

C. BUELLESBACH.
 SPRING TREAD FOR STAIRWAYS.
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1,105,877.

Patented Aug. 4, 1914.

Fig. 1.

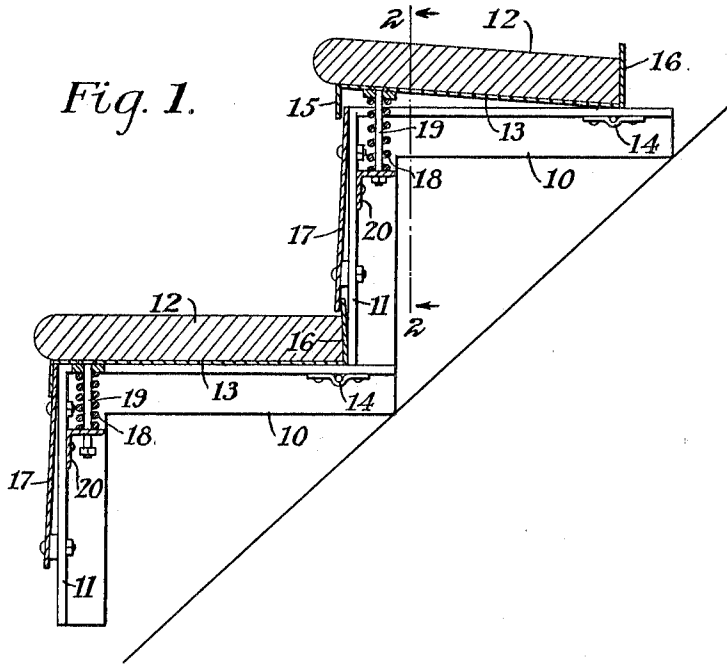
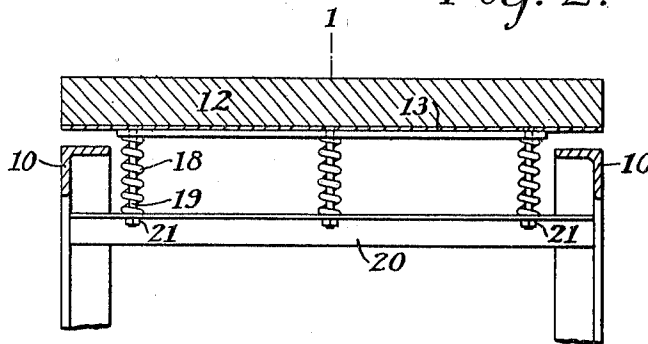


Fig. 2.



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SPRING-TREAD FOR STAIRWAYS.

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To all whom it may concern:

Be it known that I, CASPAR BUELLESBACH, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Spring-Treads for Stairways; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention has relation to an improved form of spring tread to be applied to stairways for tenements and other public places, particularly, and the same is especially useful and valuable in the construction of fire-proof stairs.

A number of forms of spring tread have been proposed for constructing stairways but all of these have disadvantages which the present invention is intended to overcome.

One of the advantages of the present invention is that, while it affords a construction which can be easily assembled, or taken apart for purposes of repair and cleaning, it is so constructed as to prevent water and dirt from getting under the various parts and interfering with the action of the moving step or tread.

Another advantage of the invention is that it makes it possible easily to apply additional spring power where it is desirable for any reason to increase the weight of a given tread; and in general the construction covered by this invention has the advantages of flexibility of character, cheapness and ease of construction and adaptability to fire proof work.

The invention is illustrated in a preferred form in the accompanying drawings wherein—

Figure 1 is a central vertical section of the stairway provided with my invention taken on the line 1—1 of Fig. 2 and Fig. 2 is a section of a part of Fig. 1 taken on the line 2—2 of Fig. 1, looking toward the left in Fig. 1, the riser guard plate being removed.

The fixed or permanent stairway is preferably but not necessarily constructed as shown in the drawings of skeleton steel or iron work, comprising horizontal angle bars under the treads and the vertical angle bars 11 behind the risers.

The movable spring treads may be of

slate, stone or other fire-proof material or they may be made of wood but this is not the preferred construction. These movable members are shown at 12 and each is hinged to the skeleton permanent stairway by means of a guard plate 13 attached by a hinge 14 and provided with bent edges at each end as shown. The edge 15 depends from the front end of each movable tread and serves as a guard to prevent water or dirt from getting under the tread from the front. The bent edge 16 conforms to the rear end of the tread 12 and projects above it as clearly shown in the drawing, so as to overlap the edge of the riser guard plate 17.

Each riser is provided with a guard plate 17 which is preferably bolted to the skeleton frame work and is slightly inclined so as to leave enough space behind the lower edge to permit the play backward and forward of the upturned edge 16 when the step 12 is tilted around the edge 14. It will be seen that the edge 16 of each plate 13 coöperates with the riser guard plate to prevent dirt or water from getting in behind the step 12 in each instance.

The front end of each step 12 is supported by a number of springs 18 which surround guide posts 19 fixed as shown to the underside of the step 12. The posts 19 pass through appropriate openings in the cross bracket 20 which is fixed to the skeleton frame work, and this bracket also supports the springs 18. A nut or head 21 on the lower end of each post 19 acts as a stop to prevent undue upward movement of the step 12 under the action of the supporting springs.

The advantage of this structure is that the springs can be maintained under constant tension, so that due resistance to a weight applied is always ready. Where the springs are not so arranged they must either be so stiff as to give very poor results, or they offer insufficient resistance and the steps make a disagreeable noise when walked on.

It is obvious, that where it is desired to increase the weight of the step in a given construction, the number of springs may be increased, and this can be done very easily without taking the structure apart more than by simply removing the guard plate 17 so as to have access to the cross bracket 20 in any instance. A hole can then be bored wherever desired in the bracket 20 and a small stud can be supplied as shown in Fig.

2 at 22. A spring can then be inserted and above this stud and surrounding it on the bottom thereof. The stud will prevent the spring from slipping off of the bracket.

5 The spring is shown in dotted lines in Fig. 2.

The invention can be embodied in a variety of forms obvious to those skilled in the art without departing from the scope of the same and I do not limit myself to
10 the details herein shown and described.

What I claim is—

1. In a stairway and in combination with skeleton side supports, a riser guard plate, a hinged tread, a spring support for said
15 tread and a guard plate applied to said tread extending upward so as to lap under

said riser guard plate, substantially as described.

2. In a stairway and in combination with skeleton side supports, a riser guard plate 20 inclined forward so as to leave a space behind its lower edge, a spring support for said tread, and a guard plate applied to said tread extending upward into the space behind said riser guard plate and lapping 25 under the same, substantially as described.

In testimony whereof, I affix my signature, in presence of two witnesses.

CASPAR BUELLESBACH.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."