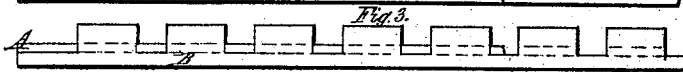
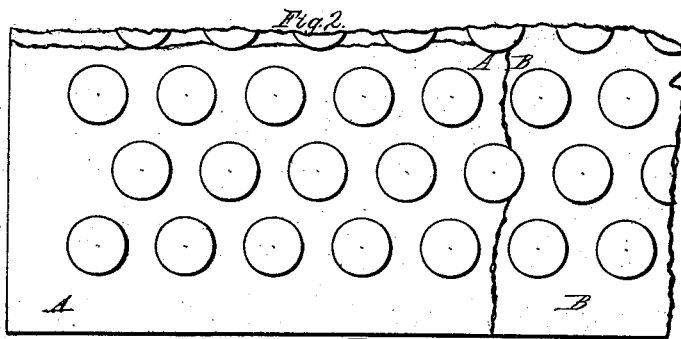
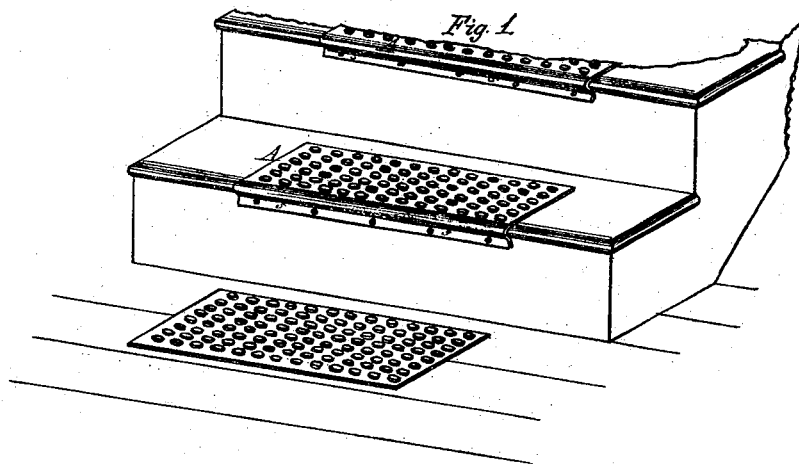


*P. W. Neefus,*  
*Stair Cover.*  
*No. 109,649. Patented Nov. 29, 1870.*



Witnesses,

*T. S. Sucher*  
*Chas. E. Emery*

INVENTOR,

*Peter W. Neefus*

# UNITED STATES PATENT OFFICE,

PETER W. NEEFUS, OF NEW YORK, N. Y. .

## IMPROVEMENT IN METALLIC AND ELASTIC STAIR-PLATES.

Specification forming part of Letters Patent No. **109,649**, dated November 29, 1870; antedated November 26, 1870.

*To all whom it may concern:*

Be it known that I, PETER W. NEEFUS, of the city, county, and State of New York, have invented a new and Improved Metallic and Elastic Stair-Plate; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, making a part of this specification.

The rapid wear of wooden stairs and of stair-carpet has made it necessary to apply metal stair-plates, which, when constructed in the ordinary manner, cause considerable noise, and quickly become smooth and slippery.

My invention consists of a stair or floor plate in which studs or projections of vulcanized india-rubber or other similar elastic material are secured to or formed on a sheet of similar material in the process of manufacture, which sheet is placed underneath and combined with a perforated plate (preferably of metal) in such manner that the elastic studs project through the perforations in the covering-plate, and, extending slightly above the same, form an elastic and noiseless bearing-surface for the feet, which may be trodden upon without danger of slipping.

In the drawing, Figure 1 is a perspective view of a portion of a stair-case, showing one of the plates in position. Fig. 2 is a top view of a sheet of rubber or elastic material with studs formed upon its upper surface, which pass through and protrude above a metal stair-plate, part of which is shown in place. Fig. 3 is a longitudinal vertical section of the same.

A represents the stair-plate in the drawing. It is made to cover the horizontal portion of the stair to the usual extent, and is curved over the front and secured to the rising portion in the manner shown. The descending portion of the plate (marked *s s*) may be omitted, if desired, or it may be extended so as to dispense with the usual "toe-plate."

In Figs. 2 and 3, B represents a plate of rubber or elastic material, constructed with projections or studs on its upper surface. A

is a plate, preferably of metal, which is perforated to fit over the studs and cover B in the manner shown.

The plate A may be made of brass or other metal, either rolled or cast, and the holes be formed by punching, drilling, or coring in any of the usual ways. Such a plate may also be made of wood, as the elastic projections will protect it from wear.

The elastic material may be of any kind—such as vulcanized rubber or either of the various compounds of that or other gums. Cork may also be employed in a similar manner.

The elastic studs may be of any desired size or shape. They operate well when made circular and from one-half to three-quarters of an inch in diameter. The spaces between them should be well defined, so that the broom can remove dirt collecting there; but such spaces should not be so large as to give an unequal bearing to the foot.

The several projections may be arranged in relation to each other in any desired manner—for instance, in rows parallel to the edges of the plates, as in Fig. 1, or diagonal thereto, as in Fig. 2.

The plates should be secured to the stairs by screws in the usual manner.

Plates provided with the elastic projections may be used to cover floors, passages, or walks.

I do not claim mats or coverings for floors made entirely of rubber or elastic material. In my invention the elastic substance is protected and held in place by metal or wood, as described.

I claim as new and desire to secure by Letters Patent—

The combination, with a perforated stair or floor plate, A, of a plate, B, having projections thereon of elastic material, which extend through the perforations in A, substantially as herein specified.

PETER W. NEEFUS.

Witnesses:

T. B. BEECHER,  
CHAS. E. EMERY.