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A. BRETT

2,009,384

PARKING DECK

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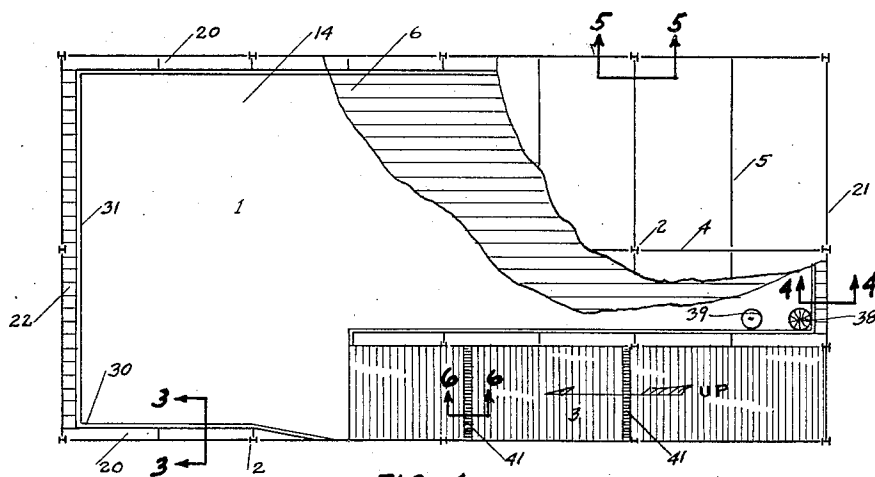


FIG. 1

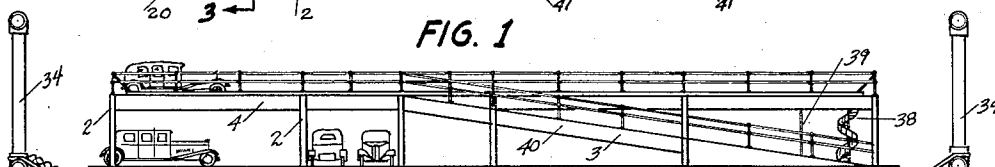


FIG 2

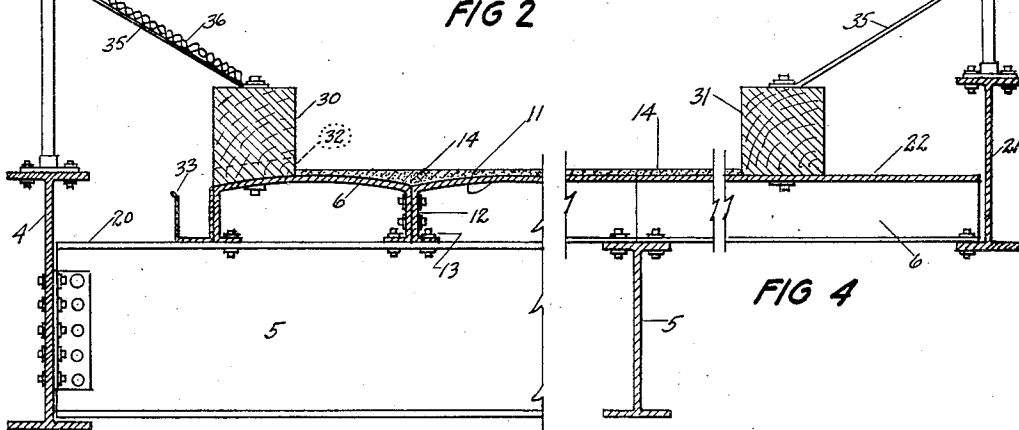


FIG 4

FIG 3

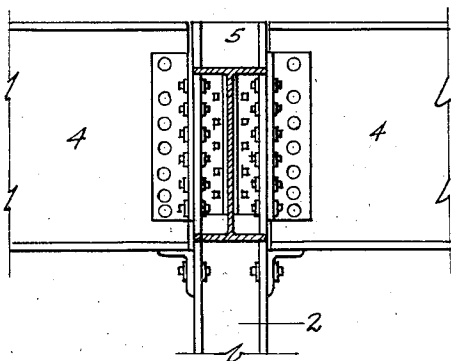


FIG 5

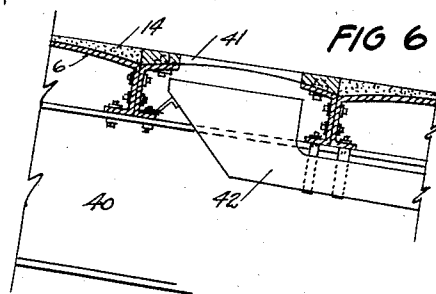


FIG 6

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PARKING DECK

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6 Claims. (Cl. 20—1.13)

This invention relates to a structure for parking automobiles and has for its object the provision of such a structure as can be constructed almost entirely of prefabricated metal shapes and standard structural forms. In a certain sense this improved parking deck is a "knock-down" structure, one of the purposes being to enable the owner of a vacant lot to increase the available area thereon for the parking of automobiles by means of a comparatively inexpensive structure which can be taken down and erected elsewhere with relatively little labor in case the original lot is desired for building purposes becomes unprofitable, or for other reasons. To the accomplishment of the foregoing and related ends, said invention, then, consists of means hereinafter fully described and particularly pointed out in the claims.

The annexed drawing and the following description set forth in detail certain structure embodying the invention, such disclosed means constituting, however, but one of various structural forms in which the principle of the invention may be used.

In said annexed drawing:

Fig. 1 is a plan view and Fig. 2 a side elevation of a preferred form of parking deck structure embodying the principles of this invention, Figs. 3, 4, 5 and 6 are respectively enlarged sectional views on the lines 3—3, 4—4, 5—5 and 6—6 of Fig. 1, looking in the direction of the arrows; Figs. 3 and 4 are edge details, Fig. 5 is a joint detail and Fig. 6 is a ramp detail.

Referring now particularly to Figs. 1 and 2, my parking deck comprises a platform generally indicated by the reference character 1 supported by a suitable number of posts such as 2 at a height sufficient to afford ample head room under the platform for automobiles, this platform being approached by a ramp 3. The platform is preferably built up of I-beam framing comprising side girders such as 4 and cross members such as 5. This framing in turn supports a deck construction of inverted channel members 6, of special form. These members do not in themselves constitute a part of my invention but form convenient components for use in building my structure. Others of suitable characteristics might be employed.

These channels, as best seen in Fig. 3, comprise what may be termed an inverted trough with an upwardly convex top 11, vertical sides 12 and in-turned edge flanges 13. They are laid transversely of the girder 5 and bolted thereto, as shown, with the flanges 13 resting on the top

flanges of the girders, the vertical sides also being bolted to each other. A smooth thin paving 14 of asphalt or like material is laid over them.

At the side edges of the deck these channels are discontinued leaving a space 20 which is particularly useful for the purpose of convenient access to the joints when assembling and disassembling the deck. The channels 6 are carried on to the end and rested on the bottom flanges of end beams 21, as shown in Fig. 4, but the paving is discontinued somewhat back of the edge, as shown at 22. A wooden guard rail 30, 31 is bolted or otherwise strongly secured to the floor channels 6 around the edges of the deck, drain channels 32 being left at intervals around the deck; 30 representing the side guard rails and 31 the end guard rails. Drain channels 32 are left under the side guard rails. None are needed at the end guard rails because these only touch the tops of the floor channels 6. If desired, a gutter such as 33 may be used on the outside edge of the platform. The guard rails 30 and 31 form a boundary for the paving 14. These rails are of sufficient height to prevent cars from climbing them when moving slowly. The deck is also surrounded by a hand rail 34 but it will be noted that the guard rails 30, 31, rather than the hand rail 34, is intended to prevent cars from running off the deck. The hand rail is bolted to the top flanges of the beams 4 and 21, respectively, and is braced at the guard rail 30, 31 at intervals as by the rods 35. As a further safeguard, a wire netting 36 may be stretched on the braces 35 at the sides, thus preventing any danger of persons stumbling on the guard rail 30, 31 and falling through the opening 20. No such netting is needed at the ends, since the channels 6 extend entirely out to the end of the structure, as shown in Fig. 4.

A convenient means of quick access to the upper deck is given by a circular staircase 38 in the corner nearest the lower end of the ramp and attendants can come down quickly from the deck by a sliding pole 39, of the type familiarly used in fire department quarters, along side the staircase 38.

Access to the deck is by means of the inclined ramp 3 which is of the same construction as the deck 1, that is to say, built of side stringers 40 across which a flooring of inverted channels 6 is laid, as shown in detail in Fig. 6. The guard rail and hand rail construction is conveniently the same as that in Fig. 4. In order to prevent excessive flow of water down the ramp in rainy

weather transverse gratings 41 are provided, as shown in Figs. 1 and 6. Gutters 42 of appropriate shape carry off the drainage from these.

It will be apparent from the foregoing description that my parking deck can be erected at a very reasonable cost, for the most part by unskilled labor. Since practically all the assembling is by field bolting, the difficulties of building, dismantling, and re-building are slight.

Practically the only material that is wasted in tearing down the deck and transferring it to a new location is the paving 14. It will also be noted that the posts 2 offer very little obstruction to the original parking lot, so that the capacity of the lot is almost doubled by the deck. This deck also affords shelter to the cars parked on the ground, and the deck itself is almost as easy of access as the ground level of a lot.

Under special conditions more than one deck might be erected above a lot, but the particular advantage of the structure is that where the owner of property does not contemplate the use of his lot for parking for more than a few months or a year or so and where changing real estate developments after that may make it advisable to put a building on the lot and move the deck to some other location.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the structure herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:

1. In a parking deck built up of structural steel forms field bolted, a framework comprising longitudinal supports and transverse supports carried thereby, longitudinal flooring members resting on said transverse supports, a side edge formed by securing the edge flooring member inward of the side longitudinal supporting member, a guard rail curbing bolted along the top of the edge of said floor member, a hand rail bolted to the top of said longitudinal side member, a plurality of diagonal brace rods from said guard rail to said hand rail and a netting stretched over

said rods between said guard rail and said hand rail.

2. In an outdoor parking lot, a deck above the ground level, a ramp leading to said deck, said ramp being water-tight down to a point where car head room no longer exists beneath the ramp, a transverse grating section across said ramp at said point, and a gutter beneath such section.

3. In an outdoor parking lot, a deck above the ground level, a ramp leading to said deck, said ramp being constructed of side stringers and a transverse floor, the floor being made of shallow inverted channels transversely secured to said stringers mutually edge to edge, certain of said channels being reticulated, said reticulated portions being limited to the part of the ramp which is too low for cars to be stored thereunder.

4. In a knock-down parking deck built up of structural steel forms field bolted, a framework comprising longitudinal supports and transverse supports carried thereby, flooring carried by said transverse supports, and a gutter along the outside of the flooring and below the surface thereof but inboard of the longitudinal supports.

5. In a parking deck a framework, flooring surface supported by and above said framework, said flooring surface terminating short of the sides of the framework, a flooring edge construction comprising a relatively heavy curb of approximately half a wheel height above said surface, said curb being inset from the edge of the structure, and drainage means for the flooring surface, said drainage means including a gutter along the flooring edge but below the floor surface and within the limits of the framework, clearance spaces being provided between said curb and the floor surface.

6. In a knock-down parking deck built up of structural steel forms field bolted, a framework comprising longitudinal supports and transverse supports carried thereby, flooring carried by said transverse supports but stopping short of said longitudinal supports, and guard means protecting the space from the edge of the flooring to the longitudinal supports.

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