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1,499,983

S. L. HEIDRICH

SLEEPER SUPPORT

Filed Jan. 29, 1923

Fig. 1.

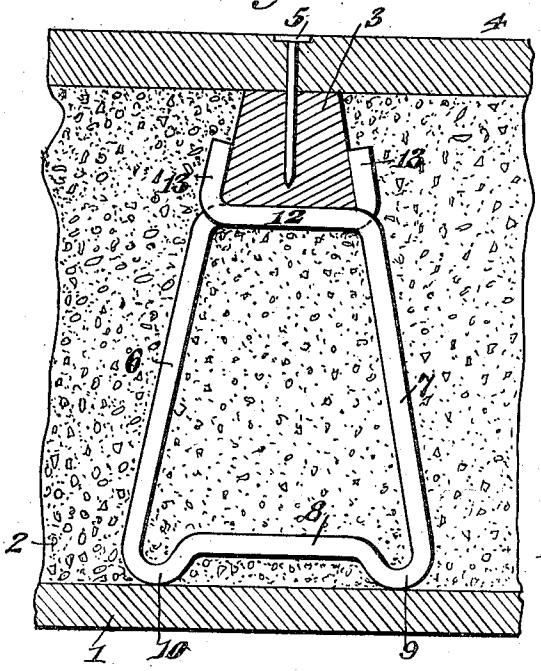


Fig. 2.

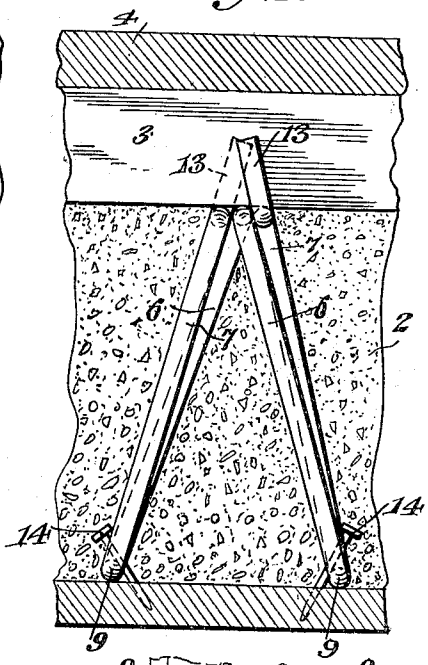


Fig. 3.

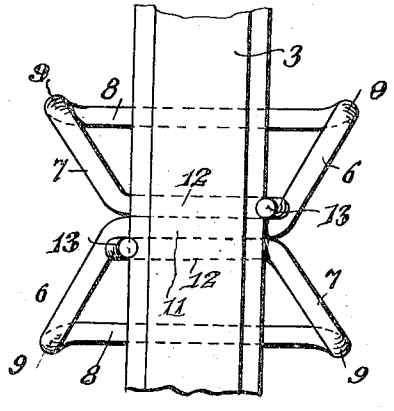


Fig. 4.

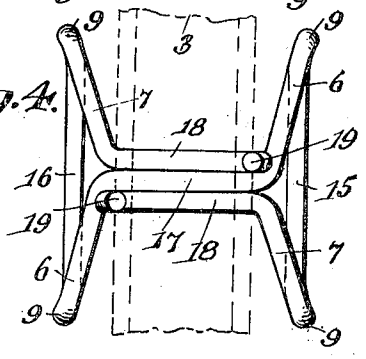


Fig. 5.

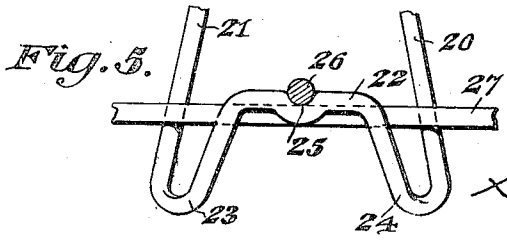
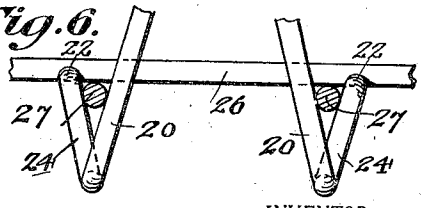


Fig. 6.



INVENTOR.

Stephen L. Heidrich

BY

Geo. P. Kimmel.

ATTORNEY.

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UNITED STATES PATENT OFFICE.

STEPHEN L. HEIDRICH, OF BROOKLYN, NEW YORK.

SLEEPER SUPPORT.

Application filed January 29, 1923. Serial No. 615,758.

To all whom it may concern:

Be it known that I, STEPHEN L. HEIDRICH, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Sleeper Supports, of which the following is a specification.

This invention relates to a sleeper support for use in connection with concrete structures, and has for its object to provide in a manner as hereinafter set forth, a supporting element adapted to be embedded in a concrete slab and provided with means for supporting a wooden sleeper which is also embedded in the slab, and to further provide said element in a manner whereby the means employed to support the sleeper will act as a lock between the sleeper and such element.

A further object of the invention is to provide in a manner as hereinafter set forth, for the economical production of a support for wooden sleepers in concrete structures, said support being light in weight, strong, possessing the necessary rigidity and providing means for holding a wooden sleeper in place during the pouring of concrete about the same thereby setting up a securely anchored base to which a wooden floor may be nailed directly.

A further object of the invention is to provide in a manner as hereinafter set forth, a sleeper support for the purpose referred to formed from a single piece of material of the desired strength and rigidity.

A further object of the invention is to provide in a manner as hereinafter set forth, a sleeper support having means at the base thereof whereby it can be conveniently secured to the mold so as to maintain it in the position to which it has been set for the reception of the sleeper and for further maintaining it in the set position during the pouring of the concrete.

A further object of the invention is to provide a sleeper support in a manner as hereinafter referred to with an expansible and contractible top, not only providing means for supporting a wooden sleeper, but further providing means for locking the sleeper thereto.

Further objects of the invention are to provide a sleeper support for use in connection with concrete structures, which is simple in its construction and arrangement, strong, durable, compact, rigid, efficient in its use, formed of a single piece of material, conveniently positioned in the mold structure, providing a securely anchored base for a floor, and comparatively inexpensive to manufacture.

With the foregoing and other objects in view, the invention consists of the novel construction, combination and arrangement of parts, as hereinafter more specifically described and illustrated in the accompanying drawings, wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which come within the scope of the claims hereunto appended.

In the drawings wherein like reference characters denote corresponding parts throughout the several views:—

Figure 1 is a side elevation of a sleeper support in accordance with this invention, showing the adaptation thereof in connection with the sleeper and a floor anchored to the sleeper and further illustrating the support in a concrete slab within a mold structure.

Figure 2 is an end elevation with the support in a concrete slab within a mold structure.

Figure 3 is a top plan view of the support with the sleeper mounted therein.

Figure 4 is a view similar to Figure 3 of a modified form.

Figure 5 is a fragmentary view in side elevation and Figure 6 is a fragmentary view in end elevation of another modified form of support.

Referring to the drawings in detail, 1 denotes the base of a mold, 2 a mass of concrete poured therein, 3 a wooden sleeper which is wedge-shaped in cross section, 4 a flooring secured to the sleeper by holdfast devices 5, only one of which is shown.

By way of example the support is shown constructed of wire of the desired diameter and necessary rigidity, but it is to be understood that the support may be produced otherwise than from wire, the latter being used in the present case simply to indicate and explain the invention, as it is obvious a metallic strip would be substantially as effective in carrying out the invention, as would be the wire, and thus in its broadest aspect, the invention consists of a support formed of any suitable material capable of

carrying out the function prescribed for the support.

Referring to Figures 1, 2 and 3 of the drawings, the support which is formed from a single piece of material consists of a pair of oppositely extending complemental side members inclining from each other in opposite directions and each formed of a pair of end bars 6, 7, the former of greater length than the latter and which are connected together at the lower termini thereof by a bottom bar 8 having the medial portion thereof offset with respect to the end portions 9, 10 thereof, which are curvilinear in contour. The medial portion 8 of the bottom bar is positioned upwardly with respect to the end portions 9 and 10, or in other words, the medial portion is raised to prevent contact with the bottom 1, of the mold so that the concrete 2 can extend between the medial portion of the bottom bar and the bottom 1, of the mold. When the support is set up the end portions 9, 10, rest on the bottom 1, of the mold as shown in Figures 1 and 2. The end bars of one side member are alternately disposed with respect to the end bars of the other side member and the end bar 6 of one side member is connected to the end bar 6 of the other side member, at the top thereof, by a supporting bar 11, which may be termed a coupling bar. Each of the side bars 7 terminates at its upper end in a combined supporting and locking bar 12 disposed in parallel relation with the bar 11 and having the end terminal portions thereof disposed upwardly and inwardly at an angle to provide a lock, as indicated at 13. The bar 11 is interposed between the bars 12 and the said bars 12 extend in opposite directions with respect to each other so that when the sleeper 3 is mounted on a support, the locks 13 will bind against the sides of the sleeper as shown in Figure 1, whereby the sleeper will be locked to a support.

The bars 7 are so set up as to have what may be termed an extensible and contractible function so that they may be extended apart relatively to each other for the purpose of positioning the sleeper, after which the bars are released and will spring to a position to have the angle shaped free terminal portions thereof bind against opposite sides of the sleeper 3 whereby the latter will be locked in position.

As shown in Figure 2, hold-fast devices 14 are extended through the end portions 9 and 10 to secure the support to the mold whereby it will be maintained in the position to which it has been set when mounting the sleeper in position and also when pouring the concrete into the mold.

The supporting bar 11, which is also termed the coupling bar which connects the bars 6 and 7 together, provides means for supporting the sleeper at the desired position independently of the bars 12 when initially positioning the sleeper 3. The bar 11 is not shifted during the extending and contracting of the bars 12 and by this arrangement when the support is set in its receiving position, that is to say, in a position to receive the sleeper 3, it is not necessary to shift the support during the operation of the locking of the sleeper 3 to the support through the medium of the bars 12.

In the form shown in Figure 4, in lieu of setting the support up with a pair of side members, end members 15 and 16 are employed and which are constructed in the same manner as the side members shown in the form illustrated by Figure 3, or in other words, the support shown in Figure 4 is the same as that shown in Figure 3, with the exception that the members which support the combined supporting and coupling bar and the combined supporting and locking bars are disposed at right angles with respect to the direction of the supporting members in Figure 3 for such function. In Figure 4, the combined supporting and coupling bar is indicated at 17, the locking bars at 18 and the angle end terminal portion of each of the bars 18 at 19.

In Figures 5 and 6 of the drawings, the end bars of each of the side members are indicated at 20, 21, the bottom bar at 22, the curved end portions of the bottom bar at 23, 24. The medial portion of the end bar is raised and offset as at 25 to provide a seat for a reinforcing bar 26. A reinforcing bar 27 extends between the end bars 20, 21, and the end portions 23, 24 of the bottom bar 22. The position of the reinforcing bar 26 is such as to engage the reinforcing bars 27.

In the construction shown in Figures 5 and 6, a means is provided for retaining in position the reinforcing elements for the concrete slab such elements being the bars 26 and 27 and these bars are maintained in the position to which they have been set. The bottom bar 22 is bent outwardly with respect to the end bars 20, 21, to provide for the reception of the reinforcing bars 27.

From the foregoing description taken in connection with the accompanying drawings, an economical production of a support for wooden sleepers in concrete construction is provided and further a support which is light in weight, strong and rigid when employed for the purpose specified, and further the support provides means which will hold a wooden sleeper in place while pouring concrete about the same, thereby resulting in a securely anchored base to which a wooden floor may be nailed directly, and it further provides for the setting of sleepers economically both as to labor and material in concrete structure to which

wooden floors are to be secured, and although the preferred embodiment of the invention is as shown and described, yet it is to be understood that changes in the details of construction can be resorted to which fall within the scope of the invention as claimed.

What I claim is:—

1. A device for the purpose set forth comprising a pair of oppositely extending supporting elements, a combined coupling and supporting bar connecting said elements together at the top thereof, and each of said elements provided at its top with a combined supporting and locking bar for a sleeper.

2. A device for the purpose set forth comprising a pair of oppositely extending supporting elements, a combined coupling and supporting bar connecting said elements together at the top thereof, and each of said elements provided at its top with a combined supporting and locking bar for a sleeper, each of said locking bars being shiftable and having the free terminal portion thereof extended upwardly at an angle and inwardly inclined.

3. A device for the purpose set forth comprising a pair of oppositely extending supporting elements, a combined coupling and supporting bar connecting said elements together at the top thereof, and each of said elements provided at its top with a combined supporting and locking bar for a sleeper, said locking bars being oppositely disposed with respect to each other.

4. A sleeper support formed of a single length of material bent to provide a plurality of supporting elements seating on the bottom of a mold and each having a part of its base positioned above the bottom of the mold, a combined supporting and coupling bar connecting the top of said elements together and each of said elements having its top formed with a combined supporting and locking bar for engagement with a sleeper mounted upon said coupling bar.

5. A sleeper support formed of a single length of material bent to provide a plurality of supporting elements seating on the bottom of a mold and each having a part of its base positioned above the bottom of the mold, a combined supporting and coupling bar connecting the top of said elements together and each of said elements having its top formed with a combined supporting and locking bar for engagement with a sleeper mounted upon said coupling bar, said locking bars being oppositely disposed with respect to each other.

6. A sleeper support formed of a single length of material bent to provide a plurality of supporting elements seating on the bottom of a mold and each having a part of its base positioned above the bottom of the mold, a combined supporting and coupling bar connecting the top of said elements together and each of said elements having its top formed with a combined supporting and locking bar for engagement with a sleeper mounted upon said coupling bar, said locking bars arranged in parallelism and further disposed parallel with said coupling bar when in locking engagement.

7. A sleeper support formed of a single length of material bent to provide a plurality of supporting elements seating on the bottom of a mold and each having a part of its base positioned above the bottom of the mold, a combined supporting and coupling bar connecting the top of said elements together and each of said elements having its top formed with a combined supporting and locking bar for engagement with a sleeper mounted upon said coupling bar, said locking bars arranged in parallelism and further disposed parallel with said coupling bar when in locking engagement, and said locking bars being oppositely disposed with respect to each other.

8. A device for the purpose set forth comprising a pair of skeleton supporting elements each having a part of its base raised with respect to the remaining portion of its base, a combined coupling and supporting bar connecting said elements together at the upper portions thereof and each of said elements having the upper portions thereof provided with a combined supporting and locking bar for securing a sleeper on said supporting bar.

9. A device for the purpose set forth comprising a pair of skeleton supporting elements each having a part of its base raised with respect to the remaining portion of its base, a combined coupling and supporting bar connecting said elements together at the upper portions thereof and each of said elements having the upper portions thereof provided with a combined supporting and locking bar for securing a sleeper on said supporting bar, said elements extending in opposite directions with respect to each other.

10. A device for the purpose set forth comprising a pair of skeleton supporting elements each having a part of its base raised with respect to the remaining portion of its base, a combined coupling and supporting bar connecting said elements together at the upper portions thereof and each of said elements having the upper portions thereof provided with a combined supporting and locking bar for securing a sleeper on said supporting bar, said locking bars extending in opposite directions with respect to each other.

11. A device for the purpose set forth comprising a pair of skeleton supportig elements each having a part of its base raised with respect to the remaining portion of its base, a combined coupling and supporting

bar connecting said elements together at the upper portions thereof and each of said elements having the upper portions thereof provided with a combined supporting and locking bar for securing a sleeper on said supporting bar, said locking bars extending in opposite directions with respect to each other, and said elements extending in opposite directions with respect to each other.

12. A device for the purpose set forth comprising a pair of supporting elements of skeleton formation extended in opposite directions with respect to each other, a combined supporting and coupling bar connecting said elements together at the upper portions thereof, and each of said elements at its upper end extended to provide a combined supporting and locking bar disposed in parallelism with respect to said coupling bar, said locking bars being oppositely disposed with respect to each other and each having an angularly disposed free terminal portion, said free terminal portions extending toward each other at an inclination to provide locking means for a sleeper when mounted on the coupling bar.

In testimony whereof, I affix my signature hereto.

STEPHEN L. HEIDRICH.