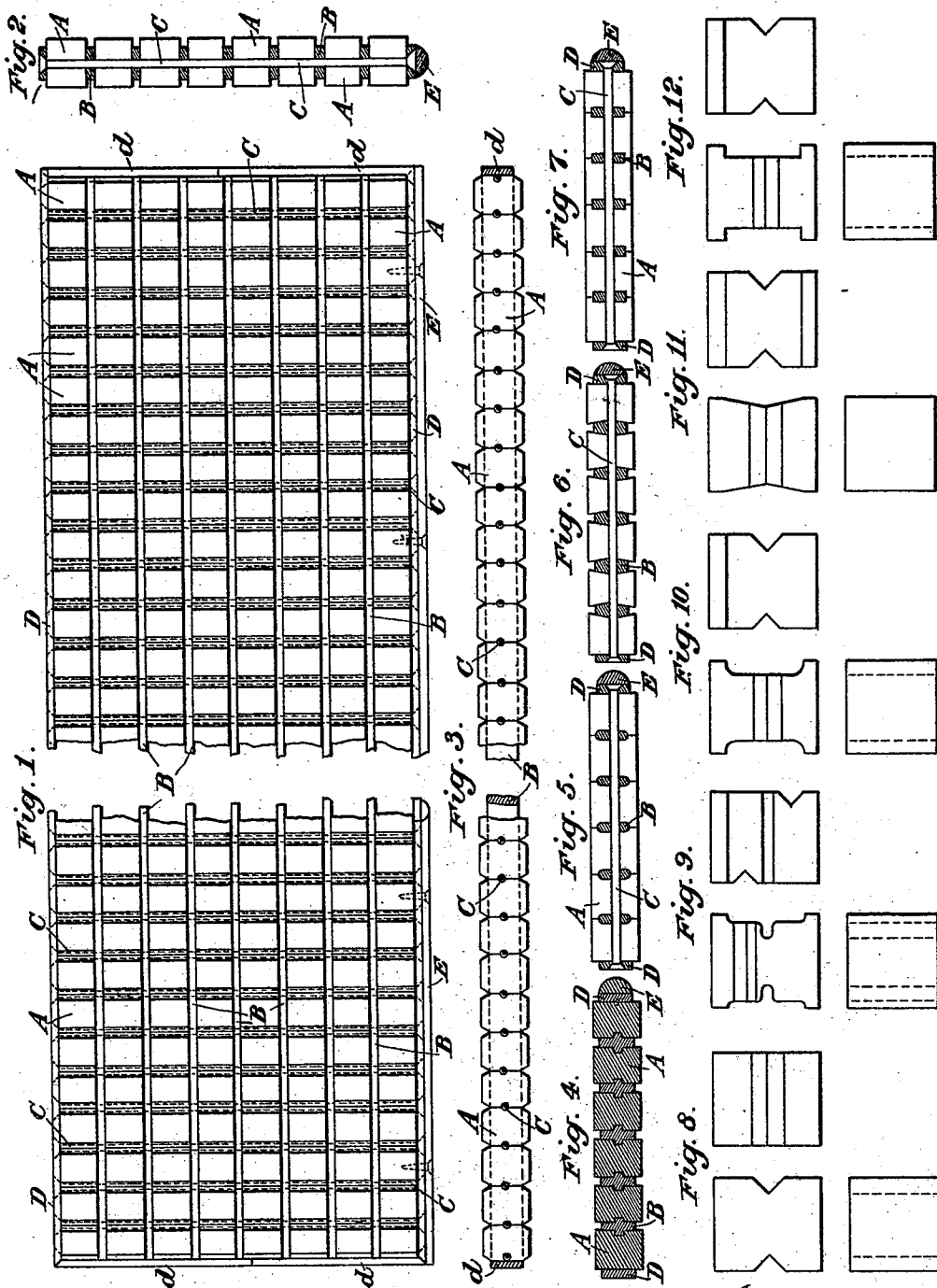


(No Model.)

J. T. ANDREWS.
STAIR TREAD, LANDING, OR THE LIKE.

No. 544,204.

Patented Aug. 6, 1895.



Witnesses:
Chas Buckler
A. C. Connor

Inventor:
Joseph S. Andrews,
By Horace T. Hanson
Attorneys

UNITED STATES PATENT OFFICE.

JOSEPH T. ANDREWS, OF LONDON, ENGLAND.

STAIR-TREAD, LANDING, OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 544,204, dated August 6, 1895.

Application filed August 28, 1894. Serial No. 521,500. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH THOMAS ANDREWS, engineer, a subject of the Queen of Great Britain and Ireland, residing at 51 Blackheath Road, Greenwich, London, in the county of Kent, England, have invented certain Improvements in Stair-Treads, Landings, or the Like, of which the following is a specification.

This invention has for its object to provide an improved construction of stair-treads and landings, applicable also for coverings for subways, sewer-outlets, and for other analogous purposes, such as for the treads of cabs or tramway, railway, or other carriages, or for the floors thereof, or for the gangways of ships, or for any other purpose to which they are or may be applicable. The construction of stair-treads and the like by driving wooden blocks into recesses in a cast-iron frame of any desired shape, so as to expose a wooden surface or tread at one side, is well known.

My invention consists in arranging wooden blocks in rows alternating with metal bars, the whole being held together by long bolts or rivets passing through holes formed by grooves between the wooden blocks and through the metal bars transversely thereto. The metal bars are narrower than the wooden blocks, whereby the wearing-surfaces on both faces of the tread consist of wood only.

When my invention is applied to stair-treads or the like, the front bar may be of the section known as "half-round," or a separate nosing may be applied thereto, and the back bar or that which in stairs abuts against the riser may be brought round at either end, and, if desired, be secured to the wooden blocks by screws or otherwise, or the front and back bars may each be so brought round—say each be brought round half way. The treads, when used for stairs, may be secured to the risers according to the ordinary or any suitable method, and may be used with iron, wooden or stone, or other staircases.

In order that my invention may be well understood, I will describe, with reference to the accompanying drawings, the manner in which it may be carried into practical effect, premising, however, that I do not limit myself to the precise details shown.

Figure 1 is a plan, Fig. 2 is a cross-section,

and Fig. 3 is a longitudinal section, of a tread or surface made according to my invention.

A are rows of wooden blocks and B are metal bars alternating therewith. These rows of blocks A and the bars B are held together by long rivets or bolts C passing through the bars and through holes formed by grooves in opposite faces of the blocks, the whole being encircled by a metal frame into which the long rivets or bolts are by preference countersunk. The said frame is shown as being constituted by the front and back bars D, the ends of which are continued and turned to overlap the sides, as at *d*, and these overlapping parts may be secured to the end blocks of the rows by screws or other fastenings. A nosing E, if required, (as in the case of stair-treads, for example,) can be fixed by means of screws, as shown, or otherwise on the front bar D of the tread, or this part of the bar can be made with a curved face to constitute a nosing.

In a tread or surface constructed according to my invention, the wooden blocks expose a surface of wood only at each side, and each side may be similar, and when the upper surface or that exposed to wear is worn out the treads can be turned upside down, thus exposing a perfectly-new surface to the traffic or for wear, or in the case of stair-treads or the like, when one edge of the surface has become worn the sides of the same surface may be reversed, and when the whole surface of the wooden blocks has become worn the wooden blocks and bars may be taken asunder and new wooden blocks be inserted very readily and at a small cost, so that the treads made on my improved system are very durable and can be very readily and economically renewed.

The wooden blocks may be of any kind of wood and of any desired size, and the intersecting bars may be of any suitable metal or material, preferably of iron or steel, and the shape and thickness of tread as a whole may be varied to suit circumstances.

In Figs. 1 and 2 I have shown flat-sided bars and blocks with flat sides to correspond, but in Figs. 4 to 12 I have shown in cross-section various forms which the bars and blocks may have, but I do not limit myself to these or to any particular form. In these figures

the parts are marked with the letters which are used to denote the same parts in Figs. 1, 2, and 3.

In Figs. 8 to 12 I have shown various forms of blocks, the bars and bolts being made, of course, to correspond in shape to the recesses for them in the blocks.

If desired, for example, for use in dwelling-houses, public buildings, and the like, the kinds of wood used in any one piece may be varied so as to form any desired pattern or design.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

A tread or wearing surface for stairs, &c., composed of series of rows of short wooden

blocks, provided with grooves in their sides and having the grain of the wood vertical, with metal bars of narrower depth than the blocks extending along the sides of the blocks, each of the blocks of said rows being supported by bolts or rivets passing through the metal bars and the grooves in the sides of the block, whereby a self-supporting tread is secured with wooden surfaces presented on both sides, substantially as described.

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

J. T. ANDREWS.

Witnesses:

W. J. MCGAW,
F. G. WOOLLEY.