No. 749,622. PATENTED JAN. 12, 1904.

W. B. LONG.

WHEEL PAINTING APPARATUS.

APPLICATION FILED APR. 22, 1903.

NO MODEL.

FIG. I.

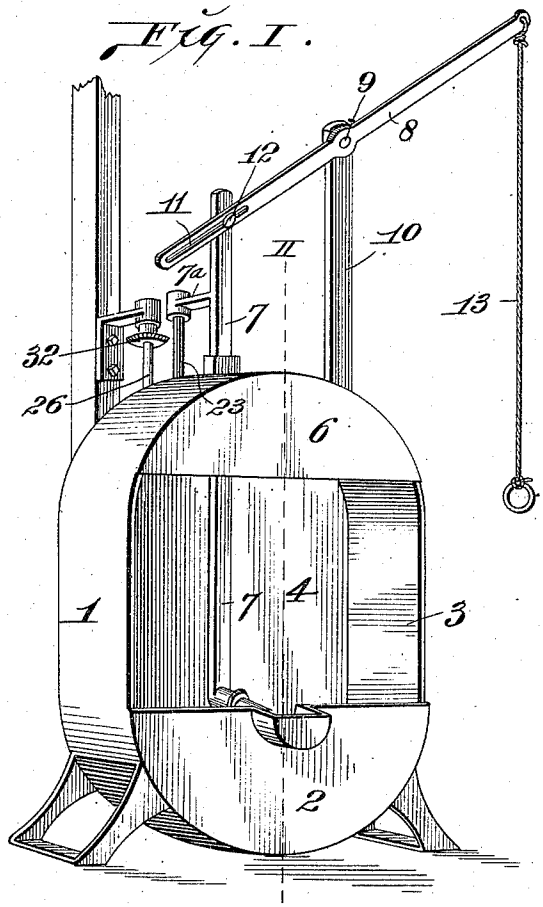


FIG. II.

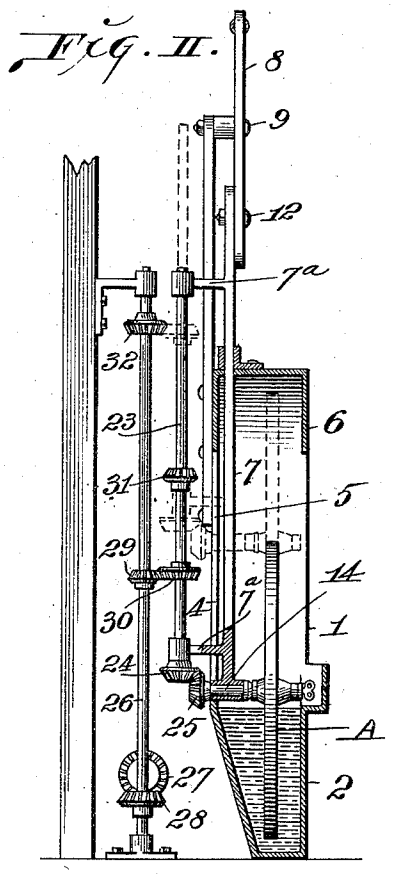


FIG. III.

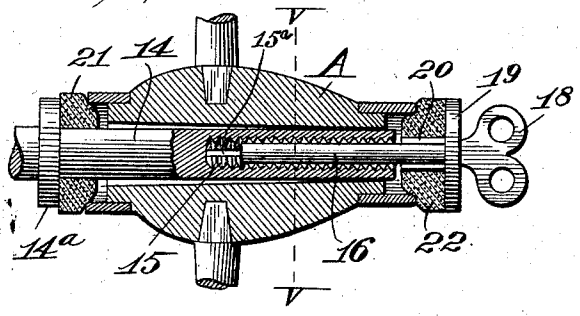


FIG. IV.

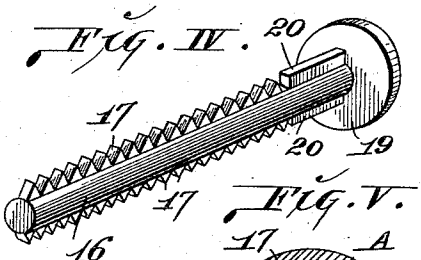
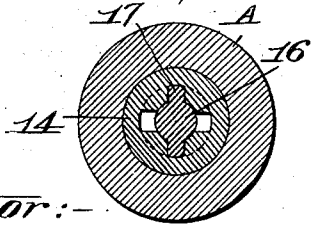


FIG. V.



Attest:—
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No. 749,622. Patented January 12, 1904.

UNITED STATES PATENT OFFICE.

WALTER B. LONG, OF CLEVELAND, OHIO.

WHEEL-PAINTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 749,622, dated January 12, 1904.

Application filed April 22, 1903. Serial No. 153,798. (No model.)

To all whom it may concern:

Be it known that I, WALTER B. LONG, a citizen of the United States, residing in Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Wheel-Painting Apparatus, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an apparatus for use in painting vehicle-wheels, the parts being so arranged that the wheel may be first supported and revolved in a suitable housing containing paint, then elevated in the housing, and revolved to remove the surplus paint.

My invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a perspective front view of my apparatus. Fig. II is a vertical section taken on line II II, Fig. I, and showing the wheel supporting and revolving mechanism in elevation. Fig. III is a detail section illustrating the stub-shaft on which the wheel is supported in the apparatus. Fig. IV is a view of a wheel-retaining screw of the stub-shaft. Fig. V is a cross-section taken on line V V, Fig. III.

1 designates a housing at the bottom of which is a paint-well 2. The housing is provided with an opening 3 at its front and has a rear wall 4, that contains a vertical slot 5. (See Fig. II.) Above the opening 3 at the front of the housing is a shield 6.

7 designates a vertically-movable bar arranged to operate in the housing 1 and extending vertically through the top of said housing to receive the connection of means by which the bar is raised or lowered to shift the position of its lower end in the housing for the purpose hereinafter made clear. The means I have shown for moving the bar 7 comprises a double-armed lever 8, that is pivoted at 9 to a post 10, and the inner arm of which is provided with a slot 11, that receives a stud 12, seated in the bar 7 to operate in said slot.

13 is a pull-cord connected to the outer arm of the lever 8 and by which said lever is moved to lift the bar 7. By the construction described the bar 7 may be manually lifted; but I do not limit myself to this particular construction, as it is obvious that the bar may be connected to power mechanism for its actuation.

14 designates a spindle journaled in the lower end of the bar 7 and adapted to receive the vehicle-wheel, as indicated by A, Figs. II and III, to be painted. The spindle 14 is provided with an interior screw-thread 15 and slots 15^a, that lead inwardly from its outer end.

16 is a retaining-screw having series of teeth 17 of a pitch corresponding to that of the screw-thread 15, which receives the teeth when the retaining-screw is turned into the spindle 14.

18 is the head of the retaining-screw, and 19 is an annular rim surrounding said screw adjacent to its head. Between the rim 19 and the teeth 17 are fins 20.

21 is a gasket on the spindle 14, resting against an annular rim 14^a on the rear part of the spindle and adapted to bear against the inner end of the hub of the wheel A when mounted on said spindle.

22 is a gasket that is fitted to the retaining-screw 16 and held from rotation thereon by the fins 20 while presented to the outer end of the wheel-hub between said end of the hub and the rim 19 of the retaining-screw.

The gaskets 21 and 22 are intended to exclude the ingress of paint into the interior of the hub of the wheel A while it is being coated with paint contained in the well 2 of the housing 1, as illustrated in Fig. II.

In the process of painting a wheel it is mounted on the spindle 14, as seen in Figs. II and III, and held thereon by the retaining-screw 16 to be lowered into the paint-well 2. The wheel is lowered into the paint-well on the lowering of the vertically-movable bar 7 and while in the paint is rotated to coat it by means that will now be described.

23 designates a driven shaft that is mounted in bearing-arms 7^a, carried by the bar 7, and the lowermost of which operates through the slot 5 in the housing 1. The driven shaft 23 is geared to the spindle 14 by a beveled pinion 24 on said shaft, that meshes with a beveled pinion 25, fixed to the spindle.

26 is a drive-shaft to which power is communicated from a beveled pinion 27, suitably operated and geared to a beveled pinion 28, fixed to said drive-shaft.

29 is a beveled pinion on the drive-shaft 26, that meshes with a beveled pinion 30, fixed to the driven shaft 23. When the wheel A has been lowered into the paint-well 2, the beveled pinion 30 is in engagement with the beveled pinion 29, and the drive-shaft 26 being in motion rotation is imparted to the driven shaft 23 through the medium of said pinions and transmitted to the beveled pinions 24 and 25 to rotate the spindle 14 and turn the wheel A in the paint, so that it will be thoroughly coated. The bar 7 is then lifted to raise the wheel A out of the paint into the position seen in dotted lines, Fig. II, carrying the driven shaft 23 therewith. On the upward movement of the driven shaft 23 the beveled pinion 30 is moved out of engagement with the pinion 29, and the beveled pinion 31, fixed to the driven shaft above the pinion 30, is carried to a beveled pinion 32, fixed to the upper end of the drive-shaft 26. As soon as the pinion 31 engages with the pinion 32 renewed rotation of the driven shaft 23 is furnished and rotation is again imparted to the spindle 14 to turn the wheel A in its elevated position and throw therefrom the surplus paint which it carried when elevated from the paint-well. During the rotation of the wheel in its elevated position the paint is prevented from being thrown out of the housing 1 by the shield 6 at the front of the housing, and the paint, therefore, on being thrown against the housing-walls and said shield must of necessity flow therefrom back to the paint-well 2.

I claim as my invention—

1. In a wheel-painting apparatus, the combination of a housing, paint-well at the bottom of said housing, a wheel-receiving spindle, means for supporting said spindle, means for lowering and raising said spindle-supporting means, and means for imparting rotation to said spindle when in its lowered and elevated positions, substantially as set forth.

2. In a wheel-painting apparatus, the combination of a housing, a paint-well at the bottom of said housing, a bar vertically movable in said housing, means for lowering and raising said bar, a wheel-receiving spindle journaled in said bar, a driven shaft geared to said spindle, and carried by said vertically-movable bar, a drive-shaft and gearing fixed to said drive-shaft and driven shaft to be engaged when said vertically-movable bar is in lowered and elevated positions, substantially as set forth.

3. In a wheel-painting apparatus, the combination of a support, a wheel-receiving spindle mounted in said support, and provided with an interior screw-thread, a gasket located on the rear portion of said spindle, a retaining-screw for insertion into said spindle, and a gasket carried by said retaining-screw, substantially as and for the purpose set forth.

4. In a wheel-painting apparatus, the combination of a support, a wheel-receiving spindle mounted in said support and provided with an interior screw-thread, a gasket on the rear portion of said spindle, a retaining-screw for insertion into said spindle, a rim carried by said screw, fins extending longitudinally of said screw, and a gasket positioned on said screw at the location of said fins and rim, substantially as set forth.

WALTER B. LONG.

In presence of—
S. SHANKWEILER,
R. C. ACKER.