

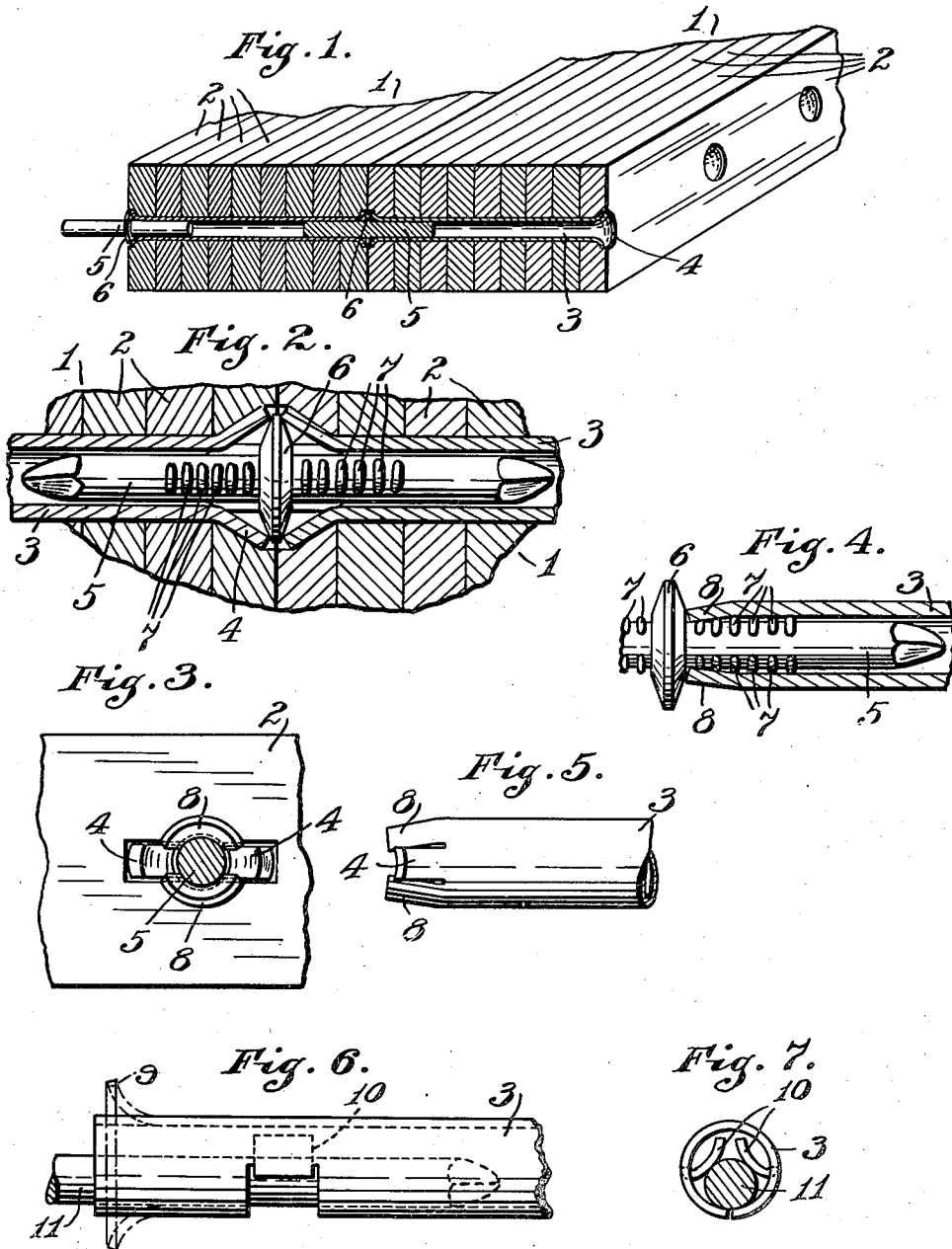
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BRIDGE FLOORING

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BRIDGE FLOORING.

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Our invention relates to improvements in tread floors for bridges, driveways and the like wherein the tread or floor is made of laminated edge-set wooden strips. This type of tread or floor consists as a rule of creosoted strips of wood, generally oak, two by four or two by six in cross sectional diameter and fourteen to eighteen feet long. These strips are set edgewise in forming the flooring and in some instances the flooring is formed of sections comprising a plurality of strips held together by bolts.

Our invention is primarily designed to provide improved means for securing the strips together to form the sections and to provide means for securing the sections together in abutting relation.

For the purpose of disclosing our invention we have illustrated certain embodiments thereof in the accompanying drawings in which

Fig. 1 is a perspective view partly in section of a flooring embodying our invention;

Fig. 2 is an enlarged sectional detail showing the manner of securing the flooring sections together;

Fig. 3 is a partial side elevation of one of the flooring sections showing the means for securing the tubular tie bar in position;

Fig. 4 is a detail section showing the locking means for the dowel pins;

Fig. 5 is a side elevation of one end of the tubular tie bar;

Fig. 6 is a side elevation of a modified form of tubular tie bar, and

Fig. 7 is a transverse sectional view thereof showing the means for holding the dowel pins in locked position.

In the embodiment illustrated the floor comprises a plurality of sections 1 each section consisting of a series of laminated edge-set strips 2. These strips are secured together to form the sections 1 by tubular tie bars 3 which pass through the various strips and have portions of their outer edges flared outwardly to form the out turned lips 4, the out flared portions however being counter-sunk in the surface of the outer strips. For connecting the sections 1—1 together when the flooring is laid we provide dowel pins 5 the opposite ends of which take into the tubular tie rods 3. These pins are preferably provided at their center with an annular collar or flange 6 to hold them against being inserted too far in

one or the other of the tie rods of the adjacent sections and are provided towards their center with serrations 7 which are engaged by the inturned edges 8 of the tie rods whereby after the dowel pins have been inserted and the sections drawn together the dowel pins will be securely locked in position.

In Figs. 6 and 7 we have illustrated a modified form of tubular tie rod. In this form the tie rod when placed in position has its entire outer end belled or flared outwardly as at 9 and at a point slightly removed from its outer end the material is cut transversely and the cut portion turned inwardly to form a pair of spring lips 10 which when the dowel pin 11 is inserted in position frictionally engage the pin to hold the same against displacement. The tubular tie rod may be formed of a solid tube or as shown in Fig. 7, a tube which is longitudinally split.

While we have shown and described our invention as being particularly applicable to bridge floors and to floors wherein sections are formed of laminated strips, it will be understood that the invention is not to be limited to the particular use or construction illustrated in the accompanying drawings and described. It is apparent that the connecting means may be used for joining or connecting adjacent boards and in other structures than in flooring.

We claim as our invention:

1. A wooden floor comprising a plurality of sections each formed of laminated wooden strips arranged to be edge-set, tubular tie rods extending through the laminations of each section and having their outer ends flared and counter-sunk for locking the laminations together, dowel pins socketing in the ends of the tie rods of adjacent sections and means in said tie rods for engaging said dowel pins and locking the same against lateral displacement.

2. A wooden floor comprising a plurality of sections each section formed of a plurality of laminations arranged to be edge-set, tubular tie rods extending through said laminations and having their outer ends flared to lock the laminations of a section together, dowel pins arranged to socket in the ends of the tie rods of adjacent sections and means on the tie rods for frictionally engaging the dowel pins to prevent lateral displacement.

3. A wooden floor comprising a plurality of sections each section formed of a plurality of laminations arranged to be edge-set, tubular tie rods for securing said laminations together extending through said laminations and having their outer ends outwardly flared to lock the laminations together, dowel pins arranged to socket in the ends of tie rods of adjacent sections, the tie rods having a portion thereof bent inwardly to engage the dowel pins and frictionally lock the same against displacement.

4. A wooden floor comprising a plurality of sections, each formed of laminated wooden strips arranged to be edge set, tubular tie rods extending through the laminations of each section and having portions of their outer edges flared and counter-sunk for locking the laminations together, dowel pins

socketing in the ends of the tie rods of adjacent sections, said tie rods and dowel pins having engaging portions for locking the dowel pins against lateral displacement.

5. A wooden floor comprising a plurality of sections each section being formed of a plurality of edge set laminations and a plurality of hollow tubular tie rods for securing said laminations together extending through said laminations and having portions of their outer ends outwardly flared and counter-sunk to lock the laminations together.

In witness whereof, we have hereunto set our hands at Indianapolis and Wabash, respectively, Indiana, this 9th day of April, A. D. one thousand nine hundred and twenty six.

GEORGE W. WARMOTH.
ROY WERTENBERGER.