Nov. 17, 1959 A. P. HART 2,912,909

PORTABLE ROAD AND TURN-AROUND

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FIG. 1

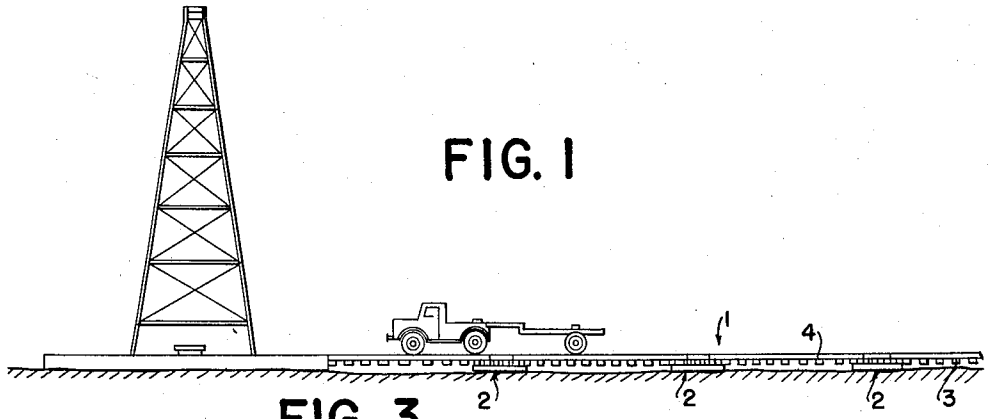


FIG. 3

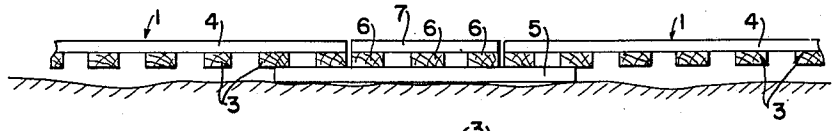


FIG. 4

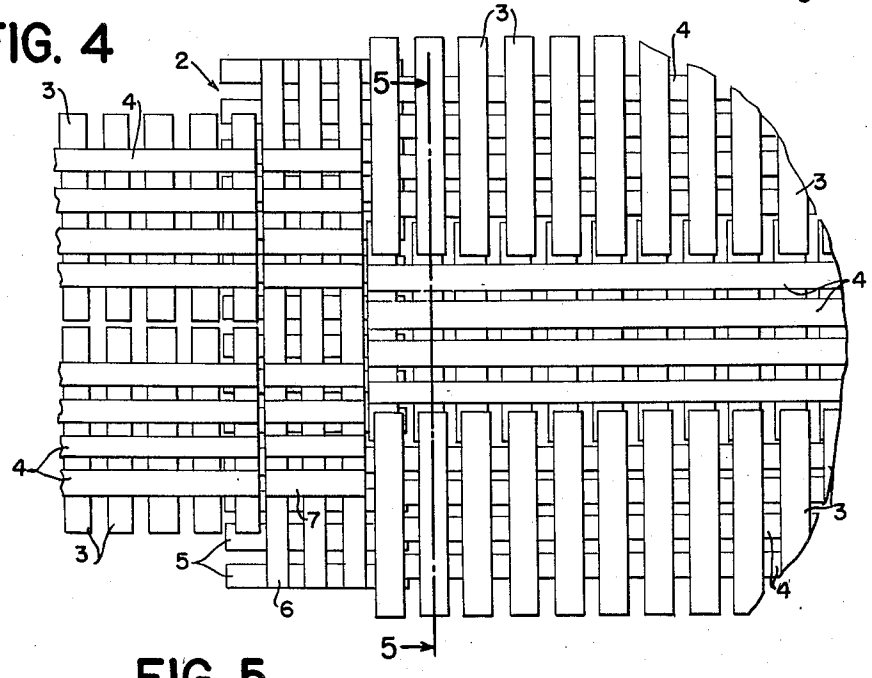
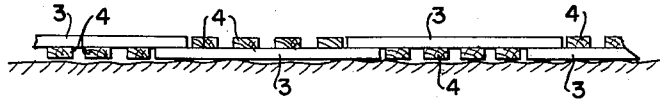


FIG. 5



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PORTABLE ROAD AND TURN-AROUND

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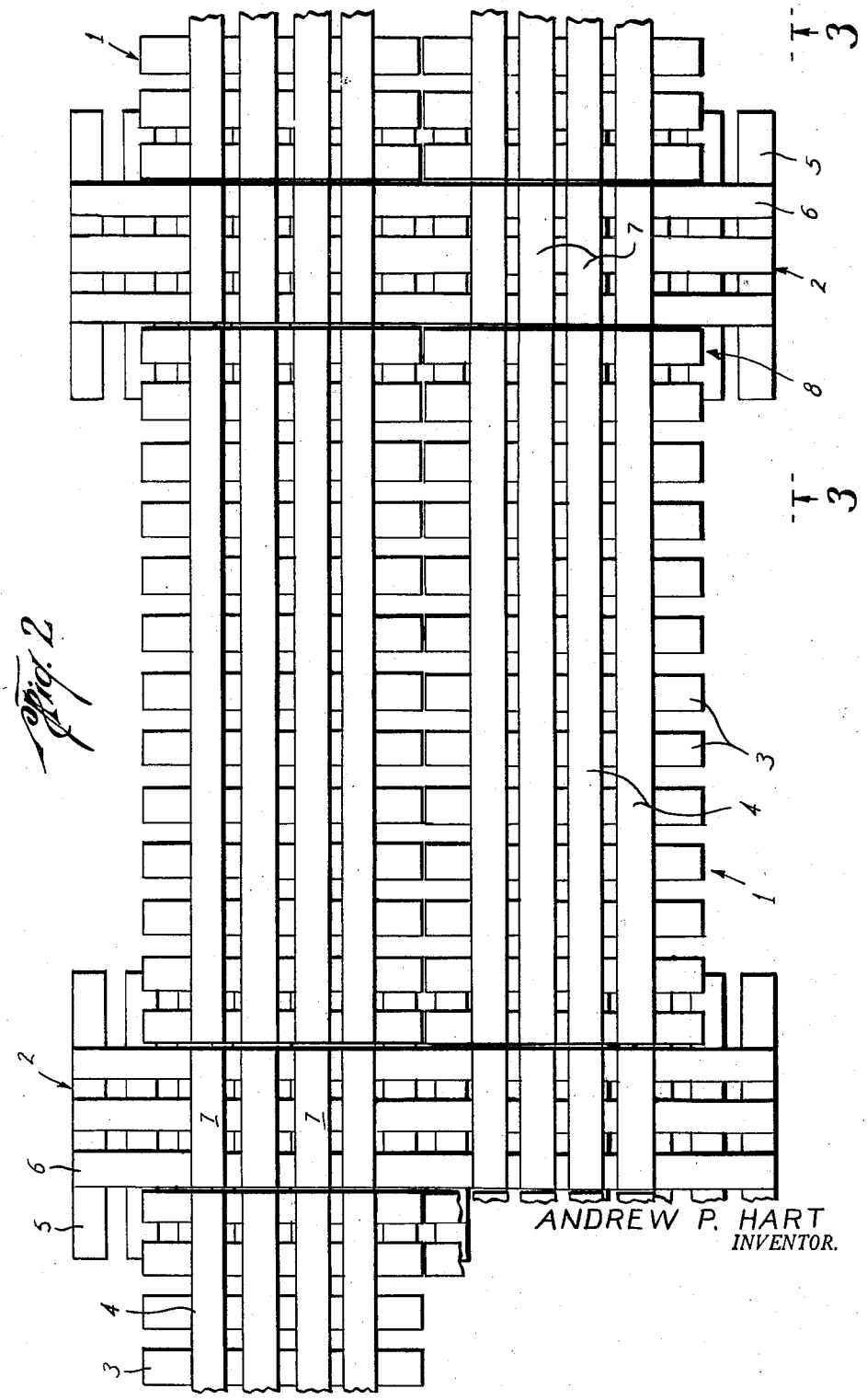


Fig. 2

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2,912,909

PORTABLE ROAD AND TURN-AROUND

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Application October 1, 1954, Serial No. 459,754

3 Claims. (Cl. 94—11)

This invention relates to a portable road and turn-around and more particularly to a portable road incorporating a turn-around for heavy off-the-road vehicles.

In many industries today, particularly the oil industry, there is occasion to use heavy off-the-road vehicles such as portable drilling rigs which must be able to go over terrain where it may not be practical to have a conventional road because of expense or of the soil characteristics of the ground. It is the object of this invention to provide for an economical portable road and cooperating turn-around area which is inexpensive to construct and which may be easily moved while at the same time providing a sufficient supporting surface for heavy off-the-road vehicles.

Broadly, I propose to have a portable road comprising a plurality of mats resting on a plurality of ties wherein each of the mats comprises a number of parallel spaced runners and a number of parallel spaced cross pieces. The runners are fastened on one side to the cross pieces which in turn lie normal to and extend beneath and beyond the runners. Each of the ties includes a plurality of spaced sleepers and a plurality of parallel spaced tie bars along with a number of parallel spaced filler pieces which correspond in number and spacing to the individual runners of the various mats. A tie bar is fastened on one side to the sleepers which in turn lie normal to and extend beneath and beyond the tie bars while the filler pieces lie normal to and extend above the tie bars and parallel to the sleepers. Each of the mats is positioned on a tie so that one or more cross-pieces at the end of a mat rests upon the top of the sleepers of a tie and so that the runners of a mat adjoin the filler pieces of a tie.

A turn-around area in which a vehicle may be turned may extend off one end of the portable roadway and comprises generally a series of alternately inverted mats. The mats are so placed adjacent one another that the runners of one mat rest upon the ground, while the cross pieces of the mats adjacent on either side rest upon the ground. In this manner the upper surface of all the mats comprising the turn-around area are substantially flush. The mats immediately adjacent the portable road have an end resting on the sleepers of the end tie of the road so that these particular mats are tilted to a height corresponding to the height of a sleeper.

Referring to the drawings in which a preferred embodiment of my invention is illustrated,

Fig. 1 illustrates a side view of a roadway constructed according to my invention with a truck and trailer thereon;

Fig. 2 is an enlarged plan view of the roadway of Fig. 1;

Fig. 3 is an end view of a tie and adjacent mats taken along line 3—3 of Fig. 2;

Fig. 4 is a plan view of a portion of a roadway constructed according to my invention with an adjacent turn-around mat; and

Fig. 5 is a reduced sectional view of the turn-around area of Fig. 4 taken along line 5—5.

Referring to the drawings in greater detail and in particular to Figs. 1, 2 and 3, 1 illustrates generally a mat which comprises a plurality of spaced runners 4 connected by a plurality of spaced cross pieces 3. The ends of each mat comprising the roadway rest upon a tie denoted generally by 2 which comprises a plurality of parallel spaced filler pieces 7 which are joined by means of a plurality of parallel spaced tie bars 6. Tie bars 6 in turn are fastened to the top of parallel spaced sleepers 5 which rest upon the ground.

As shown in Figs. 2 and 3, the ends of the mats 1 are placed so that their end cross pieces 3 rest upon the top of sleepers 5. The mats 1 are positioned on the ties so that their runners 4 are adjacent and parallel to the filler pieces 7. It is seen by further reference to Fig. 3 that the top of the runners 4 and the filler pieces 7 will be flush so that the roadway surface is smooth. Two parallel separate lines of mats are placed on the ties so that each line will serve as a track for the wheels of a vehicle.

The material comprising the various parts of the ties and mats is usually timber. However, a light weight metal could also be used. It is readily seen by reference to Fig. 2 that the roadway may be made of any length by placing a desired number of mats and ties as shown in Fig. 2.

If the portable roadway is to make a sharp turn, or if it is desired to have an area for a vehicle to turn around, a separate turn-around area must be provided. Such a turn-around area is shown in Fig. 4 at the end of a portion of the roadway. The turn-around area comprises a plurality of mats positioned alternately inverted, as shown in Fig. 5 so that the upper surfaces of the adjacent mats are substantially flush. It is seen by reference to Fig. 4 that the mats immediately adjacent the roadway have one of their ends resting on the tie bars of the last tie of the roadway. The other end of the mats rests directly on the ground while both ends of the mats separated from the roadway by the first mentioned mats are completely on the ground. The slight tilting of the mats adjacent the roadway does not hinder the operation of turning the vehicle around.

It is seen that by my novel combination of ties and mats that I can provide for a portable roadway which may be extended over rough terrain. Also because of the relatively large bearing area of the sleepers with respect to the ground, large weights may be placed on the roadway on soft ground without danger of the vehicle becoming mired.

I claim:

1. A portable roadway comprising in combination a plurality of mats and a plurality of ties; each of said mats including a plurality of parallel spaced runners and a plurality of parallel spaced cross pieces, said runners being fastened on one side to said cross pieces lying normal to, beneath and extending beyond said runners, and each of said ties including a plurality of parallel spaced sleepers, a plurality of parallel spaced tie bars, and a plurality of parallel spaced filler pieces corresponding in number and spacing to the runners of said mats, said tie bar being fastened on one side to said sleepers lying normal to, beneath and extending beyond said tie bars and said filler pieces lying normal to and above said tie bars; each of said mats resting at each of its ends upon the sleepers of a tie with the runners and filler pieces in alignment.

2. A portable roadway according to claim 1 having in addition in combniation one or more turn-around areas at one or more ends of said roadway; each said turn-around area comprising a plurality of mats laid alter-

nately inverted adjacent one another with the cross pieces of adjacent mats overlapping and with runners of each said mat extending in a parallel direction and with the runners of a single mat lying in the same horizontal plane as the cross pieces of a mat immediately adjacent; the cross pieces of the mats immediately adjacent an end of said roadway resting on the sleepers of a single tie included at the end of said roadway.

3. As a subcombination, a turn-around area comprising a plurality of mats; each mat comprising in turn a plurality of parallel spaced runners and a plurality of parallel spaced cross pieces, said runners being fastened on one side to said cross pieces lying normal to and extending beyond said runners; said mats being laid adjacent one another and inverted with respect to one another and with the cross pieces of adjacent mats overlapping and with the runners of one mat being in the same horizontal plane as the cross pieces of the mat immediately adjacent to form on their upper surfaces a substantially flush level area.

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