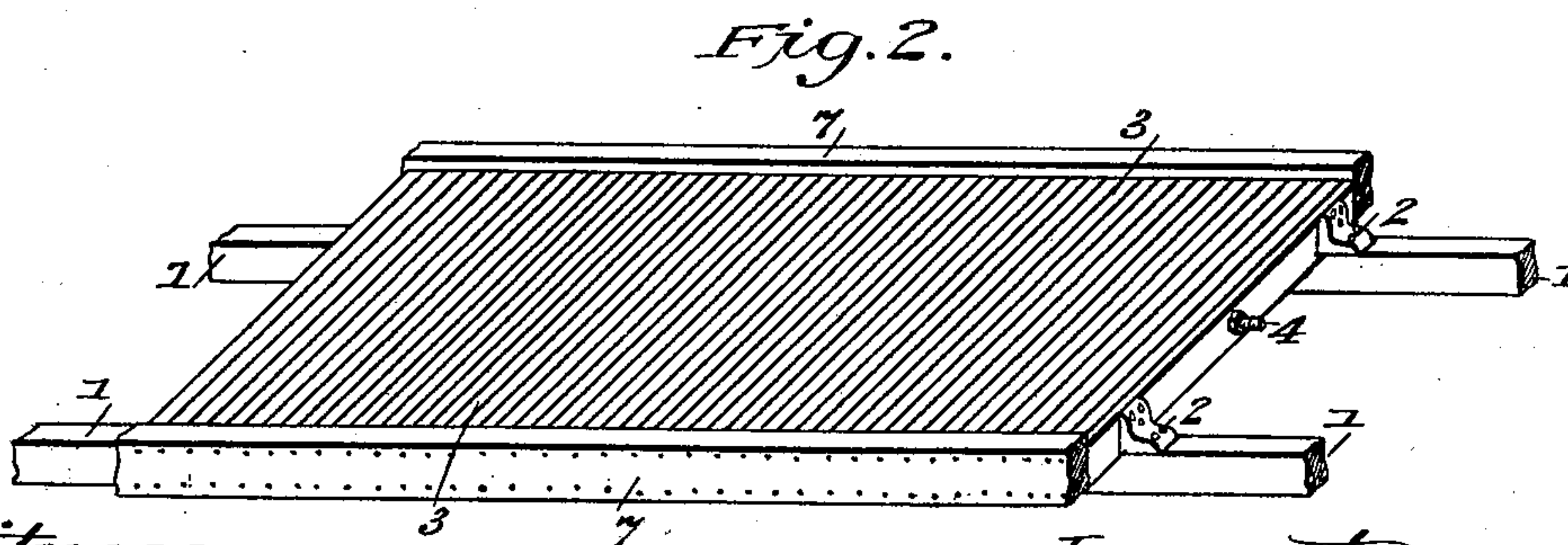
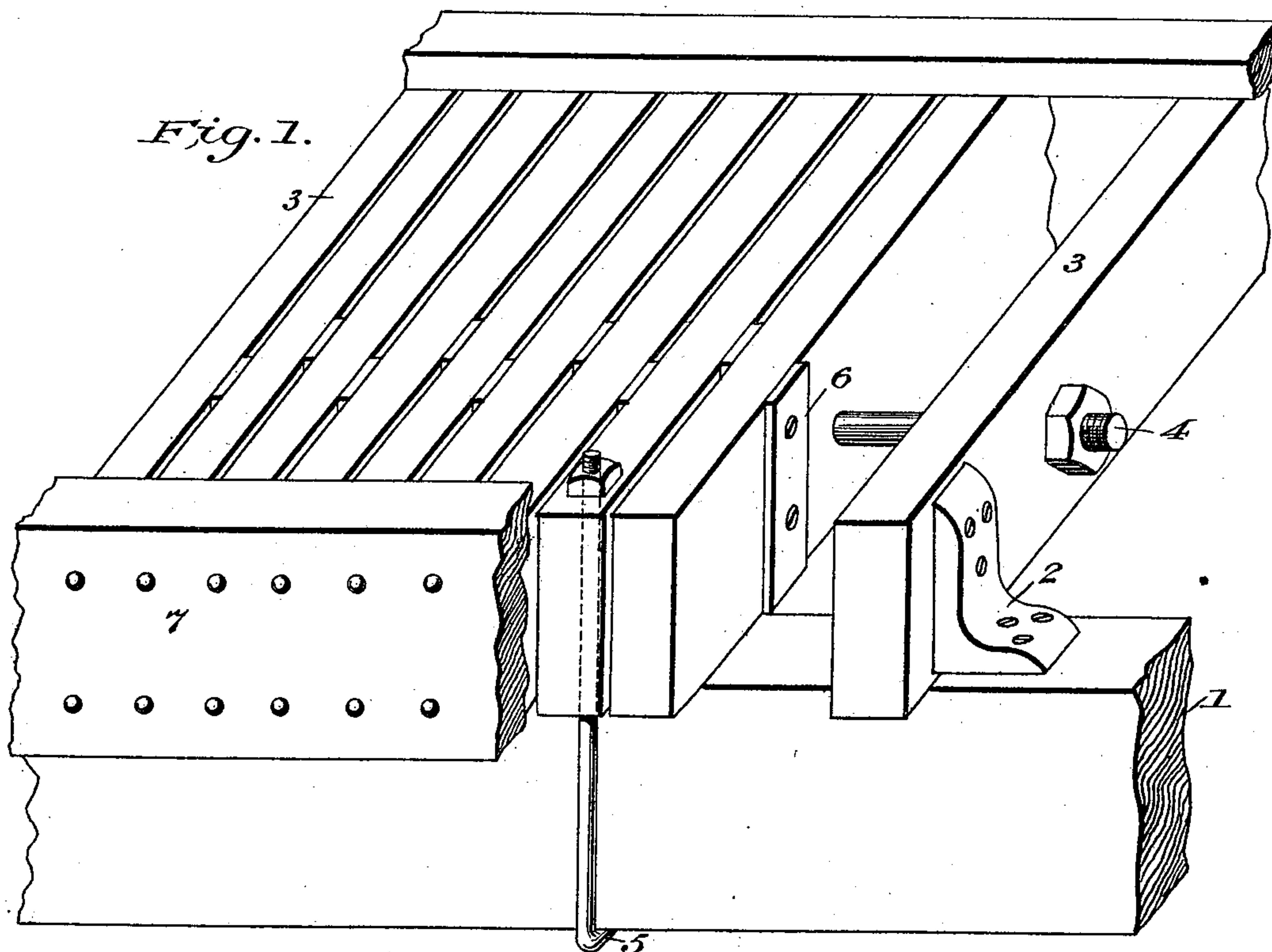


(No Model.)

U. S. ANDERSON.  
PORTABLE BRIDGE FLOOR.

No. 583,855.

Patented June 1, 1897.



Witnesses:

*E. J. Benjamin*  
*W. L. Colson*

Inventor:

*Ulysses S. Anderson*



# UNITED STATES PATENT OFFICE.

ULYSSES S. ANDERSON, OF DUGGER, INDIANA.

## PORTABLE BRIDGE-FLOOR.

SPECIFICATION forming part of Letters Patent No. 583,855, dated June 1, 1897.

Application filed August 12, 1895. Serial No. 559,087. (No model.)

*To all whom it may concern:*

Be it known that I, ULYSSES S. ANDERSON, a citizen of the United States, residing in the town of Dugger, in Sullivan county, in the State of Indiana, have invented certain new and useful Improvements in Portable Bridge-Floors; and I do hereby declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

My invention relates to certain new and useful improvements in bridge-floors and possesses the following useful features, to wit:

First. It may be laid upon and securely anchored to stringers, of either metal or wood, having a regular upper surface without any special preparation of such stringers to receive it and without reducing the strength and durability of the stringers by the use of mortises, holes, or openings of any kind. Bridge-floors heretofore in use are set in mortises or anchored to the stringers by nails or bolts passing into or through them and by which they are weakened and crevices afforded for the retention of moisture and dirt, thus hastening decay.

Second. It is placed on and removable from the stringers in sections easily portable.

Third. When a section is in place, it is readily fastened to or loosened from the stringers by turning the nut attached to the anchor-iron at either end of the section.

Fourth. This floor is made of boards set edgewise and uniformly spaced by blocks of wood or metal, and the boards of each section are held and bolted firmly together by means of an iron rod passing through the center of each board from one side of a section to the other, which is provided with threads and a nut at one end.

Fifth. Each section is held in shape and prevented from cupping by a casing board or timber of equal width with the floor-boards securely fastened by nails or screws to the ends of the boards forming the section and at either end thereof.

Sixth. There are no holes made in nor obstructions placed upon the upper edges of the

floor-boards, except the anchor-iron at either end of each section, the opening for which is securely covered by the nut. The maximum of durability is thus secured in the floor-boards.

Seventh. This floor affords secure footing for animals without any obstructions for vehicles and will collect and retain only a minimum amount of dirt and moisture. The greatest strength and durability is secured in all parts of the bridge.

The accompanying drawings show all the features and illustrate my invention.

Figure 1 is a view of a part of a section of the floor in position on the stringers, a part of the near casing-board and one of the floor-boards being removed, exposing and showing the position and relation of the different pieces and parts of which the floor is composed. Fig. 2 is a view of an end section intact and in position upon the stringers, showing the two angle bracing-irons (indicated by 2 in the drawings) used only on the outside of the section at either end of the floor.

The floor is composed of a number of sections, the number depending on the length of the bridge. The sections are not attached to each other in any way, but are laid side by side upon the stringers, to which each is separately anchored.

Each section being identical in all its parts to every other section, it is only necessary to describe the construction of a single section. The boards composing a section, being rectangular and of equal proportions, are each perforated at the center straight through the shortest dimension by a hole of sufficient diameter to receive under slight force the binding-rod, (indicated in the drawings by 4.) One board is slipped onto the binding-rod, the nut being first removed, to the shoulder or head end of the same. Two spacing-blocks of uniform thickness, made of either wood or metal, better of metal, are then attached by nails or screws to the board on the side against which the next board is to be placed, one on either side of the rod, and at such points that each will be about equidistant from the end of the board and from the other block. Another board is then slipped onto the binding-rod in like manner, and after being nailed or screwed to the blocks on the first board two blocks



are attached to it in a like manner, which process is repeated until the binding-rod is filled, when the nut is put on and tightened. The casing-boards (indicated by 7 in the drawings) are then attached by nails or screws to the ends of the floor-boards. The casing-boards correspond in length with the width of the section and in width with the width of the floor-boards and are fastened to the end of each floor-board, forming a section. The section is then placed in position upon the stringers, and the center floor-board of the section is pierced edgewise and at right angles to the upper surface of the section by a hole of sufficient diameter to receive the anchor-iron, one at each end, at a point tangent with the outside surface of the stringer. The anchor-iron (indicated by 5 in the drawings) is provided with threads and nut at the upper end and with a hook at the lower end and is of sufficient length to extend from the lower side of the stringer to the upper surface of the floor. One is inserted from below through each of the holes last described, the hook at the lower end being turned in the direction

of and under the stringer. The nut is then placed upon the upper end and turned until tight. The section is then securely anchored to the stringer.

What I claim, and desire to secure by Letters Patent, is—

1. The combination with a bridge-floor having floor-boards set edgewise and uniformly spaced and bound together, of anchor hooks or bands adjustable by means of nuts or wedges, and by means of which the floor is anchored to the stringers or timbers, substantially as described.

2. The combination with a bridge-floor having floor-boards set edgewise and uniformly spaced, of casing-boards attached to either end of the floor-boards and of equal or greater width therewith, substantially as described.

In testimony whereof I have hereunto affixed my signature in the presence of two witnesses.

ULYSSES S. ANDERSON.

Witnesses:

E. S. BENJAMIN,  
W. L. COULSON.