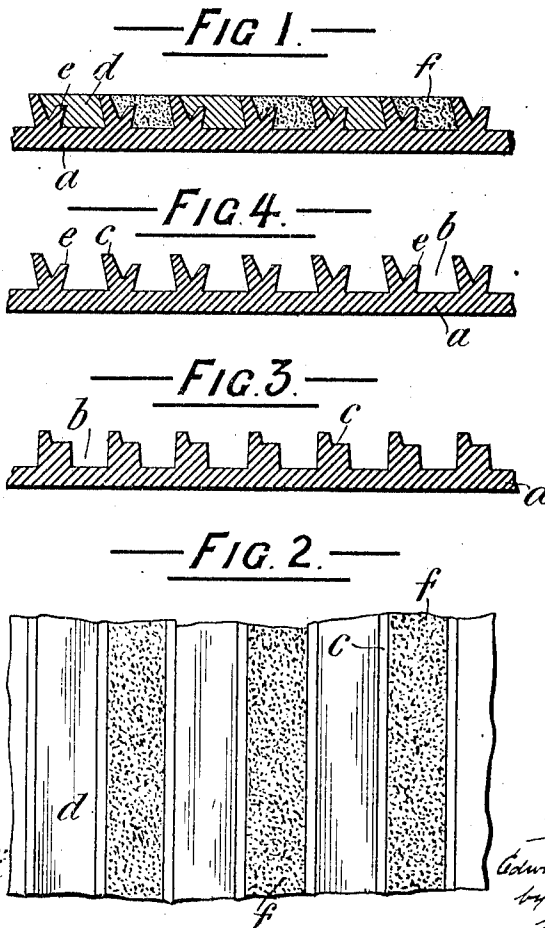


E. S. HIGGINS.
STAIR TREAD AND THE LIKE.
APPLICATION FILED DEC. 19, 1911.

1,051,583.

Patented Jan. 28, 1913.



Witnesses:
O. W. Holmgren.
J. George Barry

Inventor:
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by his attorney
Mounslward

UNITED STATES PATENT OFFICE

EDWARD SMITH HIGGINS, OF BALHAM, LONDON, ENGLAND, ASSIGNOR TO THE SAFETY
TREAD SYNDICATE LIMITED, OF LONDON, ENGLAND.

STAIR-TREAD AND THE LIKE.

1,051,583.

Specification of Letters Patent.

Patented Jan. 28, 1913.

Application filed December 19, 1911. Serial No. 666,796.

To all whom it may concern:

Be it known that I, EDWARD SMITH HIGGINS, a subject of the King of Great Britain, and resident of 21 Cornford Grove, Baiham, London, England, consulting engineer, have invented new and useful Improvements in Stair-Treads and the Like, of which the following is a specification.

The present invention has reference to stair treads and the like of the kind which comprises a metal plate or base provided with grooves into which lead or other non-slipping material is introduced.

The object of the invention is to produce a hard metal plate or base which when provided with the filling of non-slipping material will present a flush surface without recesses or projections which can collect or retain dirt and dust, at the same time the surface will not comprise an undue proportion of hard metal nor will there be any difficulty in insuring the safe retention of the filling material in the grooves.

In the accompanying drawing:—Figure 1 represents in cross section a form of tread for stairs embodying this invention. Fig. 2 is a plan view thereof. Fig. 3 shows in section a partly manufactured plate from which the tread shown in Figs. 1 and 2 is formed, and, Fig. 4 shows in section a fully formed plate without the filling material.

The plate *a* with ribs thereon may be formed preferably by rolling. The first rolling leaves the plate in the form shown in Fig. 3. *b* are grooves or channels and *c* are ribs extending between the grooves; the tops of the ribs are stepped as shown. This form of plate is easily rolled as a clearance for the projections on the roller is easily furnished. In a second rolling the ribs *c* are

divided as shown in Fig. 4 and spurs *e* are thrown out into the channels or grooves *b* on one side while the remainder of the ribs *c* is set over to overhang the channels on the other side and to complete a dovetail, well adapted for retaining material in the said channels.

Figs. 1 and 2 show the channels *b* filled alternately with lead *d* and other material *f* such as carborundum.

The operation of rolling may be superseded in whole or in part by casting, but rolling the plate as above explained is the preferred method of manufacture.

It will be observed that a flat tread is provided with a very efficient key for the non-slipping material with a very small exposure of hard metal on the surface.

What I claim and desire to secure by Letters Patent of the United States is:—

A plate for holding non-slipping material for stair treads and the like, provided with ribs projecting upwardly therefrom and separated by channels, the said ribs being provided with spurs of less height than the ribs and projecting laterally into a channel on one side of the rib and the top of the rib above the spur being bent into the channel on the opposite side of the rib, whereby a body of non-slipping material may extend intact from the channel over the spur into the space between the spur and rib.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD SMITH HIGGINS.

Witnesses:

ALFRED S. BISHOP,
HERBERT D. JAMESON.