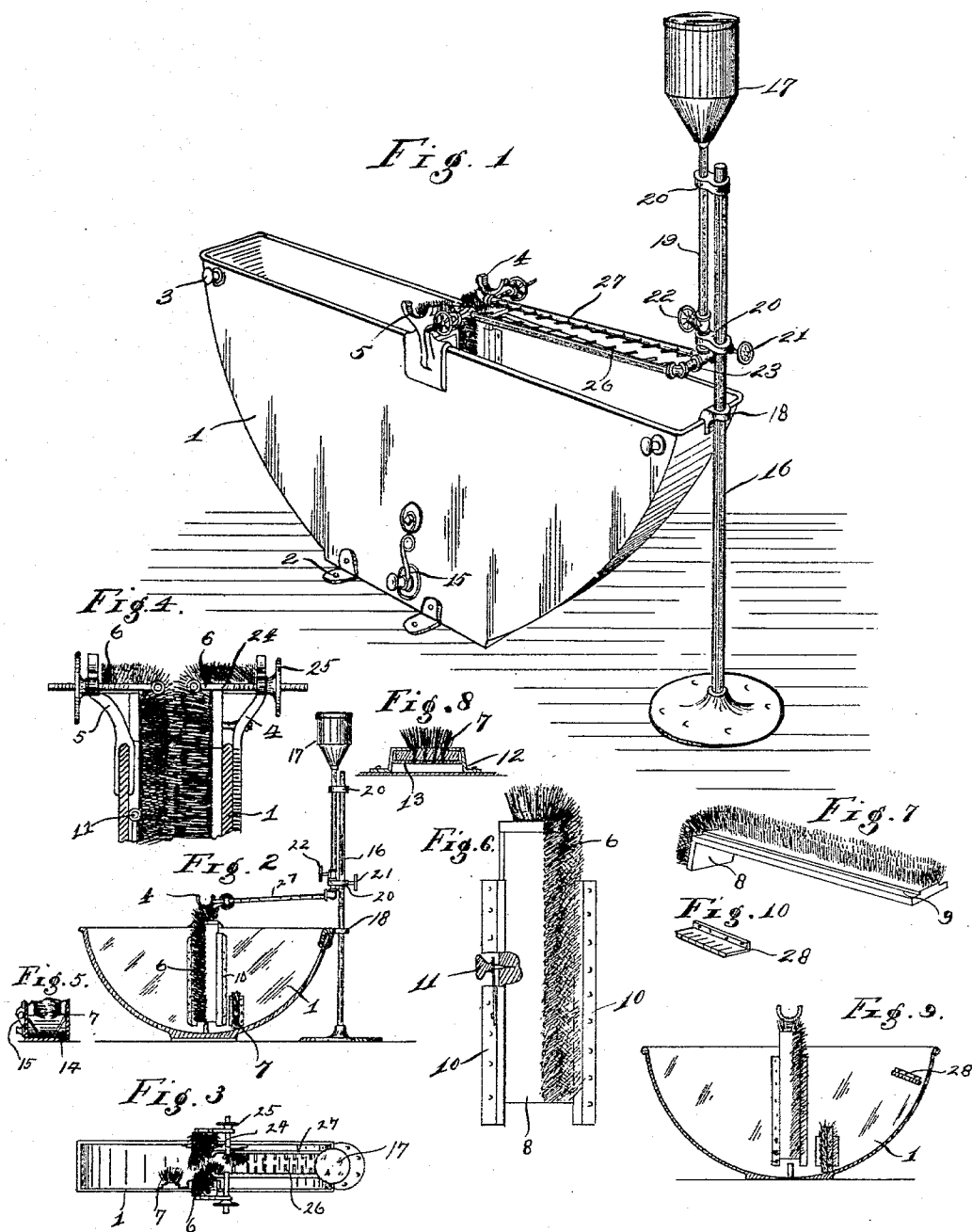


(No Model.)

M. ARBUCKLE.
WHEEL PAINTING MACHINE.

No. 546,216.

Patented Sept. 10, 1895.



Witnesses
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UNITED STATES PATENT OFFICE.

MATTHEW ARBUCKLE, OF INDIANAPOLIS, INDIANA.

WHEEL-PAINTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 546,216, dated September 10, 1895.

Application filed August 30, 1894. Serial No. 521,764. (No model.)

To all whom it may concern:

Be it known that I, MATTHEW ARBUCKLE, of Indianapolis, county of Marion, and State of Indiana, have invented certain new and useful
5 Improvements in Wheel-Painting Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like numerals refer to like parts.

10 The object of my wheel-painting machine is to reduce the cost of painting carriage and other vehicle wheels. With my machine one person can paint several wheels while he would be painting one by hand. This machine applies and spreads the paint and dries
15 it quickly. My device can also be used as a wheel-washing machine by omitting some parts of the painting-machine.

20 The full nature of my invention will appear from the following description and accompanying drawings.

Figure 1 is a perspective of my wheel-painting machine. Fig. 2 is a central vertical longitudinal section of the device, excepting the
25 paint-can and support, which are in elevation. Fig. 3 is a plan view of the machine. Fig. 4 is a vertical cross-section of the upper central portion of the tank to one side of the brushes. Fig. 5 is the same view of the lower
30 central portion of the tank, but on a smaller scale than Fig. 4. Fig. 6 is a detail view of a main brush and attachment, being an elevation. Fig. 7 is a perspective of a main brush. Fig. 8 is a cross-section of a small
35 brush and its attachment. Fig. 9 is a central vertical longitudinal section of a good form of the tank when used for washing wheels, and Fig. 10 is a detail view of the mud-scraper in the washing-machine.

40 I provide a tank 1, made, preferably, of wood and semicircular, as shown, being wide enough to contain the brushes and receive a wheel. When desired, I secure it to the floor by the cleats 2 and provide knobs 3 for handling it. A portion of the bottom of the tank
45 is built flat, as shown, that it may sit level and steady.

50 I mount centrally on the tank means of supporting the wheel, consisting of a vertically movable and adjustable jack 4 on one side

and a readily-removable support 5 upon the other side. The jack 4 and its means of adjustment are similar to that shown in my Letters Patent dated September 4, 1894. The support 5 is made removable in order that supports of varying heights may be used for
55 wheels of varying diameters, the support 4 being adjusted to register with it. These supports 5 are made removable also for converting the painting-machine into a washing-machine 60 when the wheel is on the carriage-axle, as the jack 4 then is sufficient. If the wheel, however, is not on the vehicle, the support 5 is required in the washing-machine.

Two sets of brushes are provided by me, 65 main brushes 6 and small or felly brushes 7. Two of these, one of each kind, are placed on each inner side of the tank. The main brushes 6 are made in the form, preferably, that is shown in Fig. 7—of a wooden L-shaped base 70 8, with grooves 9 on each side of the inner face thereof. This base is so formed that it may be slipped in a guideway formed, as shown in Fig. 6, by placing a pair of guide-
75 strips 10, being L-shaped in cross-section, so as to have a flange extending in from the base 8 and fitting in the grooves 9. These guide-strips are made, preferably, of sheet-iron galvanized and nailed to the inner side of the tank, near the middle, so as to register with 80 the wheel-supports 4 and 5. The long end of the brush-base 8 is placed in this guideway, the short end extending horizontally outward over the sides of the tank. The fibers of the main brushes are set to one side of the center 85 of the base 8, as seen in Fig. 6, in order that the ends of fibers may pass each other when the brushes are in place, which is desirable, that the brushes may overlap the spokes of the wheel. This peculiar position of the
90 fibers, however, is not required on the short part of the brush-base. One of these main brushes is fastened by a screw at its upper end to the jack 4, whereby the two move up or down together. The other brush is moved 95 by hand to register with the first and is held in place by a spring catch or dog 11, which operates through a hole in the cleat to which it is fastened. The short end of this pair of brushes engages the hub, while the long end 100

acts on the spokes. The short brushes 7 are to act on the felly and that part of the wheel. It is made, as shown in Fig. 8, plain, and is held in the guideway or small brush-holder 5 12, made like the other guideways, except it has a back 13, which sets the brush out some distance from the tank, whereby it can engage the felly and can be held rather tightly in place. These brushes usually need no adjustment, but, if desired, they can be slipped up or down and the tight fit of the brush-holder will keep them in place.

At the bottom of the tank I provide means of centering the wheel in the tank, consisting of what I call "centering-strips" 14, being a pair of strips secured to the side and bottom and inclined toward each other at the bottom. By this the tire will not engage the side of the tank and the wheel will be kept in a position wherein the brushes will act equally upon it. To remove the contents of the tank quickly, I provide a spring-closed valve 15, covering an exit at the lower part of one side of the tank. The spring rotates laterally, whereby the valve can quickly be opened or closed.

To feed the paint to the wheel, I provide a suitable stand or support 16 for a paint can or tank 17, from which the paint is conveyed by suitable tubes to the wheel. The stand shown is secured to the floor near the wheel-tank and is secured to the same by the removable connection 18. An iron pipe or tube 19, extending down from the paint-can 17, is fastened to the stand 16 by two brackets 20, one being secured by a set-screw on wheel 21. The iron paint-tube 19 has a valve 22 at its lower end, below which it divides and forms a U-shaped tube 23, the U pointing toward the wheel. From each arm of the U-shaped tube is a rubber tube 27, extending parallel with the top of the sides of the tank to the inner end of a laterally-adjustable rod or arm 24, which is mounted in the wheel-support on either side and, as shown herein, is operated by a small hand-wheel 25. The tubes are provided with a series of apertures or preferably small inwardly-extending tubes 26, through which the paint flows to the wheel. The tubes are moved close to the spokes after the wheel is put in, whereby the small outlets will to some extent overlap the spokes, and thus deposit paint on them. The inner end of the main tubes deposits paint on the hub. The brushes evenly distribute the paint thus deposited. To dry the wheel, drying-brushes, like the paint-brushes above described, are substituted for them, or, preferably, a second machine for drying purposes is placed near the first, being like it except the device for supplying the paint. In this manner the paint will be readily deposited and distributed over the surface of the wheel. The fibers of the brushes should be soft and long. If they should be short or stiff, they will often

fail to distribute paint properly about the ends of the spoke, where a few touches by a hand-brush would be necessary.

When my device is used to wash carriages, the paint-supplying part is removed, as it is readily detachable. If the wheel is on the buggy, the removable support 5 is taken off; otherwise not. Sometimes it is desired to scrape mud off the sides of the felly, as water is slow to penetrate and disintegrate some kinds of dirt. For this I put a scraper 28 on each side of the tank, made, preferably, of rubber a fourth of an inch thick and partially split, as shown in Fig. 10. Usually this scraper is not needed. To increase the pressure of the scraper on the wheel, I press laterally against the tank with my hand. I might add that usually the tank when used to wash wheels is not secured to the floor, but is placed under the wheel in the manner described in my former patent above mentioned. Instead of making the tubes 26 and 27 of rubber I sometimes make them of iron, the tubes 26 being short with a small, preferably hollow, hair brush secured to them and extending inwardly into contact with the wheel.

What I claim as my invention, and desire to secure by Letters Patent, is the following:

1. A wheel painting machine comprising a tank, means of supporting the wheel so it will rotate in the tank, brushes removably mounted on the sides of the tank close enough to the wheel to engage it, a paint can placed higher than the tank, and tubes leading from the paint can alongside the parts of the wheel and provided with apertures through which the paint is deposited on the wheel.

2. In a wheel painting or washing machine, a tank, guideways on the sides of the tank, and L-shaped brushes with the long ends fitting in such guideways and the short ends extending laterally outward at the top, the fibers of the brushes being on one side of the center of the long ends whereby the ends of the fibers will pass each other when the brushes are in place, substantially as shown and described.

3. In a wheel painting or washing machine, a tank, a set of L-shaped brushes adjustably mounted on the sides of the tank with their short ends upward and extending outward, and a set of small brushes on the sides of the tank near the bottom and set so as to engage the felly and outer ends of the spokes of the wheel, substantially as shown and described.

4. In a wheel painting or washing machine, a tank, an adjustable jack on one side, and a support on the other side whereby the wheel is supported, guideways on the sides of the tank, brushes movable in such guideways, the brush on one side fastened to the jack, and a catch adapted to hold the other brush in any desired elevation, substantially as shown and described.

5 5. In a wheel painting machine, a suitable frame, means for supporting the wheels on such frame, a paint can placed higher than the wheel hub, tubes leading from the paint can alongside the wheel, and laterally adjustable rods mounted on the frame to whose inner ends the inner ends of the paint tubes are attached whereby the closeness of such tubes

to the wheel may be adjusted, substantially as shown and described. 10

I witness whereof I have hereunto set my hand this 17th day of August, 1894.

MATTHEW ARBUCKLE.

Witnesses:

V. H. LOCKWOOD,

A. S. COURTRIGHT.