

A. ELIAERS.

Staircase.

No. 16,380.

Patented Jan. 13, 1857.

Fig. 2.

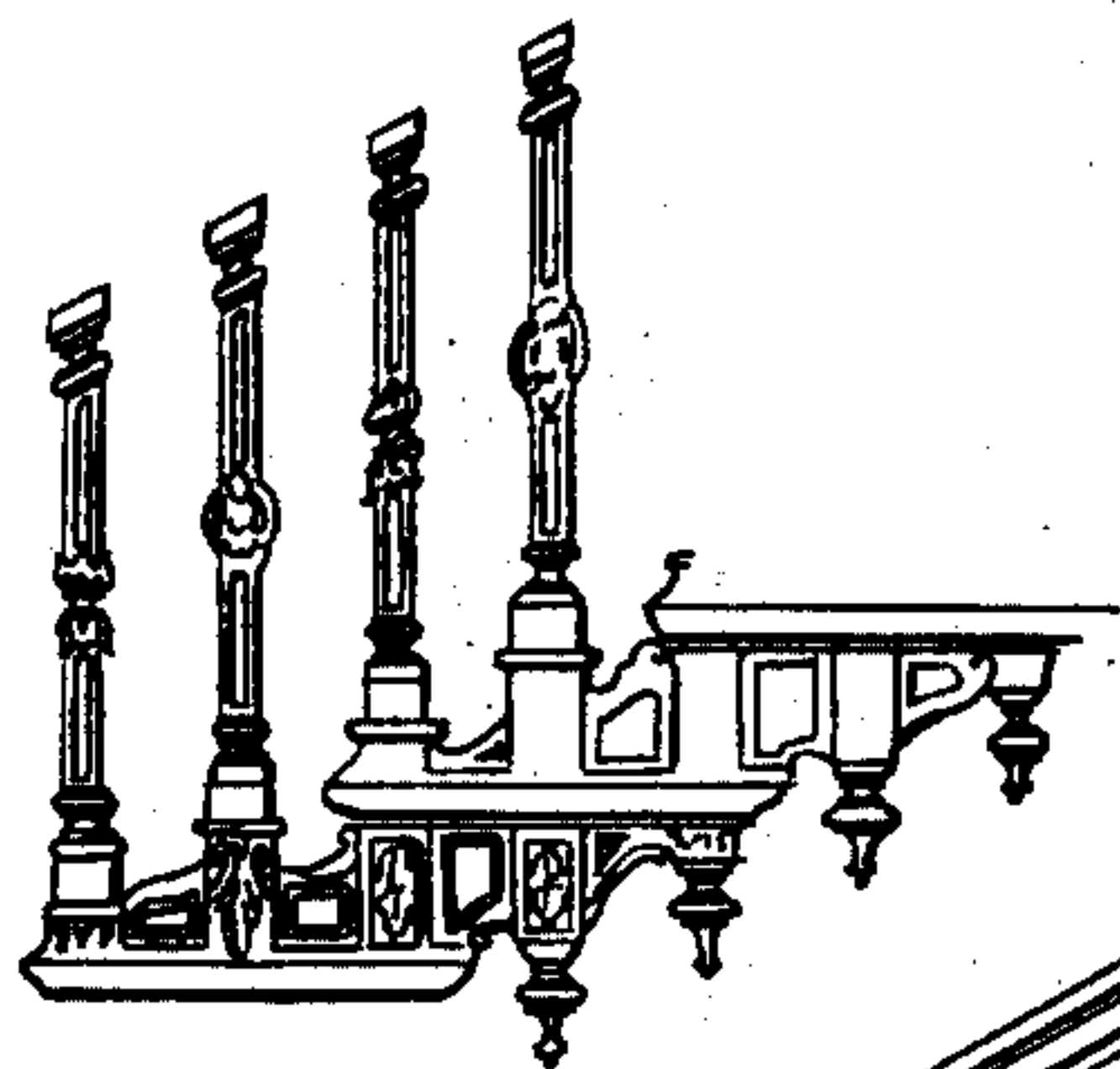
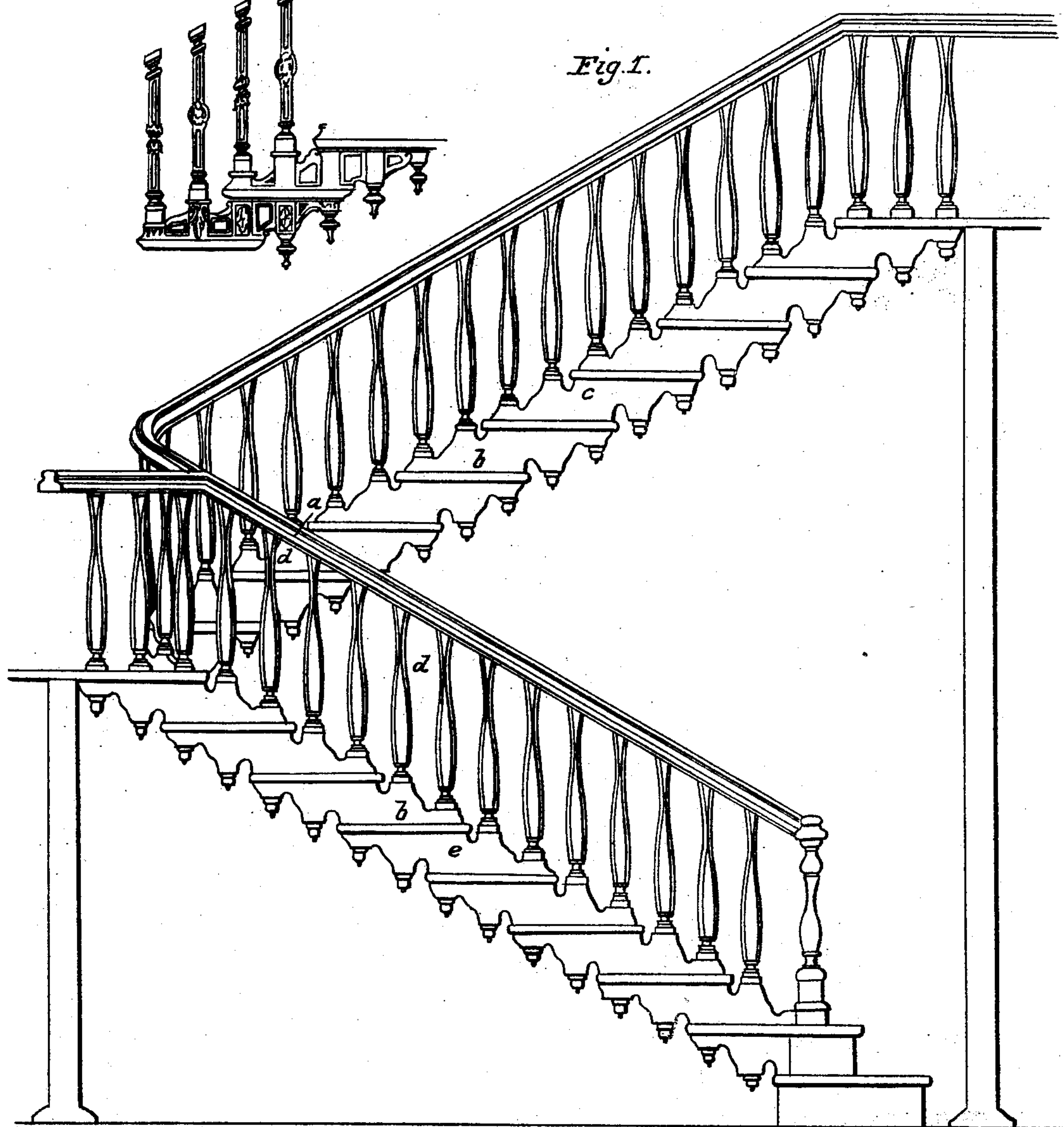


Fig. 1.



Witnesses:
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Inventor:
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2 Sheets—Sheet 2.

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Fig. 7.



Fig. 6.

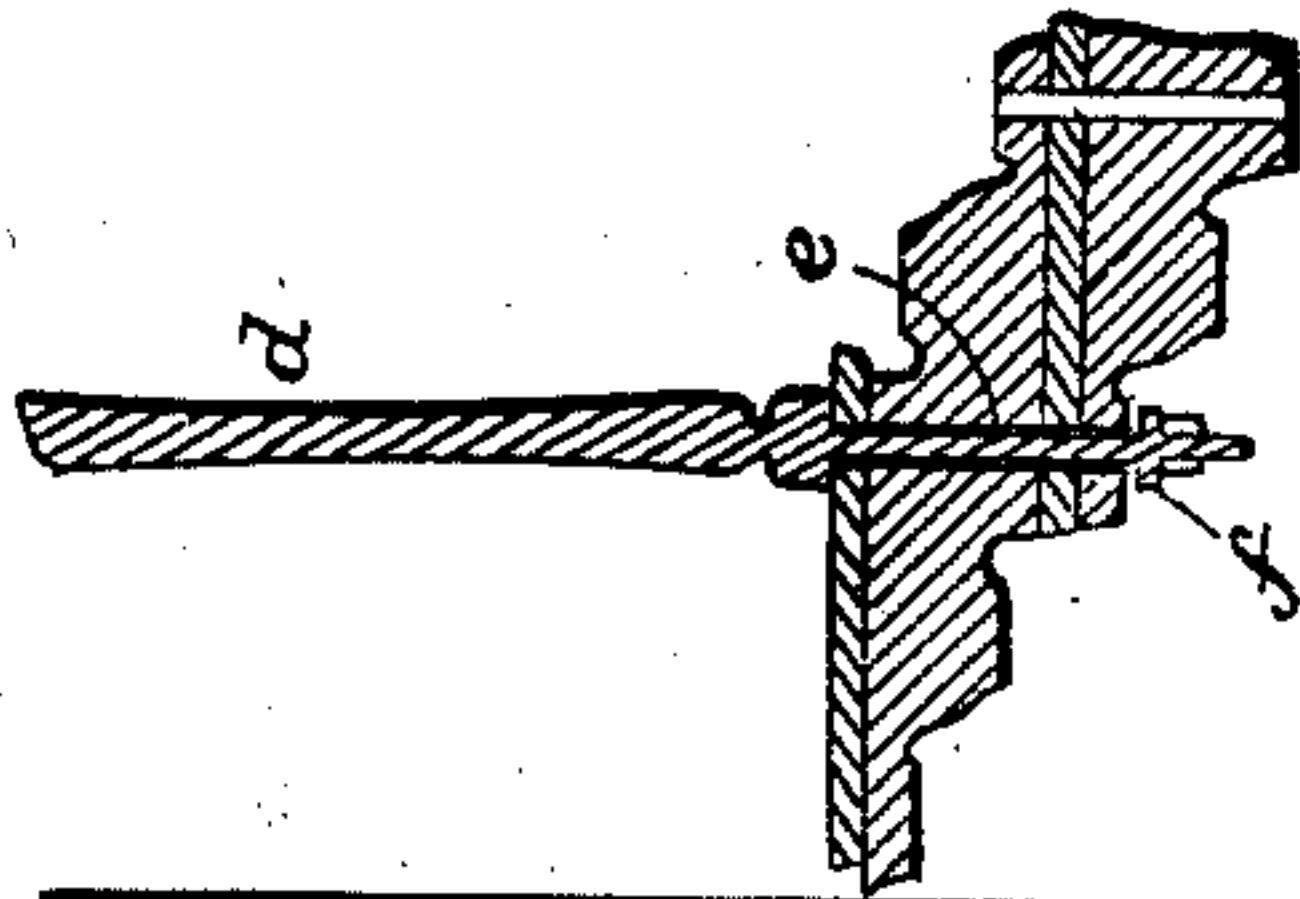


Fig. 4.

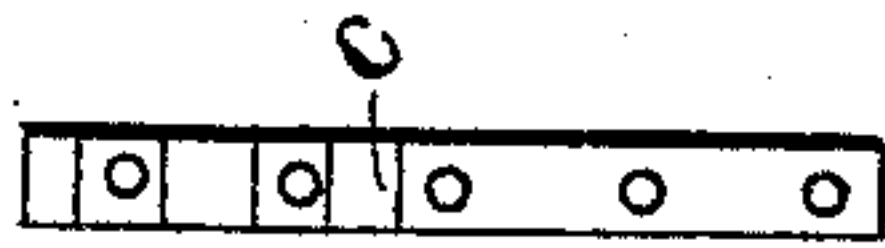
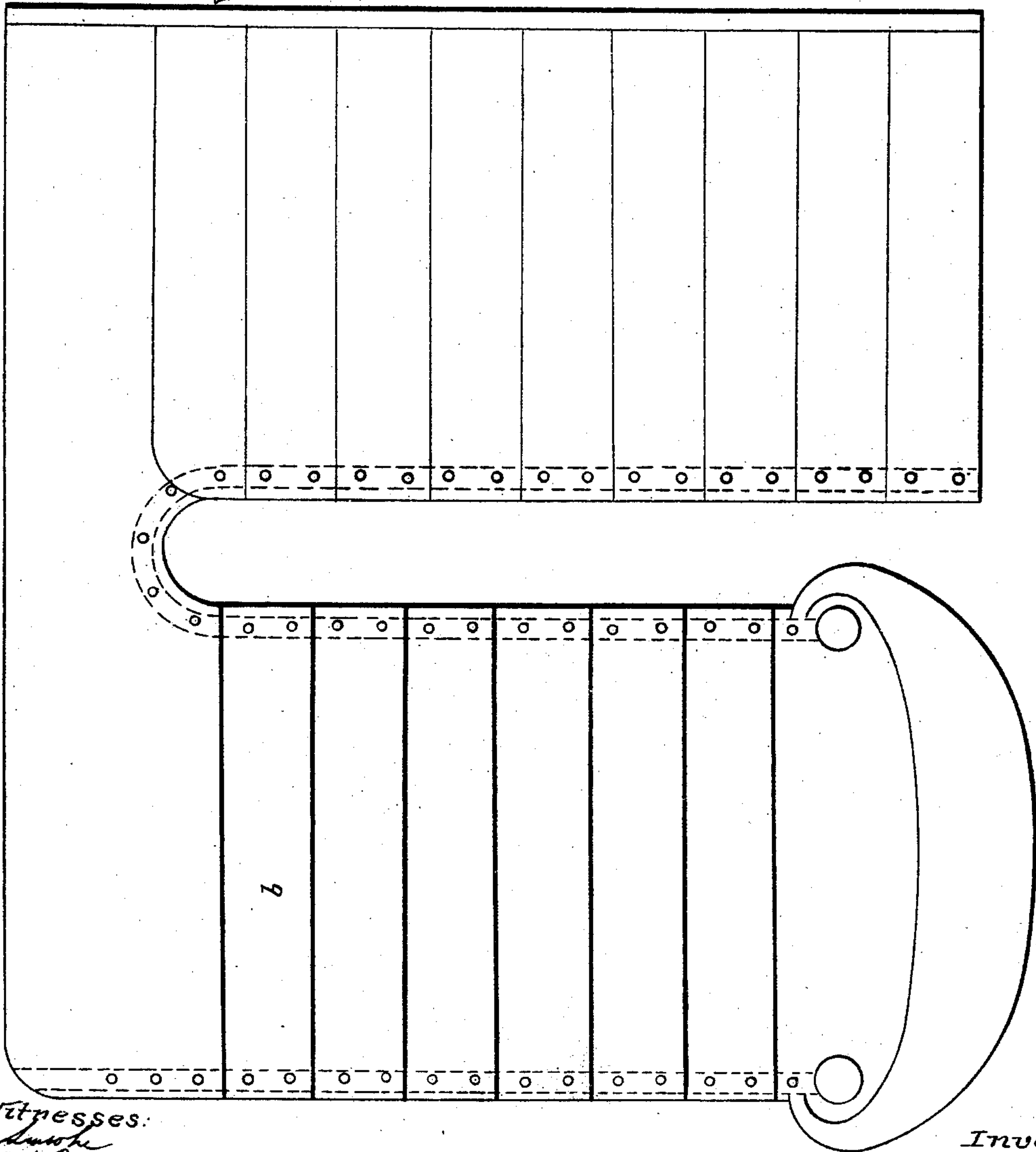


Fig. 5.



Fig. 3.



Witnesses:
Samuel H. Piper.

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UNITED STATES PATENT OFFICE.

AUGUSTUS ELIAERS, OF BOSTON, MASSACHUSETTS.

STAIRCASE.

Specification of Letters Patent No. 16,380, dated January 13, 1857.

To all whom it may concern:

Be it known that I, AUGUSTUS ELIAERS, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in the Construction of Staircases, and that the following description, taken in connection with the accompanying drawings, hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements, by which my invention may be distinguished from others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

The figures of the accompanying plates of drawings represent my improvements.

In Plate 1 Figure 1 is a side elevation of my improved staircase. Fig. 2 is a partial elevation showing a different mode of ornamenting. In Plate 2, Fig. 3 is a plan or top view of the staircase. Figs. 4 and 5 are detail views of the "string-pieces." Fig. 6 is a sectional view of the baluster &c. Fig. 7, is a detail view to be hereinafter referred to.

To construct a staircase which shall be portable, that is, so contrived as to be adapted to any height of ceiling, by simply leaving out or adding any number of steps, and so as to be set up or dismembered with ease and without injury to any of its parts, is the object aimed at and obtained by the present invention. These results are effected by my improvements, the "string pieces" to each step being independent of each other, and the treads, balusters and "string pieces" being fastened together in such a manner that the treads shall be gripped by the "string pieces," the baluster passing through two or three string-pieces, (as the case may be) and two treads, and fastened by a screw and nut. By the ordinary mode of constructing stair-cases the tread is fastened to the string-piece which has to be mortised and cut away to receive it thereby lessening its strength. In the present invention the tread is held by and between the independent string-pieces, and projects through and beyond them forming the ornamental molding which by the ordinary method has to be added by nailing or otherwise.

In the accompanying drawings *a a a a* represent the rails of the stairs.

b b are the treads.

c c, &c., are the "string-pieces" composed of separate and independent parts.

The tread *b* is placed between two of these independent string pieces and gripped by them as shown in the drawings, the balusters *d d*, &c., having a bolt *e* which is attached to or forms a part of the baluster that extends through the string-pieces and treads and is secured by a nut *f*, thereby binding the treads, balusters, and string-pieces firmly together. The stairs can thus be taken down by simply unscrewing the nut *f* when the parts will be dismembered, and can also be as readily set up, forming in fact a portable stair-case, which can be adapted to any height of ceiling by leaving out, or adding any number of stairs as the case may require. Another advantage of this improvement consists in the fact, that the balusters are all of equal length, which advantage could not be secured by the ordinary mode of construction without adding an extra piece to the stringer at each step. The facilities for ornamenting the stair-case are also greatly facilitated as will readily be seen by inspection of Fig. 2, while at the same time the stair-case is much stronger than ordinary ones. In Fig. 7 the bolt *f* instead of forming a part of the balustrade which is the case when the balustrade is formed of metal, is attached thereto by a pin *h*. The mode of securing the tread by gripping in building stair-cases of stone, marble, or metal, as by the usual method of construction the treads cannot be readily and securely fastened to the string-pieces.

Having thus described my improvements I shall state my claims as follows:

What I claim as my invention and desire to have secured to me by Letters Patent is—

The above described improvement in the construction of stair-cases, the same consisting in forming separate and independent "string pieces" between which the treads are held and gripped, the whole being secured by a screw bolt that forms a part of, or is attached to the baluster as above set forth.

AUGUSTUS ELIAERS

Witnesses:

ESIA LINCOLN,
JOSEPH GAVETT.