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R. T. ROMINE

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PORTABLE PLATFORM

Filed June 16, 1927

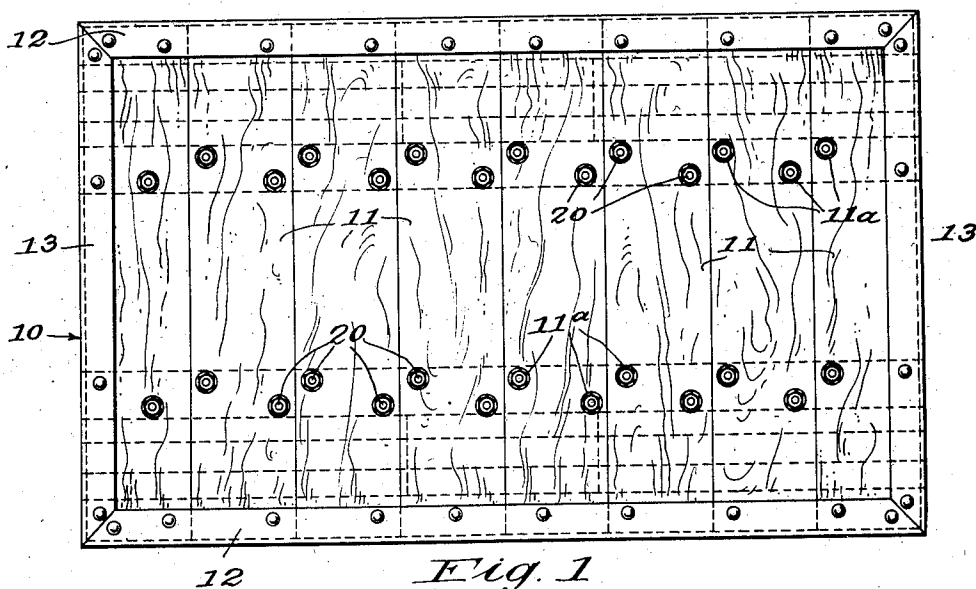


Fig. 1

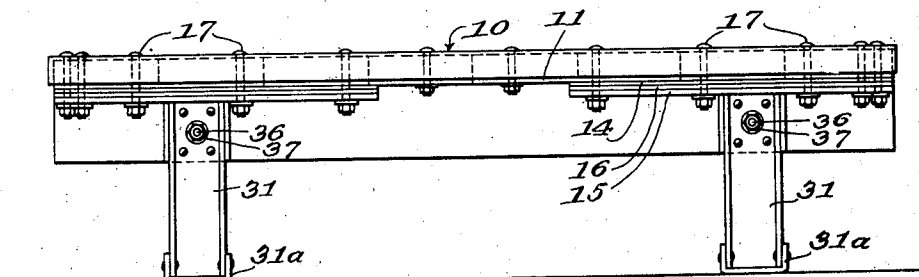


Fig. 2

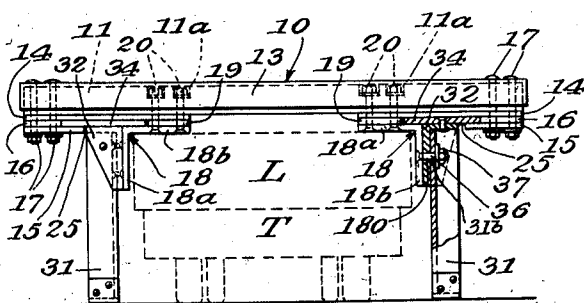


Fig. 3

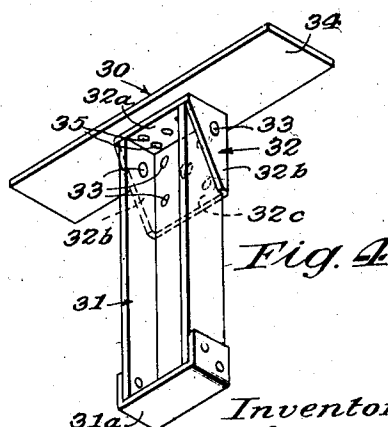


Fig. 4.

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PORTABLE PLATFORM

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This invention relates to portable platforms particularly adapted for use in connection with industrial trucks of the load elevating or lift platform type and constructed to permit the truck platform to be propelled or introduced beneath the floor boards of the platform to lift the same and transport it to a predetermined destination. The present invention enables platforms to be practicably built which are capable of supporting in use heavy loads, such as five and ten ton loads, and in which the supporting legs are strong so as to withstand hard usage.

An object of the invention is to provide a portable platform of the above character having a load supporting floor and improved supporting members or legs of relatively light and simple construction yet which render the platform capable of sustaining extremely heavy loads.

In lifting and transporting heavy loads supported by the portable platforms of the character shown and described in my Letters Patent No. 1,608,039, issued November 23, 1926, in limited areas or where the floor space is considerably restricted, frequently the supporting structure or legs of the platforms are damaged by collisions or impacts, such as when the truck operator propels the lift truck platform against one of the legs. An object of the present invention is to provide a portable platform in which the supporting legs may be readily detached for the purpose of renewing or replacing the same in the event of damage thereto during use, while at the same time providing a platform which will be sturdy and capable of sustaining heavy loads, thereby reducing to a minimum the upkeep and maintenance of such equipment.

Other objects of this invention will appear in the following description and appended claims, reference being had to the accompanying drawings forming a part of this specification wherein like reference characters designate corresponding parts in the several views.

In said drawings:

Fig. 1 is a top plan view of the platform of my invention.

Fig. 2 is a side elevation of the platform of Fig. 1 showing the detachable legs in opera-

tive relation with respect to the platform floor.

Fig. 3 is an end elevation, partly in section, of the platform of Fig. 2 showing in broken lines a truck platform positioned between the supporting legs and about to lift the platform.

Fig. 4 is a detail perspective view of one of the detachable and interchangeable leg supports.

Before explaining in detail the present invention, and the method or mode of operation embodied therein, it is to be understood that the invention is not limited in its application to the details of construction and arrangement of parts illustrated in the accompanying drawings, since the invention is capable of other embodiments and of being practised or carried out in various ways. Also it is to be understood that the phraseology or terminology employed herein is for the purpose of description and not of limitation, and it is not intended to limit the invention beyond the terms of the several claims hereto appended or the requirements of the prior art.

The portable platform in the present instance is shown as a whole at 10 and comprises a load supporting floor formed of a plurality of transverse boards 11. The platform floor is bound around its marginal edges by means of a metal frame comprising, preferably, angle bars 12 embracing or confining the longitudinal edges of the floor, and transverse angle bars 13 confining the end edges of the floor.

The load supporting floor is provided on its under surface with a pair of metal supporting and reinforcing plates 14 which are arranged in parallelism and preferably positioned adjacent the longitudinal edges of the platform. Beneath each plate 14 and at the outer edge thereof, there is provided a longitudinally extending plate or strip 15 which is maintained in spaced relation with respect to the plate 14 by means of a narrow filler strip or bar 16 interposed therebetween. The plates 14, 15 and 16 are all secured together and to the angle bars 12 and 13 by means of bolts 17. At the inner longitudinal edge of each plate 14 there is provided a truss member or angle bar 18 having a vertical flange 18^a and a horizontal flange 18^b, the latter

flange being maintained in spaced relation with respect to the plate 14 by interposing between the flange and the plate a filler strip or bar 19. The members 18 and 19 and the inner edge of the plate 14 are secured together and to the platform floor by means of bolts 20, there being preferably a series of such bolts which may be arranged in staggered relation (Fig. 1), the bolts having countersunk heads so as to lie flush with the exposed or under surface of the flange 18^b (Fig. 3). The nuts applied to the threaded ends of the bolts 20 are adapted to fit in recesses 11^a formed in the floor boards in order that the load supporting floor of the platform will present a plain or unobstructed top surface, this being desirable since material of relatively heavy character when being placed upon the platform floor would tend to shear off or loosen the bolts. The flange 18^a of each angle is provided adjacent its opposed ends with a hole or slot 180 (Fig. 3) for a purpose to be hereinafter described.

As will be seen in Fig. 3, the plates 15 and the angle 18 are spaced relatively to one another as well as with respect to the plates 14, to provide a guideway or channel 25 (Fig. 3) adapted to receive the detachable supporting means for the platform.

In order to support the platform floor so that the platform may be engaged by the lift platform of a power driven industrial truck and elevated and transported thereby, I provide preferably, four detachable leg supports shown as a whole at 30 (Fig. 4). Each leg support comprises a vertical channel 31. A flat bar bent to provide a foot or base portion 31^a encloses the lower end of each channel 31. The central web portion of the channel adjacent its upper end is provided with an aperture or slot 31^b. The upper end of each channel 31 is connected to a plate 34 and to the truss member 18 through the medium of a gusset member 32. This member is preferably pressed or drawn from a flat steel plate to provide an upper horizontal flange 32^a overlying the top of the channel, reinforcing side webs 32^b located at opposite sides of the channel, and an integral rear web 32^c. The channel and gusset members are riveted together at 33. The horizontal portion 32^a of the gusset which overlies the upper end of the channel 31 serves as means to support a metal plate 34 somewhat wider than the gusset 32, thereby providing outwardly projecting flanges 34^a and 34^b. The plate 34 is preferably secured to the horizontal portion 32^a by means of rivets 35. It will be seen from the foregoing that the channel, gusset and plate are all secured together to provide a sturdy leg support, which is of relatively simple character and inexpensive to manufacture.

When it is desirable to assemble the platform, it is simply necessary to insert the plate 30 of each supporting leg in the channel or

guideway 25, slide the leg member into place until the apertures or slots 180 and 31^b register, whereupon a bolt 36 having a countersunk head adapted to lie flush with the inner face of the vertical flange 18^a, is inserted through the aligned apertures and a nut 37 applied thereto to firmly secure the leg member to the truss member 18. It will be noted that the flange portions 34^a and 34^b are thus interlocked in position between the plate 14 on the one hand and the parts 15 and 18 on the other hand.

In Fig. 3 I have shown one of my improved portable platforms about to be engaged and lifted by means of the lift platform L of a power driven industrial truck T. The vertical flanges 18^a of the truss members serve as guide means for the lift platform when moving into position to lift and transport the portable platform, whereas the horizontal flanges 18^b serve to receive and distribute the upward thrust of the lift platform, thereby protecting the floor boards 11 of the portable platform.

From the foregoing it will be seen that I have provided an improved portable platform having preferably detachable supporting legs which, when damaged or otherwise rendered unfit for use, may be easily removed and new ones installed without necessitating the complete rebuilding or replacement of the portable platform. By providing portable platforms having detachable supporting legs in accordance with this invention, it is possible to store a greater number of platforms in a given area or storage space than where portable platforms of the integral leg type are used. Moreover, the platforms may be shipped in carriers in greater quantities in a given space since the detachable legs may be removed, thereby facilitating the loading or packing of the platforms for shipment.

I claim:

1. A portable platform having a load supporting floor, structural members carried by the under side of said floor, supporting legs for the platform adapted to be detachably connected with one of said structural members, each of said legs comprising a vertical channel, a plate overlying the upper end of said channel, and a gusset plate for interconnecting the channel and plate.

2. A portable platform having a load supporting floor, longitudinal guideways adjacent opposite sides of the floor upon its under surface, and detachable leg members having portions adapted to be slid into position within the guideways for supporting the platform, each of said leg members comprising a vertical channel, a plate extending above the upper end of said channel, and a gusset plate having a portion overlying the channel and connecting said channel and plate.

3. A portable platform having a load sup-

porting floor, longitudinal guideways adjacent opposite sides of the floor upon its under surface, and detachable supporting members for the platform each comprising a vertical channel, guideway engaging means carried at the upper end of said channel, and a gusset plate having a flange overlying said channel and secured to said means.

4. A portable platform comprising a load supporting floor, parallel angle bars disposed upon the under side of the floor, a flat bar positioned adjacent each angle bar and parallel thereto, said angle bars and said flat bars being spaced from the floor and from one another to provide a pair of guideways, and detachable leg members for supporting the platform each comprising an upper portion adapted to interlock in one of said guideways.

5. A portable platform having a load supporting floor, parallel truss members extending beneath said floor, leg supports for said platform each comprising a vertical channel, and a gusset plate adapted to interconnect each channel and a truss member and having a flange overlying the upper end of the channel and stiffening webs at opposite sides of the channel.

6. A detachable leg support for a portable platform, comprising a flat horizontal plate, a vertical channel for supporting said plate, and a gusset plate having a flange overlying the upper end of the channel and stiffening webs at opposite sides of the channel.

7. A portable platform comprising a load supporting floor, a pair of truss members extending beneath the floor along opposite sides and each comprising a vertical guide flange for a lift truck, leg supports positioned at the outer faces of said flanges, a gusset plate interposed between each leg and the guide flange and comprising an integral top flange overlying the upper end of the leg and integral webs uniting said flange and the central web of the gusset plate.

8. A portable platform having a load supporting floor comprising a series of cross members, a truss member extending beneath the floor at each longitudinal side and including a vertical guide for a truck, leg supports positioned at the outer faces of said guides and each having means for supporting a plurality of said cross members, said means including a gusset plate interposed between the leg and guide, said gusset plate having a flange overlying the leg and a stiffening web or webs uniting the plate and flange.

In testimony whereof I affix my signature.

ROBERT T. ROMINE.