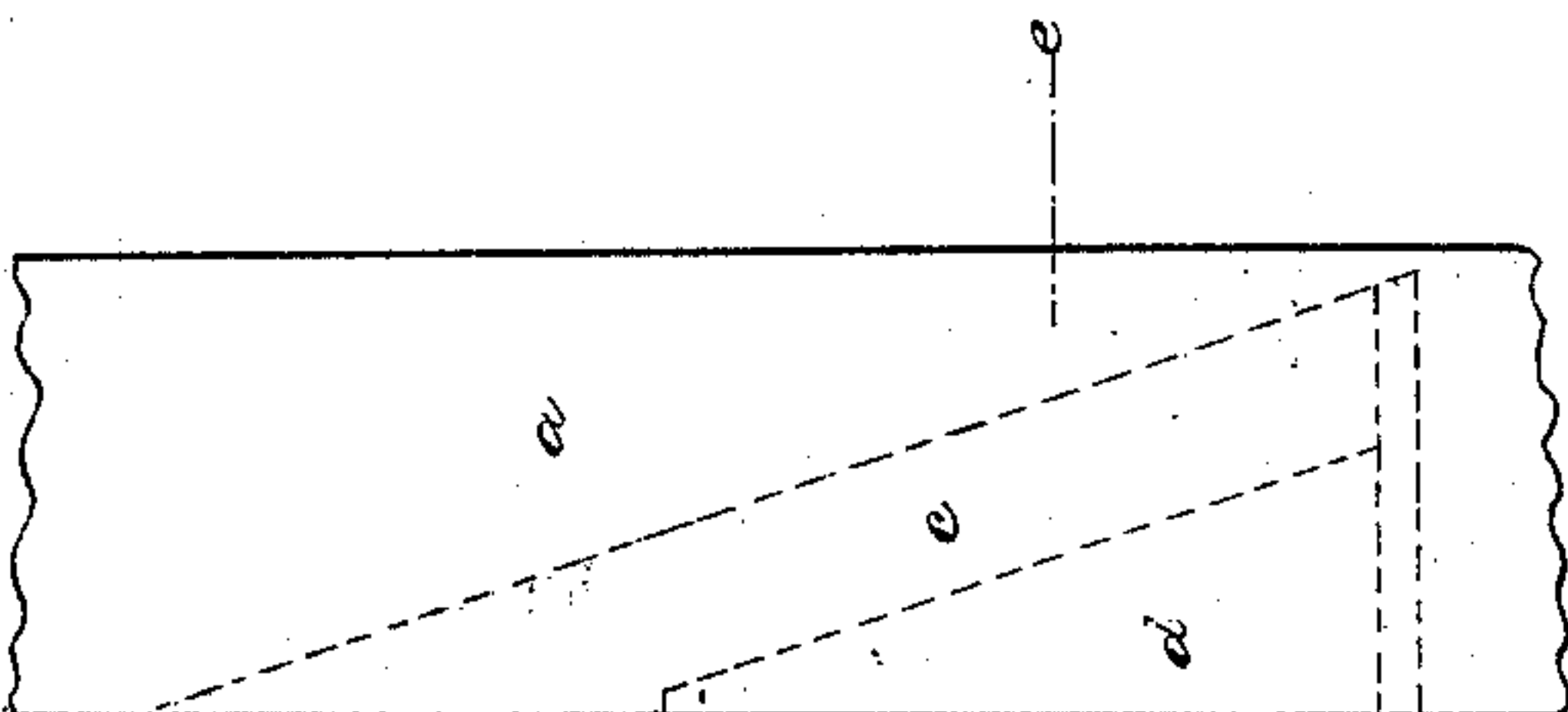


Fig. 1

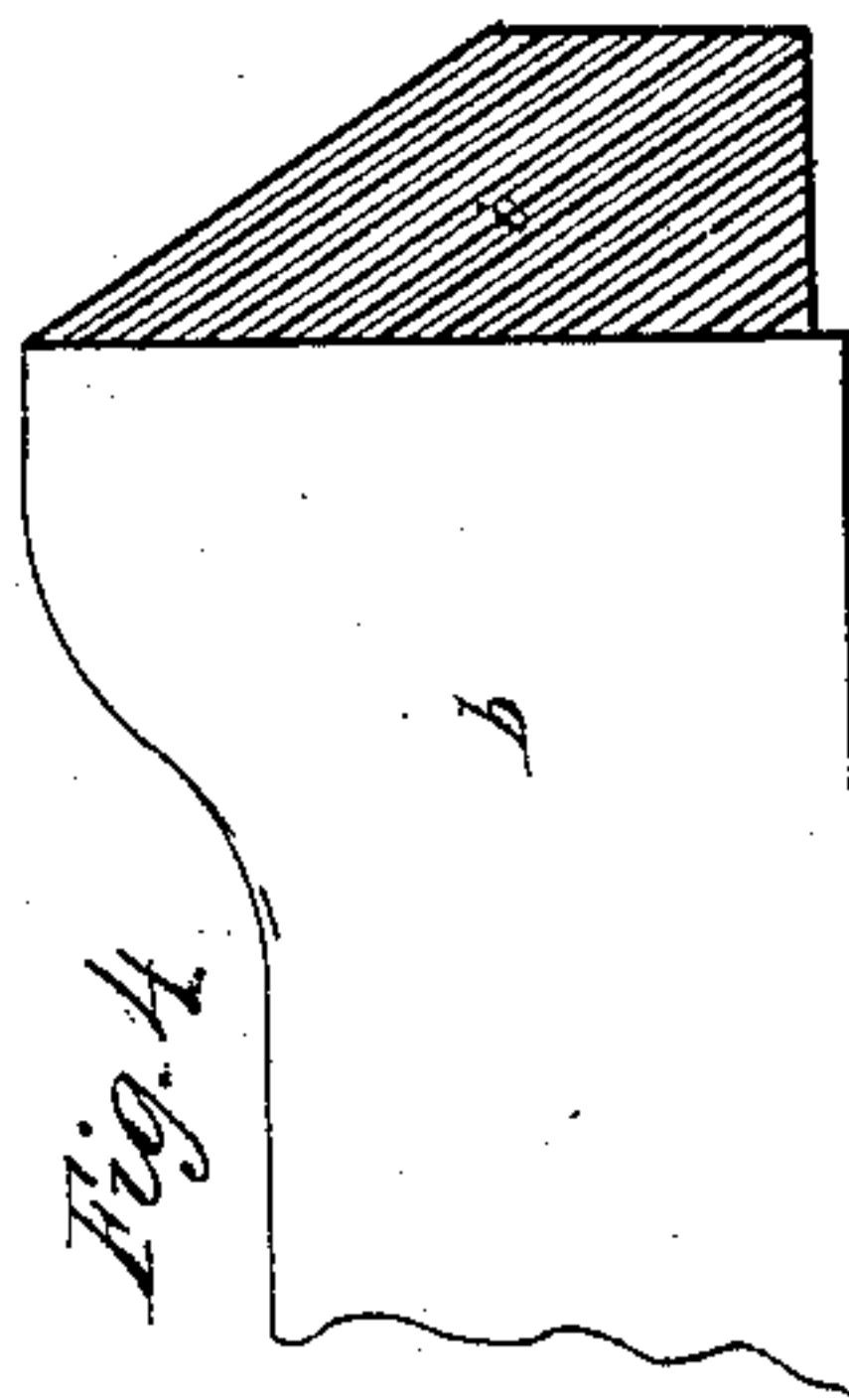


Fig. 4

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IMPROVED BEDSTEAD FASTENING.

WILLIAM H. ELLIOT, OF NEW YORK.

Letters Patent No. 59,794, dated November 20, 1866.

SPECIFICATION.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM H. ELLIOT, of the city, county, and State of New York, have invented a new and improved Bedstead Fastening, and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon. Similar letters of reference indicate the same devices in all the figures.

To enable others skilled in the arts to comprehend, make, and use my invention, I will proceed to describe its nature, construction, and operation.

The nature of my invention consists in the employment of certain projections or ribs on the sides of the tenon cut on the end of a bedstead rail, with corresponding grooves or depressions cut in the sides of the mortise in the post, for the purpose of fastening the rail and post together, and in so constructing the parts that the tenon can only enter the mortise by a downward movement, and that it can be drawn out of the mortise only by an upward movement.

Figure 1 is an elevation of a portion of the side rail of a bedstead and the post, showing the mortise and tenon by dotted lines.

Figure 2 is a section of the same at dotted line *e*, fig. 1.

Figure 3 is an elevation of a side rail showing the tenon.

Figure 4 is a modification of the same invention, showing a series of diagonal ribs raised on the side of the tenon, suited to corresponding grooves in the mortise, similar in shape to the threads of a screw.

Figure 5 is also a modification of the same invention, the ribs or enlargements being curved.

a, bedstead post; *b*, side rail; *c*, enlargement or projection on the end of the tenon; *d*, thin portion of the tenon; *i*, ribs on the tenon.

My invention refers to a cheap class of bedsteads which are usually fastened together with iron connections in some form, and the object of my invention is to do away with the use of iron for fastenings, and so shape the tenon and mortise that they can readily be put together and taken apart, and at the same time retain all the strength and durability of iron fastenings.

The bed posts are usually about three inches square, and the side rail about six inches wide at the ends, and one inch in thickness.

There are many modifications of my invention, but the one I prefer as the simplest to make, and the most easily put together and taken apart, is represented by figs. 1, 2, and 3.

This mortise is made by boring a round hole, one inch in diameter, into the post in a diagonal or downward direction, as represented by *c*, fig. 1, and then by cutting a mortise about one-half inch wide into the hole, as shown at *d*. The tenon is then so shaped as to fill the mortise perfectly.

It is obvious that this tenon can be got into the mortise only by a downward movement in the direction of the enlargement, *c*, on the end of the tenon. The tenon should not rest upon the lower end of the mortise, but the side rail should be held up by the binding of the tenon in the mortise, so that the greater the weight placed upon it, the more firmly the tenon and mortise are fastened together.

Fig. 4 shows a series of ribs, similar to the threads of a screw, on the sides of the tenon, which slide in corresponding grooves in the sides of the mortise. These ribs slide into their respective grooves in the same way that the enlarged end of the tenon slides into the round portion of the mortise in fig. 1.

Fig. 5 shows the same ribs or projections in a curved form.

The mortise and tenon in my improved fastening are so constructed that the tenon enters the mortise cut in the face or side of the post by a direct downward and inward movement at an angle of about twenty-two degrees from perpendicular. By this peculiarity of my invention the projections on the tenon enter the depressions in the sides of the mortise, while the upper portion of the tenon is yet outside of the mortise. Thus the disadvantage of making so long a mortise that the tenon may be first enter it to full depth before the projections on its sides can pass into the depressions prepared for them is avoided.

By cutting the bottom of the mortise and the end of the tenon at an angle which corresponds with the angle of the projections on the sides of the tenon and the depressions in the sides of the mortise, the tenon passes into the mortise by a movement which must correspond in direction with the bottom of the mortise and the end of the tenon. The advantage of thus constructing the mortise and tenon over others that are self-tightening

are, first, the tenon may be made to completely fill the mortise; second, the tenon, with the projections on the side of it, may be made across the entire width of the side rail, thereby obtaining a very simple fastening of great strength and durability.

The ribs or projections standing out from the sides of the thinner portion of the tenon form a shoulder which is opposed to the shoulder of the tenon, and when resting in the mortise a weight placed upon the side rail causes the shoulder of the projection to slide downward and inward upon a corresponding shoulder in the bottom of the mortise formed by the depressions in the sides of the mortise, drawing the tenon inward till its shoulder strikes the face of the post. Thus the side rail is supported, resting upon the two shoulders, viz., the shoulder of the tenon and the shoulder of the projection. The mortise, with its depression, being cut in the post, the shoulder in the bottom of the mortise is of one solid piece with the post, and the tenon, with its projection, being also of one solid piece with the side rail, neither can be detached without breaking, while at the same time they are self-tightening.

I do not confine myself to any particular form of ribs or projections on the sides of the tenons; but what I claim, and desire to have secured to me by Letters Patent of the United States, is—

1. So constructing the mortise cut in the face of the post, and the tenon cut on the end of the side rail, that the tenon, with its projections, may pass to its place in the mortise by a direct downward and inward movement, substantially as herein set forth.
2. Cutting the bottom of the mortise and the end of the tenon at an angle which corresponds with the direction of the movement of the tenon when it passes into the mortise as herein shown.
3. The combination of the several shoulders herein described for supporting the side rail when formed out of the solid material of the bedstead and operating as set forth.

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Witnesses:

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