

May 9, 1933.

E. M. BARDEN ET AL

1,907,708

STRIPING INSTRUMENT

Filed Aug. 3, 1929

2 Sheets-Sheet 1

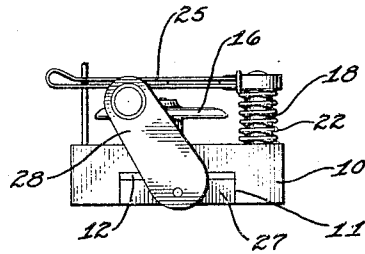
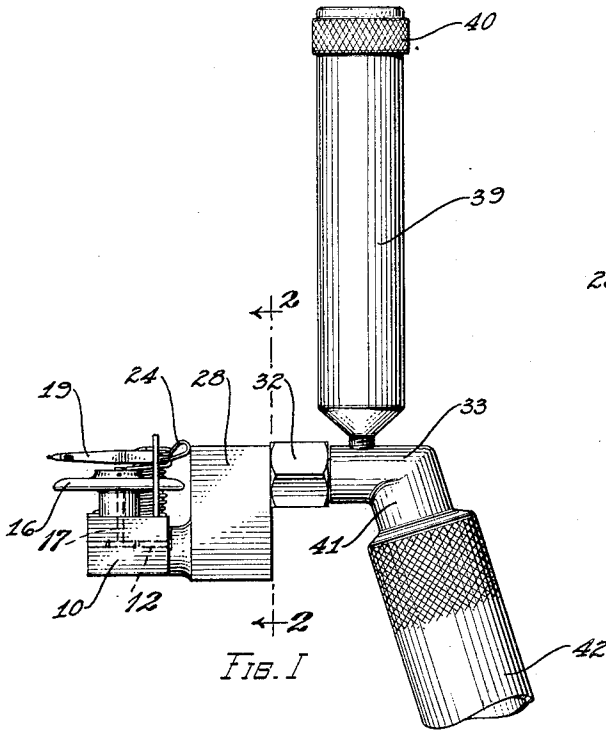


FIG. 2

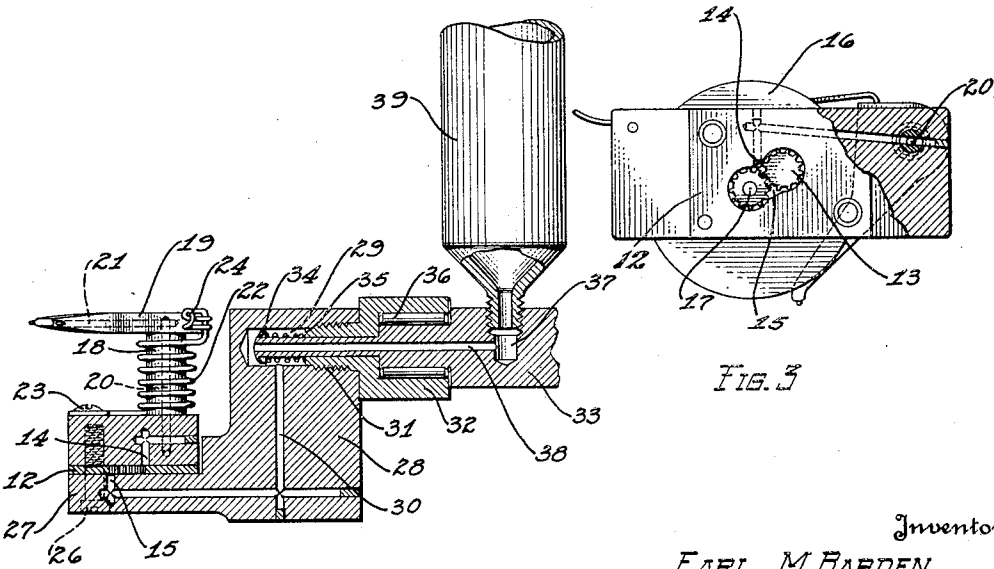


FIG. 3

FIG. 4

Inventor

EARL M. BARDEN
FREDERICK A. BENDIT

By *William S. Heltz*
Attorney

May 9, 1933.

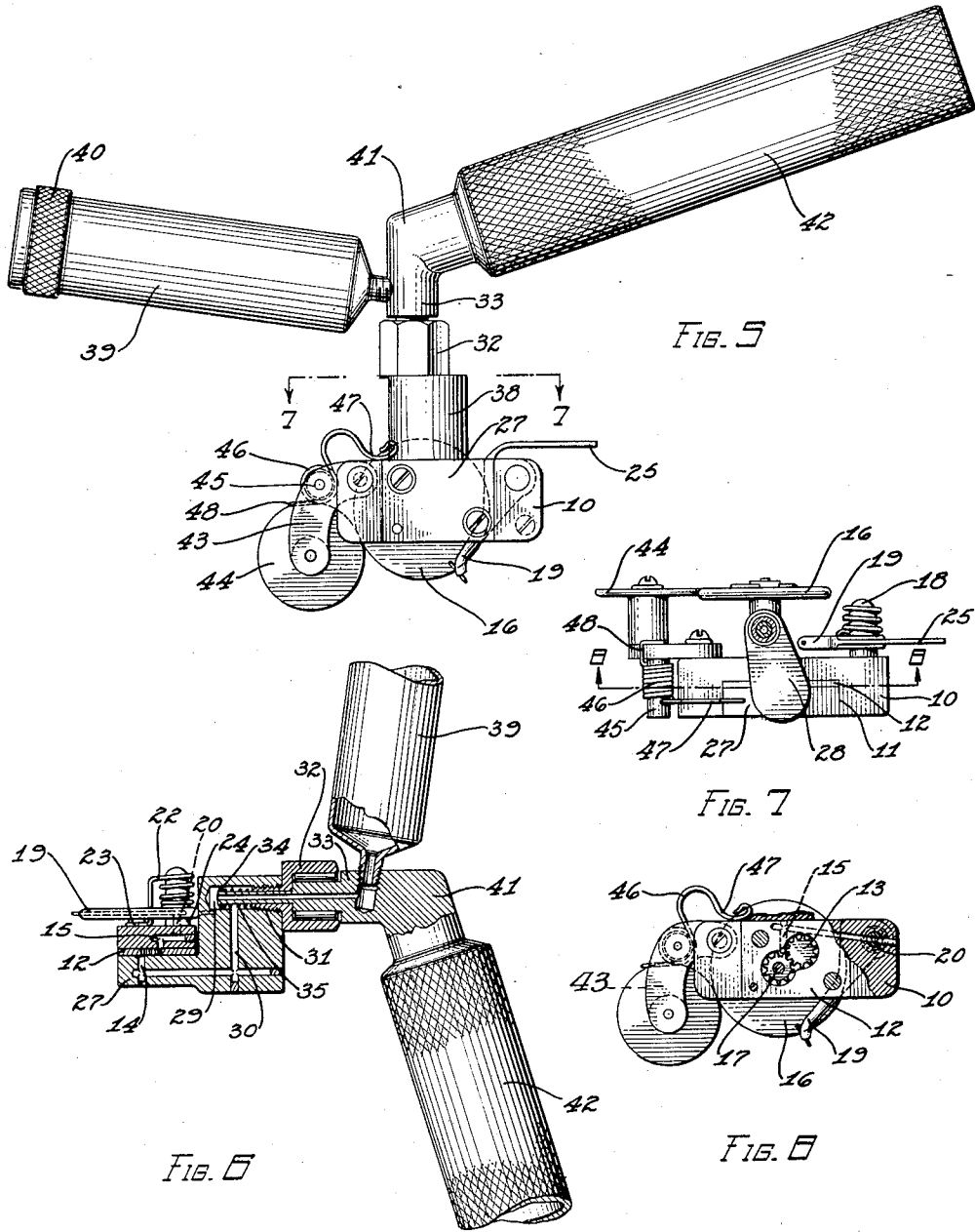
E. M. BARDEN ET AL

1,907,708

STRIPING INSTRUMENT

Filed Aug. 3, 1929

2 Sheets-Sheet 2



Inventors

EARL M. BARDEN
FREDERICK A. BENOIT

334

William T. Hites
Attorney

UNITED STATES PATENT OFFICE

EARL M. BARDEN AND FREDERICK A. BENOIT, OF DETROIT, MICHIGAN, ASSIGNORS TO
PACKARD MOTOR CAR COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF
MICHIGAN

STRIPING INSTRUMENT

Application filed August 3, 1929. Serial No. 383,369.

This invention relates to painting instruments and more particularly to striping instruments.

Heretofore in the art of painting, the application of a stripe to a window reveal has proved rather difficult owing to the curvature in the corners of the reveal. In instances where window reveals have been painted with instruments, it has been found necessary to use forms or guides for the instruments, and in such cases, the application of the stripe has proved more or less difficult owing to the necessity of providing means for holding the forms or guides in position. The present invention aims to overcome these difficulties by providing an instrument for applying a stripe which may be guided by the reveal and will at all times position the discharge end of the nozzle in substantially uniform spaced relation to the edge of the reveal.

An object of the invention is to provide a striping instrument having a swiveled handle so positioned on the body of the instrument that the instrument may be at all times maintained in proper relation to the work with the operator holding the instrument in a natural position.

Another object of the invention is to provide a striping instrument having two spaced supporting and guiding rollers, the distance between which can be regulated for maintaining the discharge end of the nozzle in substantially uniform spaced relation to the edge of the work.

Another object of the invention is to provide a striping instrument having a guiding roller and means co-operating therewith for maintaining the instrument in proper relation to the work.

A further object of the invention is to provide a striping instrument having a body portion, a pump mechanism in the body portion and a nozzle for the pump and means for operating the instrument, so that the nozzle may be maintained in uniform spaced relation to the edge of the work regardless of the contour or curvature thereof.

A further object of the invention is to provide a striping instrument having means for

ment will co-operate with the edge of a work piece to apply a stripe adjacent to the edge and in spaced relation with respect thereto.

With these objects in view, which may be incident to the improvements, the invention consists in parts and combinations to be hereafter set forth and claimed with the understanding that the several necessary elements comprising the invention may be varied in construction, proportion, and arrangement without departure from the scope of the appended claims.

Other objects of the invention will appear from the following description taken in connection with drawings, which form a part of this specification, and in which:

Figure 1 is an end elevation of a striping instrument embodying the invention,

Figure 2 is a view substantially on line 2—2, Figure 1,

Figure 3 is a side elevation partially broken away and partially in sections,

Figure 4 is an enlarged sectional view,

Figure 5 is a side elevation of a modified form,

Figure 6 is a sectional view of the modified form,

Figure 7 is a sectional view substantially on line 7—7, Figure 5, and

Figure 8 is a sectional view substantially on line 8—8, Figure 7.

Referring by numerals to the drawings, 10 indicates the body of the instrument. As shown, the body comprises a rectangular block having positioned therein a notch or slot 11. Positioned in the slot 11 is a plate 12 having overlapping transverse bores in which are positioned small intermeshing gears constituting a pump unit 13 having an intake 15 and an outlet 14. The pump is operated by a roller 16 suitably journaled on one side of the block 10 and connected as by a shaft 17 to one of the gears of the pump.

Formed or secured on the body portion 10, adjacent the periphery of the roller 16, is a column or post 18 having positioned thereon for oscillation, a nozzle 19. The post 18 is provided with a bore 20 leading from the outlet 14 of the pump 13 to a passage 21 in the nozzle 19, and positioned on the column 18 is

a coil spring 22 having one end suitably secured to the body portion 10 as by a screw 23, and the other end of the spring is secured to the shank of the nozzle as indicated at 24. This spring serves to retain the nozzle in engagement with the work and also to secure the nozzle on the column 18. Secured in the shank of the nozzle is a lever or handle 25, by means of which the nozzle may be disengaged from the work.

Fitted in the notch 11 and suitably secured in position as by screws 26 is a block 27 having formed integral therewith or suitably secured thereto an arm 28 inclined to the axis of the driving roller 16. The arm 28 has a bore 29, the axis of which is at right angles to the axis of the operating roller 16. Leading from the bore 29 is a passage 30 communicating with the intake 15 of the pump.

The bore 29 is internally threaded as indicated at 31 and mounted therein is a sleeve 32 having a double diametral bore in which is positioned a spindle 33. This sleeve has secured upon its inner end a washer 34 between which and the inner end of the sleeve 32 is positioned a coil spring 35 adapted to securely retain the spindle 33 in the sleeve 32 and to provide for the free rotation of the spindle. Roller bearings 36 are positioned between the sleeve 32 and the spindle 33, and the spindle 33 is provided with a radial bore 37 and an axial bore 38 connecting the radial bore 37 with the bore 34 in the arm 28. As shown, the bore 37 is internally threaded to receive a container 39 provided with a cap 40 having the usual vent, not shown. The spindle 33 is bent as indicated at 41 to receive a socket in a handle 42, or the spindle and the handle may be integrally formed as shown in the modified form.

A modified form of the invention is shown in Figures 5, 6, 7 and 8. In this modification the body portion 10 has pivoted thereto an arm 43, and mounted for rotation on the free end of the arm is a roller 44. The roller 44 is in alinement with the roller 16, and positioned on the arm is a stud 45 having wound thereon a coil spring 46, one end of which, 47, engages the body of the instrument and the other end, 48, engages the arm 43 to press the roller 44 so that it is adjacent the roller 16.

In this modified form, the rollers engage the angle formed between a surface and a bead formed thereon, or the angle formed in a reveal, such as a window reveal, so that the instrument is caused to travel in the angle which provides a suitable guide, and through more or less pressure against the body of the instrument the distance between the bearing portions of the rollers engaging the work surface can be varied. A wide spacing of the rollers will give a bearing which will provide a steady support for the body and will be used when the instrument is operating in a substantially straight line. A light pres-

sure against the instrument will permit the spring 46 to press the roller 44 closely adjacent the roller 16, which is a useful operating arrangement when the instrument is striping in a curve because under such circumstances there will be no appreciable tangent between the bearing wheels which normally would cause the nozzle to move closer to the edge of the reveal or surface against which the rollers are operating, and in this manner the discharge end of the nozzle can be maintained substantially a uniform distance from the bearing edge against which the rollers engage to guide and support the instrument. Due to the swivel arrangement of the handle the operator can hold the instrument naturally irrespective of the course the body may assume in following a guiding surface, and the support extends from the body to a point closely adjacent the fixed guiding roller 16 so that normal pressure of the operator to hold the instrument against a work surface will be less inclined to cause side tilting and will require less effort upon the operator's part in maintaining the body parallel with the surface over which it operates.

This arrangement for mounting the handle provides for the carriage of a reservoir 39 so that it will extend in a direction for the paint therein to flow by gravity to the pump in any position of operation either in a vertical plane or when the instrument is operating upon a surface which the body overlies, and this feature is an important one because it allows a steady feed of paint when the instrument is being moved up or down against a vertical surface.

In practice the container 39 is filled with a suitable liquid such as lacquer for applying a stripe and the operating roller 16 is rotated a few times to draw the lacquer from the container to and through the pump to the discharge end of the nozzle. The instrument is then applied to the work by depressing the lever or handle 25 and engaging the operating roller or the rollers 16 and 44 in the angle formed by a surface and a bead or the angle formed in a reveal. With the instrument in this position the handle 25 is released to permit the nozzle 21 to engage the surface to be operated upon.

Upon moving the instrument by the handle 42 with the operating roller 16 or the rollers 16 and 44, as the case may be, in engagement with the angle, the nozzle 21 is retained in a uniform spaced relation to the bead or to the edge of the reveal even though it be curved, and as the roller or rollers rotate, the pump is operated to draw the liquid or lacquer from the container 39 to and through the pump and deliver same at the discharge end of the nozzle to the work.

Owing to the position of the arm 28 on the body portion of the instrument and the swivel connection between the arm 28 and the han-

dle 42, the container 39 is maintained in an upright or vertical position and the body of the pump is caused through the engagement of the roller to follow the contour of the bead or the angle in the reveal and to turn at any curve therein, so that the stripe may be applied in uniform spaced relation to the bead or the edge of the reveal.

While the invention has been described in connection with certain specific embodiments, it is not our intention to limit the scope of the invention to those particular embodiments or otherwise than by the terms of the appended claims.

Having thus described the various features of our invention, what we claim as new and desire to secure by Letters Patent is:

1. In a striping instrument, for painting a work surface, having a body, a pump positioned therein, a nozzle for the pump and means for operating the pump; a handle swiveled to the body, and a container carried by the handle, the handle and container being located in a plane substantially parallel to the work surface.

2. A striping instrument, for painting a work surface, comprising a body portion, a pump positioned therein, an oscillatory nozzle connected to the outlet of the pump, means for operating the pump including a guide roller, an arm on the body portion, a spindle having its axis at right angles to the work surface positioned in the arm, a container on the spindle connected by passages in the spindle and arm to the intake of the pump, and a handle on the spindle.

3. A striping instrument comprising a body portion, a pump therein, a nozzle positioned on the body portion for oscillation and connected to the outlet of the pump, means for operating the pump including a guide roller, an arm on the body portion, a sleeve in the arm, a spindle in the sleeve, a container on the spindle communicating with the intake of the pump, and a handle connected to the sleeve.

4. A striping instrument comprising a body portion, a pump positioned therein, a nozzle for the pump positioned on the body portion, a guide roller on the body, an operating roller for the pump, an arm on the body portion having a bore the axis of which is at right angles to the axis of the operating roller, a spindle in the bore of the arm, a container on the spindle having communication with the bore in the arm, and a handle on the spindle.

5. A striping instrument comprising a body portion, a pump positioned therein, a nozzle for the pump positioned on the body portion, guide rollers on the body, an arm on the body having a bore the axis of which is at right angles to the axis of one of the guide rollers, a sleeve in said bore, a spindle positioned in the sleeve, a container on the sleeve

connected by passages to the intake of the pump, and a handle on the spindle for the manipulation of the instrument.

6. A striping instrument comprising a body portion, a nozzle positioned on the body for oscillation, guide rollers on the body, an arm on the body portion, a handle pivotally mounted on the arm at right angles thereto, and a container on the handle connected to the nozzle by passages in the arm and handle.

7. In a striping instrument, a body, a nozzle extending from the body for depositing paint upon a work surface traversed thereby, and a pair of body supporting and guiding members having their bearing portions substantially aligned in a plane at one side of the nozzle, and spaced in the direction of the operative movement of the instrument, at least one of the members being movable in a direction to vary the spaced relation of its bearing portion from the bearing portion of the other member while being moved across a work surface.

8. In a striping instrument, a body, a nozzle extending from the body for depositing paint upon a work surface traversed thereby, and a pair of spaced and substantially aligned body supporting and guiding members carried by the body and laterally disposed with respect to the nozzle and having substantially aligned spaced bearing portions, one of the members being resiliently mounted and movable in a direction whereby the distance between said bearing portions of said members may be lessened while traversing a curve during the stripe applying operation through the variance of pressure against the instrument.

9. In a striping instrument, a body, a nozzle extending from the body for depositing paint upon a work surface traversed thereby, a pair of spaced and substantially aligned body supporting and guiding members laterally disposed with respect to the nozzle and having bearing portions, one of the members being pivoted to the body whereby the distance between said bearing portions may be lessened while describing a curve during the stripe applying operation.

10. In a striping instrument, a body, a nozzle extending from the body for depositing paint upon a work surface traversed thereby, a pair of spaced and substantially aligned body supporting and guiding members laterally disposed with respect to the nozzle having bearing portions, one of the members being pivoted to the body, and a spring associated with the pivoted member and the body to normally urge the pivoted member toward the other guiding member.

In testimony whereof we affix our signatures.

EARL M. BARDEN.

FREDERICK A. BENOIT.