Nov. 25, 1930. H. S. McCLELLAN 1,782,541

METHOD OF STENCILING

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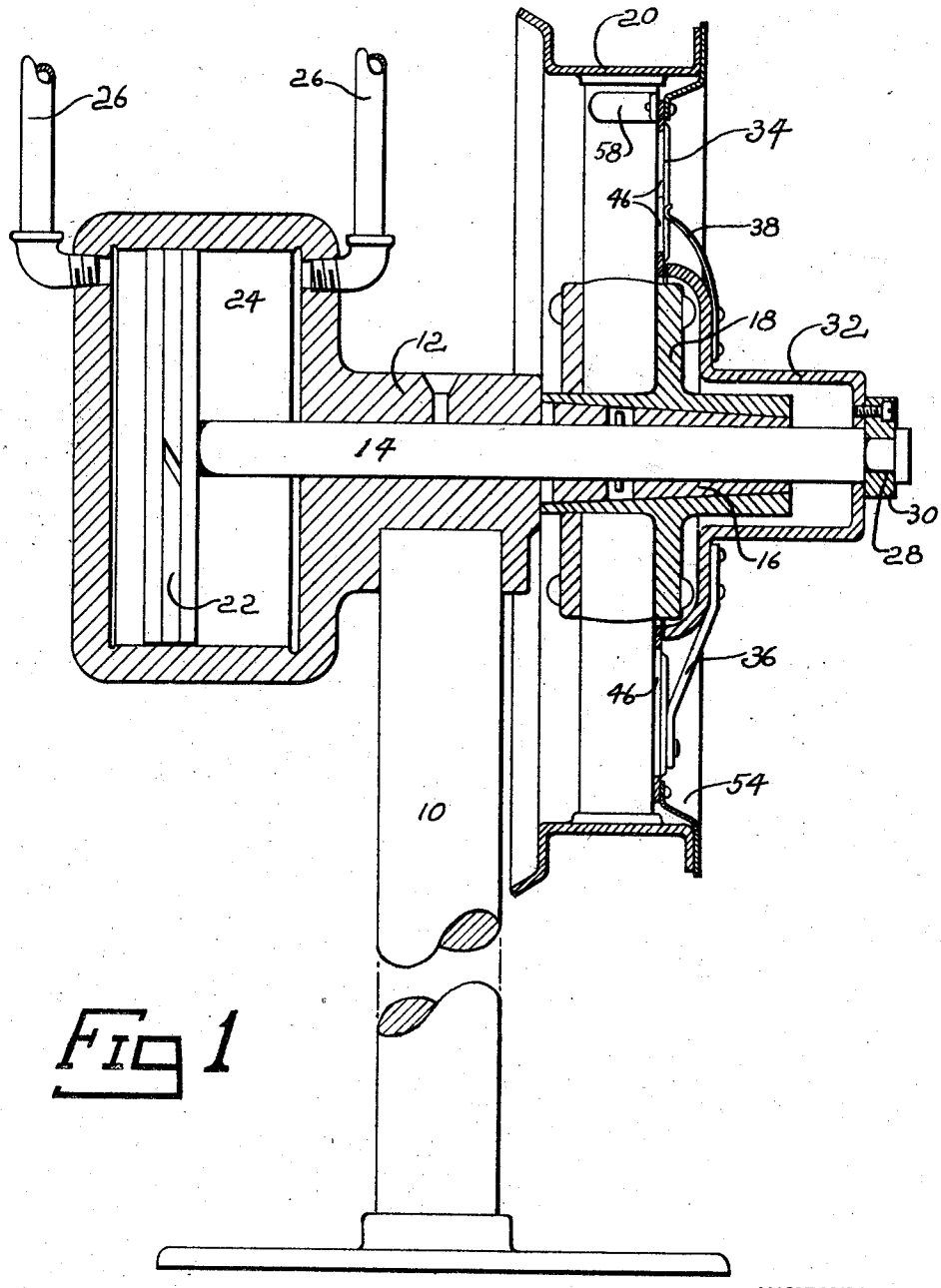


FIG 1

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FIG 2

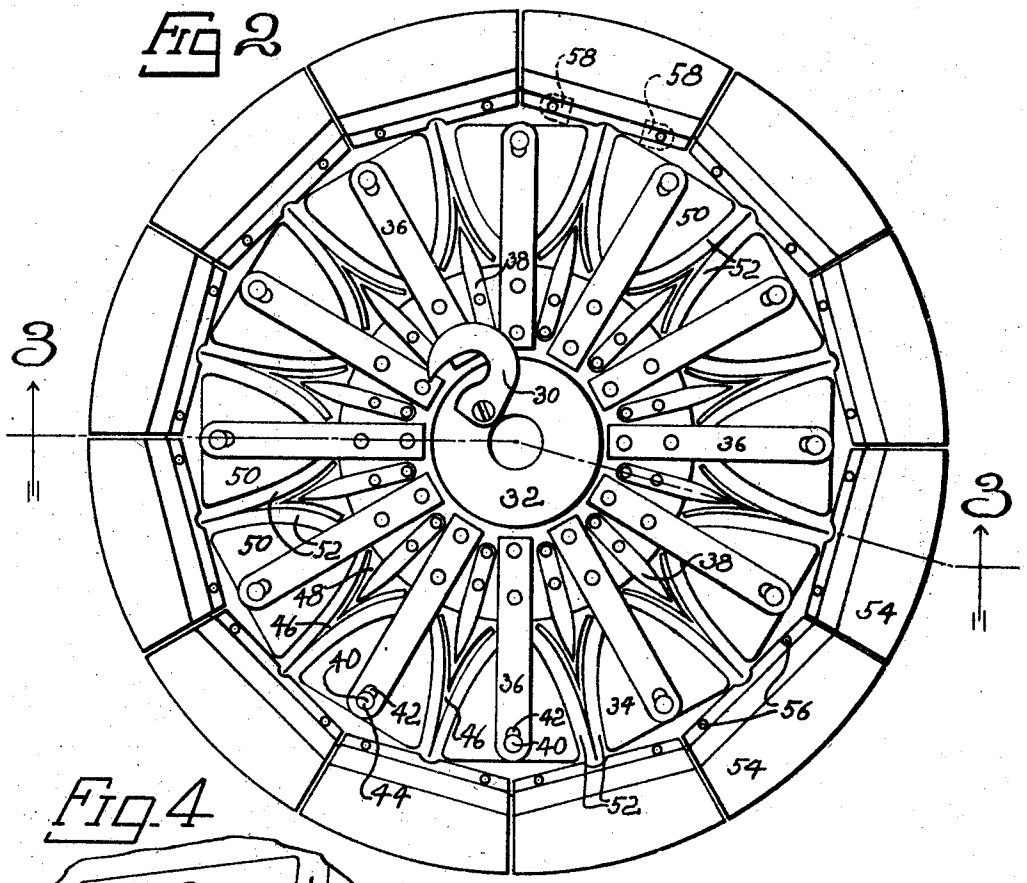


FIG 4

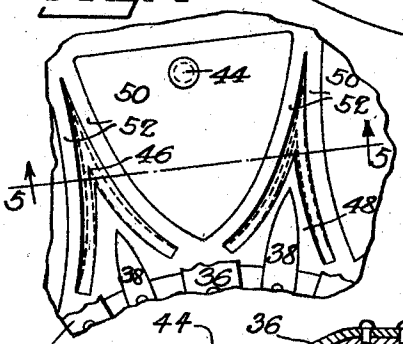


FIG 5

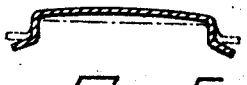


FIG 3

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UNITED STATES PATENT OFFICE

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METHOD OF STENCILING

Application filed September 16, 1927. Serial No. 220,026.

This invention relates to the method of producing patterns or designs by stenciling over irregular surfaces and more particularly to the method of producing a stripe design on the spokes of automobile wheels.

Heretofore the striping of automobile wheels has been by hand and stencils have been found impractical due to the irregular surface of the spokes. When a stencil was used the lines were foggy and broken or the edge of the stencil caused the paint to run where a proper contact was not made between the stencil and the spoke. It is therefore an important object of this invention to secure a resilient stencil under pressure with its edges in contact with an irregular surface so that the design may be sprayed thru the stencil.

The invention will be more clearly understood by reference to the following description taken in connection with the accompanying drawings in which:

Fig. 1 is a sectional view thru an automobile wheel and a support therefor showing a method of securing the stencil thereon.

Fig. 2 is a plan view of the stencil.

Fig. 3 is a sectional view on line 3—3 of Fig. 2.

Fig. 4 is a fragmentary plan view of a portion of the stencil illustrating the movement of the edges around the opening. Fig. 5 is a sectional view on line 5—5 of Fig. 4.

Referring particularly to Fig. 1 of the drawings, a pedestal 10 has been shown having a work supporting member 12 pivoted at its upper end. Extending thru the work supporting member 12 is a reciprocal locking member 14 and upon which I have shown a tapered sleeve 16 adapted to receive the hub 18 of an automobile wheel 20. At one end of the member 14 I have provided a piston 22 which fits an air chamber 24 in the support 12. Pipes 26 communicate with the chamber 24 at opposite sides of the piston 22 so that by positioning a valve, not shown, one is adapted to supply an air pressure and the other receives the exhausted air at the opposite side of the piston. The piston may be moved in either direction by causing an air pressure to be applied thru either pipe 26; the other acting as the exhaust conduit.

The wheel hub 18 is placed on the tapered sleeve 16 and the stencil is placed over the outer surface of the wheel and connected to the member 14 in such a manner that its movement to the left holds the stencil tightly against the wheel and holds the latter on the tapered sleeve 16.

The end of the member 14 opposite the piston 22 is provided with a groove 28 adapted to receive a pivoted hook 30 on the stencil. By applying pressure at one side of the piston 22, the stencil may be moved away from the wheel and by applying a pressure at the opposite side of the piston the stencil is resiliently held in contact with the irregular wheel surface.

The stencil comprises a hub portion 32 and a plate portion 34. The hub portion is adapted to fit over the member 14 and the hook 30 is pivoted on its outer end. A plurality of spring fingers 36 and 38 are secured to the hub member. The springs 36 are secured to the plate portion 34 by projections 40 received in slots 42 in the springs 36. A head portion 44 holds the plate 34 on the springs 36. The slip connection has been provided to permit the same tension on each portion of the plate.

The figure to be stenciled or the spoke stripes are cut in the plate 34 providing openings 46 thru which the design is sprayed. In forming a stencil for the particular design illustrated, V shaped portions 48 are formed and the springs 38 engage these resiliently forcing them against the irregular surface of the spokes. The V shaped portions are bent slightly below the normal contacting surface so that when they engage and disengage the wheel surface a wiping effect is obtained. The portions 50 between each of the openings 46 are provided with depressed portions 52 around the edge of the openings so that they slightly slide when making contact. It is this feature that makes stenciling irregular surfaces possible because the edges of the stencil are slightly drawn away from the paint before it is removed from

the work thus preventing blurring or running of the paint.

In order that the stencil may be as flexible as possible the plate 34 is made as a small as possible and in order to cover the entire wheel a segmental flange is secured to the outer periphery of the plate. This flange is made up of a plurality of flanged members 54 shown riveted to the plate 34 as at 56.

The stencil is positioned on the wheel angularly by a pair of resilient clips 58 which engage one of the spokes.

It will be understood that various changes may be made in the construction and arrangement of parts without departing from the spirit of my invention, that the stencil may be used for applying various designs to parts other than automobile wheels, and that it is not my intention to limit its scope other than by the terms of the appended claims.

What I claim is:

1. The method of striping spoked wheels which consists in applying a resilient stencil to the surface thereof, forcing the stencil against said surface to cause the edges of the openings in said stencil to slide on said surface, and spraying paint thru said openings.

2. The method of forming designs on irregular surfaces which consists in applying a resilient stencil to said surface, pressing the stencil against said surface to cause the edges of the openings in said stencil to slide on said surface, and applying paint to said surface thru the openings in said stencil.

3. The method of stripping wheels which consists in applying a resilient stencil to the surface thereof, pressing the stencil against said surface at points on portions between the openings of said stencil whereby the edges of the opening slide on the wheel, and applying paint to said surface thru the openings in said stencil.

4. A stencil of the class described comprising a central hub member, a plate spaced from said hub member and provided with openings corresponding in shape to the design desired, resilient flanges at the edges of the openings, and spring members secured to said hub adapted to frictionally engage portions of said plate, certain of said spring members adapted to connect said plate to said hub.

5. A stencil of the class described comprising a supporting member, a plate spaced from said supporting member and provided with openings, spring members secured to said supporting member adapted to engage the portions of said plate between said openings and adapted to form a connection between said plate and said support, and depressed portions in said plate around the openings in said plate.

6. A stencil of the class described comprising a supporting member, a plate resiliently connected to said supporting member and provided with openings thru which paint may be applied, and resilient depressed portions on said plate around the edge of said openings.

7. The method of striping spoked wheels which consists in applying a resilient stencil to the surface thereof, forcing the stencil against said surface to cause the edges of the openings in said stencil to slide on said surface, and spraying paint thru said openings, then sliding the stencil on the surface away from the opening.

8. The method of forming designs on irregular surfaces which consists in applying a resilient stencil to said surface, pressing the stencil against said surface to cause the edges of the openings in said stencil to slide on said surface, and applying paint to said surface thru the openings in said stencil, then sliding the stencil on the surface away from the opening.

9. The method of applying a stencil marking to a surface which comprises placing a flexible stencil on the surface, pressing the flexible stencil to thereby cause the edges of the openings to slide toward the portion of the surface to be painted, and removing the pressure after painting to permit the edges to slide away from the painted surface prior to removing the stencil from the work.

10. The method of applying a stencil marking to a surface which comprises sliding the edges of the openings in the stencil toward the surfaces to be marked, applying a coloring through the openings, and sliding the edges of the openings away from the mark surface prior to removing the stencil from the work.

11. A stencil comprising a body portion having openings through which paint may be applied, the edges around the openings being movable in a plane parallel to the plane of said body portion.

12. A stencil comprising a body portion having openings through which paint may be applied, the edges around the openings being normally out of the plane of said body portion and yieldable to be moved under pressure into the plane of said body portion.

13. A stencil comprising a body portion having openings through which paint may be applied, resilient means normally forcing the edges around the openings out of the plane of said body portion and yielding to permit the edges to be moved into the plane of said body portion when the stencil is applied to the work.

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