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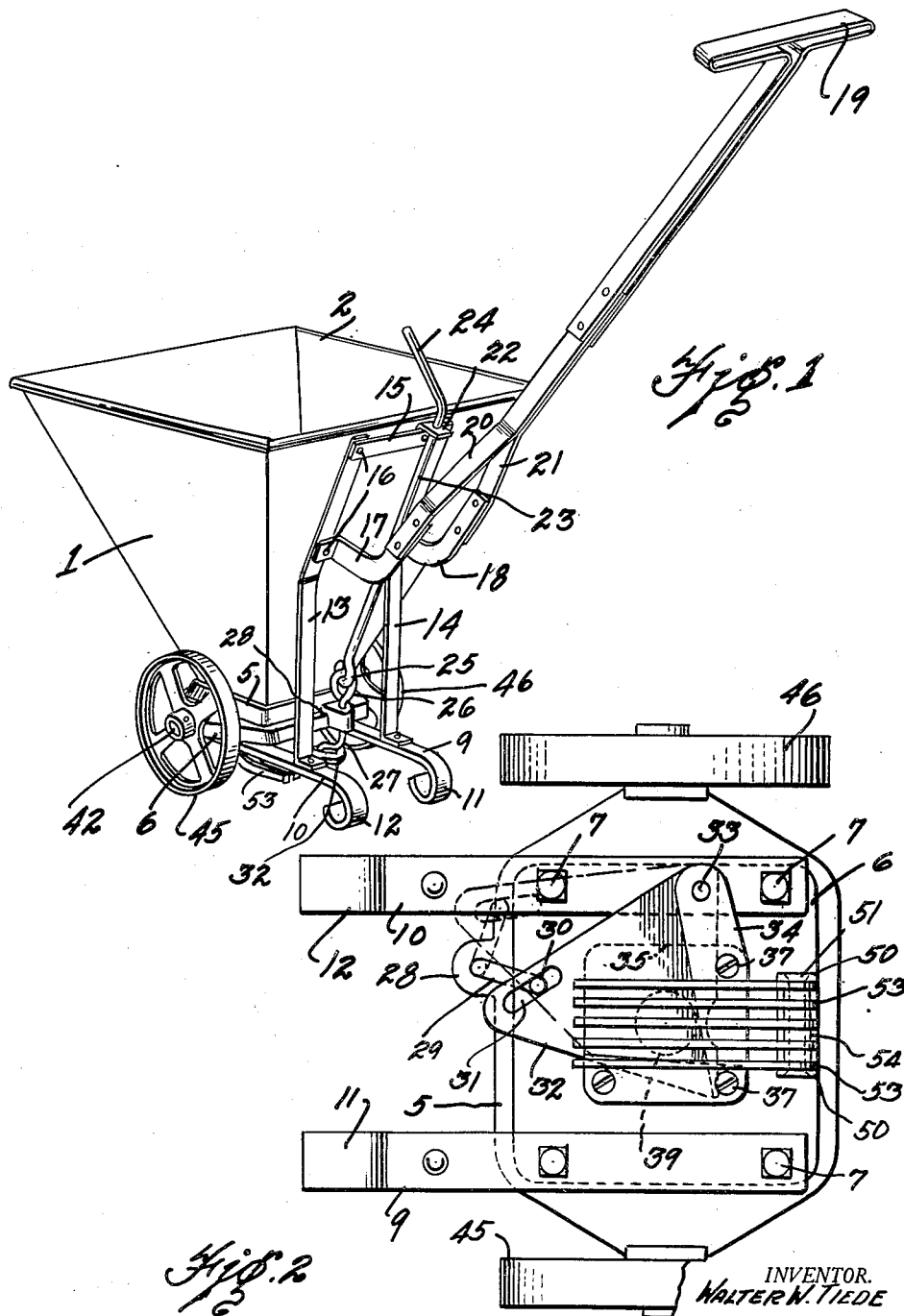
W. W. TIEDE

1,966,192

LINE MARKER

Filed March 9, 1931

2 Sheets-Sheet 1



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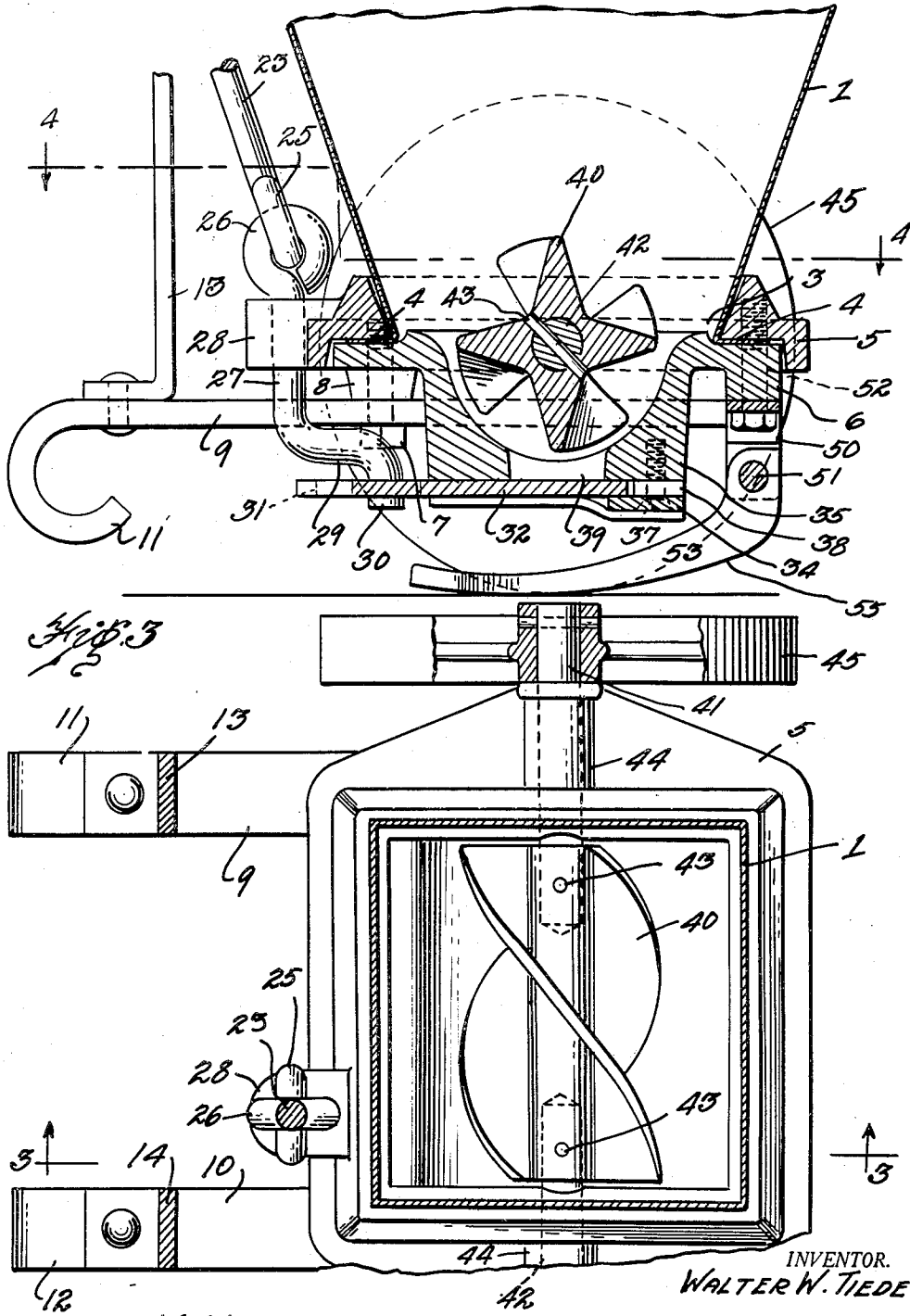
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1,966,192

LINE MARKER

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6 Claims. (Cl. 91—43)

This invention relates to markers for use in marking lines on athletic fields or the like and an object of the invention is to provide a device in which the material used in marking may be either in the dry or liquid state as desired.

Another object of the invention is to provide a device of this character which will mark a well defined line on either a smooth surface such as a concrete road or a rough surface such as a cinderized track.

Another object of the invention is to provide a marker which is cheap to manufacture and easy to assemble and in which the parts are so constructed as to not easily get out of order.

A still further object of the invention is to provide a device of this character consisting of a hopper mounted upon a pair of wheels for rolling the same along the ground and the bottom of the hopper provided with a slide for stopping the flow of material to the ground and a plurality of spaced fingers extending under the opening in the hopper and loosely pivoted at one end and movable in a vertical plane to conform to the contour of the ground over which the device is being moved.

These objects and the several novel features of the invention are hereinafter more fully described and claimed and the preferred form of construction by which these objects are attained is shown in the accompanying drawings in which—

Fig. 1 is a perspective view of my improved device.

Fig. 2 is a bottom plan view thereof.

Fig. 3 is a section of the lower end of the device taken substantially on line 3—3 of Fig. 4.

Fig. 4 is a plan section taken on line 4—4 of Fig. 3.

Referring now to the drawings it will be seen that the hopper 1 is open at its upper and lower ends as indicated at 2 and 3 respectively and if desired a cover (not shown) may be placed over the open end 2 to prevent rain or moisture from entering the hopper. The lower end of the hopper 1 is provided with the outturned flanged portions 4, 4 and the members 5 and 6, preferably castings, clamp the flange 4 therebetween by means of the bolts 7. The lower face of the member 6 is provided with a plurality of lugs 8 and the longitudinally extending metal strips 9 and 10 are secured thereto also by means of the bolts 7. The strips 9 and 10 are provided with the rolled end portions 11 and 12 respectively, the same acting as supports for the device when it is not in use. The strips 9 and 10 have secured thereto the respective strap members 13 and 14

the upper ends of the same being connected together by the strip 15 and the upper ends of the members 13 and 14 and the intermediate portions thereof are rigidly secured to the hopper 1 by means of the rivets or the like 16.

The rivets connecting the intermediate portion of the straps 13 and 14 to the hopper 1 also connect the arms 17 and 18 to the respective straps 13 and 14 and the handle 19 for pushing the device along the ground is connected to the arms 17 and 18 by means of the strap irons 20 and 21. The strap 15 has secured thereto a guide member 22 apertured to receive the rod 23, the upper end 24 of the same being bent at an angle to the main portion of the rod to form a handle for turning the same. The lower end of the rod 23 is provided with an eye 25 for engaging in a similar eye 26 formed on the upper end of the rod 27, the same being journaled in an extension 28 formed integral with the member 5. The lower end of the rod 27, as indicated at 29, is bent at right angles to the main portion of the rod, and the end 30 is downwardly bent and extends through the elongated aperture 31 formed in the plate 32, the same being pivoted at 33 to the plate 34, that in turn being secured to the boss 35 extending from the lower face of the casting 6 by means of the screws 37. By reference to Fig. 3 it will be seen that the plate 34 is spaced from the lower face of the boss 35 a distance equal to the thickness of the plate 32 by means of the spacers 38. The boss 35 is provided centrally thereof with the opening 39 so that the marking material in the hopper 1 may fall through the aperture 39 onto the ground when the slide 32 has been moved to the position shown by dotted lines in Fig. 2 thereby uncovering the said aperture.

When the slide 32 has been moved to the position shown in full lines in Figs. 2 and 3 the flow of marking material will be cut off. It will be clearly seen that by operation of the handle 24 to rotate the rod 23 that the plate 32 will be moved to close or open the aperture 39 as desired. An agitator 40 is positioned at the lower end of the hopper 1 and the shafts 41 and 42 have their inner ends pinned at 43 to the agitator 40 and are journaled in bearings 44 formed in the casting 5. The outer ends of the shafts 41 and 42 have connected thereto the respective ground wheels 45 and 46 so as the device is rolled along the ground the agitator 40 will be rotated thus tending to keep a steady and continuous flow of material from the hopper 1 through the aperture 39 to the ground. An inverted U shaped bracket 50 is secured to the lower face of the member 6 and at

the extreme forward edge thereof by the bolt 52 and a pin 51 extends through both legs of the U shaped member. A plurality of fingers 53 are loosely pivoted upon the pin 51 and extend toward the rear of the device and are positioned directly beneath the opening 39. It will be seen by reference to Fig. 2 that the fingers 53 are held in spaced relation one to another by means of the spacers 54 surrounding the pin 51. It will be further noted by reference to Fig. 3 that the lower edge of the fingers 53 are curved at 55 so that they may easily ride over any obstructions encountered in the movement of the device along the ground.

The fingers 53 will form a well defined line on the ground as the material that falls from the hopper will be limited in its spread by the two outside fingers 53.

The operation of the marker is as follows: The device is rolled along the ground to a position where it is desired to start the marking of a line on the ground. The handle 24 is then operated moving the slide 32 to uncover the aperture 39 then upon movement of the device the ground wheels 45 and 46 will be rotated consequently rotating the agitator 40 thereby causing the material in the hopper to be distributed through the aperture 39 onto and between the fingers 53 positioned therebeneath and as the device is rolled along a continuous line of uniform width will be formed upon the ground. When it is desired to stop marking the ground the handle 24 will be operated to move the slide 32 to close the aperture 39. It will be understood that either slaked or unslaked lime or any liquid or dry material may be used in the hopper with equal success as the fit between the slide 32 and the bottom of the casting 6 will be of sufficient tightness to prevent leakage of material therethrough when the device is not in operation.

From the foregoing description it becomes evident that I have provided a line marker which may be used with equal success on even or rough ground and which is cheap to manufacture and assemble and economical in operation and which will mark a line of uniform width as desired.

Having thus fully described my invention, its utility and mode of operation, what I claim and desire to secure by Letters Patent of the United States is—

1. A device of the character described comprising a hopper for containing marking material, open at its lower end, a slide positioned below the opening in the hopper, means for moving the slide to cover or uncover the opening, and a plurality of fingers pivotally supported at one end and spaced sufficiently apart to permit the free passage of material therebetween and having portions thereof practically parallel with the surface being marked positioned vertically below the slide and the opening in the hopper for defining the marking material as it falls to the ground.

2. A device of the character described comprising a hopper for containing marking material open at its lower end, a slide positioned beneath the opening in the hopper, means for moving the slide to cover or uncover the opening in the hopper, an agitator positioned in the hopper and near the opening therein, a plurality of spaced fingers for permitting the marking material to flow thereon and therebetween and positioned below the slide and the opening in the hopper for defining the line the marking material makes as it falls to the ground, said fingers having portions thereof

lying in a plane parallel to the line of movement of the marker directly below the hopper opening, said fingers being pivotally mounted at their forward ends and relatively freely movable as their trailing ends are dragged across an uneven ground surface and means for rotating the agitator for causing the material in the hopper to flow in a continuous stream onto the fingers and thence to the ground.

3. A device of the character described comprising a hopper for containing marking material open at its lower end, a pin positioned below the hopper and forward of the opening therein, a plurality of spaced fingers positioned below the opening in the hopper and spaced a sufficient distance apart to allow the material to flow freely therebetween and for defining the line the marking material makes as it falls to the ground, the forward end of the fingers apertured to fit loosely around the pin and the fingers having trailing portions directly below the hopper opening and lying in a plane parallel to the line of movement of the device and movable in a vertical plane to readily conform to the contour of the ground.

4. A device of the character described comprising a hopper for containing marking material open at its lower end, an agitator positioned in the hopper and near the opening therein means for rotating the agitator for causing the material in the hopper to flow in a continuous stream to the ground, a pin positioned below the hopper and forward of the opening therein, a plurality of spaced fingers positioned below the opening in the hopper, and spaced a sufficient distance apart to permit the material to freely flow therebetween and for defining the line the marking material makes as it falls to the ground, the forward end of the fingers apertured to fit loosely around the pin, and the fingers having portions thereof directly below the hopper opening and lying in a plane parallel to the line of movement of the device and movable in a vertical plane to readily conform to the contour of the ground.

5. A device of the character described comprising a hopper for containing marking material open at its lower end, a slide positioned below the opening in the hopper, means for moving the slide to cover or uncover the opening, an agitator positioned in the hopper and near the opening therein, means for rotating the agitator for causing the material in the hopper to flow in a continuous stream to the ground, a pin positioned below the hopper and forward of the opening therein, a plurality of spaced fingers for permitting the marking material to flow thereon and therebetween and positioned below the opening in the hopper for defining the line the marking material makes as it falls to the ground, the forward ends of the fingers apertured to fit loosely around the pin, and the trailing portion of the fingers positioned to lie directly below the hopper opening in a plane parallel to the line of movement of the device and movable in a vertical plane to readily conform to the contour of the ground.

6. A device of the character described, comprising a hopper for containing a marking material and having a discharge opening at its lower end, a plurality of spaced fingers having portions directly below the opening and onto which the said material is discharged from the hopper, all of said fingers being pivotally mounted and spaced a distance apart to permit the marking material to pass therebetween to the ground.

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