

March 9, 1926.

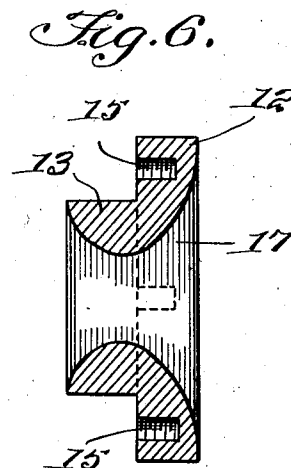
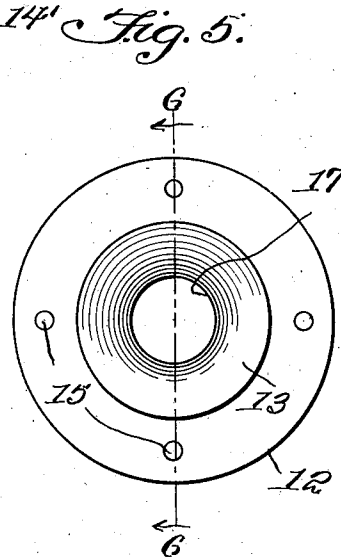
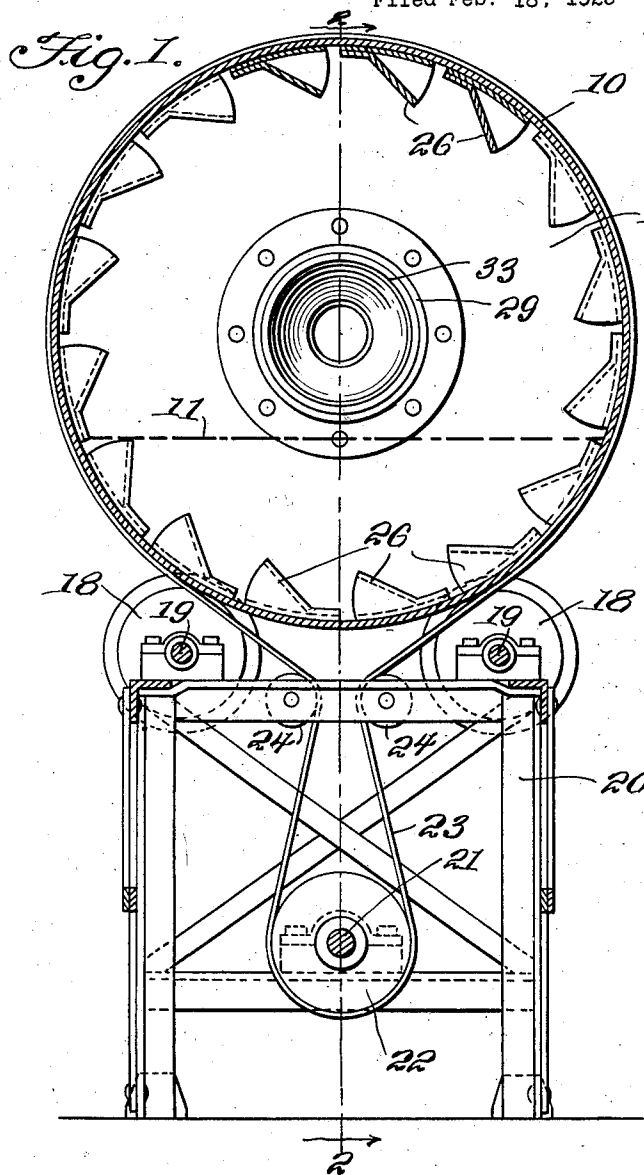
1,576,327

J. H. HUGHES

HANDLE PAINTING MACHINE

Filed Feb. 18, 1925

2 Sheets-Sheet 1



WITNESS: *J. T. L. Wright*

James H. Hughes

INVENTOR

BY *Victor J. Evans*

ATTORNEY

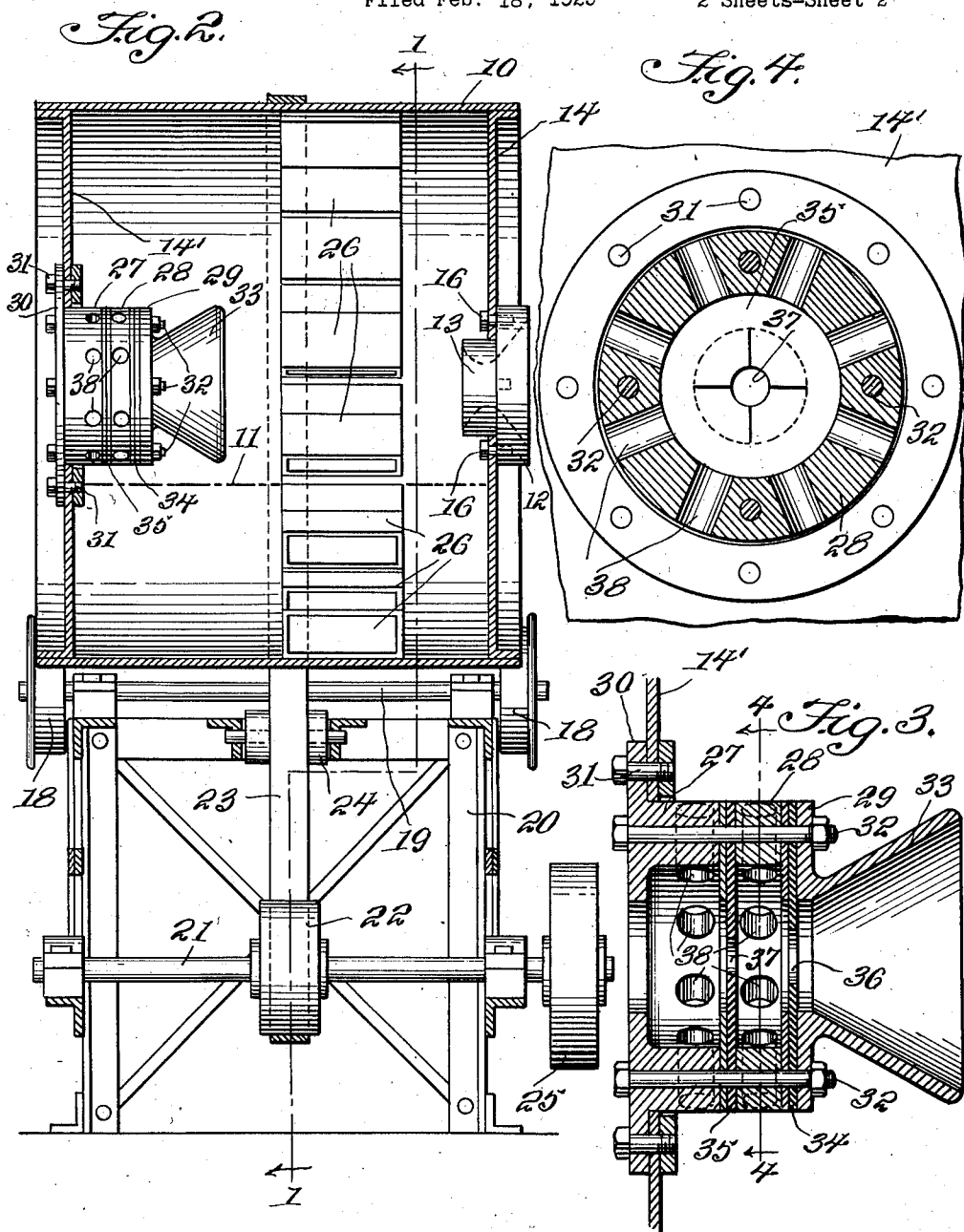
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UNITED STATES PATENT OFFICE.

JAMES H. HUGHES, OF CANTON, OHIO.

HANDLE-PAINTING MACHINE.

Application filed February 18, 1925. Serial No. 10,117.

To all whom it may concern:

Be it known that I, JAMES H. HUGHES, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented new and useful Improvements in Handle-Painting Machines, of which the following is a specification.

This invention contemplates the provision of an automatic painting apparatus wherein handles of any sort or other analogous articles are painted.

In carrying out the invention, I contemplate the use of a container adapted to be partly filled with paint, and arranged means for splashing or spilling the paint over the article being dealt with as the latter passes through the container.

One of the chief characteristics of the invention resides in the novel construction of means employed for lifting the paint above the article to be painted, and ultimately pour the paint on said article, whereby the latter is quickly and conveniently treated, the said means being also utilized to maintain a continuous mixing action in the paint in the lower part of the container.

Another very important object of the invention resides in the provision of means for wiping each article as it passes from the container, thus equally distributing the paint over the article, and relieving the latter of superfluous paint which is returned to the container.

More specifically stated, the invention comprehends the use of a container mounted for rotation, and adapted to be partly filled with paint, the container being provided with spaced openings to allow an article to be passed through the container from one side to the other at a point above the level of the liquid in the container, the container being equipped with a circumferential series of dips or buckets for lifting the paint above the article, and subsequently pouring the paint over the article for the purpose stated, while the article is subsequently adapted to be passed through one or more wiping elements so as to relieve the article of any superfluous paint and to also equally distribute the paint over the article as it is taken from the container.

The nature and advantages of the invention being better understood when the follow-

ing detailed description is read in connection with the accompanying drawings, the invention residing in the construction, combination and arrangement of parts as claimed.

In the drawings forming part of this application, like numerals of reference indicate similar parts in the several views, and wherein:

Figure 1 is a sectional view taken on line 1—1 of Figure 2.

Figure 2 is a view taken on line 2—2 of Figure 1.

Figure 3 is a sectional view through the gasket head, through which the articles finally pass in leaving the apparatus.

Figure 4 is a sectional view on line 4—4 of Figure 3.

Figure 5 is a view in elevation of the inlet head.

Figure 6 is a sectional view taken on line 6—6 of Figure 5.

The apparatus forming the subject matter of the present invention essentially embodies a container 10 adapted to be partly filled with paint or the like, and while this container may vary in size or configuration without departing from the spirit of the invention, it is preferably of cross sectional contour clearly shown in Figure 1. The handles or other analogous articles to be painted are adapted to be passed through the container 10 at a point above the level of the paint indicated at 11, and while being passed through said container, they are quickly and conveniently painted in the manner to be presently described. For the purpose of passing the articles through the container, I provide the latter with opposed openings arranged in axial alignment, and in one of these openings is arranged the inlet head shown in Figure 6, while arranged in the other opening is the gasket head shown in Figure 3. The inlet head consists of a casting 12 preferably of the construction shown in Figures 5 and 6, wherein it will be noted that the casting is formed with a reduced annular portion 13 which snugly fits within the opening above referred to formed in the adjacent wall 14 of the casing. The body of the casting is provided with threaded openings 15 to accommodate suitable fastening elements 16 employed to secure the casting in the position shown in Figure 2. This

casting is also formed with a flared entrance opening 17, it being understood that the handle or other article enters the casing 10 through this head. After the handles or other articles have entered the casing 10, they are splashed with paint, and subsequently withdrawn from the casing 10 through the gasket head above referred to and supported by the opposed wall 14' of the casing.

While the casing 10 may be stationary, and any suitable means employed for splashing the articles as they pass through the casing, in accordance with the preferred embodiment of the invention, I mount the casing 10 for rotation. The said casing may be supported in any suitable manner for this purpose, but preferably reposes upon a plurality of flanged rollers 18 which are supported on shafts 19, the latter being journaled in a suitable supporting structure indicated generally at 20 in Figures 1 and 2. Also journaled in this supporting structure is a shaft 21 which has keyed or otherwise secured thereto at a point between its ends a belt pulley 22 about which is trained a belt 23, the latter passing around the casing 10 and between a pair of guide rollers 24 arranged in the manner shown in Figure 1 to hold the belt operatively associated with the casing 10. The shaft 21 is adapted to be rotated in any suitable manner preferably by a small motor not shown and adapted to be connected with the shaft 21 by means of the belt passed about the pulley 25. Consequently, when the shaft 21 is rotated similar motion is imparted to the casing 10, and it is during this rotation of the casing that the paint is lifted to points above the transverse center of the casing, thereby subjecting the article to a bath of paint for the purpose specified. In this manner each article is quickly and conveniently painted as it passes through the casing 10, and the said article may be supported by the inlet head 12, and the gasket head at the other side of the casing to rotate with the latter, or it may be gradually turned by the operator while being passed through the casing as will be readily understood.

Various means may be employed for lifting the paint from the lower part of the container 10 to a point above the article, and subsequently direct the paint on the article, but I prefer the means illustrated in the drawings. This means consists of a circumferential series of dips or buckets 26 which may vary in size and shape, and may also be arranged different distances apart if so desired. These dips or buckets pass through the body of paint incident to the rotation of the container 10 upon which the buckets are supported, and consequently each bucket is filled with paint, carrying the latter to a point above the transverse center of the cas-

ing, and subsequently pouring the paint on the article arranged therein. In addition to lifting the paint in the manner described and subsequently spilling or pouring the paint over the article arranged within the container, the dips or buckets 26 are utilized to stir or agitate the paint in the lower part of the container 10, and consequently maintain the continuous mixing action therein.

The gasket head hereinabove referred to and clearly illustrated in Figure 3 is made up of a plurality of separable sections indicated at 27 and 28 and 29 respectively. The section 27 constitutes the body of the head and is of a diameter to snugly fit within the opening formed in the adjacent wall 14' of the container. It is also formed with a flange 30 adapted to be arranged against said wall and secured thereto by suitable fastening elements 31. The section 27 projects inwardly from the wall 14' and is secured to the other sections 28 and 29 by means of bolts or the like 32. The section 29 is formed with a substantially bell shaped extension 33 so that the handles or other articles being passed through the container can be readily passed through the gasket head without any difficulty. Interposed between the respective sections of this head is a pair of spaced gaskets 34 and 35 respectively, the former being clamped between the sections 28 and 29 and formed with a central opening 36, while the gasket 35 is clamped between the sections 27 and 28 and formed with a central opening 37 arranged in axial alignment with the opening 36 of the gasket 34, being considerably smaller than the latter. It is due to this construction and arrangement of parts, that each handle or article is thoroughly wiped as it leaves the container 10, the gasket not only serving to evenly distribute the paint over the article, but also removing the superfluous paint therefrom as will be readily understood. This superfluous paint as it is separated from the handle falls in either the section 27 or 28 of the head, and each of these sections is therefore formed with an annular series of openings 38 to allow this superfluous paint to drain back into the container 10. It is manifest from the structure herein shown and described, that I have devised an automatic painting apparatus which is very meritorious for the purpose intended, in that a large number of handles or other similar articles can be properly painted in a comparatively short time, it being only necessary to start the apparatus and subsequently pass each article through the container as specified.

While it is believed that from the foregoing description, the nature and advantages of the invention will be readily apparent, I desire to have it understood that I do not limit myself to what is herein shown

and described, and that such changes may be resorted to when desired as fall within the scope of what is claimed.

Having thus described the invention, I claim:

1. A painting apparatus of the character described, comprising a container through which each article to be painted is adapted to be passed, said container being adapted to be partly filled with paint, means for conveying the paint in predetermined quantities to points above the article, and subsequently splashing the article therewith, and means for wiping each article as it is taken from the container.

2. A painting apparatus of the character described comprising a container through which each article to be painted is adapted to be passed, said container being adapted to be partly filled with paint, means for supporting the container for rotation, means for rotating the container, and means operable within the container for lifting the paint in predetermined quantities to points above the article and subsequently splashing the latter therewith for the purpose specified.

3. A painting apparatus comprising a container adapted to singly receive the articles to be painted, and adapted to be partly filled with paint, means for supporting the container for rotation, means for rotating the container, means operable within the container for lifting the paint in predetermined quantities, above said article, and subsequently splashing the paint thereon, said last mentioned means also serving to maintain a continuous mixing action within the paint, and means for wiping each article as it is taken from the container.

4. A painting apparatus of the character described comprising a container adapted to singly receive the articles to be painted, and adapted to be partly filled with paint, means for supporting the container for rotation, means for rotating the container, means operable within the container for lifting the paint in predetermined quantities to points above the article, and subsequently subjecting the article to a bath of paint, a head supported on said casing and through which each article passes when taken from the container, and spaced gaskets supported by said

head and having axial aligned openings therein, said gaskets being used to wipe each article as it passes through said head.

5. A painting apparatus of the character described comprising a container adapted to receive singly the articles to be painted and adapted to be partly filled with paint, means supporting the container for rotation, means for rotating the container, a circumferential series of buckets supported within the container and adapted to lift the paint in predetermined quantities to points above the article, and subsequently splash said article therewith incident to the rotation of the container.

6. A painting apparatus comprising a container adapted to singly receive the articles to be painted and adapted to be partly filled with paint, means for supporting the container for rotation, means for rotating the container, a circumferential series of buckets arranged within the container and adapted to lift the paint in predetermined quantities to points above the article, and subsequently pour the paint over said article incident to the rotation of the container, and means for wiping each article as it is taken from the container.

7. A painting apparatus of the character described comprising a container adapted to be partly filled with paint, said container having opposed axially aligned openings through which the articles to be painted are singly passed through the container, an inlet head supported in one of said openings, a second head supported in the other of said openings and having a flared portion projecting inwardly from the adjacent wall of the casing, means for supporting the container for rotation, means for rotating said container, means operable within said container for lifting the paint in predetermined quantities to points above said article, and subsequently pouring the paint over the latter, and spaced gaskets supported by the second mentioned head and designed to wipe each article as it is taken from the container, and said last mentioned head having a plurality of openings through which the superfluous paint drains back into the container.

In testimony whereof I affix my signature.

JAMES H. HUGHES.