

No. 750,998.

PATENTED FEB. 2, 1904.

E. OHNSTRAND.
STAIRWAY.

APPLICATION FILED FEB. 20, 1903.

NO MODEL.

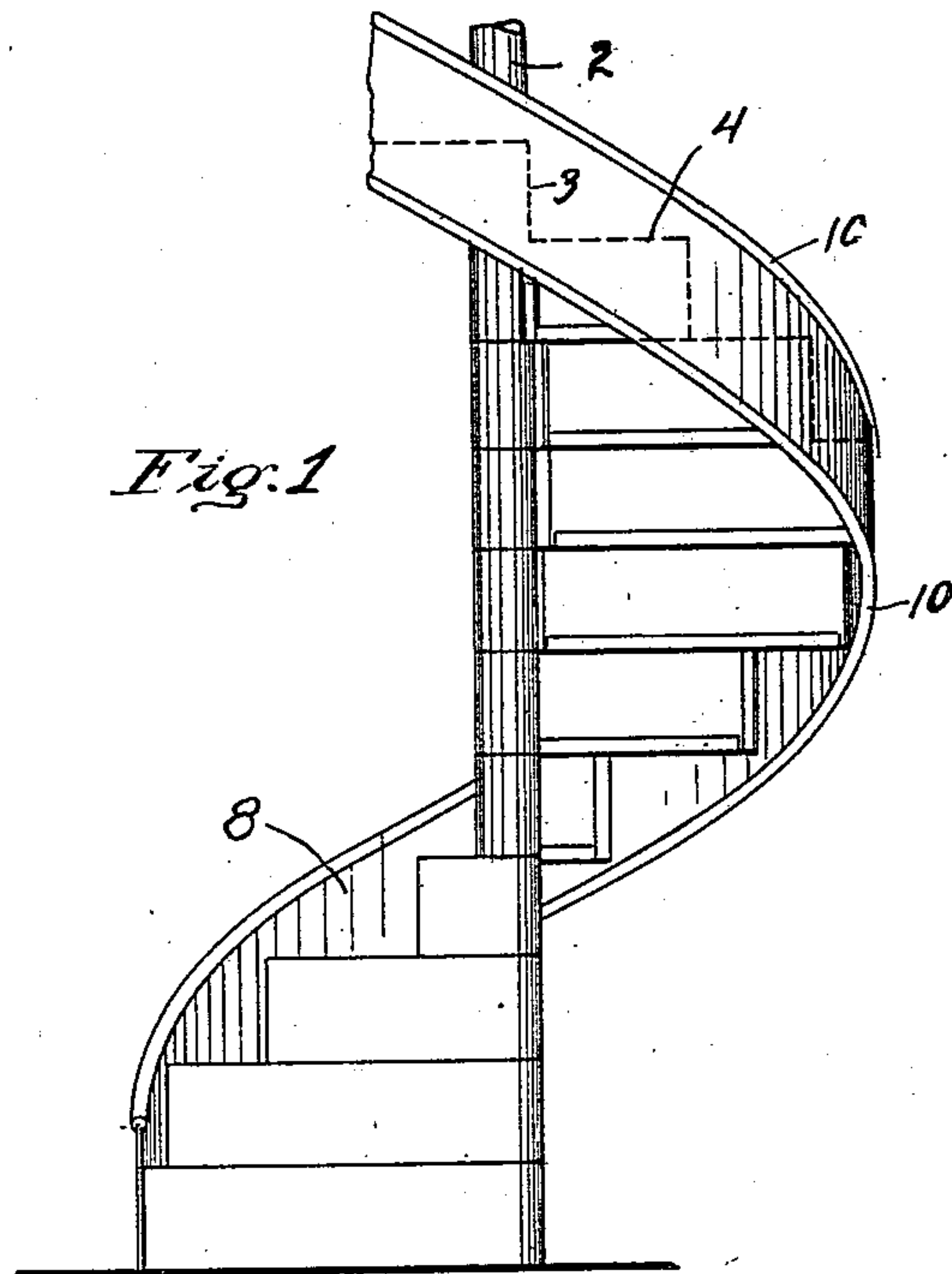


Fig. 1

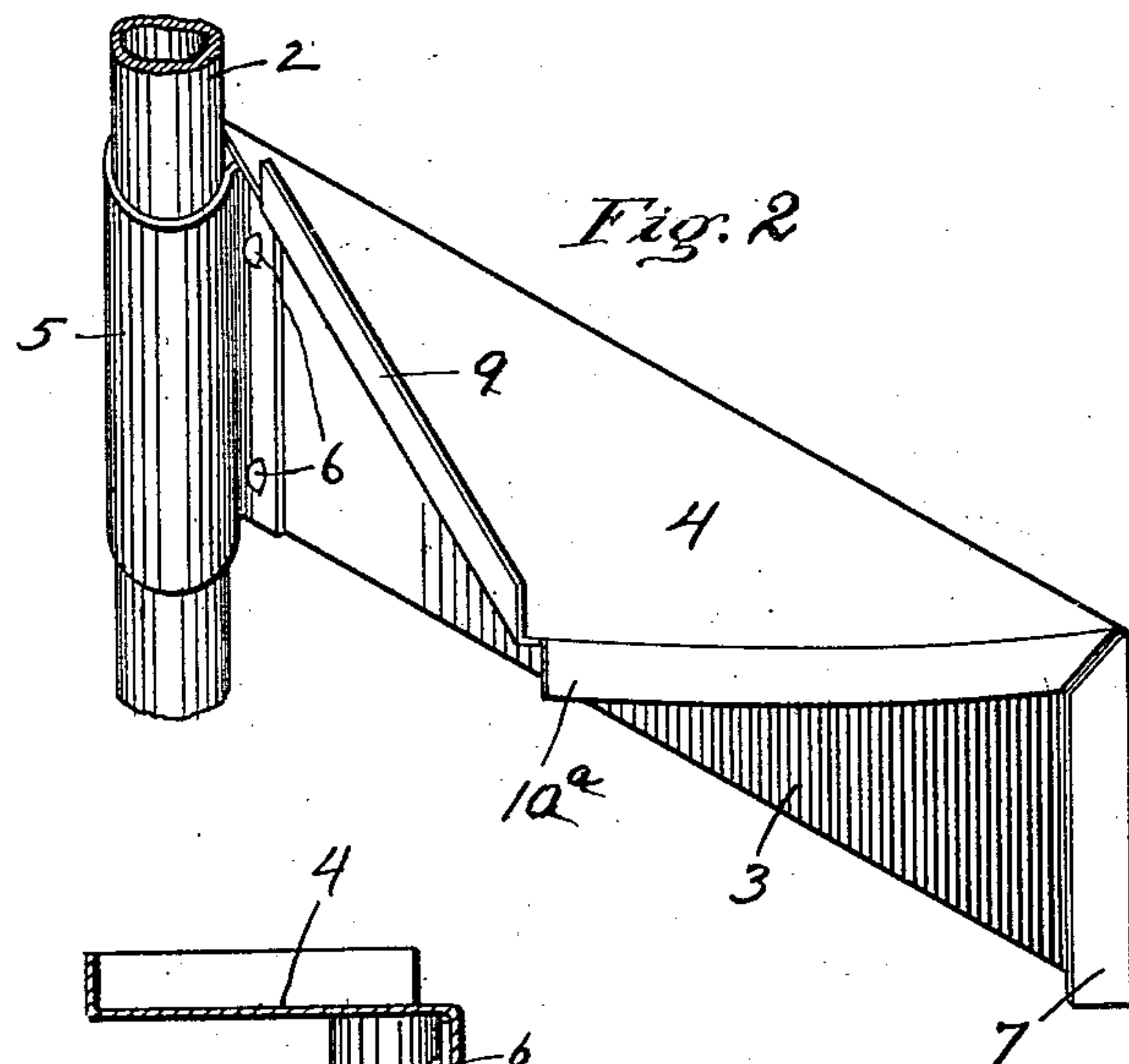


Fig. 2



Fig. 3

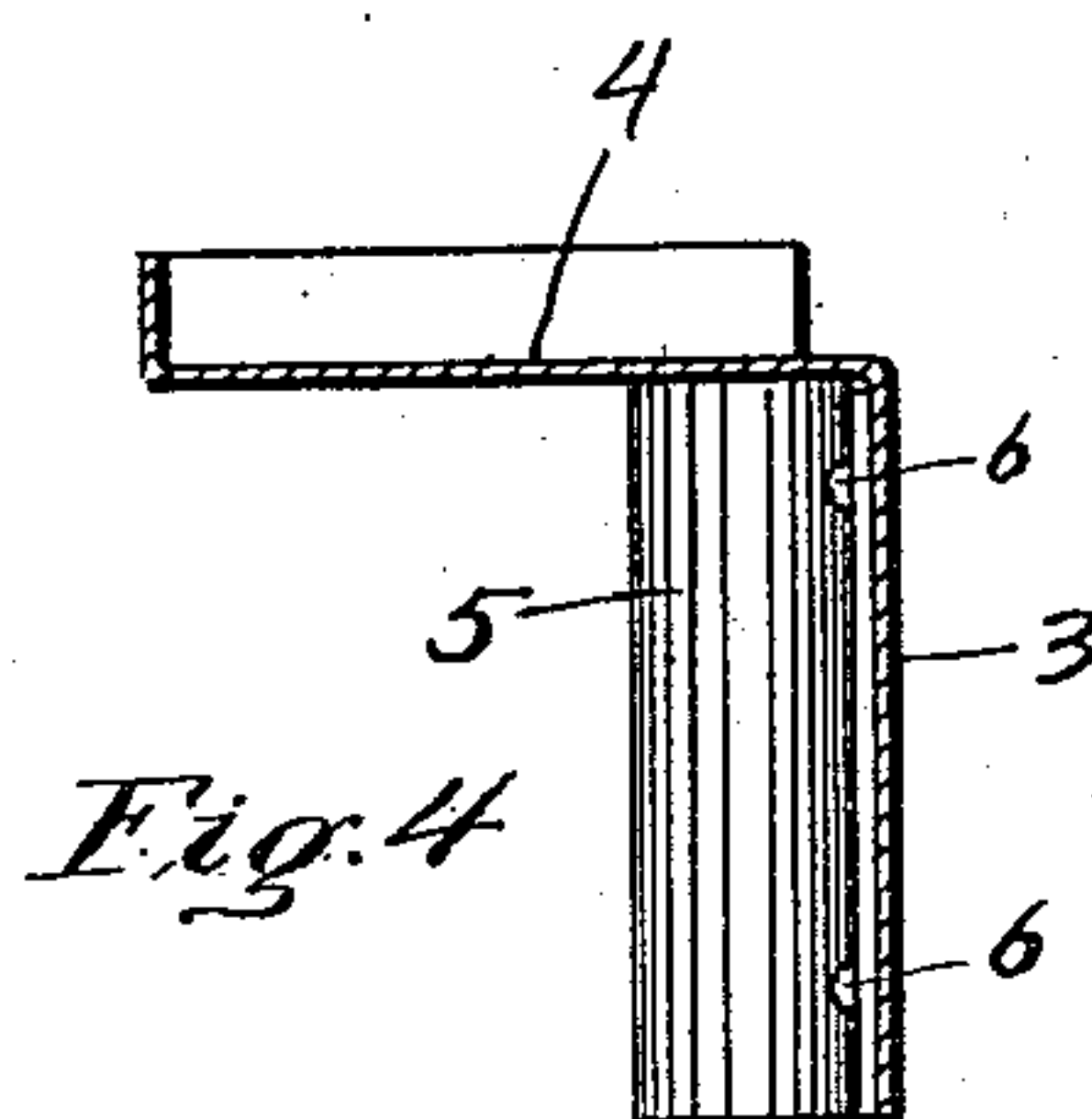


Fig. 4

Witnesses.
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UNITED STATES PATENT OFFICE.

ENOCH OHNSTRAND, OF JAMESTOWN, NEW YORK, ASSIGNOR TO ART METAL CONSTRUCTION COMPANY, OF JAMESTOWN, NEW YORK, A CORPORATION OF NEW YORK.

STAIRWAY.

SPECIFICATION forming part of Letters Patent No. 750,998, dated February 2, 1904.

Application filed February 20, 1903. Serial No. 144,222. (No model.)

To all whom it may concern:

Be it known that I, ENOCH OHNSTRAND, a resident of Jamestown, in the county of Chautauqua and State of New York, have invented
5 a new and useful Improvement in Stairways; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to spiral stairways, and more especially to metallic stairways for
10 use in banks, vaults, libraries, or other places where a light fireproof structure is desirable, the object of my invention being to provide such a metallic stairway in which the risers and treads of the stairs as well as the string-
15 ers may be formed of plate or sheet metal so formed and assembled as to reduce the number of parts and provide a light but durable staircase.

To these ends my invention comprises the
20 novel features hereinafter set forth and claimed.

To enable others skilled in the art to make and use my invention, I will describe the same with reference to the accompanying drawings,
25 in which—

Figure 1 is a view of a portion of a spiral stairway embodying my invention. Fig. 2 is an enlarged perspective view of the tread and riser and the manner of securing same to the
30 central support or pillar. Fig. 3 is a sectional view of the stringer. Fig. 4 is a sectional view of the tread and riser.

Like numerals indicate like parts in each of the figures.

35 In the accompanying drawings the numeral 2 designates the central column or pillar around which the stairway is wound, said pillar being supported in any suitable manner, and said pillar, if desired, may be formed of
40 tubing of proper diameter. The steps consist of the risers 3 and treads 4, formed from one piece of sheet metal, the risers having the tongues or extensions 5, formed thereon, adapted to encircle the pillar 2 and secured by means
45 of the rivets 6 or in any other suitable manner. The tongue 5 forms thus a sleeve surrounding the pillar, said tongue being riveted to the

riser. The outer end of the riser 3 is provided with the flange 7, which is adapted to be riveted or otherwise secured to the stringer 8, 50 said stringer being preferably formed of a continuous piece of sheet metal wound spirally to accord with the spiral arrangement of the stairway. The upper and lower edges of the stringer may be provided with the bead- 55 ing 10, which consists of a tubular piece of metal slitted to engage the stringer on both sides thereof, the spring of the metal of the tube itself being sufficient to hold said bead- ing in place without the employment of other 60 fastening means. Each tread or riser is provided with a flange to form a connection with the adjoining riser or tread. The preferred construction is illustrated, the tread 4 of the step being provided with the flange 9 along 65 its rear end adapted to be riveted to the riser of the next succeeding step, the downwardly-extending flange 10^a at the outer end of said tread being adapted to be secured to the stringer 8. In this manner the spiral stairway 70 is built up, the tongues 5 of the risers of each succeeding step encircling the pillar 2, so as to rest one upon the other in the manner shown in Fig. 1, while each riser and tread is secured in the manner desired to the riser of the suc- 75 ceeding step and to the stringer. By my invention a light but very rigid construction is thus obtained, the cost of construction and labor being reduced by the fact of the risers and treads being formed of one piece of metal 80 and secured to each other without the use of separate connecting-pieces.

Spiral stairways constructed in accordance with my invention will be found to be particularly applicable for use in banks, vaults, and 85 libraries, where a fireproof structure is required and where a light compact staircase is desirable. By forming the tread and riser of each step from one piece of metal no joints are formed at the outer edge of the step and 90 a strong, stiff, and durable structure is obtained. No separate connecting device is required to connect the steps to the central column or pillar, and a neat appearance is obtained

by the continuation of the riser around the pillar, while at the same time a very secure and durable connection with said pillar is made.

What I claim is—

- 5 In a spiral stairway, the combination with a suitable post, pillar or column, of a step having the riser and tread formed from one piece of plate or sheet metal, said tread and

riser having flanges adapted to be secured to the stringer.

In testimony whereof I, the said ENOCH OHNSTRAND, have hereunto set my hand.

ENOCH OHNSTRAND.

Witnesses:

A. GILBERT,

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