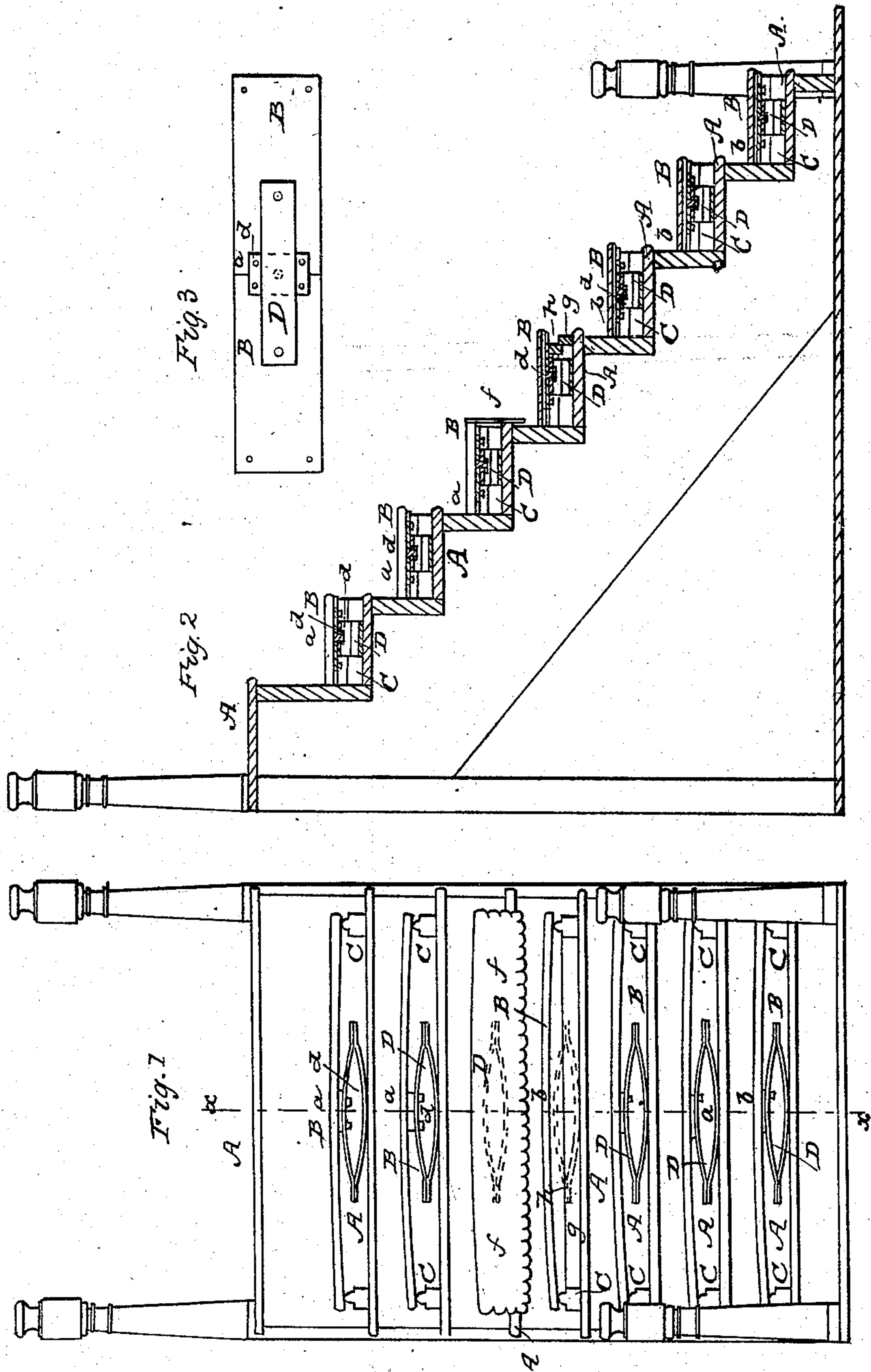


C. ROBINSON.

Elastic Stairs.

No. 17,234.

Patented May 5, 1857.



# UNITED STATES PATENT OFFICE.

CHARLES ROBINSON, OF CAMBRIDGEPORT, MASSACHUSETTS.

## ARRANGEMENT OF STAIR-STEPS.

Specification of Letters Patent No. 17,234, dated May 5, 1857.

*To all whom it may concern:*

Be it known that I, CHARLES ROBINSON, of Cambridgeport, in the county of Middlesex and State of Massachusetts, have invented a new and useful Elastic Stair for Stairways; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification, Figure 1 being a front elevation of a flight of stairs provided with my improvement; Fig. 2, a vertical section thereof in the plane indicated by the line *x, x*, Fig. 1; Fig. 3, a view of the under side of one of the elastic steps.

Like letters designate corresponding parts in all the figures.

The nature of my invention consists in supporting the steps of stairs by springs situated beneath them, substantially as herein described, for the purpose of rendering the ascent and descent thereon light, soft and easy.

In order to apply my improvement to stairs already constructed, supporting blocks *C, C*, are placed upon the stairs *A, A*, near the ends thereof, (as shown in Fig. 1,) upon which the ends of superadded steps *B, B*, are secured. The height of these blocks should only be sufficient for the purpose intended. Under the middle of each superadded step is then placed a spring *D*, either an elliptic spring, as represented, or any other suitable kind, such as one of india-rubber, for instance. If the elliptic spring is used, it may be riveted to a flanch *d*, and this screwed to the bottom of the step, as shown in Fig. 3. When the spring is placed under the middle of the step, as above described, the step should be divided in the center, as shown at *a, a, a*, in the three upper steps; or partially divided on the under side, as shown at *b, b*, in the other steps. This is to allow each

step to adapt itself to the movements of the spring on which it rests.

In order to conceal the springs beneath the superadded steps, and to give a handsome finish to the stairs, an ornamental screen *f*, may be placed in front thereof, as shown in Fig. 1; or a strip *g*, may pass along between the supporting blocks *C, C*, upon the front edge of each stair *A*; behind which strip, another divided strip *h*, attached to the superadded step, may move upward and downward.

Instead of supporting the ends of the superadded steps by blocks, and locating the springs under the middle thereof, there may be a spring under each end of each step, and thus give equal elasticity to the whole step.

When stairs are first constructed with my spring supports, the springs may be placed beneath the ordinary steps *A, A*, being suitably supported beneath and behind the stairs, and thus dispense with the superadded steps.

The advantages of elastic stairs, as above described, are obvious. Not only is the tread soft and nearly noiseless, but persons are enabled to ascend and descend the stairs with such ease, as to render the improvement of great value to invalids.

What I claim as my invention, is—

Placing beneath each step a spring, or springs, so as to give an elastic movement thereto in ascending and descending upon the stairs, for the purposes specified.

The above specification of my improved elastic stair, signed by me this 16th day of February, 1857.

CHARLES ROBINSON.

Witnesses:

JUSTIN A. JACOBS,  
A. K. P. WELCH.