

April 23, 1935.

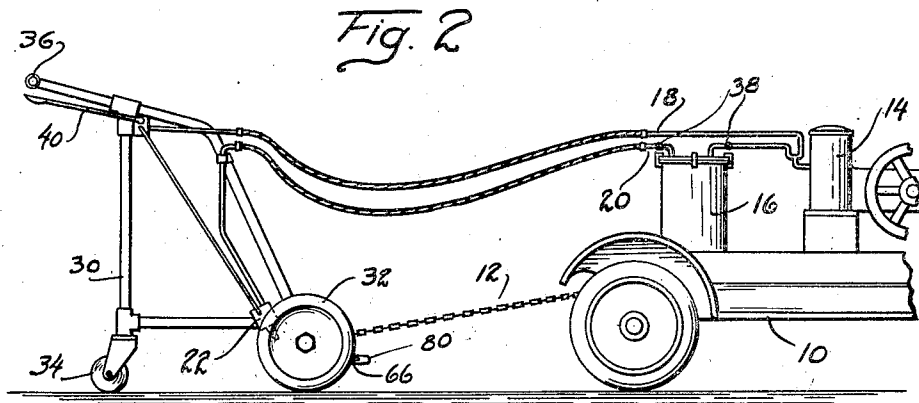
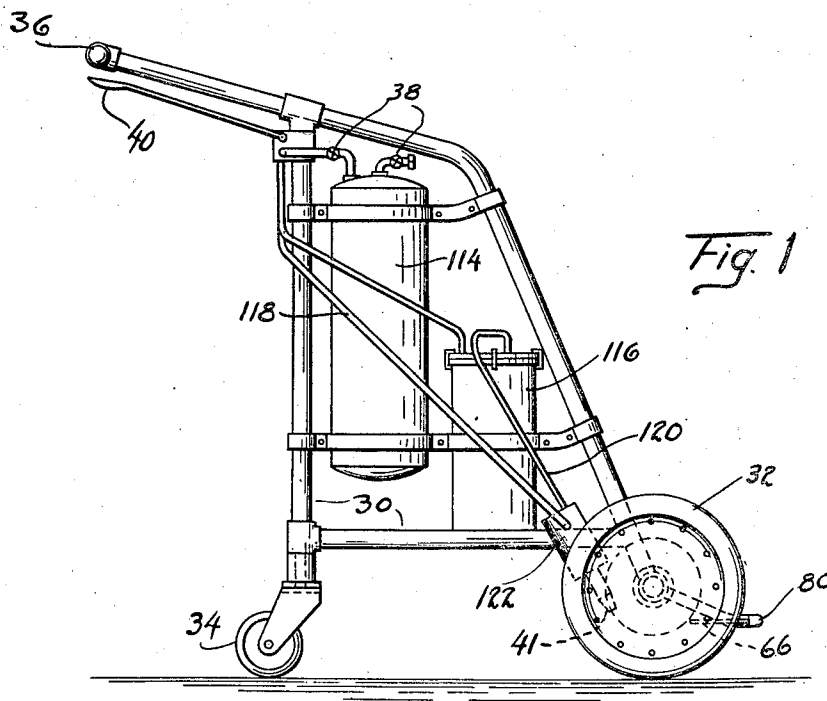
C. W. GLASGOW

1,998,502

ROAD MARKER

Filed April 25, 1929

2 Sheets-Sheet 1



Chester W. Glasgow

INVENTOR.

BY

Parker & Burton

ATTORNEYS

April 23, 1935.

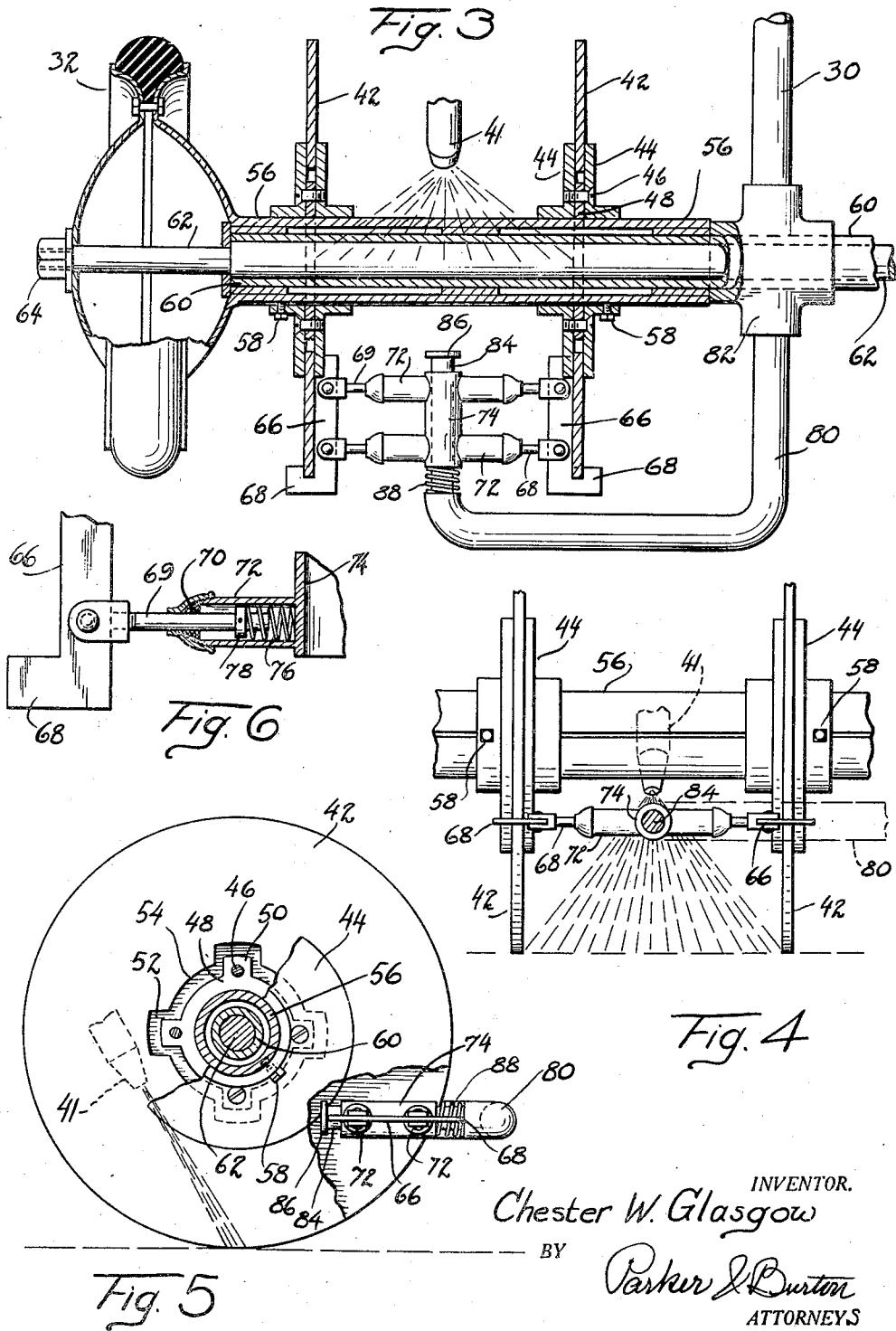
C. W. GLASGOW

1,998,502

ROAD MARKER

Filed April 25, 1929

2 Sheets-Sheet 2



UNITED STATES PATENT OFFICE

1,998,502

ROAD MARKER

Chester W. Glasgow, Detroit, Mich.

Application April 25, 1929, Serial No. 357,945

16 Claims. (Cl. 91—45)

My invention relates to an improved road marker of the character adapted for employment to mark a guide line or stripe upon the surface of the road, and is clearly adaptable for use in applying paint lines or stripes to road pavements.

An object is the provision of such a road marker which is of strong, sturdy, and simple construction; which is easily and readily handled to apply paint lines or stripes of any desired width to the road surface; which is of such a character that the resulting paint line or stripe is even, clear and clean cut in its outline. The machine is adapted to apply these paint lines to the road surface at a rapid rate of speed.

My invention may be embodied in a portable road marker adapted for driving and operation by a single operator or it may be embodied in a road marker adapted primarily to be connected as a trailer in the rear of a truck or tractor to be drawn thereby. In the first instance the paint spray mechanism and paint tank is carried by the road marker itself while in the second instance the source of paint supply and pressure machinery may be carried by the truck and may communicate with paint spray mechanism carried by the marker.

A meritorious feature of my invention consists in the provision of rotatable road engaging wheels or discs arranged to determine the width of the paint stripe and adapted to produce a clear, clean cut paint stripe and which are automatically adjustable or floating to accommodate for variations in the surface of the road so as to normally maintain contact therewith and are axially adjustable to vary the width of the paint stripe. The road marker is wheel supported and the paint discs are preferably coupled with the road wheels of the marker to be driven thereby and means are provided for continuously cleaning the discs during the working operation.

An object therefore is the provision of self cleaning means for limiting or determining the width of the paint stripe to be applied to the road which produces a paint stripe having a clean, even outline.

The above objects and others, together with various meritorious features and advantages of my invention will more fully appear from the following specification, appended claims and accompanying drawings, wherein,—

Fig. 1 is a side elevation of my invention embodied in a portable hand operated road marker.

Fig. 2 is a side elevation of my invention embodied in a road marker adapted to be coupled to a truck to be drawn thereby.

Fig. 3 is a sectional view through one of the road wheels of the marker and the paint discs showing the paint spray nozzle and the disc cleaning members in elevation.

Fig. 4 is a front elevation of a fragment of the marker showing the discs and cleaning members illustrated in Fig. 3.

Fig. 5 is a side elevation of one of the discs and its supporting axis.

Fig. 6 is an elevation of a fragment of one of the cleaning members and its support.

In Fig. 2 of the drawings a truck 10 is illustrated as coupled by suitable means such as connections 12 with my improved marker to draw the same. The truck carries suitable air pressure developing machinery 14 and a paint tank 16 which are connected by feed lines 18 and 20 with paint spray mechanism 22 carried by the marker so that paint under pressure may be supplied to the paint spray mechanism and a proper amount of air under pressure may be employed to produce the desired spray. My invention does not relate to this apparatus and it is shown merely as of a conventional character.

In Fig. 1 my improved marker is of the portable type wherein there is an air tank 114 and a paint tank 116 carried thereby which accomplishes the same purpose as the paint tank and air pressure mechanism carried by the truck in Fig. 2. The air pressure tank 114 is, of course, filled and replenished from a suitable source as and when desired. Suitable delivery lines 118 and 120 lead from the air and paint tank to paint spray mechanism 122 of a type similar to that shown in Fig. 2.

The marker in each instance comprises a rigid frame structure 30 provided with a pair of supporting front road wheels 32 and a trailing road wheel 34 and a handle 36 by means of which the course of travel of the marker may be guided. Suitable control devices such as valves 38 and a hand operated control 40, all of a conventional character, are provided to regulate the discharge of the paint spray.

The paint spray mechanism terminates in a nozzle portion 41 which is adapted to direct a spray of paint upon the surface of the road between the road wheels 32 and between a pair of rotatable discs 42. Each of these discs is supported by a hub structure comprising a pair of plates 44 (see Fig. 3) arranged on opposite sides of the discs and tied together by suitable means such as screws 46. These hub plates 44 are held in spaced apart relationship by a spacer plate 48 which is provided with a series of circumfer-

entially arranged radially projecting lugs or ears 50 normally disposed within recesses 52 arranged about an axial aperture 54 in the disc 42, whereby the disc 42 is freely adjustable upon the plate 48 between the hub disc 44 with respect to the supporting axis of the discs to accommodate for variations in the surface of the road over which the disc 42 travels.

The discs 42 are mounted upon a long hub 56 carried by the road wheel 32. The discs 42 are held in spaced apart relationship upon this hub and this distance may be varied as the discs are axially adjustable upon the hub. Each disc is shown as provided with an adjustment screw 58 extending through a flange formed on one of the hub plates 44 to secure the discs to rotate with the hub 56. The hub 56, which is a part of the wheel 32, is rotatable freely over a tubular member 60 which is carried by the stationary axle portion 62 which is provided at its outer end with a wheel retaining nut 64.

It will be apparent that the discs are rotatably driven by the wheel 32 and that they rotate over the pavement of the road and have a permitted play to accommodate for variations in the surface of such a pavement whereby contact is normally maintained on the road surface regardless of irregularity which may elevate one road wheel with respect to the opposite road wheel, and that the paint spray mechanism 41 delivers a spray of paint between the discs 42, the spread of which is limited by the discs so that the width of the resulting paint stripe may be regulated by the adjustment of the discs. The discs might be said to float on the axle to maintain this road contact.

The road engaging peripheries of the discs are normally kept clean by the rotation of the discs over the road so that the margin of the paint stripe is clean cut in outline. To thoroughly clean the discs during the working operation I prefer to provide, however, cleaning members, one for each disc, which comprise a scraper 66 having an end portion 68 overhanging the margin of the disc. Each scraper 66 is carried by a pair of supporting arms 69. Each arm is slidably arranged within a bearing 70 which terminates in a housing 72 carried by a main sleeve 74. A spring 76 is arranged within this housing and bears against an enlarged end 78 of the arm 69, exerting a pressure thereon tending to hold the scraper 66 against the paint sprayed face of the disc 42.

This entire scraper assembly is carried by a bracket 80 secured by a coupling 82 upon the tubular shaft 60 and this bracket terminates in a supporting portion 84 having an end plate 86 upon which is slidably arranged the sleeve 74 which is held toward the end plate 86 by a spring 88 so that the end portion 68 of the scraper elements are held at all times against the peripheries of the discs 42.

This construction and arrangement of the scraper devices serves to remove any excess of paint from the paint sprayed surface or peripheries of the discs 42 so as to keep such discs clean during the working of the mechanism.

What I claim is:

1. A road marker comprising, in combination, a pair of floating parallel spaced apart rotatable road engaging discs, and paint spray mechanism arranged to deliver a spray of paint upon the surface of the road between said discs.

2. A road marker comprising, in combination, a pair of parallel spaced apart rotatable road engaging discs individually vertically automati-

cally adjustable to accommodate for variations of the road surface, and paint spray mechanism arranged to deliver a spray of paint upon the surface of the road between said discs.

3. A road marker comprising, in combination, an axle provided with road wheels supported thereon to rotate the axle, a pair of parallel spaced apart rotatable road engaging discs carried by the axle to rotate therewith automatically vertically adjustable with respect to said road wheels to accommodate for variations of the road surface, and paint spray mechanism arranged to deliver a spray of paint upon the surface of the road between said discs.

4. A road marker comprising, in combination, a pair of parallel spaced apart rotatable road engaging relatively axially adjustable discs, road wheels supporting the discs and coupled therewith to drive the discs, said discs supported to float automatically with respect to said road wheels to accommodate for variations in the road surface, and means for delivering a spray of paint upon the surface of the road between said discs, the spread of which is to be limited by said discs.

5. A road marker vehicle having, in combination, supporting road wheels, a pair of parallel spaced apart rotatable road engaging discs arranged intermediate said wheels and supported to float with respect thereto to normally maintain contact with the road surface, paint spray mechanism arranged to deliver a spray of paint upon the surface of the road between said discs, and road wheels supporting said paint spray mechanism and said discs and coupled with the discs to rotate the discs.

6. A road marker comprising, in combination, a pair of parallel spaced apart rotatable road engaging discs, paint spray mechanism arranged to deliver a spray of paint upon the surface of the road between said discs, road wheels supporting said paint spray mechanism and said discs and coupled with the discs to rotate the discs, said discs being supported to float vertically to maintain by gravity surface contact with the road to accommodate for variations in the road surface.

7. A road marker comprising, in combination, a pair of spaced apart discs supported for rotatable travel over the road, means for delivering a spray of paint between said discs, the spread of which will be limited by the discs, and a scraper held yieldingly in contact with the periphery of each disc and held yieldingly against the inner surface of the disc adjacent to the periphery.

8. A road marker comprising, in combination, a pair of spaced apart discs supported for rotatable travel over the road, means for delivering a spray of paint between said discs the spread of which will be limited by the discs, a pair of scrapers, one for each disc, arranged between said discs, means holding each scraper yieldingly against the paint sprayed surface of its disc, each scraper so formed as to also engage the periphery of its disc, and means holding each scraper yieldingly against the periphery of its discs.

9. A road marker comprising, in combination, a frame provided with rotatable road wheels, paint spray mechanism carried by the frame adapted to deliver a spray of paint on the surface of the road between said wheels and an axle member supporting a pair of independently laterally adjustable rotatable road engaging elements arranged to limit the spread of said paint spray, each element being vertically floating with respect to said road wheels.

10. A road marker comprising, in combination, a frame supported upon road wheels, paint spray mechanism carried by the frame adapted to deliver a spray of paint on the surface of the road, 5 a rotatable road engaging disc arranged adjacent to said paint spray mechanism to limit the spread of said paint spray and supported to float vertically with respect to said road wheels.

11. A road marker, a vehicle having supporting 10 road wheels, and including means supporting a pair of independent vertically floating road engaging rotatable discs independently axially adjustable, a scraper yieldingly engaging the inner face and peripheral face of each disc, and paint 15 spray means arranged to deliver a spray of paint upon the road surface between said discs.

12. A road marker comprising, in combination, a pair of supporting ground wheels, one of which includes a hub portion extending along a substantial length of a supporting wheel axle, a pair 20 of ground engaging discs supported on said hub portion for independent axial adjustment along the length thereof and to float vertically with respect thereto, and means for discharging a 25 spray of paint upon the ground between said discs.

13. A road marker comprising, in combination, a pair of supporting ground wheels, one of which includes a hub portion extending along a substantial length of a supporting wheel axle, a pair 30 of ground engaging discs supported on said hub portion to rotate therewith and to float vertically with relation thereto, each of said discs being independently axially adjustable along the 35 length of said hub portion, means for discharging a spray of paint upon the ground between

said discs, and a scraper yieldingly engaging the inner face of each of said discs.

14. A road marker comprising, in combination, a pair of parallel spaced apart rotatable road 5 engaging discs individually vertically automatically adjustable to accommodate for variations of the road surface, paint spray mechanism arranged to deliver a spray of paint upon the surface of the road between said discs, a pair of 10 scrapers arranged between said discs, one for each disc, each scraper having a portion adapted to engage the edge of the disc and a portion adapted to engage the inner side of the disc adjacent its edge, means yieldingly holding said 15 scraper against the inner face of its disc, and means yieldingly holding said two scrapers as a unit against the edges of said two discs.

15. In a highway marker, the combination with a spray gun for discharging marking material towards the highway and rotating disks 20 mounted for movement towards and from each other for confining the application of the marking material on the highway to a stripe of predetermined width, of means for removing excess marking material from the inside faces and peripheral 25 edges of the disks.

16. A road marker comprising, in combination, a pair of spaced apart disks supported for rotatable travel over the road, means for delivering a spray of paint between said disks whereby the 30 spread of paint will be limited by the disks, and means yieldably positioned adjacent each disk for scraping the excess material from the periphery thereof.

CHESTER W. GLASGOW. 35