F. A. WINSLOW.

STAIRCASE.

APPLICATION FILED NOV. 19, 1908.

989,095. Patented Apr. 11, 1911.

Fig. 1

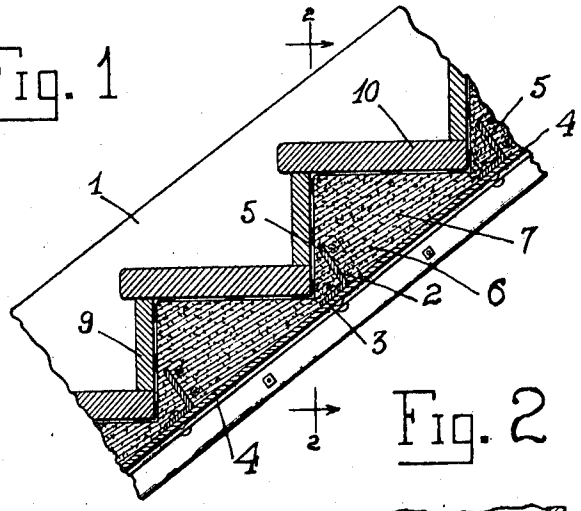


Fig. 2

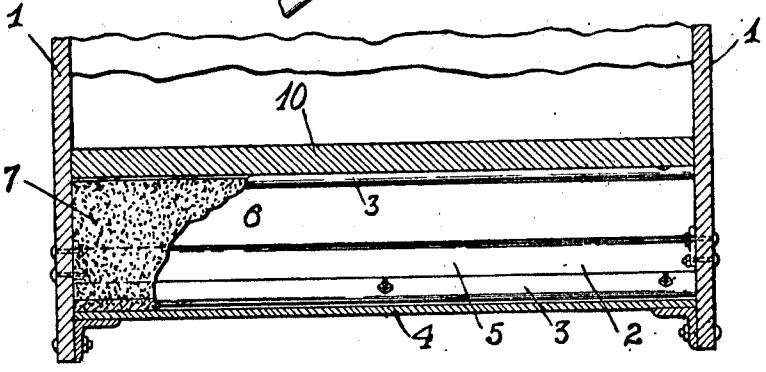
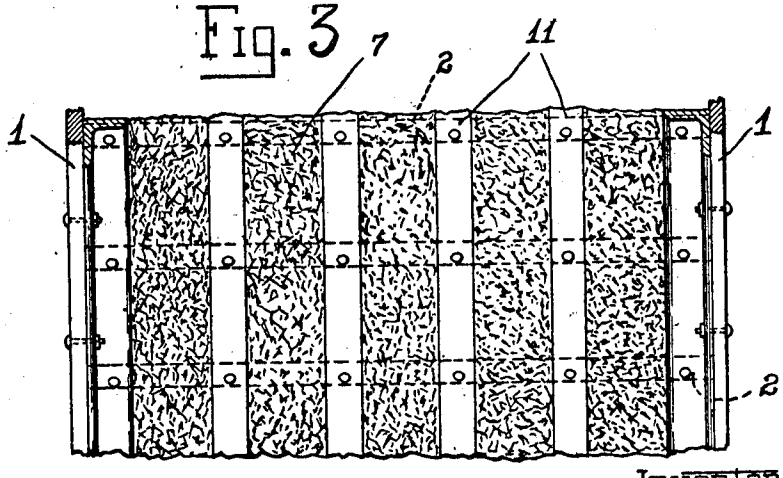


Fig. 3



Witnesses

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UNITED STATES PATENT OFFICE.

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STAIRCASE.

989,095. Specification of Letters Patent. **Patented Apr. 11, 1911.**

Application filed November 19, 1908. Serial No. 463,375.

To all whom it may concern:

Be it known that I, FRANCIS A. WINSLOW, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and Improved Staircase, (Case 7,) of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to staircase having for its object improved construction.

In my construction cross members which may be in the form of angle irons are suitably connected to the side plates, and a soffit is secured to the cross members to form pockets with the cross members. Cementitious material is built up in these pockets to form stair bodies, and if desired, risers can be provided for the stair bodies and suitably secured in place, and tread plates can also be provided if desired.

In the accompanying drawings which illustrate my invention—Figure 1 is a longitudinal sectional view of a staircase, Fig. 2 is a sectional view taken on plane 2—2, Fig. 1; and Fig. 3 is a rear view of Fig. 1 showing a modified soffit arrangement.

Side plates 1 of any suitable construction are provided and extending between and fastened to these side plates are cross members 2, which may be in the form of angle irons suitably spaced and secured to the side plates. As shown the lower limbs 3 of the angle irons lie in a common plane, and support the soffit 4 which follows the inclination of the side plates, while the other limbs 5 of the angle irons extend upwardly. The upwardly extending limbs 5 and the soffit form pockets 6 for supporting the stair bodies 7. The stair bodies are formed by filling the spaces in and above the pockets 6 with cement or concrete. The staircase is thus supported by the side plates 1 and the soffit together with the cross members which are embedded in the stair bodies.

Risers can be provided and these may be of any suitable material, and attached in any suitable way to the stair bodies. As shown, risers 9 are provided in the form of slabs of stone, such as marble, these being held in place by the insertion of plaster of Paris, or some other cement, between the stair body and the riser. A tread plate 10 can also be provided and held in place by the use of cement such as plaster of Paris. One of the advantages of this construction is that the stair bodies can be built up independently of the risers or treads, if desired, and these parts are therefore protected against heavy wear during building operations. Risers and tread plates of marble or other material which can be easily scratched or spoiled, need therefore, not be applied until the very last.

The soffit member, which is supported independently of the risers, may be a plate of sheet metal, or may be in the form of expanded metal, or, as shown in Fig. 3, narrow longitudinal strips 11 of wrought iron could be used suitably spaced and secured to the cross members, this arrangement providing a good plastering surface.

Having thus described my invention, I desire to secure the following claims by Letters Patent:—

1. In a staircase, the combination of suitable side plates, cross bars extending between and secured to said plates, a soffit secured to the underside of the said bars, cementitious material applied over the soffit and about the cross bars to form stair bodies, and riser and tread plates cemented to the stair bodies.

2. In a staircase, the combination of inclined side plates, cross members in the form of angle bars extending between and connected to the side plates, one limb of the cross members lying in a common plane, a flat soffit secured to said limbs, the other limbs of the cross members forming pockets with the soffit, cementitious material applied in said pockets to form stair bodies, and a riser, and a tread plate cemented to each stair body.

3. In a staircase, the combination of side plates, angle iron cross bars connecting the side plates, said cross bars having one limb disposed in a common plane, a soffit secured to said limbs, the other limbs of said cross bars extending upwardly, said upwardly extending limbs and the soffit forming pockets, cementitious material applied in said pockets to form stair bodies, a tread plate and a riser plate for each stair body, and cement material interposed between said plates and stair body to secure said plates to the stair body.

4. In a staircase, the combination of suitable side plates, cross bars in the form of

angle irons secured to the side plates, a flat soffit secured to the angle irons, said angle irons and soffit forming pockets, and cementitious material applied in and about said pockets to form stair bodies.

5. In a staircase, the combination of suitable side plates, cross bars in the form of angle irons extending between the side plates, a flat soffit secured to one limb of the angle iron cross bars, the other limbs of the cross bars forming pockets with the soffit, and cementitious material applied in and about said stair pockets to form stair bodies.

6. In a staircase, the combination of suitable side plates, cross bars in the form of angle irons extending between the side plates, a flat soffit secured to one limb of the angle iron cross bars, the other limbs of the cross bars forming pockets with the soffit, and cementitious material applied in and about said pockets to form stair bodies, said cementitious material surrounding the angle irons.

7. In a staircase, the combination of suitable side plates, risers extending between the side plates, a flat soffit below the risers, cross members extending between the side plates for supporting the soffit independently of the risers, and cementitious material built up above the soffit and about the cross members to form stair bodies.

8. In a stair, the combination with a plate forming a soffit, of an angle bar extending transversely across said plate, said angle bar and plate forming a pocket, and cementitious material applied in said pocket and about said angle bar to cover the same and to form a step body.

9. In a stair, the combination with a plate forming a soffit, of a plurality of angle bars extending transversely across said plate to form a series of pockets, and cementitious material applied in said pockets and about said angle bars to cover the same and to form step bodies.

10. In a stair, the combination with a plate forming a soffit, of an angle bar extending transversely across said plate to form a pocket, and cementitious material applied in and about said pocket to form a step body.

11. In a stair, the combination of suitable side members, angle bars extending transversely between said side members, a metallic strip extending longitudinally and secured to said transverse members, said strip forming a pocket with each of said transverse members, and cementitious material applied in and about said pockets to form stair bodies.

12. In a stairway, the combination of suitable side plates or stringers, risers, a body of cementitious material in the space behind the risers, and reinforcement members embedded in said cementitious material and secured to the side plates.

13. In a stairway, the combination of suitable metallic side plates or stringers, risers, angle members secured to said side plates, reinforcement bars having their ends secured to said angle members and extending from side plate to side plate in the space behind the risers, and cementitious material filled into said space and embedding said reinforcement members.

In witness whereof, I hereunto subscribe my name this 13th day of November, A. D. 1908.

FRANCIS A. WINSLOW.

Witnesses:
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