Sept. 11, 1962 A. RUSSELL 3,052,909

PAINT STRIPER

Filed June 13, 1960 2 Sheets-Sheet 1

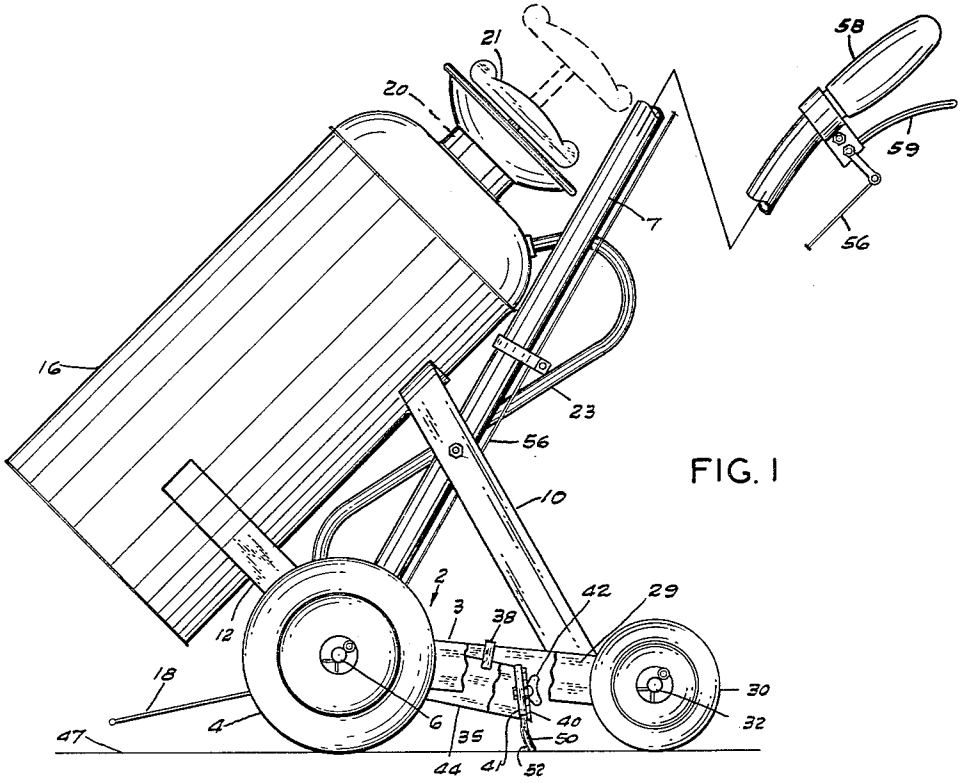


FIG. 1

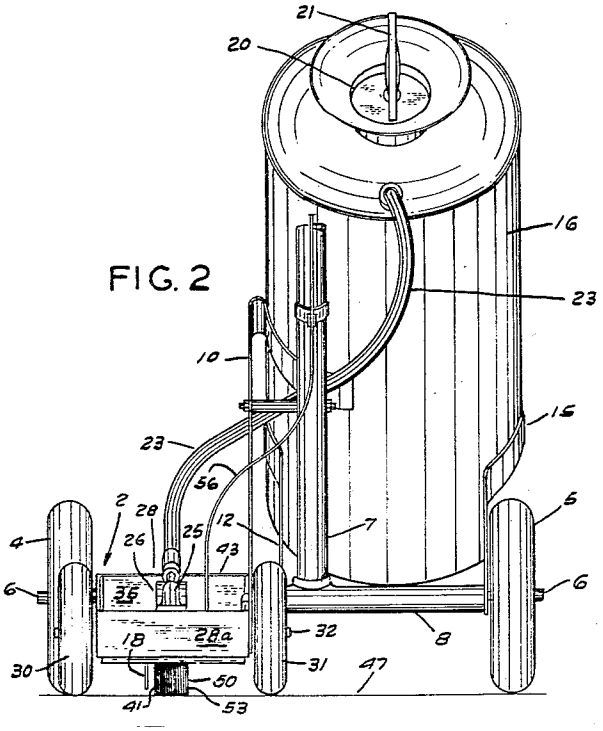


FIG. 2

INVENTOR

Albert Russell

BY Scott L. Norvell

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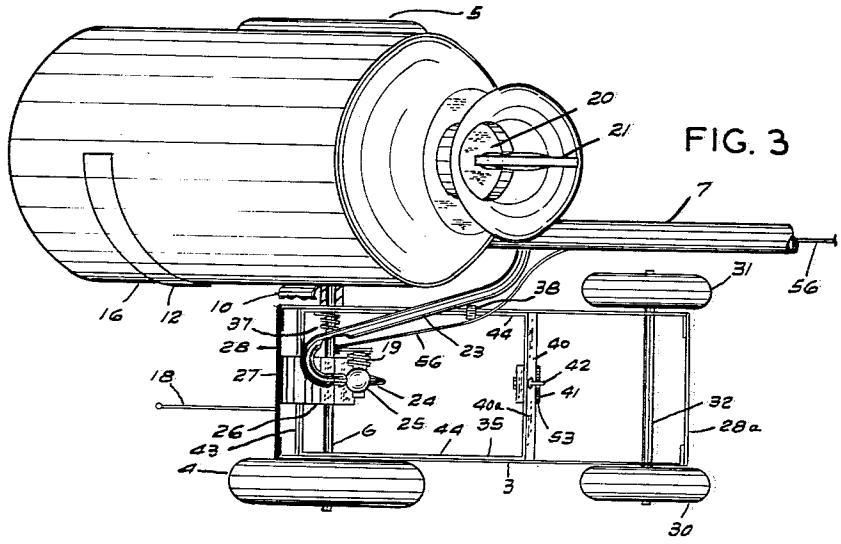


FIG. 3

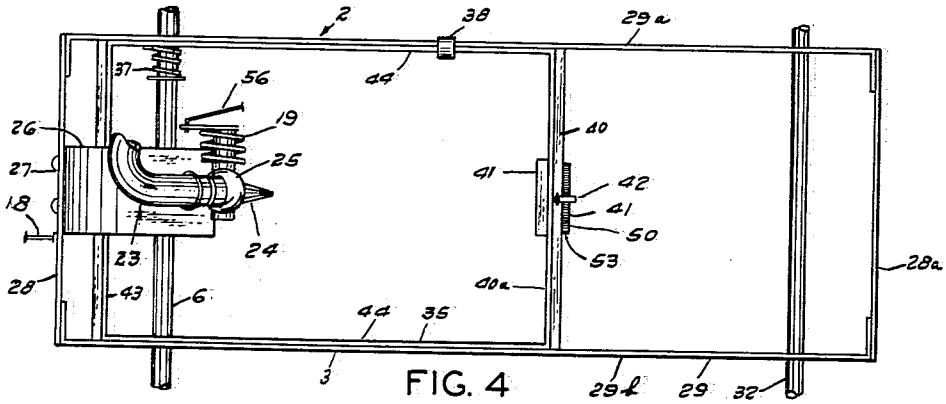


FIG. 4

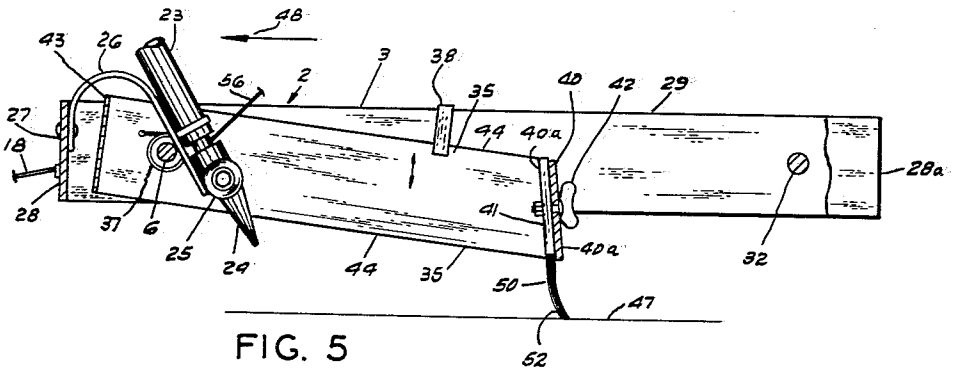


FIG. 5

INVENTOR.
Albert Russell
BY Scott L. Norvil

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PAINT STRIPER

Albert Russell, Phoenix, Ariz.

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1 Claim. (Cl. 15—503)

This invention pertains to paint stripers.

Stripers of the type herein concerned are for use in painting stripes or bands of varying width on surfaces such as tennis courts, street pavement, parking lots, floors of gymnasiums and the like. It is to be understood that the painting of the stripes is done rapidly and accurately and due to the fact that considerable area is covered rapidly, paint must be supplied in considerable quantity.

The device here concerned is intended to roll over the surfaces to be painted which are for the most part horizontal.

In view of the foregoing, one of the objects of my invention is to provide a paint striper having a wheeled carriage which will carry a considerable quantity of paint in a closed container and which will roll over the work to be painted in a rapid and accurate manner and apply paint in the form of a ribbon or strip in a smooth and even manner.

Another object of the invention is to provide a paint striper which will apply the paint stripe in an even and smooth manner without depositing excess paint or wasting it.

Still another object is to provide a paint striper of the type mentioned wherein the parts supplying the paint are adequate to supply the quantity required and to not clog up or retain paint after use in a manner so as to permit it to harden and render the device inoperative when use is again required.

Still another object is to provide a device wherein the paint will be distributed evenly throughout the working period required and will be available at all times in the quantity required; said paint supplying means supported on said carriage having means for feeding paint by definite air pressure and not being dependent on gravity for its feed flow.

Still another object is to provide a mechanism on the paint carriage which will permit the user to observe the line where the paint is being applied; the parts being arranged to render the painting operation visible at all times during operation.

Still another object is to provide a subframe which is pivotally attached to a frame of the carriage which will cause and permit the brushing mechanism to follow the contour of the surface over which the carriage runs independently of the vertical position of the carriage wheels on such surface. The painting striping means is therefore pivoted independently of the body of the carriage to permit the striping means to accommodate itself to variations such as humps and depressions in the surface to which the paint is applied and in this way produce a continuous stripe without the need of retouching in certain places where the brush does not contact the surface.

Other objects will appear hereinafter.

I attain the foregoing objects by means of the devices, parts, and combinations of parts shown in the accompanying drawings, wherein:

FIGURE 1 is a side elevational view of my paint striping mechanism;

FIGURE 2 is an elevation thereof as viewed from the rear;

FIGURE 3 is a plan view thereof;

FIGURE 4 is a plan view of the carriage mechanism drawn on an enlarged scale, and

FIGURE 5 is a side elevational view of the carriage mechanism drawn on an enlarged scale and with portions thereof shown in section.

Similar numerals refer to similar parts in the several views.

The carriage **2** consists of a rectangular frame **3** supported at the front by wheels **4** and **5** which are journalled on an axle **6**. A guide handle **7** extends upwardly and rearwardly from approximately the center of the casing **8** which surrounds axle **6**. From the frame **3** there are two upwardly and forwardly angularly extending brackets **10** and **12**. These brackets have arcuate support **15** to hold paint tank **16**.

As shown, this tank is of the closed pressure feed type and has a screw top **20** which contains a pressure pump **21**.

From pressure tank **16** paint is delivered through flexible tubing **23** to a nozzle **24**. The nozzle **24** is provided with a feed valve **25** and is somewhat pivotally supported on a flat spring **26** which is attached at **27** to a back cross member **28** of the rectangular frame **29**. This frame is supported as aforesaid on wheels **4** and **5** and at the front on axle **6** running transversely through the frame. It is supported at the rear by smaller wheels **30** and **31** which are journalled on an axle **32** at the rear of the frame.

The frame, being an open rectangular member, has a subframe **35**, which is also an open rectangular frame, contained within it. This subframe is pivoted at the rear on wheel axle **6** and is held in place by suitable springs, such as spiral springs **37** on axle **6**. There are stops **38** to prevent excessive movement of the subframe **35**. It may be understood that the subframe is also the brush carrying frame. In FIGURE 5, note that the front transverse member **40** of the subframe **35** has a brush **41** attached by means of a thumb screw **42**. The rear transverse member **43** of the subframe joins the two horizontal members **44**.

This structure permits the subframe to pivot on axle **6** which is at its rear and permits its front end **40***a* to move up and down within the main frame **29**. The main frame is composed of a rear transverse member **28** and a forward transverse member **28***a*, both of which join the ends of the longitudinal extending side members **29***a* and **29***b*.

The flow of paint through valve **25** is controlled by a control wire, marked **56**, which is connected to the rotary valve plug. A spring **19** pormally holds the valve plug in closed position. It is to be observed that the paint flows from the nozzle **24** of the valve **25** and this flow is then spread and rolled by the bristles **52** of brush **50**. The body of the machine is positioned forward in the direction indicated by arrow **48** during this process. A guide wire **18** may be used to indicate and align the movement of the machine with the stripe being produced by the brush **50**.

In use the tank **16** is filled with properly prepared paint. The valve **25** is opened so that the paint drips onto the surface **47** to be painted. The carriage is then pushed in the direction of arrow **48**, FIGURE 5, so that the paint, after it is deposited on the surface **47**, is brushed over by the brush bristles **50** which are contained in the brush **41** on subframe **35**.

The bristles draw up some of the paint by capillary action and at the same time roll some of it at **52** over the surface **47**. This roll extends only so far as the width of the bristles **50** in ordinarily correct operation. Unless paint is dropped by nozzle **24** in great excess, the stripe will extend only so far as the edges **53** of the bristles **50**. The bristles tend to gather, mix and apply the paint to the surface **47** and produce the smooth even stripe as desired. Excess paint whenever it is applied is shut off by a partial closing of valve **25**, as effected through means of the wire rod **56** which extends up the handle **7** to the grip **58** and may be operated by the lever **59**.

I have found that the most practical way to obtain

the best results is to drop the paint directly onto the surface **47**, as above described, and in line with the bristles **50**. The paint must contact the surface **47** a distance ahead of the bristles. This provides a much better action than where it is attempted to feed the paint to the brush by dropping it onto, through or in between the bristles themselves. Thus, in operation paint is applied to the surface **47** to be striped directly in line and ahead of the brush **50** which follows up and smooths the paint and adequately applies it by working it into the surface **47** so that all parts of the paint adequately adhere thereto.

At the termination of any one operation, the lever **59** is operated to shut off the flow of paint and the device is moved to a new location and the paint flow again started. It is to be understood that the paint should not flow unless there is forward motion. The combination of the flow of paint onto the surface **47**, to be striped, together with the immediate brushing, produce a smooth, even stripe or line which will adhere to any surfaces ordinarily encountered.

I claim:

A paint striper, having a rectangular frame body including side members and front and back cross members, a forward transverse wheel axle at the front of said frame, wheels journalled on the ends of said axle, a rear transverse axle at the rear of said frame, wheels journalled

at the ends of said rear axle, a rectangular sub-frame having a front end and a rear end, pivotally supported within and to one side of the longitudinal center of said frame; one end of said sub-frame being pivoted on said forward transverse wheel axle; resilient means for supporting the rear end portion of said sub-frame within said frame, a striping brush having long flexible rearwardly, angularly directed bristles, adapted to flow, spread and direct paint centrally supported on the rear portion of said sub-frame, a paint applying nozzle on the forward end of said frame disposed a substantial distance from and in aligned relation relative to said striping brush directed to apply paint to the surface to be marked, a paint container attached to said frame having a paint supply pipe connected to said nozzle, a paint flow control valve in said paint supply pipe adjacent said nozzle, a push and guide handle attached to said frame and extending upwardly and rearwardly from said frame, a paint supply control mechanism supported on said handle.

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