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NAILABLE METAL FLOORING

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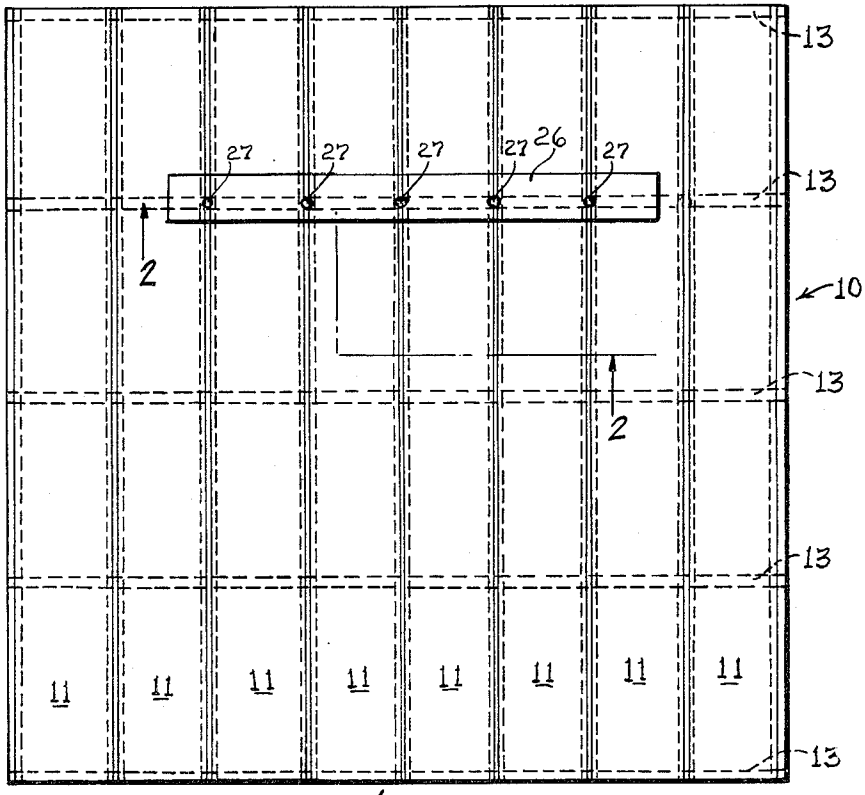


Fig. 1.

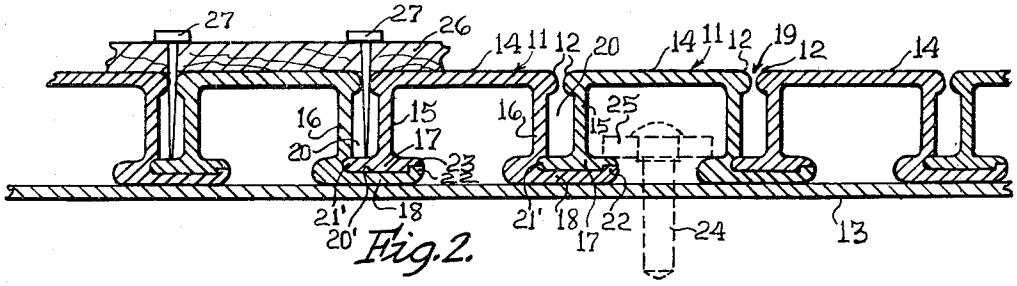


Fig. 2.

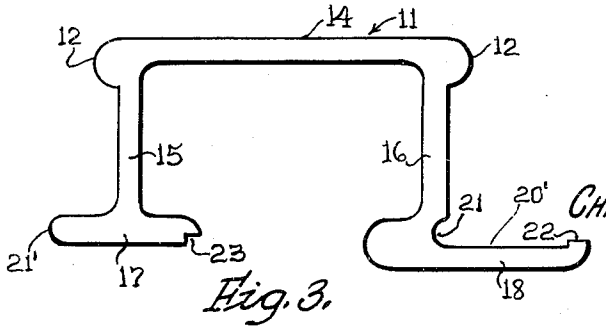


Fig. 3.

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NAILABLE METAL FLOORING

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My invention relates to a new and useful improvement in a nailable metal flooring and more particularly to a metallic floor for freight carrying conveyances which flooring contains nail receiving and retaining channels.

The principal object of my invention is in the provision in a device of this character of a means of constructing a metallic flooring or the like which by reason of its configuration will receive and retain nailable freight retaining blocks without impairing the construction, strength and durability of the flooring.

Another object of my invention is in the provision in a device of this character of an arrangement of structural supporting members which by reasons of their specific configuration provides interconnecting elements which form a nailable floor section.

Yet another object of my invention is in the provision in a device of this character of improved structural members having corresponding structural elements cooperating with each other when the members are assembled into a flooring unit which will provide a relatively lightweight floor that will support heavy loads and present a nail receiving channel extending longitudinally thereof.

Still another object of my invention is in the provision in a device of this character of an arrangement of structural supporting members, which by their specific configuration, provides connecting means whereby each member will support and be fixedly connected to the next member without the necessity of welding or the like.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangements of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings showing the preferred form of construction and in which:

FIG. 1 is a top plan view of nailable floor section including my improved nail receiving channels formed therein;

FIG. 2 is a detailed sectional view taken on line 2—2 of FIG. 1; and

FIG. 3 is an end elevational view of one of the structural members.

It is the object of this invention to provide in freight carrying conveyances such as a railroad freight car a nailable metallic flooring. A nailable floor is one that will receive and support freight thereon and at the same time be capable of receiving and retaining nails or the like used for the purpose of attaching to the floor freight retaining blocks or other removable members that may be used for preventing the shift of the freight during transit. The nailable flooring must be of such a construction that the repeated operation of receiving and retaining nails and their forceable removal therefrom will not impair in any manner the condition and structural strength of such flooring.

To achieve a complete nailable flooring I prefabricate metal floor sections, one of which is shown as at 10 in FIG. 1. This floor section 10 comprises a plurality of parallelly extending elongated strips 11. These strips 11 are of identical construction and configuration and are adapted to be supported on connecting bars 13 extending transversely beneath the strips 11 in spaced parallel relation. These connecting bars are in turn adapted to be supported and connected to any suitable structural frame members of the vehicle. The structural frame members of the vehicle may be a part of a side wall or ceiling, and

therefore in this specification and claims the term floor may be taken to include side walls and ceilings where such is not inconsistent with the context of such specification and claims.

As each strip 11 is of identical construction and configuration I will but describe one. The strip 11 is substantially U-shaped in cross-section as seen in FIG. 3. Such strip 11 presents a horizontally disposed longitudinally extending deck portion 14. The strips 11 provides flanges 15 and 16 depending from opposite longitudinal edges of the deck portion 14. The depending flange 15 terminates into a connecting foot 17 extending equal distance to either side of the end of the flange 15, while the opposite depending flange 16 terminates into a laterally extending base member 18.

The base member 18 provides one part of an interengaging connecting means that includes having its upper face formed to provide an interengaging foot receiving recess 20'. The recess 20' includes a circular toe receiving indentation 21 and a raised locking finger 22 adjacent one extremity thereof as shown in FIGS. 2 and 3.

The connecting foot 17 is formed to provide a circular toe 21' at one end and a notched out recess 23 in the opposite end of the bottom face of the foot 17.

As will be seen in FIGS. 2 and 3, the connecting foot 17 of each flange 15 of the strips 11 extend through a longitudinal plane which is offset with respect to the longitudinal plane of the base member 18 of the opposite flange 16. By reason of this novel construction when the strips 11 are mounted in parallel relation to make up the floor section 10 as seen in FIG. 1, the connecting foot 17 of each flange 15 of each strip 11 will interengage the base member 18 of each of the adjacent flanges 16.

Thus the strips 11 are provided with laminated bottom supports that are of a double thickness and as such will withstand a greater degree of stress and strain.

In assembling the strips 11 into the floor section 10 the circular toe 21' of the flange 15 is inserted into the toe receiving indentation 21 of the flange 16. The connecting foot of flange 15 is inserted into the recess 20' with the heel-like locking finger 22 inserted into the notched out recess 23, thus interlocking the strips together in a longitudinal plane.

The juxtapositioned strips 11 are then mounted upon the connecting bars 13 by a bolt 24 having an enlarged head 25 which sits upon a portion of the connecting foot 17 and base member 18 as viewed in FIG. 2. The bolt 24 extends through the connecting bar 13 and may be attached thereto by having a nut not shown threaded thereon.

In FIGS. 1and 2 I show a wood freight retaining block 26 attached to the floor section 10 by nails 27 driven into the nail receiving grooves 20 formed between each of the strips 11. It will be noted that the opposite longitudinal edges of the deck portion 14 of each strip 11 is provided with enlarged circular heads 12 which when disposed in spaced confronting relation form a restricted throat 19 for the nail receiving grooves 20. It is these enlarged members 12 which bear upon the nail 27 to hold the same in the nail receiving groove 20.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent is:

1. In a nailable metal floor comprised of juxtaposed strips each having a horizontally disposed longitudinally

extending deck portion, each of said deck portions provided along each longitudinal edge thereof with depending flanges, said flanges being disposed in opposed relation to provide therebetween a nail receiving groove, one flange of each strip terminating into a base member extending laterally from said flange in a substantially parallel plane with respect to said deck portion, the other flange of each of said strips terminating into a connecting foot, said base member of each of said one flange providing means to interengage with the connecting foot of the next juxtaposed strip, said connecting foot of each of said other flanges providing interengaging means cooperating with said first mentioned means so as to provide a sealed self-locking connection between each of said juxtaposed strips, said interengaging means provided by said connecting foot comprises a toe extending transversely and to one side of said other flange and a recess formed in the lower face of and adjacent the opposite end of said foot to cooperate with said means provided by said base member for locking said connecting foot to said base member so as to provide a sealed self-locking connection between each of said juxtaposed strips.

2. In a nailable metal floor comprised of juxtaposed strips each having a horizontally disposed longitudinally extending deck portion, each of said deck portions provided along each longitudinal edge thereof with depending flanges, said flanges being disposed in opposed relation to provide therebetween a nail receiving groove, one flange of each strip terminating into a base member extending laterally from said flange in a substantially parallel plane with respect to said deck portion, the other flange of each of said strips terminating into a connecting foot, said base member of each of said one flange providing means to interengage with the connecting foot of the next juxtaposed strip, said connecting foot of each of said other flanges providing interengaging means cooperating with said first mentioned means so as to provide a sealed self-locking connection between each of said juxtaposed strips, each of said deck portions providing along its longitudinal edges a means for cooperating with a like means provided by the confronting longitudinal edge of the next juxtapositioned strip to form therebetween a nail retaining restricted throat for the nail receiving groove formed thereby, said interengaging means provided by said connecting foot comprises a toe extending transversely and to one side of said other flange and a recess formed in the lower face of and adjacent the opposite end of said foot to cooperate with said means provided by said base member for locking said connecting foot to said base member so as to provide a sealed self-locking connection between each of said juxtaposed strips.

3. In a nailable metal floor comprised of juxtaposed strips each having a horizontally disposed longitudinally extending deck portion, each of said deck portions provided along each longitudinal edge thereof with depending flanges, said flanges being disposed in opposed relation to provide therebetween a nail receiving groove, one flange of each strip terminating into a base member extending laterally from said flange in a substantially parallel plane with respect to said deck portion, the other flange of each of said strips terminating into a connecting foot, said base member of each of said one flange providing means to interengage with the connecting foot of the next juxtaposed strip, said connecting foot of each of said other flanges providing interengaging means cooperating with said first mentioned means so as to provide a sealed self-locking connection between each of said juxtaposed strips, said interengaging means provided by said base member comprises a connecting foot receiving recess, said recess provided at one end with a toe receiving indentation and at the opposite end with a raised locking finger, said interengaging means provided by said connecting foot comprises a toe extending transversely and to one side of said other flange and a recess formed in the lower face of and adjacent the opposite end of said foot, said toe receiving indentation formed in said base member adapted to receive said toe provided by said connecting foot and said raised locking finger provided by said base member adapted to project into said recess formed in the lower face of said connecting foot when said strips are in juxtaposed position so as to provide a sealed self-locking connection between each of said juxtaposed strips.

4. In a nailable metal floor comprised of juxtaposed strips each having a horizontally disposed longitudinally extending deck portion, each of said deck portions provided along each longitudinal edge thereof with depending flanges, said flanges being disposed in opposed relation to provide therebetween a nail receiving groove, one flange of each strip terminating into a base member extending laterally from said flange in a substantially parallel plane with respect to said deck portion, the other flange of each of said strips terminating into a connecting foot, said base member of each of said one flange providing means to interengage with the connecting foot of the next juxtaposed strip, said connecting foot of each of said other flanges providing interengaging means cooperating with said first mentioned means so as to provide a sealed self-locking connection between each of said juxtaposed strips, each of said deck portions providing along its longitudinal edges a means for cooperating with a like means provided by the confronting longitudinal edge of the next juxtaposed strip to form therebetween a nail retaining restricted throat for the nail receiving groove formed thereby, said interengaging means provided by said base member comprises a connecting foot receiving recess, said recess provided with a toe receiving indentation at one end and a raised locking finger at the opposite end, said interengaging means provided by said connecting foot comprises a toe extending transversely and to one side of said other flange and a recess formed in the lower face of and adjacent the opposite end of said foot, said toe receiving indentation formed in said base member adapted to receive said toe provided by said connecting foot and said raised locking finger provided by said base member adapted to project into said recess formed in the lower face of said connecting foot when said strips are in juxtaposed position so as to provide a sealed self-locking connection between each of said juxtaposed strips.

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