Jan. 23, 1934. G. A. PRIMROSE 1,944,368

STRIPING PENCIL

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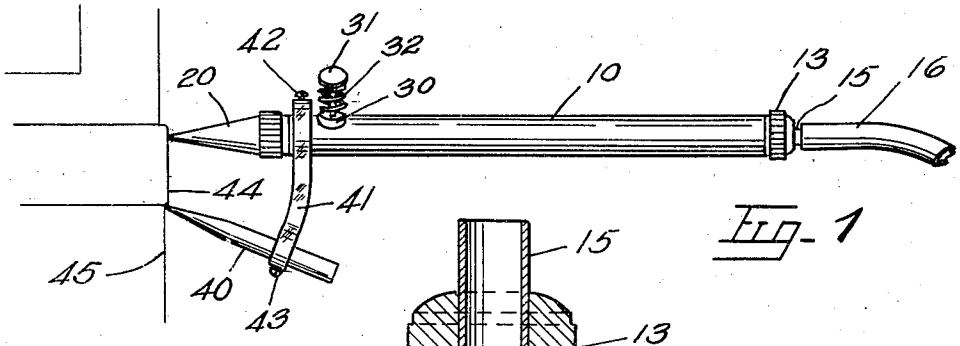


Fig. 1

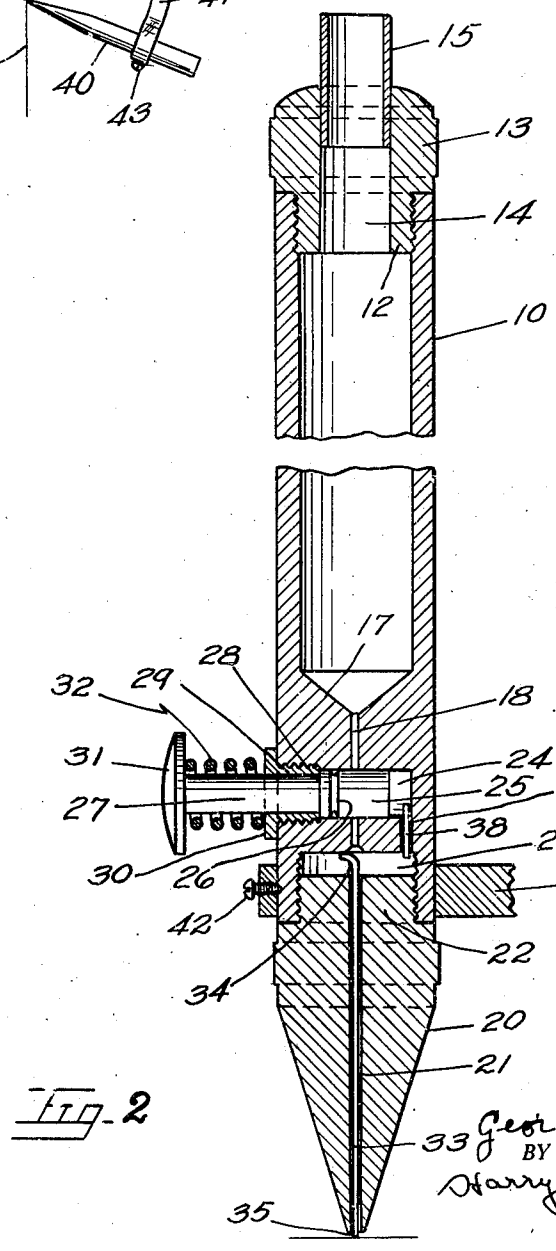


Fig. 2

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STRIPING PENCIL

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7 Claims. (Cl. 91—62.6)

The invention consists in the improvements in the construction and the resultant operation of striping pencils as described in the following specification and illustrated in the accompanying drawing.

The object of the invention is the construction of a striping pencil that will feed a pigment to a surface at a uniform rate of flow and produce a clean cut line when drawn over the surface of an object to be penciled.

A further object of the invention is to construct a device of this character having a guide means for drawing stripes on a surface in parallelism.

A still further object is to construct such a device having an additional bearing point for contacting with the surface being striped, thereby producing a more stable contact with the surface by the pencil which acts as a stabilizer and tends to steady the hand of the operator while using the pencil.

The invention will be hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawing:

Figure 1 is a side view of the improved striping pencil shown as being used on the body of a vehicle.

Figure 2 is a central longitudinal sectional view of Figure 1 with the spacing member broken away.

Referring to the drawing; reference character 10 indicates a cylindrical body portion or barrel which may be made of bakelite or any suitable substance and has formed therein a reservoir extending from its open end through a portion of the length thereof. Body portion 10 has internally screw-threaded bore for engagement with the externally screw-threaded lug 12 of closure cap 13 which has aperture 14 extending therethrough and nipple 15 fitted therein for receiving on its outer end flexible conduit 16 leading to a source of supply of a fluid under pressure not shown. The bottom wall 17 of the reservoir is tapered inwardly and communicates with the upper end of duct 18 extending longitudinally through the center of the body portion 10, the duct 18 communicating with compartment 23 at its lower end. Tapered nozzle 20 having duct 21 through the center thereof has upstanding externally screw-threaded boss 22 for screw-threaded engagement with the lower end of the body portion 10 forming compartment 23. Body portion 10 has extending transversely thereof bore 24 in which plunger valve 25 is adapted to have reciprocal movement. Plunger valve 25 has circumferential peripheral groove 26 thereabout for registry with duct 18. The plunger valve has a reduced portion 27 forming peripheral shoulder 28 thereon for limiting the outward movement of the valve by contacting with the lower face of bushing 29 which screw-threadedly engages the body portion 10. Bushing 29 has peripheral flange 30 between which, and the under face of operating button 31, is interposed a spring 32 for urging the valve outwardly of the bore 24. Feeder pin 33 which is of smaller diameter than duct 21 of tapered nozzle 20 extends through duct 21 and has a free slidable relation thereto and is provided at its upper end with bent portion 34 to limit its outward movement in the duct 21 and is of such length as to protrude a limited distance beyond the point of the nozzle as at 35 when it is forced inwardly of the duct to the limit of its inward movement by contacting with the upper wall of compartment 23. Duct 37 communicates with compartment 23 and the bottom of bore 24 with its respective ends and has pin 38 of a smaller diameter than the duct suspended therein.

From the foregoing it will be readily seen that a pigment introduced into the reservoir under pressure will be forced downwardly through ducts 18 and 21 and outwardly of tapered nozzle 20 when the circumferential groove 26 of the plunger valve 25 is moved inwardly against the tension of the spring 32 into alignment with duct 18 by pressure on the operating button 31. When the pressure on the button 31 is released the spring 32 will force the plunger valve outwardly of the bore 24, thereby forming a suction in the bottom of the bore which tends to draw the pigment in compartment 23 and bore 21 inwardly of the body of the pencil. The free floating pin 38 being loosely fitted within the bore 37 moves laterally within the confinements of the wall of the opening, and tends also to move axially in and out on the suction and pressure strokes of the piston 25, and therefore serves in a measure to keep the passageway open by agitating and assisting the movement of the striping material flowing through the bore. Guiding finger 40 is secured to the lower portion of the body of the pencil by means of angular strap 41 which embraces the body at one of its ends and is secured thereto by tension screw 42 which embraces guide finger 40 adjustably securing the guide finger thereto by tension screw 43. As shown in Figure 1, the guide finger may be placed on the lower edge of the bead 44 on the body panel 45 and the point of the pencil placed upon the face of the bead and a line penciled on the bead in absolute parallelism with

the bottom of the bead or the point of the guide finger 40 may be placed upon a line previously penciled upon its surface and moved thereover and a second line penciled on the surface in absolute parallelism with the first named line.

Having thus explained the nature of the invention and described an operative manner of constructing and using the same, although without attempting to set forth all the forms in which it may be made or all the forms of its use, what is claimed is:

1. A hand tool for laying down an ornamental paint stripe on a smooth painted surface, including a barrel, a division wall intermediate the opposite ends of the barrel affording a pair of chambers projecting from the wall to the opposite ends of the barrel and having a communicating passageway between the chambers and a lateral bore intersecting said passageway, means to connect one chamber with an external source of striping fluid under pressure, a work contacting nozzle associated with the other chamber and provided with a duct leading from the chamber to the work contacting tip of the nozzle, a finger operated plunger slidable in said lateral bore and depressible to open the passageway for fluid flow, the end of said plunger beyond the passageway constituting a piston which snugly fits the bore and cooperates therewith to afford a pump and pumping chamber, and a duct to connect the chamber at the nozzle end of the barrel with the pumping chamber at the inner end of the bore beyond the piston, whereby the retraction of the piston withdraws fluid from the nozzle duct.

2. A hand tool for laying down an ornamental paint stripe upon a smooth painted surface, including a work contacting discharge pencil having a bore for the flow of paint and a piston chamber intersecting said bore, a finger operated piston slidable in the chamber and provided with a passageway registrable with said bore to pass paint upon piston depression, a passage between the inner end of the piston chamber and the bore beyond the piston, thru which paint may be sucked back upon piston retraction, and a floating pin freely slidable in said passage to prevent coagulation of the paint in the passage.

3. A hand tool for laying down an ornamental paint stripe upon a smooth painted surface, including a work contacting discharge pencil having a paint duct therein and a chamber intersecting said duct, a finger operated piston slidable in said chamber and provided with a passageway registrable with the duct to pass paint upon piston depression, a passage between the inner end of the piston chamber and that part of the duct beyond the piston, thru which paint at the discharge end of the pencil may be drawn back by the suction created upon retraction of the piston, a floating pin freely slidable in said passage with piston movement to assist the flow of paint in the passage and a floating feed pin in the duct adjacent the discharge end of the pencil to assist paint flow therethru and by its movement reducing the likelihood of stoppage.

4. A striping instrument comprising a pencil having a reservoir for striping fluid, means associated with the reservoir imposing a pressure therein, an outlet leading from the reservoir, means positioned between the reservoir and the discharge end of the outlet controlling the discharge of striping fluid, and means including a passageway associated with the controlling means imposing suction on the outlet beyond the controlling means when said controlling means is released.

5. In a striping instrument having a fluid container, an outlet structure comprising a body having an axially extending passage therethrough in communication with the container and a chamber extending transversely of the body and intersecting the axially extending passage, duct means connecting one end of the chamber with the axially extending passage between the outlet end and the chamber, a slidable valve member in the chamber controlling flow of fluid through the axial passage in the body, the sliding movement of the valve member in one direction creating pressure in the duct means and the sliding movement of the valve member in the opposite direction in the chamber creating a suction in the duct means.

6. In a striping instrument having a fluid container, an outlet structure comprising a body having an axially extending passage therethrough communicating with the container and a chamber extending transversely of the body and intersecting the axially extending passage, duct means connecting one end of the chamber with the axial passage between the outlet end and the chamber, and a valve member movable in the chamber controlling the flow of fluid through the axial passage in the body.

7. In a striping instrument having a fluid container, an outlet structure comprising a body having a passage extending axially therethrough in communication with the container and another passage extending transversely therethrough and intersecting the axially extending passage, a reciprocable valve member in the transverse passage and projecting from one end thereof, said valve member having a grooved portion adapted to establish communication through the axial passage, a plug in one end of the transverse passage through which the valve member extends, said body having a passage extending from the interior portion of the transverse passage to said axial passage, and a spring normally urging the valve member outwardly into a position cutting off communication through the axial passage.

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