

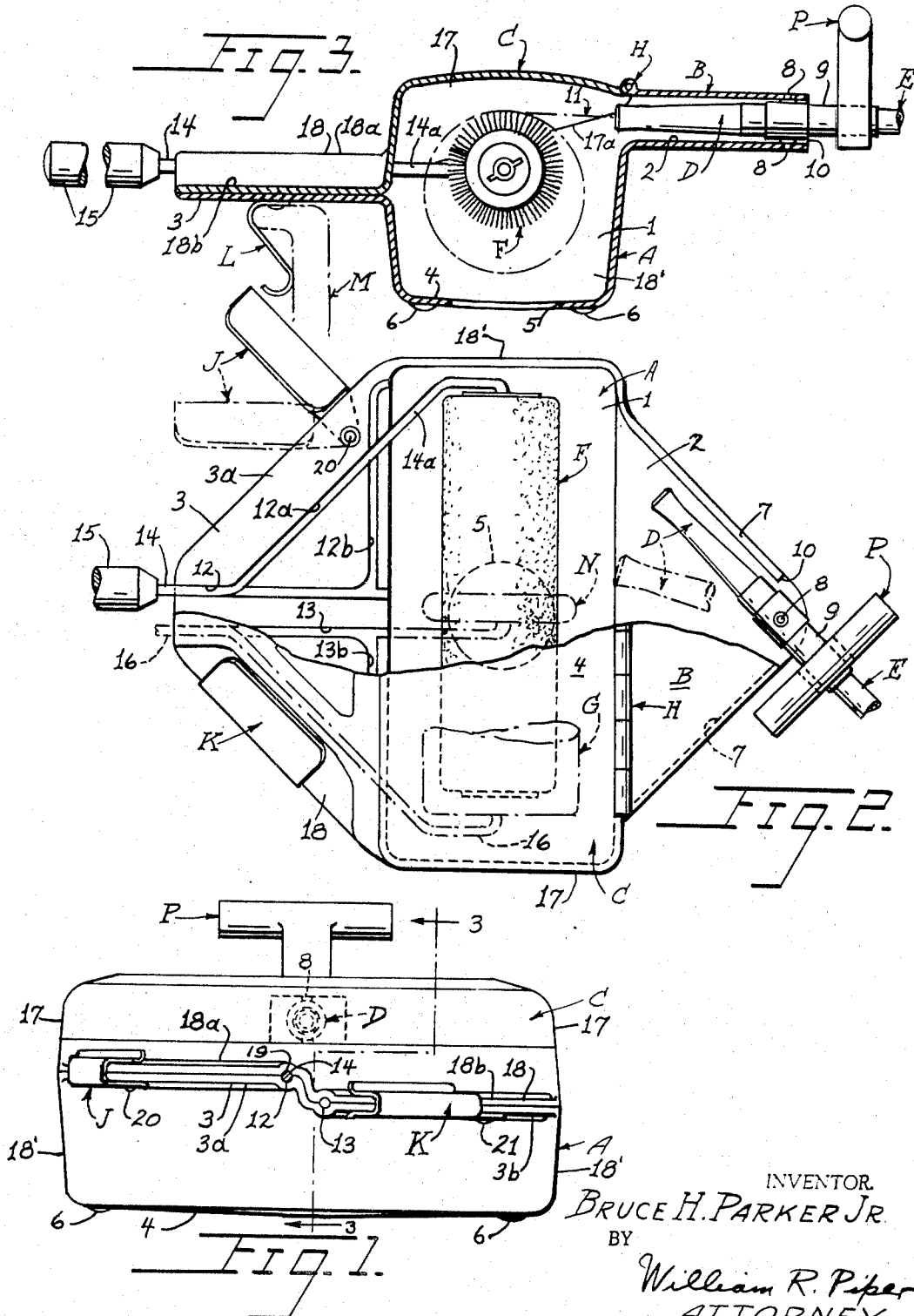
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CENTRIFUGAL WATER-ACTION ROLLER CLEANER

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CENTRIFUGAL WATER-ACTION ROLLER CLEANER

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3 Claims

ABSTRACT OF THE DISCLOSURE

The centrifugal water-action roller cleaner comprises a transparent casing that can receive the paint roller that is to be cleaned. A pivotally mounted nozzle is used for directing a stream of water against the periphery of the paint roller for removing paint therefrom and for rotating the roller at a high speed in order to throw the paint from the roller by centrifugal force. The operator can move the stream of water from end to end of the roller and thus thoroughly clean it. A cover for said casing has an extension which is also used for supporting the handles of different diameter paint rollers so that the periphery of the roller is always tangent to the stream of water.

An object of my invention is to provide a centrifugal wateraction roller cleaner that can be used for cleaning paint rollers of different sizes and shapes. The transparent plastic casing in which the paint roller is received, is designed so that the periphery of the cylindrical paint roller will be tangent to the stream of water issuing from a swingable nozzle regardless of the size of the diameter of the paint roller. The swingable nozzle is connected to a hose which in turn is connectible to a water faucet. The water pressure can be controlled by the faucet. The nozzle has a handle by means of which the operator can swing it to direct the stream of water against the roller from one end to the other, the water stream always being tangent to the roller periphery. The casing has a drain opening large enough to carry away all of the water delivered by the nozzle. The casing entirely encloses the paint roller so as to prevent any water and paint being splashed against the operator as the water stream rotates the roller while washing the paint therefrom and causes the roller to throw off the paint and water by centrifugal force. The speed of the roller may be about 3,000 r.p.m. during the washing operation and when the water is shut off, the continued rotation of the roller will aid in spin-drying it before the roller comes to a stop.

A further object of my invention is to provide a device of the type described in which the transparent plastic casing has a hinged cover that cooperates with the lower portion of the casing for clamping the bails of the paint rollers in positions so that the peripheries of the rollers will lie tangent to the jet stream of water issuing from the nozzle.

A further object of my invention is to provide a device of the type described which is simple in construction and can be readily cleaned after use.

Other objects and advantages will appear as the specification continues and the novel features of the invention will be set forth in the appended claims.

Drawing

For a better understanding of my invention, reference should be made to the accompanying drawing, forming a part of this application, in which:

FIGURE 1 is a side elevation of the centrifugal water-action roller cleaner.

FIGURE 2 is a top plan view with a portion of the cover broken away to show the paint roller and the swingable water nozzle more clearly.

FIGURE 3 is a transverse section through the device and is taken along the line 3—3 of FIGURE 1.

While I have shown only the preferred form of my invention, it should be understood that various changes, or modifications, may be made within the scope of the annexed claims without departing from the spirit thereof.

Detailed description

In carrying out my invention I provide a transparent plastic casing having a lower casing part A, an upper casing part B, and a hinged cover C. The lower casing part A has a paint roller receiving compartment 1, a water nozzle receiving cavity 2, and a paint roller bail-supporting extension 3, as clearly shown in FIGURES 1 and 2. The compartment 1 is made large enough in length, width and depth to receive paint rollers of different diameters. The lower wall 4 of the roller-receiving cavity 1 has a drain opening 5 which is made large enough to carry away all of the water delivered into the closed casing by a water nozzle D. The lower wall 4 may also have projections 6 depending therefrom which would act as feet for supporting the casing, see FIGURES 1 and 3.

The water nozzle receiving cavity 2 is covered by the upper casing part B, see FIGURE 3. Both the cavity 2 and the upper casing part B are triangular in shape with mating flanges 7 that are cemented together or otherwise secured to cause the cavity 2 and casing part to house the nozzle D and permit it to be swung through an arc as clearly shown in FIGURE 2. The nozzle is pivotally mounted in the cavity at 8, and it has a tubular portion 9 that projects through an opening 10 in the cavity 2 and upper casing part B. A flexible hose E leads from the tubular portion 9 and can be removably connected to a water faucet, not shown, or other source of water that is under pressure. A T-shaped handle P, is secured to the tubular portion 9 so that the operator can swing the nozzle D to a desired angular position.

The bail-supporting extension 3 has a novel shape for supporting the bail of a smaller diameter paint roller F, or supporting the bail of a larger diameter paint roller indicated by the dash lines G in FIGURES 2 and 3, so that the periphery of either cylindrical roller F or G will be tangent to the jet stream of water 11, issuing from the nozzle D. In FIGURE 1, the roller bail supporting extension 3 is shown provided with two bail-receiving grooves 12 and 13 that are disposed at different elevations with respect to each other. The groove 12 receives the bail 14 for the smaller diameter roller F. This groove 12 has an angularly disposed branch groove 12a for receiving the inclined portion 14a of the bail. The bail portion 14a extends into the compartment and rotatably supports the smaller diameter paint roller F in the compartment at a position where the periphery of the roller will be tangent to the jet stream of water 11, as shown in FIGURE 3. A handle 15 is mounted on the outer end of the roller bail 14.

Before describing how the extension 3 can accommodate a bail 16 for the larger diameter paint roller G, it is best to complete the description of the structure that clamps the bail 14 to the extension 3 so that the smaller diameter paint roller F is held in proper position within the compartment 1. The casing cover C is pivotally connected to the upper casing part by a piano hinge indicated generally at H, see FIGURES 2 and 3. The ends of the cover have downwardly extending walls 17 that in turn have downwardly inclined edges 17a that extend from the hinge H in FIGURE 3 to the upper surface of the extension 3 when the cover is closed. This inclined edge 17a contacts with a similarly inclined upper edge of the end walls 18' when the cover is closed so as to provide a water tight casing that houses the paint roller during the washing operation.

In FIGURE 3, the front edge of the extension 3 is shown as being at two different elevations. The higher elevation part 3a is the one that has the grooves 12 and 12a therein for receiving the bail 14. These grooves are semi-cylindrical in cross section. The cover C has a bail-clamping extension 18 that overlies the extension 3 when the cover is closed. The bail-clamping extension 18 has complementary grooves 19 that register with the grooves 12 and receive the bail 14 for the paint roller F when the bail is mounted in the grooves 12 and 12a. The grooves 19 are semi-cylindrical in cross section and cooperate with the grooves 12 and 12a for enclosing the bail 14 and clamping it in place when the cover is closed. Any fastening means such as U-shaped clips J and K, may be used for securing the two extensions 3 and 18 together. The clips J and K are pivotally secured to the extensions 3 by pins 20 and 21, respectively. The clip J is shown in open position by full lines and in partly closed position by dash lines in FIGURE 2 while the clip K is shown in closed position. Both clips are in closed position in FIGURE 1.

The water nozzle receiving cavity 2 is triangular in shape in the plan view of FIGURE 2 and the operator can grasp the handle P and swing the nozzle D about its pivots 8 so as to direct a tangential stream of water 11 against any desired portion of the roller F, that lies between the ends of the roller. The operator can observe the results of the washing operation through the transparent plastic cover C. All of the water delivered against the roller for washing and rotating it will be drained through the drain opening 5 in the bottom 4 of the roller receiving compartment 1. FIGURE 3 shows the lower casing part A provided with a spring clip L that is secured to the underside of the roller bail supporting extension 3. The clip L can yieldingly engage with the front of a sink M or other water-receiving receptacle in which the device is disposed. The handle P is disposed on the opposite side of the device from the spring clip L, and the hose E will extend from this same opposite side and can be removably secured to a water faucet, not shown, which is usually provided at the back of the sink.

I have already stated that the extensions 3 and 18 are shaped so as to clamp the bails for the roller brushes F and G, at different elevations so that the peripheries of both rollers will be tangent to the plane in which the jet stream 11 travels as the nozzle D is swung back and forth through an arc by means of swinging the handle P. FIGURE 1 shows the part 3a of the extension 3 as being at a higher elevation than the part 3b of the same extension. In the lower part 3b, I provide the other groove 13 for receiving the bail 16 for the larger diameter roller G, both of which are shown by the dash lines in FIGURE 2. The bail-clamping extension 18 has a portion 18b at a lower elevation than the portion 18a and this portion 18b contacts with the extension portion 3b when the cover C is closed and is provided with a complementary groove 22 that registers with the groove 13. The bail 16 for the larger diameter roller G enters the roller receiving compartment 1 at the opposite end of the compartment from that which receives the bail 14 for the smaller diameter roller F.

It is this lower elevational placing of the bail 16 from that of the bail 14 that positions the peripheries of both rollers F and G so that they are tangent to the same plane through which the jet stream of water 11 moves as the handle P swings the nozzle D. I show additional cooperating grooves in the extensions 3 and 18 for clamping roller bails of different shapes from the two already described. For example the two grooves 12 and 13 can parallel each other right up to the roller-receiving cavity 1. Also branch grooves 12b and 13b extend at right angles to the grooves 12 and 13, respectively, and in opposite directions from each other. These branch grooves 12b and 13b would receive roller-supporting bails that have a right angle bend in them.

I further show in FIGURE 2, a disc-like roller N that is used for painting corners in a room. The bail 22 for the roller N would be received in the groove 13 in the lower extension portion 3b of the extension 3. Other grooves could be shown, but those illustrated are sufficient to show that the device can clamp bails of different shapes. A detergent could be fed into the water stream with a metering device to control the proportion of detergent to the volume of water. Such a detergent might be necessary to use in washing the paint roller after the roller has been used in applying enamel paint to a surface. A paint roller can be used for applying paint of one color to a surface and then the roller can be washed and immediately used for applying a paint of a different color to a surface. The handle P gives the operator complete control of the nozzle D so that he can direct the water jet 11 against any desired portion of the paint roller F or G. If desired the handle P could be attached to the nozzle D at the pivot point 8.

I claim:

1. In combination:

- (a) a casing having a paint roller receiving compartment and a drain opening for water;
- (b) means carried by said casing for supporting the bail of a paint roller so as to dispose the roller in a predetermined position within said compartment;
- (c) a water nozzle pivotally carried by said casing and directing a stream of water tangentially against the roller periphery for washing and rotating the roller, said nozzle being swingable for directing the water stream against any portion of the roller lying between the roller ends, the water stream always lying in a plane that is tangent to the roller periphery;
- (d) said roller bail supporting means comprising an extension integral with said casing and having grooves for receiving the bail of the paint roller and positioning the roller in the casing so that the roller periphery lies tangent to the plane in which the water stream moves;
- (e) a cover for said casing having an extension designed to overlie said first-mentioned extension when said cover is closed, said cover extension having bail receiving grooves that are complementary to the grooves in said first-mentioned extension;
- (f) whereby the roller bail will be gripped by both extensions; and
- (g) means for securing the two extensions together.

2. In combination:

- (a) a casing having a paint roller receiving compartment and a drain opening for water;
- (b) means carried by said casing for supporting the bail of a paint roller so as to dispose the roller in a predetermined position within said compartment;
- (c) a water nozzle pivotally carried by said casing and directing a stream of water tangentially against the roller periphery for washing and rotating the roller, said nozzle being swingable for directing the water stream against any portion of the roller lying between the roller ends, the water stream always lying in a plane that is tangent to the roller periphery;
- (d) said roller bail supporting means comprising an extension integral with said casing and having grooves for receiving the bail of the paint roller and positioning the roller in the casing so that the roller periphery lies tangent to the plane in which the water stream moves; and
- (e) a cover for said casing having an extension designed to overlie said first-mentioned extension when said cover is closed, said cover extension having bail receiving grooves that are complementary to the grooves in said first-mentioned extension;
- (f) whereby the roller bail will be gripped by both extensions;
- (g) means for securing the two extensions together;
- (h) said first mentioned extension having grooves at one level for receiving the bail of a smaller diameter

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paint roller for positioning the roller in the casing so that the roller periphery will lie tangent to the plane in which the water stream moves, and has additional grooves at a lower level for receiving the bail of a larger diameter paint roller for positioning the roller in the casing so that the roller periphery will lie tangent to the same plane in which the water stream moves; and

- (i) said cover extension has two sets of grooves at different levels that are complementary to the two sets of grooves in said first-mentioned extension for gripping either the bail of the smaller diameter roller or the bail of the larger diameter roller.

3. In combination:

- (a) a casing having a paint roller receiving compartment and a drain opening for water;
- (b) means carried by said casing for supporting the bail of a paint roller so as to dispose the roller in a predetermined position within said compartment;
- (c) a water nozzle pivotally carried by said casing and directing a stream of water tangentially against the roller periphery for washing and rotating the roller, said nozzle being swingable for directing the water stream against any portion of the roller lying between the roller ends, the water stream always lying in a plane that is tangent to the roller periphery;
- (d) said roller bail supporting means comprising an extension integral with said casing and having grooves for receiving the bail of the paint roller and positioning the roller in the casing so that the roller periphery lies tangent to the plane in which the water stream moves;
- (e) a cover for said casing having an extension designed to overlie said first-mentioned extension when said cover is closed, said cover extension having bail receiving grooves that are complementary to the grooves in said first-mentioned extension;
- (f) whereby the roller bail will be gripped by both extensions;

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(g) means for securing the two extensions together;

- (h) said first mentioned extension having grooves at one level for receiving the bail of a smaller diameter paint roller for positioning the roller in the casing so that the roller periphery will lie tangent to the plane in which the water stream moves, and has additional grooves at a lower level for receiving the bail of a larger diameter paint roller for positioning the roller in the casing so that the roller periphery will lie tangent to the same plane in which the water stream moves; and

- (i) said cover extension has two sets of grooves at different levels that are complementary to the two sets of grooves in said first-mentioned extension for gripping either the bail of the smaller diameter roller or the bail of the larger diameter roller;

- (j) said grooves in the lower level of said first-mentioned extension positioning the bail for the larger diameter roller so that it will enter said roller-receiving compartment at the opposite end from the end that receives the bail for the smaller diameter roller.

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