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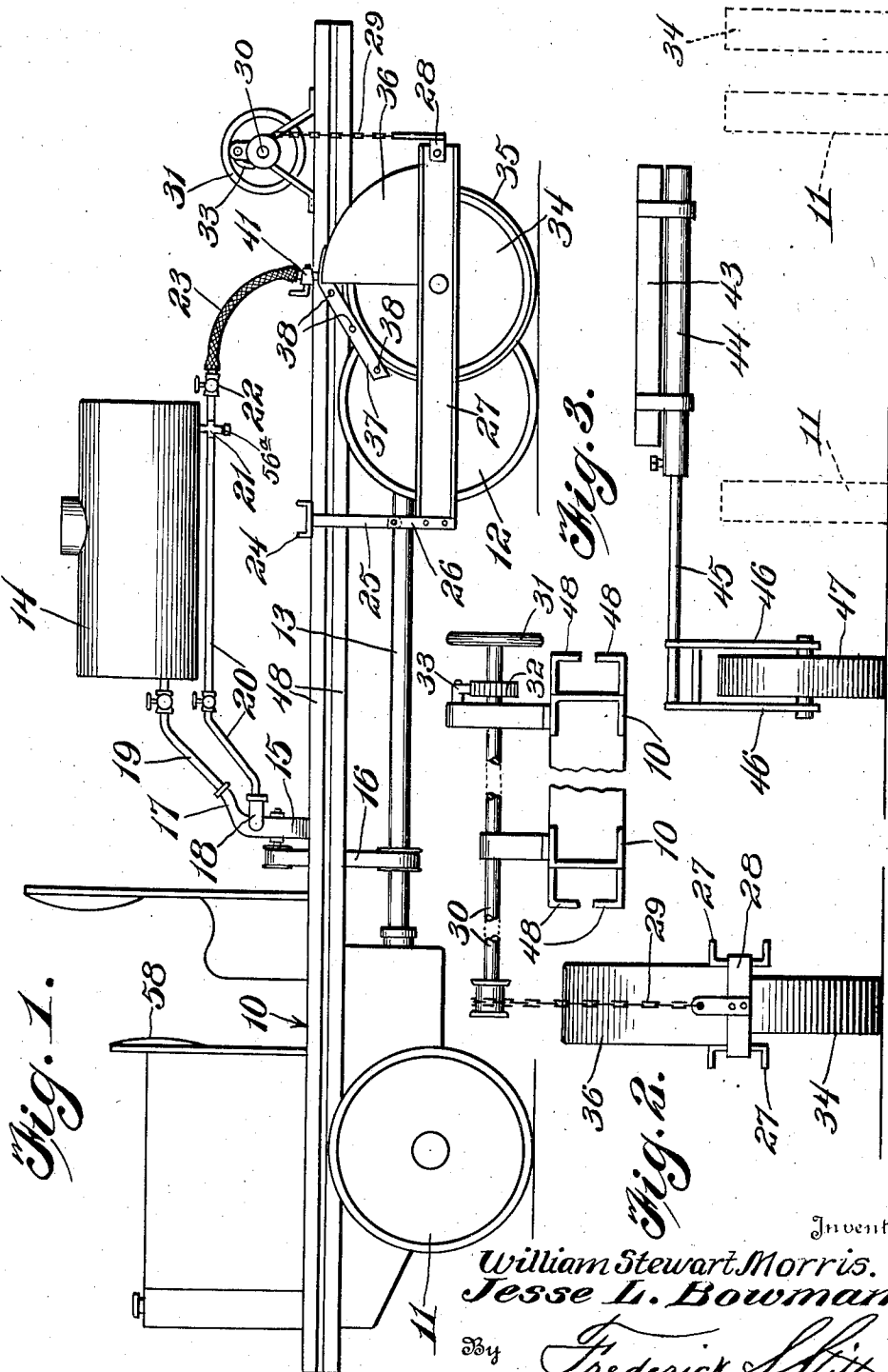
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HIGHWAY MARKING ATTACHMENT FOR VEHICLES

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2 Sheets-Sheet 1



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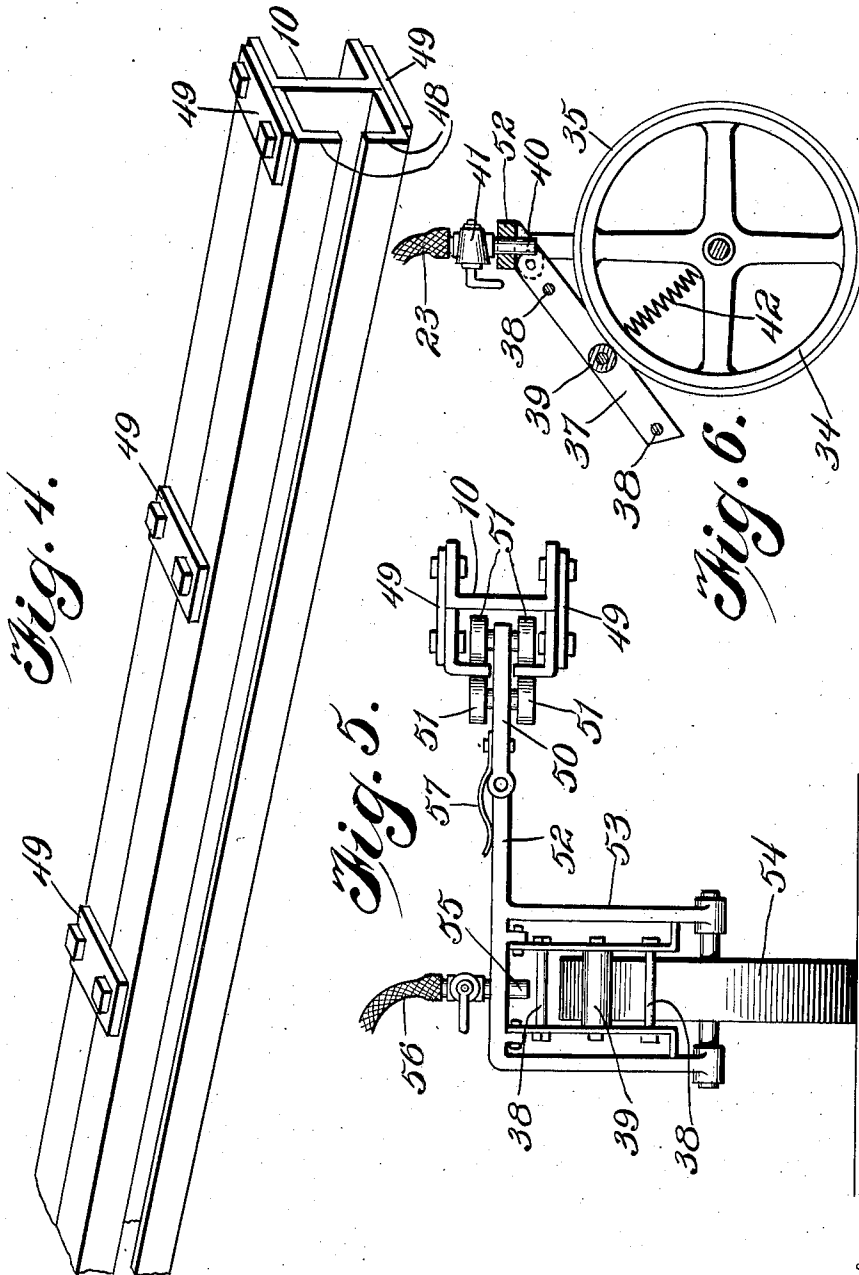
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HIGHWAY-MARKING ATTACHMENT FOR VEHICLES.

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This invention relates to devices for marking direction lines on streets or highways, and the general object of the invention is to provide means mounted upon a truck body whereby direction lines extending longitudinally of the street or highway may be readily marked, means also being mounted upon the truck whereby these lines may be marked at a predetermined distance from the curbing or side of the highway, and to provide means whereby "jay lines" and parking lines may be marked.

A further object is to provide marking wheels which have means whereby paint may be applied thereto and distributed thereover, these wheels bearing against the surface of the roadway and transferring the paint thereto, and provide means whereby these marking wheels may be raised or lowered so as to cross intersections or streets or travel over streets on which there is no necessity of marking.

A still further object is to provide improved means for applying paint or other medium to the wheels.

Another object is to provide a guide wheel which is transversely adjustable with reference to the plane of the marking wheels.

Still another object is to provide a jay marking wheel which is mounted upon the truck for longitudinal movement from one end approximately of the truck to the other, which will permit jay lines to be marked across the intersections of the streets from curb to curb, and which will permit parking lines to be marked.

Other objects will appear in the course of the following description.

Our invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a side elevation of a pavement marking machine constructed in accordance with our invention;

Figure 2 is a rear elevation of the marking attachment;

Figure 3 is an elevation of the guiding means showing the wheels of the automobile in dotted lines;

Figure 4 is a perspective view showing the frame for mounting the jay line and

parking line marking attachment to the automobile;

Figure 5 is an end elevation of the frame shown in Figure 4 and an elevation of the jay line marking attachment;

Figure 6 is an elevation of the jay line marking wheel showing the ink distributor in section;

In these drawings, we have illustrated a motor driven truck of any conventional character having the longitudinally extending channel irons 10, the front wheels 11, and the rear wheels 12. The rear wheels are driven by the usual drive shaft 13. The truck is provided with the usual motor at the forward end. Disposed upon the truck is a tank 14 adapted to contain paint or any other liquid or marking medium.

Mounted forward of the tank or in any other suitable position is a pump 15 of any suitable character driven by a belt 16 from the drive shaft, this pump having an intake 17 and an outlet 18. A pipe 19 extends from the tank to the intake of the pump and is provided with a cut-off valve. An outlet pipe 20 extends from the outlet of the pump longitudinally along the motor toward the rear thereof and at one point is provided with a cross 21 and beyond this cross with a valve 22. Just beyond this valve a flexible pipe 23 is connected to the pipe 20, this flexible pipe extending to the main marking wheel.

Extending across the channel irons 10 is a channel iron 24, and to this is connected the downwardly extending brace 25, and hinged to the lower end of this brace for oscillation parallel to the longitudinal axis of the truck is a member 26 to which the two spaced channel irons 27 are connected. These spaced channel irons are disposed exteriorly of the adjacent rear wheel 12 and extend rearwardly therefrom and at their rear ends are connected by a transverse brace 28 to which a chain 29 or other flexible connection is operatively connected. This chain 29 passes to and over a winding shaft 30 mounted upon the truck body and this winding shaft carries upon it a wheel 31 whereby the winding shaft may be manually

rotated. A ratchet 32 and a pawl 33 are adapted to hold the shaft 30 in any rotated position so that the shaft may be rotated to wind up the chain 29 and thus lift up the rear ends of the channel irons 28 which constitute the frame supporting the marker wheel.

The marker wheel 34 is mounted in bearings between the channel irons. This marker wheel has preferably the same diameter as the driving wheels of the machine, though this is not necessary, and is preferably covered with a layer of felt, designated 35. Mounted upon the channel irons 28 is a segmental guard 36 which extends over the rear portion of the marker wheel so as to prevent splashing of paint therefrom. Mounted upon the upper end of this guard and extending forward therefrom is a paint applying device comprising a frame formed of the lateral channel irons 37 connected by bolts 38. These channel irons carry between them a distributing roller 39 which passes upon the periphery of the wheel 34. Rearward of this roller there is disposed a tap 40 which is connected to the hose pipe 23 and which is provided with a valve 41, this tap discharging paint or other coloring matter from the tank 14 onto the wheel 35. As the wheel rotates it comes beneath the distributing roller which acts to spread the paint over the felt periphery of the wheel 34. A spring 42 acts to draw the frame formed of the channel irons 37 downward and urge the roller 39 against the face of the marker wheel 34.

It will be seen that with this construction, when the marker wheel is lowered into contact with the ground as the machine moves over the road or street, the marker wheel will apply paint to the surface of the street in a continuous line and that at the intersections, if desired, the frame supporting the wheel may be lifted so as to lift the wheel out of contact with the street and that the wheel may be held in its lifted position at any time and at any desired height. Obviously, when the wheel is lifted the valve controlling the flow of paint is closed.

For the purpose of permitting the machine to be guided so that the marking wheel 34 will always be a certain predetermined distance from the curb or side of the roadway, I mount beneath the front cross member 43 a pipe 44 which extends transversely entirely across the machine and which carries within it the rod 45. This rod is adjustable through the pipe and any suitable means as, for instance, a set screw may be used for holding this rod in its adjusted position in the pipe. At the extremity of the rod there are carried the forks 46 between which is mounted the guide wheel 47. By adjusting this guide wheel, it is obvious that the machine may be guided at all times a predetermined distance

from the curbing and that thus the mark made by the wheel 34 will be at all times a predetermined distance from the curbing or any other suitable line from which the line made by the marking wheel is to be spaced.

For the purpose of marking the road or highway with parking lines or jay lines, we mount upon the side of the car the longitudinally extending angle irons 48 which may be attached to one of the channel irons 10 by bolts or other suitable means, these channel irons 48 being held to the channel irons 10 by means of braces 49. The outer flanges of the channel irons 48 extend toward each other, leaving a longitudinally extending guide slot. Operating between this guide slot is a supporting bracket 50 which carries mounted upon it the rollers 51 which bear against the inside and outside faces of the flanges of the channel irons 48 and thus support this bracket in a horizontal position to permit the bracket to be shifted longitudinally of the machine from one end to the other.

Hinged to the bracket is the supporting arm 52. This arm 52 carries upon it the fork 53 upon which the jay marking wheel 54 is mounted. The same ink applying means as previously described is used, including a frame comprising the angle irons 37, the braces 38, and the roller 39. A tap 55 having a valve is used and this tap is connected by a flexible hose 56 to the nipple 56^a extending from the connection 21. This hose 56, of course, must be long enough and flexible enough to permit the device to be shifted the entire length of the channel irons and preferably the length of the machine. The same means are provided for lifting the arm 52 that may be provided for lifting the channel irons 27 or means may be provided whereby the jay marking wheel with the arm 52 may be simply turned upward and held in this raised position until it is desired to use the jay marking wheel.

It will be seen that with this construction, when the machine is in operation the pump is operated by the belt from the drive shaft to cause a positive flow of liquid from the tank to the wheel and that this wheel 34 will apply the ink or other marking liquid upon the pavement or upon the roadway in the form of a line. With this device, the roads may be marked with longitudinal lines at the rate of fifteen or twenty miles an hour without difficulty, and by having the guide wheel these longitudinally extending lines will be spaced a proper distance from the side of the road. Whenever it is desirable, the marking wheel may be raised to lift the wheel from the ground either permanently or temporarily. When it is desired to mark jay lines, for instance, B, the truck is backed up against a curb, then the jay marking wheel 54 is shifted to the back of the truck,

and then pushed by hand to the front of the truck. The truck is then driven straight across the street and one jay line is completed without turning the truck around. Obviously, the jay line marker may be left at the back of the truck until the front wheels of the truck have abutted against the curbing on the opposite side of the street and then the jay marking wheel be shifted to the front of the truck, thus completing the line.

In making a parking line, the truck is backed up against the curb and the wheel 54 is shifted the length of the truck and the line is complete. When not in use this wheel is raised and lies against the chassis of the truck. A flat spring 57 acts to hold this arm 52 down and hold the jay and parking line marking wheels downward against the pavement while in use. Of course, the amount of flow from the tank to the marking wheels may be entirely controlled by the valve shown as allied with these parts. Preferably a mirror 58 will be disposed on the front of the machine in any suitable position, this mirror being for the purpose of observing the guide wheel at the side of the machine or for the purpose of observing the marker wheel at the rear of the machine. It will be understood that this guide wheel 47 might be mounted either at the front of the machine, at the side of the machine, or behind and the mirror would inform the driver whether the marker was marking exactly on old lines that may have been already placed on the road.

While we have illustrated a preferable form of our construction, we do not wish to be limited thereto. Neither do we wish to be limited to the use of the jay marking wheel and the main marking wheel upon the same machine as these parts might be mounted upon separate machines.

The jay marking wheel or parking wheel illustrated in Figure 5 can be used either on the truck with the regular wheel or on a separate truck by itself as circumstances may require. In use, the jay making wheel is placed on the right side of the truck and does not interfere with the guide wheel shown in Figure 3, as this guide wheel is not in use when the jay line or parking line wheel is in use. The only time the guide wheel is used is when the marking wheel 34 is used.

Obviously, many changes might be made in the details of construction and arrangement of parts without departing from the spirit of the invention as defined in the appended claims.

We claim:—

1. A mechanism of the character described including a supporting structure, a marking wheel carried thereby, a tank for containing the marking liquid, and means for distributing marking liquid upon the periphery of

the wheel comprising a tap supported by the frame above the wheel and having a hose connection to the tank and being provided with a valve, oppositely disposed irons pivotally connected to the frame supporting the tap and disposed one on each side of the marking wheel and intersecting the periphery thereof, and a distributing roller mounted between said irons and bearing upon the periphery of the wheel, the irons being resiliently urged toward the periphery of the wheel.

2. In a mechanism of the character described a supporting frame adapted to be mounted upon a motor vehicle, a pavement marking wheel mounted upon the frame for vertical movement, irons pivotally mounted upon said frame and extending downward and forward and intersecting the periphery of the wheel, a distributing roller mounted between said irons and bearing upon the periphery of the wheel, a tank mounted upon the motor car, a pump driven from the motor having an intake connected to the tank and having an outlet, a pipe leading from said outlet, a flexible hose forming a continuation of said pipe, and a valved discharge member discharging liquid from the hose upon the periphery of the marking wheel.

3. The combination with a motor car, of a marking wheel mounted upon the motor car for bodily longitudinal movement in contact with the ground, and means for discharging pavement marking liquid upon the periphery of said marking wheel.

4. The combination with a motor car, of means for marking jay lines and parking lines including a wheel operatively supported upon the car for movement longitudinally thereof in contact with the ground, a tank for containing marking liquid, and a flexible hose operatively connected to the tank and discharging onto the periphery of the jay marking wheel.

5. The combination with a motor truck, of longitudinally extending angle irons operatively supported upon the truck at one side thereof and extending from front to rear thereof and spaced from each other to provide a longitudinally extending slot, a supporting member disposed through said slot, rollers mounted upon the supporting member and bearing against both of said angle irons and on the inner and outer faces thereof to thereby afford a roller bearing for said support, an arm hinged to said supports, a fork carried on the end of the arm, a marking roller mounted upon said fork, a marking liquid tank carried upon the truck, a flexible hose operatively connected to the tank and discharging upon the periphery of the roller, and means for distributing the marking liquid upon the periphery of the roller.

6. The combination with a motor truck, of

a marker wheel mounted upon the car for movement longitudinal thereof, and mounted for movement into or out of operative position with relation to the pavement, a
5 tank mounted upon the motor car, and a flexible hose operatively connected to said tank, and at its other end having means whereby the liquid discharged through the hose may be distributed upon the face of the marking wheel. 10

In testimony whereof we affix our signatures.

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