July 19, 1932. B. L. HILL 1,868,416

STRIPING PENCIL

Filed April 16, 1929

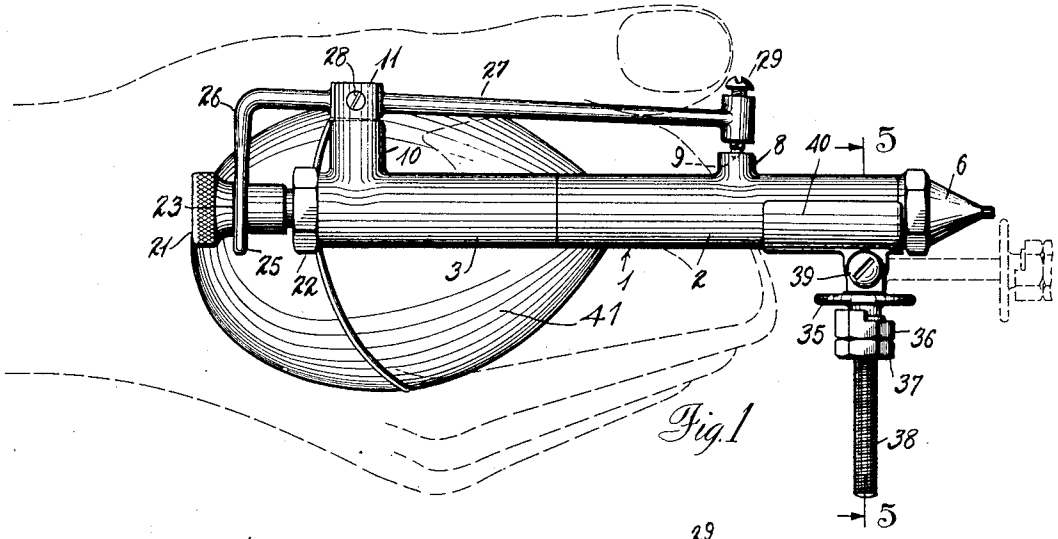


Fig. 1

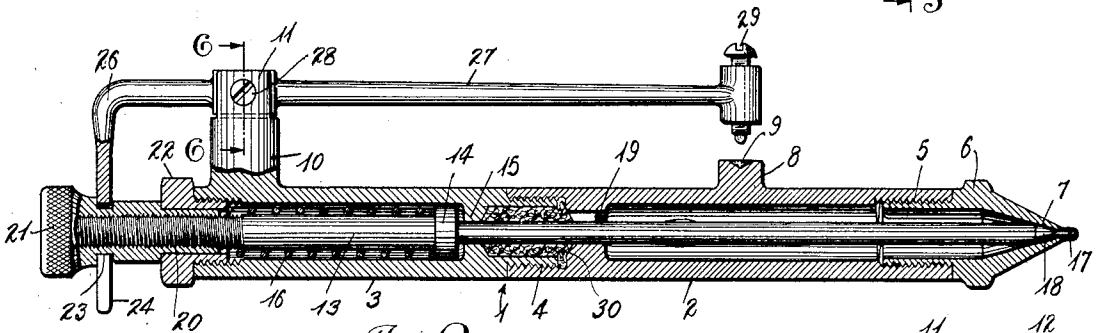


Fig. 2

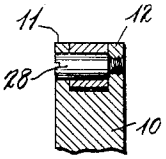


Fig. 6

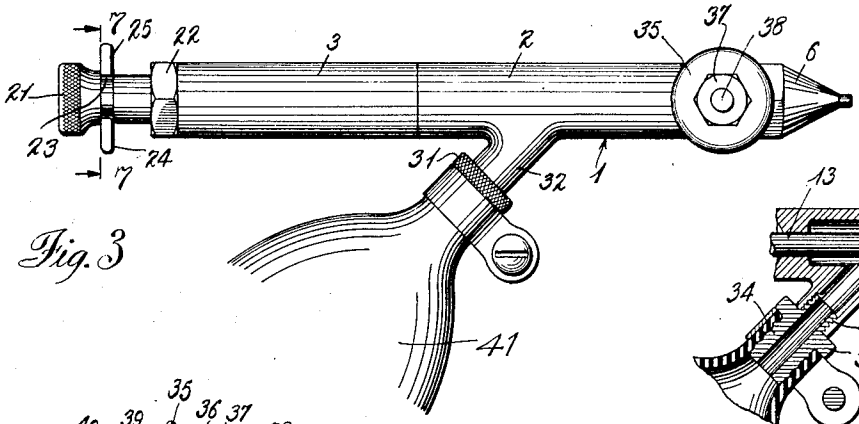


Fig. 3

Fig. 4

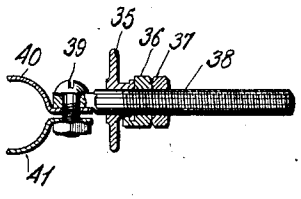


Fig. 5

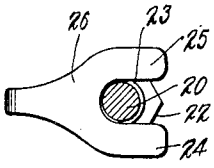


Fig. 7

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Patented July 19, 1932 1,868,416

UNITED STATES PATENT OFFICE

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STRIPING PENCIL

Application filed April 16, 1929. Serial No. 355,544.

This invention relates to striping pencils and has particular utility in the art of ornamenting automobile bodies although it is also useful for other purposes such as sign writing and the like.

The primary object of the invention is to provide a portable tool of simple construction which may be conveniently manipulated in various positions to project a uniform and predetermined character of stripe to be applied to the object being operated upon.

More specifically the invention comprehends for one of its objects an implement wherein the bulb containing the lacquer or like material is positioned within close proximity to the implement whereby the lacquer may be discharged under pressure simultaneously with the operation of the regulating device, hereinafter described, by the use of only one hand of the operator.

More specifically the invention includes an adjustable control lock for varying the effective stroke of the plunger and its associated needle valve by the application of the regulator.

There are numerous subordinate objects of the invention which will be apparent to those skilled in the art from a reading of the specification attached hereto and forming a part hereof, in which

Figure 1 is a top view showing the mode of operation of my device.

Figure 2 is a longitudinal view partly in section showing its construction.

Figure 3 is a side elevation.

Figure 4 is a detailed sectional view showing the connection of the bulb to the reservoir.

Figure 5 is a view of the detachable guide roller, and

Figure 6 is a view of the rocking connection of the regulator with respect to the pencil.

Figure 7 is a view in detail of the attachment of the control yoke to the plunger rod.

Referring now specifically to the drawing, reference numeral 1 indicates the implement generally. It is preferably of cylindrical shape and comprises a reservoir 2 screw threadedly secured to a plunger cylinder 3 as at 4. The forward end of the reservoir 2 is interiorly screw threaded as at 5 to receive a screw threaded tip 6 having an orifice 7 of any desired configuration. This tip is readily removable so that other tips of varying sizes may be employed if desired. The reservoir is further provided with an integral abutment 8 having a pocket 9. A support 10 is provided by the plunger cylinder slotted to define parallel spaced arms 11 and 12 forming a recess therebetween for the purpose hereinafter described.

Within the confines of the plunger cylinder and the reservoir I provide a reciprocating plunger 13 having a cylindrical shoulder 14 limiting the outward movement thereof by engaging the shoulder 15 of the plunger cylinder and normally urged in its protracted position by means of a spiral coil spring 16. The forward end of the plunger is of slightly less diameter and terminates in a needle valve 17 having a tapered portion 18 conforming to the sloping walls constituting the orifice 7. This plunger is mounted for free reciprocating movement but is constrained against rotary movement by means of a pin 19 engaging a longitudinally disposed spline in the plunger.

The outer portion of the plunger is exteriorly screw threaded as at 20 to provide an adjustable connection with the control lock 21 for the purpose hereinafter described. This control lock is secured in place by a nut 22 as shown in Figure 2. The control lock 21 is provided with an annular recess 23 for receiving the arms 24 and 25 of the yoke 26 provided by a regulator indicated generally as 27. This regulator extends in a position parallel with respect to the pencil and is pivoted thereto, between the flanges 11 and 12 thereof, as shown in Figure 6 by means of the adjusting pin 28. At the forward end of the regulator I provide an adjustable screw 29 which is adapted to vary the space between the regulator and the abutment 8 to thereby vary, in a slight measure, the extent of reciprocation of the plunger and its associated needle valve and thereby vary the amount of lacquer discharged from the orifice 7.

In order to prevent the escape of lacquer

from the reservoir 2 into the plunger cylinder I provide a stuffing 30 as shown in Figure 2.

From the detailed description given thus far of the implement and from an inspection of Figure 1 of the drawing, it will be apparent that an operator may grasp the implement in one hand and simultaneously apply a lateral pressure to the regulator to withdraw the plunger and its needle valve from the orifice of the reservoir and apply pressure, with the palm of the hand, to the bulb 41 whereby to secure a predetermined discharge of lacquer in all positions of use of the pencil. Obviously the application of lateral pressure to the regulator 27 tends to rock it about its pivot 28 and cause the yoke 23 thereof to move in an arc thereby withdrawing the plunger against the tension of the spring 16 until the adjusting screw 29 engages with the concavity 9 of the abutment 8. This permits a predetermined rate of flow of the lacquer to pass through the orifice 7. The minor adjustments may be made by the adjusting screw 29 which will vary the rocking movement of the regulator 27 and the degree of withdrawal of the plunger. However, the width of the discharged coating may be predetermined by a major adjustment consisting of the control lock 21 which is screw threadedly associated with the plunger. Obviously by unscrewing this control lock the regulator by reason of the engagement of the yoke in the groove thereof is rocked about the pivot so that the forward end thereof having the adjusting screw 29 is lowered into progressively closer position to the abutment. In this position the regulator is effective, upon operation, to withdraw the plunger only a slight distance from the orifice.

Obviously the bulb can be applied to the reservoir in any suitable manner as shown for instance in the construction illustrated in Figure 4 wherein a union 31 is threadedly secured to the branch of the reservoir 32 as at 33. The exterior of the bulb may be clamped to the threaded portion 34 of the union as shown.

As an adjunct to my invention thus far illustrated I may employ a guide roller of an adjustable and detachable nature shown in Figures 1 and 5 respectively. This guide roller is designated by reference numeral 35 which is adjustable in a lateral direction by means of the adjusting lock nuts 36 and 37, screw threaded on the shank 38, which shank is preferably pivoted by means of a screw 39, to the spring fingers 40 and 41. These spring fingers are snapped onto the exterior of the pencil as shown in Figure 1 and resiliently maintained thereon. As shown the shank together with the guide roll 37 may be adjusted to various angular positions with respect to the pencil depending upon the line of travel of the pencil.

While I have illustrated one embodiment of my invention yet it is understood that many variations in construction may be resorted to without departing from the principles thereof as embraced in my claims. It will further be appreciated that the pencil is capable of various uses and that materials other than lacquer may be dispensed thereby for divers purposes such as sign writing, automobile body striping, etc.

Having thus described my invention what I claim is:—

1. A striping pencil of the character described comprising a reservoir having a manually operable collapsible element adapted to supply coating material to the reservoir and discharge the same therefrom under pressure, said reservoir having a discharge orifice and a movable valve normally closing the same, a member for operating the valve to permit the passage of coating material from the pencil directly upon the surface being treated, said member and said collapsible element being located in close proximity to each other whereby an operator may simultaneously apply, with one hand, pressure to the collapsible element and to said member, said valve being movable with respect to the orifice provided by the reservoir to thereby vary the size of the orifice to change the quantity of discharge coating material whereby to form a stripe of predetermined width.

2. A striping pencil of the character described comprising a reservoir and a manually operable bulb associated therewith for applying pressure to coating material within the reservoir to discharge the same, said reservoir having a discharge orifice and a movable plunger normally tending to close the same, a regulator handle mounted in parallel relationship with respect to the pencil and operatively associated with the plunger to withdraw the same to open the orifice, said regulator and bulb being closely associated with each other and with respect to the pencil whereby an operator may with one hand apply pressure to the bulb and to the regulator to cause the discharged stream of coating material during the striping operation.

3. A striping pencil of the character described comprising a reservoir having an orifice for discharging lacquer directly upon the surface being treated and a manually operable bulb secured to the reservoir for applying pressure to the coating material therein, said bulb being disposed beneath the longitudinal axis of the pencil, in close proximity thereto, a plunger for opening the discharge orifice, a regulator handle mounted on said pencil along the side thereof and operatively connected with the plunger to withdraw the same upon application of pressure to the regulator handle to vary the discharge capacity of the orifice whereby to vary the rate of flow of the coating material through

said orifice in accordance with the character of the width desired upon the surface being treated, said regulator and bulb being adapted to be grasped simultaneously with one hand whereby pressure may be simultaneously applied to the bulb and to the regulator during the striping operation.

In testimony whereof I affix my signature.

BENJIMEN L. HILL.