

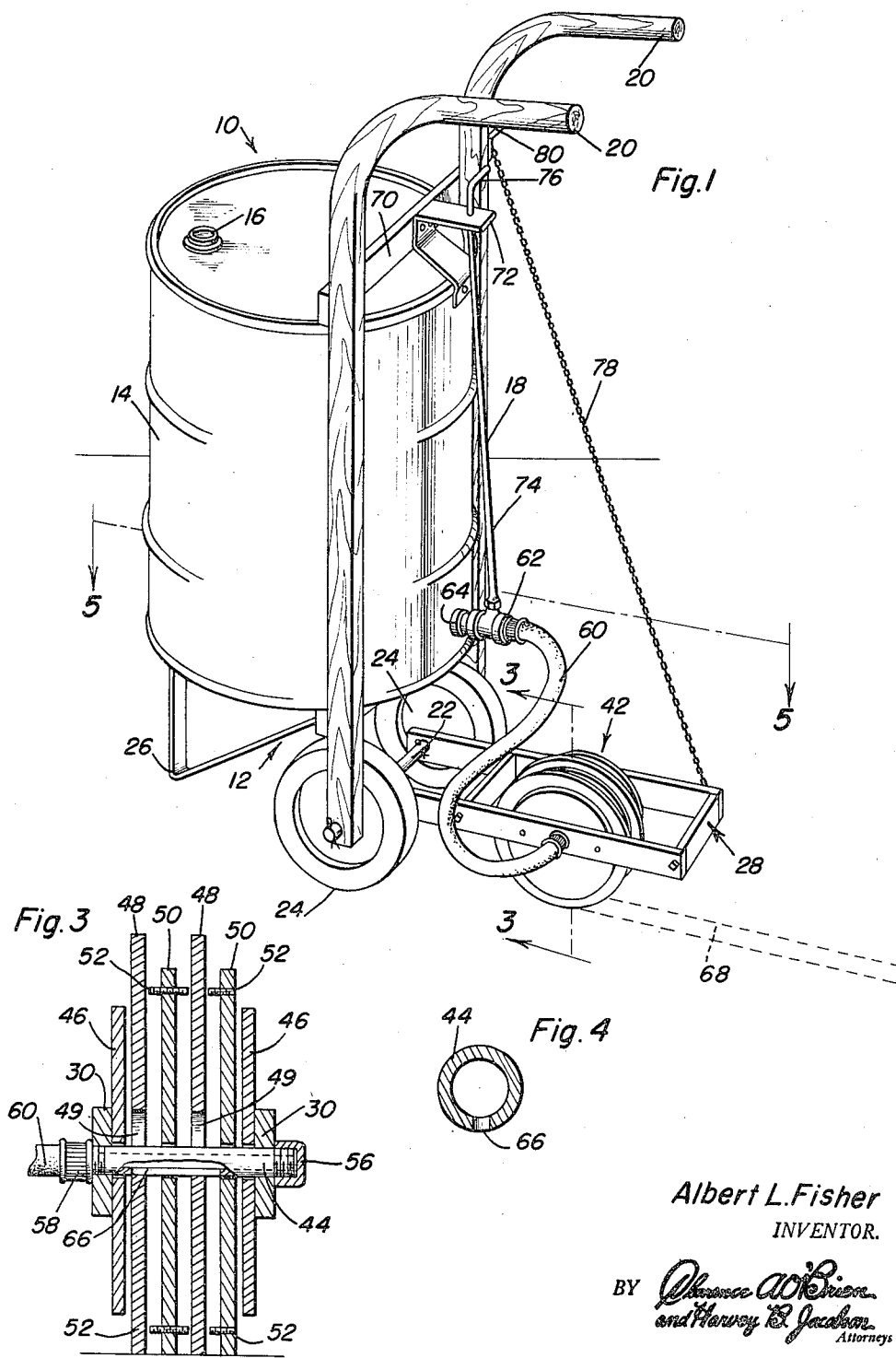
Jan. 22, 1957

A. L. FISHER
WET LINE MARKER

2,778,046

Filed Nov. 4, 1954

2 Sheets-Sheet 1



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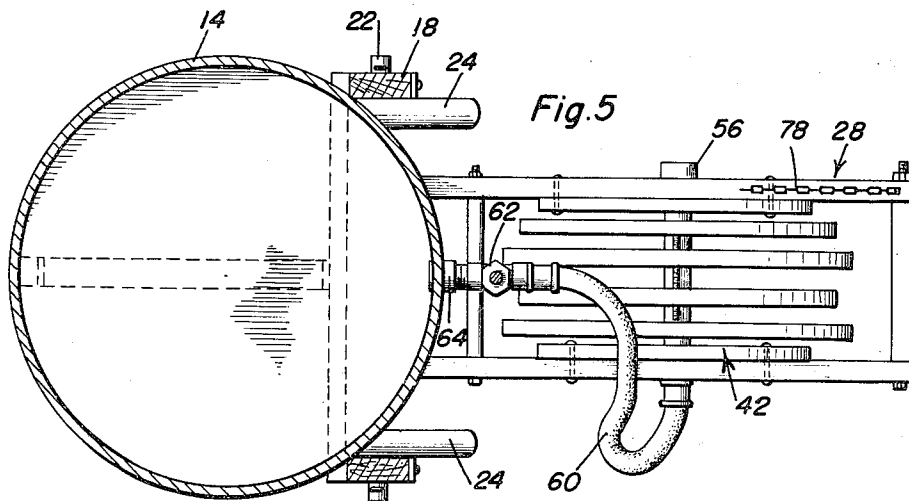
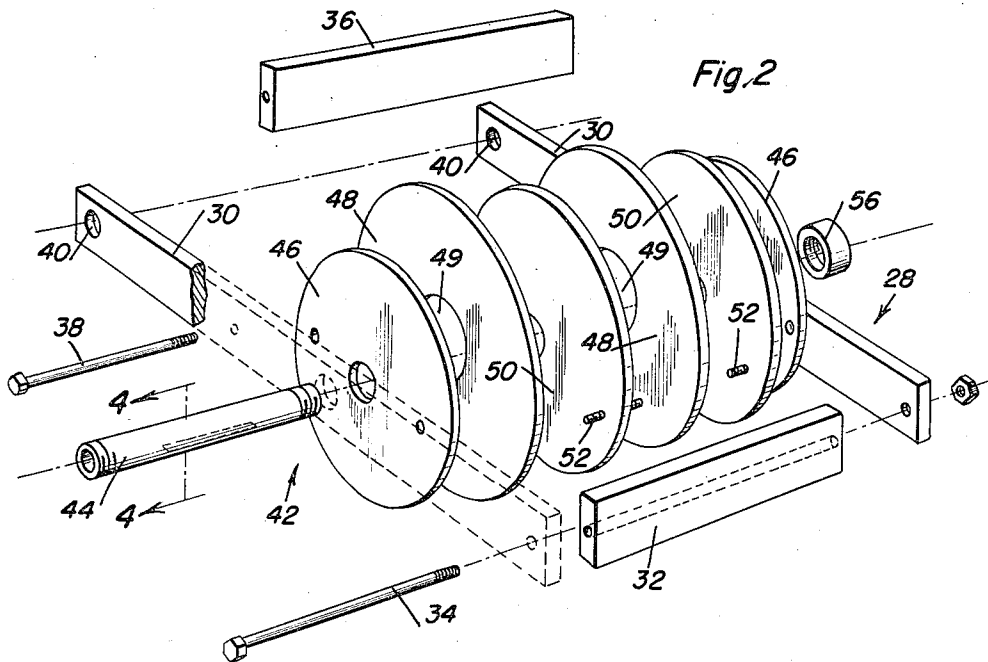
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WET LINE MARKER

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3 Claims. (Cl. 15—131.05)

This invention relates generally to new and useful improvements in marking devices, and more specifically to an improved wet lime marker.

For many years it has been the practice to mark off athletic fields with lime lines. The most conventional type of lime line is made by forming the line through the depositing of powdered lime on the ground in its dry state. However, while such a line is very clear when first applied, after it has been stepped upon a few times the line disintegrates with the result that the athletic field must be marked all over again. This is particularly true in the case of athletic fields such as tennis courts and football fields where the players are very apt to step upon the lines. In order to overcome the deficiency of a dry lime line, there have been devised wet lime lines. However, while the wet lime lines have proved to be very effective, they are very difficult to apply because of the lack of the effective lime marker.

It is therefore the primary object of this invention to provide an improved wet lime marker which is of an extremely simple construction and at the same time is highly effective in operation.

Another object of this invention is to provide an improved lime marking wheel assembly, the wheel assembly being intended to receive wet lime, the wet lime container being of such a nature whereby the wheel will apply to the ground an even wet lime line of a constant width.

A further object of this invention is to provide an improved wet lime wheel marking assembly which is of such a construction whereby it may be quickly and easily disassembled and assembled for cleaning purposes.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of the wet lime marker which is the subject of this invention and shows the same in operation, the wet lime line being shown by dotted lines;

Figure 2 is an enlarged exploded perspective view of the wheel marking assembly and the support therefor;

Figure 3 is an enlarged transverse vertical sectional view taken substantially on the plane indicated by the section line 3—3 of Figure 1 and shows the details of the lime marking wheel assembly, only the wheel assembly being illustrated;

Figure 4 is an enlarged fragmentary vertical sectional view taken substantially upon the plane indicated by the section line 4—4 of Figure 2 and shows the details of the axle of the marking wheel assembly; and

Figure 5 is an enlarged horizontal sectional view taken substantially on the plane indicated by the section line 5—5 of Figure 1 and shows the details of the lime

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marking wheel assembly and its relationship to the wet lime container.

Referring now to the drawings in detail, it will be seen that there is illustrated in Figure 1 the wet lime marker which is the subject of this invention, the wet lime marker being referred to in general by the reference numeral 10. The wet lime marker 10 includes a wheeled frame, which is referred to in general by the reference numeral 12, the wheel frame preferably being in the form of a conventional hand truck or the like. Carried by the wheel frame 12 is a wet lime container 14 which may be in the form of a conventional type of drum having a combined filling and dispensing opening 16 in the upper end thereof.

Although the structure of the wheel frame 12 may be varied as desired, the wheel frame 12 illustrated includes a frame 18 having control handles 20. The frame 18 has connected thereto a transverse axle 22 on which is mounted in spaced relation ground engaging wheels 24. The frame 18 also includes a forward ground engaging rest frame 26. The manner in which the container 14 is secured to the frame 18 may be varied as desired.

Connected to the axle 22 for pivotal movement and disposed in trailing relation is a wheel assembly support which is referred to in general by the reference numeral 28. The wheel assembly support 28, as best illustrated in Figures 1 and 2, includes a pair of longitudinal frame rails 30 which are disposed in spaced relation. The rear ends of the frame rails 30 are spaced by a transverse frame member 32 having extended therebetween an elongated fastener 34 which clamps together the rear ends of the frame members 30 against the transverse frame member 32. Disposed adjacent the forward ends of the frame members 30 is a second transverse frame member 36. The frame member 36 has extending therethrough a fastener 38 which clamps together the forward portions of the frame members 30 against the ends of the transverse frame member 36.

The forward end portions of the frame members 30 are provided with transversely aligned openings 40 of a size to receive the axle 22. Thereby the support 28 is free to pivot with respect to the axle 22.

Carried by the wheel assembly support 20 is a wet lime marking wheel assembly which is referred to in general by the reference numeral 42. The wet lime wheel marking assembly 42 includes a tubular axle 44 which extends between and passes through the frame members 30, as is best illustrated in Figure 3. Mounted on the axle 44 and secured to the inner surfaces of the frame members 30 are small disks 46.

Rotatably carried by the axle 44, which is fixed with respect to the frame members 30, is a first set of disks 48. The disks 48 are in spaced relation and have disposed therebetween a disk 50 of a second set of disks. The second disks 50 are of a smaller diameter than the disks 48 and are disposed in alternating relation with respect thereto. The disks 50 are journaled on the axle 44 whereas the disks 48 are provided with openings 49 of a larger cross-section than the axle 44. This permits the disks 48 to rotate about an axis above the axis of the axle 44 and results in relative movement of the disks 48 with respect to the disks 50.

In order that lime may pass between the disks 48 and 50, all of which are intended to engage the ground and mark a line therebetween, there is carried by the disks 50 spacing pins 52. The spacing pins 52 extend from the sides of the disks 50 and engage the disks 48 to retain the disks 48 and 50 in spaced relation. It is to be understood that more than one spacing pin 52 may be carried by each disk 50, if desired.

As is best illustrated in Figure 3, the axle 44 is retained

in place by a cap 56 removably and threadedly engaged on one end thereof and by a hose fitting 58 removably and threadedly engaged in the opposite end thereof. The hose 58 is part of a lime supply line 60 which has its opposite end connected to a valve 62. The valve 62 is connected to the lime container 14 by a suitable fitting 64 for receiving wet lime therefrom. In order that lime entering into the axle 44 may be dispensed between the disk 48, there is provided an elongated slot 66 in the bottom of the axle 44, as is best illustrated in Figures 3 and 4, which is aligned with the disk 48. The lime passes downwardly through the slot 66 to the space between the disk 48 so that a wet lime line may be marked on the ground, such a line being illustrated in Figure 1 and indicated by the reference numeral 68.

Carried by the upper part of the frame 18 is a transverse frame member 70. The frame member 70 has extending rearwardly therefrom a bracket 72 which may be used for securing the container 14 in place. The bracket 72 also carries an elongated control rod 74 which terminates in the operating end of the handle 76. The lower end of the control rod 74 is connected to the control valve 62 for controlling the flow of wet lime to the wet lime marking wheel assembly 42.

Inasmuch as the support 28 is pivotally connected to the axle 22, the disk 48 may follow the contour of the ground on which the line 68 is to be placed. When it is desired to render the marking wheel assembly 42 inoperative, it is merely necessary to lift the rear portion of the support 28 through a chain 78 connected thereto. The upper end of the chain 78 may be adjustably connected to a fitting 80 carried by the upper part of the frame 18 at one side thereof, as is best illustrated in Figure 1.

From the foregoing description of the invention, it will be readily apparent as to how the invention may be utilized in the marking of wet lime lines on the ground. Inasmuch as wet lime is utilized, this results in the difficulty of the marking wheel assembly being clogged with such wet lime after it has dried. In order to overcome this, the marking wheel assembly 42 may be quickly disassembled by removing the pipe cap 56 and the fitting 58. This having been accomplished, the axle 44 may be removed and the disk 48 quickly separated and cleaned. Also, the axle 44 may be conveniently cleaned. The component of the marker wheel assembly 42 may then be quickly reassembled and the wet lime marker 10 is again ready for use.

As the disks 48 and 50 move on the ground, there is a tendency to pick up dirt therebetween. However, since the disks 48 rotate about an axis different from the axis of the disks 50 and move relative to the disks 50, the dirt is dislodged and moves off of the disks 48 as the dirt approaches the top of its travel, the relative movement of the disks 48 and 50 with respect to each other preventing the caking of lime therebetween.

From the foregoing, the construction and operation of the device will be readily understood and further explanation is believed to be unnecessary. However, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the appended claims.

What is claimed as new is as follows:

1. For use in combination with a liquid lime source, a marking wheel assembly, said marking wheel assembly comprising a tubular axle, means for connecting said tubular axle to a liquid lime source, and a plurality of wheel forming disks carried by said axle, spacing means retaining said disks in spaced relation, a lime dispensing opening in said tubular axle for distributing lime by gravity between said disks, said disks being arranged in sets, disks of said sets being of different diameters and in alternating relation, disks of one of said sets being freely mounted on said axle for vertical movement whereby all of said disks simultaneously engage a surface being marked.

2. A marking wheel assembly comprising a normally horizontal tubular axle, a plurality of wheel forming disks journaled on said axle, means retaining said disks in spaced relation, a discharge opening in said axle for gravity feeding marking liquid down between said disks, said disks being arranged in sets, disks of one set being of a greater diameter than the disks of the other set, said disks of said one set being freely mounted on said axle for vertical movement whereby all of said disks simultaneously engage a surface being marked.

3. A marking wheel assembly comprising a normally horizontal tubular axle, a plurality of wheel forming disks journaled on said axle, means retaining said disks in spaced relation, a discharge opening in said axle for gravity feeding marking liquid down between said disks, said disks being arranged in sets, disks of one set being of a greater diameter than the disks of the other set, said disks of said one set being freely mounted on said axle for vertical movement whereby all of said disks simultaneously engage a surface being marked, disks of said sets being arranged in alternating relations.

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