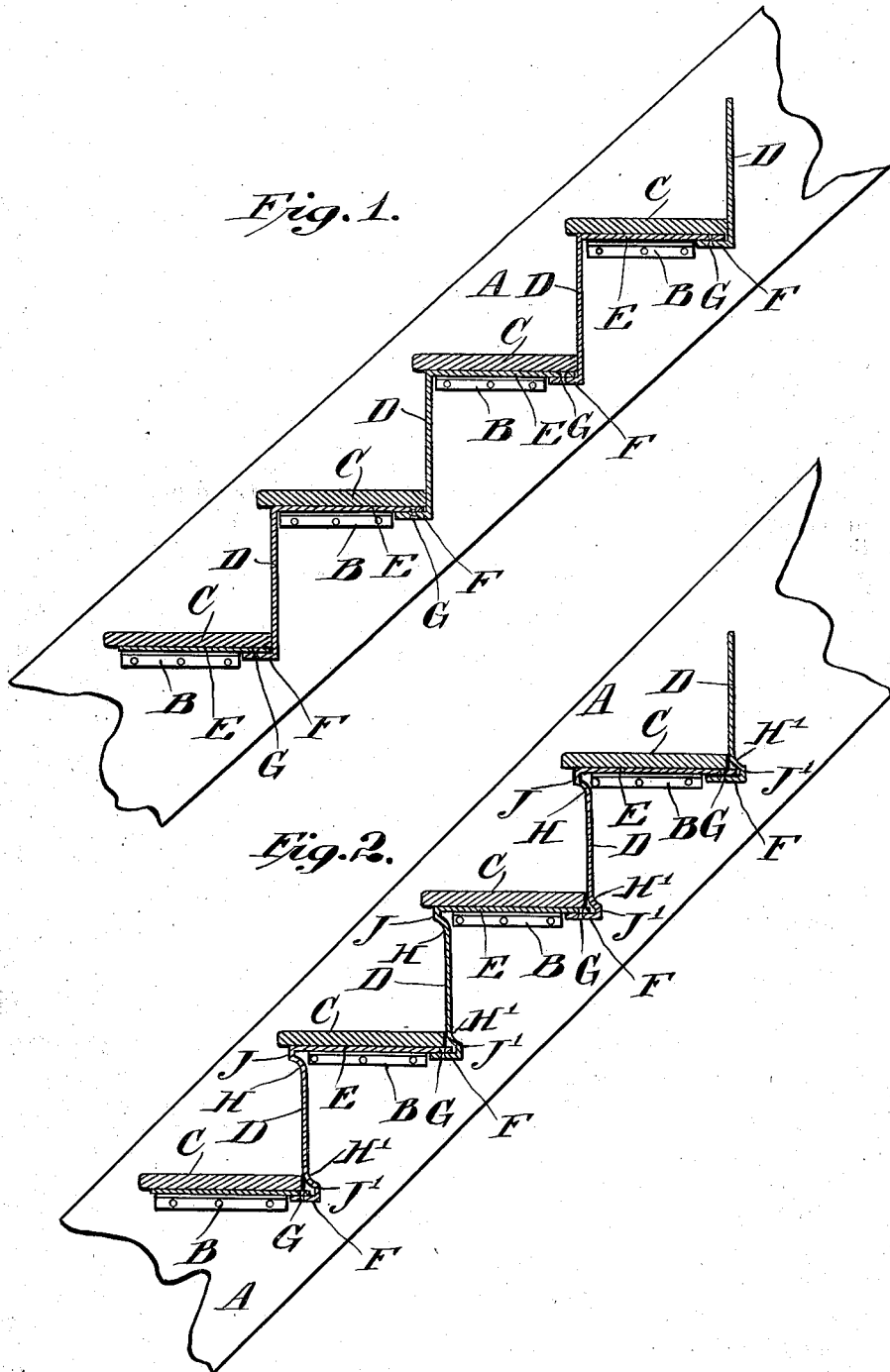


No. 847,699.

PATENTED MAR. 19, 1907

P. SCHERBNER.
METAL STAIRCASE.
APPLICATION FILED JULY 21, 1906.



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UNITED STATES PATENT OFFICE.

PAUL SCHERBNER, OF NEW YORK, N. Y.

METAL STAIRCASE.

No. 847,689.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed July 21, 1906. Serial No. 327,143.

To all whom it may concern:

Be it known that I, PAUL SCHERBNER, a citizen of the United States, and a resident of the city of New York, borough of Bronx, in the county of New York and State of New York, have invented certain new and useful Improvements in Metal Staircases, of which the following is a specification.

This invention relates to improvements in metal staircases and the object of my invention is to simplify the construction, reduce the cost, and enhance the appearance of the staircase.

In the accompanying drawings, in which like letters of reference indicate like parts in all the figures, Figure 1 is a vertical longitudinal elevation through part of my improved staircase. Fig. 2 is a similar view of a modified construction.

Metal staircases are usually constructed with metal stringers or side pieces A, which form the main support for the staircase, and to said side pieces A pieces of angle-iron B are riveted at intervals to form the supports for the steps which rest upon these angle-irons. The steps or treads C are made of wood, slate, marble, composition, &c., usually of a fire-proof material being preferred in place of wood. For the purpose of protecting the treads or steps both when made of wood or of stone from the effects of heat from below, so as to prevent their cracking and breaking or becoming ignited the building laws and the insurance underwriters require that a sheet metal be placed underneath the treads C and upon the iron angle-irons B. The risers D of the steps are also made of sheet metal. In my improved staircase I make a riser D and a horizontal sheet-metal portion E, upon which the tread proper, C, rests integral of a single piece of sheet metal, which is bent at right angle and of such dimension that one side of the shank of the angle forms the riser D and the other the tread portion E. As shown in Fig. 1, I provide a flange F along the base of the riser portion D, which flange F extends horizontally in the opposite direction of the tread portion E on the same riser, so that when the staircase is built up the free rear edge of each tread portion E rests upon the upper surface of the flange F of the next higher riser D. Small bolts G or

rivets are passed through said overlapping parts of the sheet metal of the tread portions E and flanges F.

As shown in Fig. 2, the riser portion D is also made integral with its corresponding tread portion and bent up from sheet metal; but at the top of each riser portion the upper part of the riser of sheet metal is curved to the front to form a "cove" H and a nosing J above it, and likewise at the bottom of the riser portion the metal is curved in the opposite direction to form a cove H' and a nosing J', the flange F projecting from the bottom portion of the nosing H'. The free edge of each tread portion rests upon the flange F of the next higher riser portion in the same manner as described in relation to Fig. 1, and the parts are also bolted together. The nosings and coves formed on the front side of the riser at the top and the rear side of the riser at the bottom improve the appearance of the staircase, but serve mainly for the purpose of stiffening the combined riser and tread portion, and thus increasing its strength.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a metal staircase, the combination of a series of risers and treads, each riser being made integral out of sheet metal with one tread and each riser being provided along its bottom with a flange and each riser being provided at the bottom with a curve forming a nosing and cove, substantially as set forth.

2. In a metal staircase, the combination of a series of risers and treads, each riser being made integral out of sheet metal with one tread and each riser being provided along its bottom with a flange and each riser being provided at the top with a curve forming a nosing and cove on the front of the riser, and each riser being also provided at the bottom with a curve forming a nosing and cove on the back of the riser, substantially as set forth.

Signed at New York city, in the county of New York and State of New York, this 11th day of July, A. D. 1906.

PAUL SCHERBNER.

Witnesses:

W. S. STEWART,
G. A. McMUNN.