Nov. 24, 1959 C. H. BOYLES 2,913,752

PAINT ROLL AND PAINT ROLL MOUNTING

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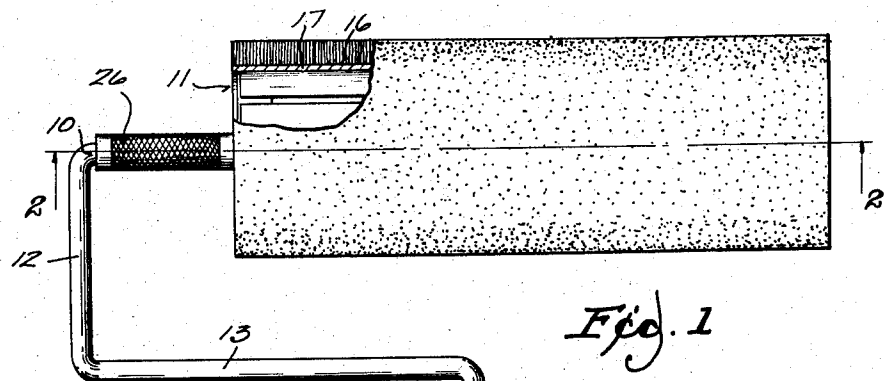

Fig. 1

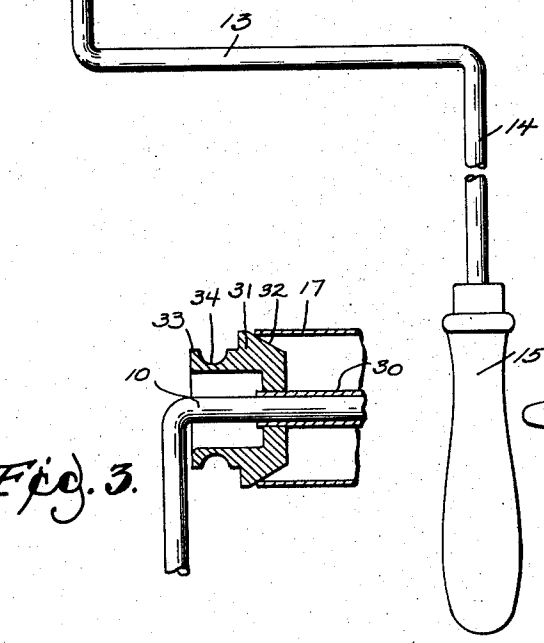

Fig. 3.

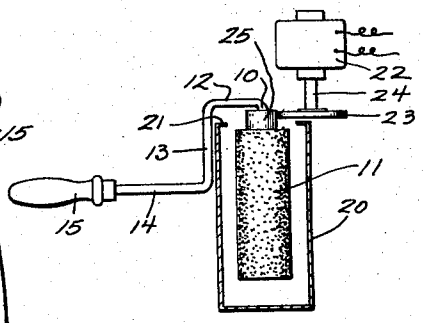

Fig. 4

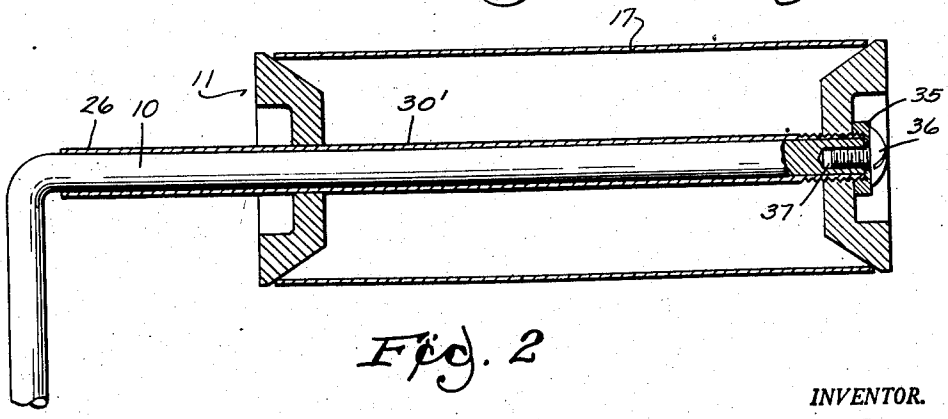

Fig. 2

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PAINT ROLL AND PAINT ROLL MOUNTING

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2 Claims. (Cl. 15—230)

My invention relates to an improved paint roll and paint roll mounting.

More particularly stated my invention relates to a paint roll and paint roll handle mounting so constructed and designed as to facilitate a cleaning operation for the roll clothing.

One of the principal objects of my invention is the addition to a somewhat conventional paint roll mounting of a device so located as to facilitate the spinning of the roll in a centrifugal cleaning operation, such device in its preferred form being incorporated permanently in the roll and mounting structure so as to be available at all times and even with the simplest of accessory equipment.

In the drawings:

Figure 1 is a plan view of a paint roll and its handled mounting made in accord with one form of my invention, a portion of the roll and roll clothing being broken away to show portions thereof in section.

Figure 2 is a section through an alternative form of paint roll cylinder mounted upon a shaft **10** of a paint roll frame, the section being comparable to a section on line **2—2** of Figure 1 but showing an alternative bulkhead and cylinder surface construction.

Figure 3 is a fragmentary detail in section of an alternative spinner hub for the type of roll mount shown in Figure 2.

Figure 4 is a diagrammatic view partly in vertical section and partly in elevation showing the application of motive power to a hub of a roll as it may be held in a container in a cleaning operation.

It is somewhat conventional to provide a paint roll with a handled mounting as shown in a typical example illustrated in the U.S. Letters Patent to Thomas et al., No. 2,520,863, issued August 29, 1950, which shows a straight shaft such as the shaft provided by the applicant at **10** upon which the roll **11** is mounted for rotation. The straight shaft **10** has a frame extension **12** approximately at right angles to the straight shaft and of sufficient length so that the continuation of the frame at **13** may parallel the straight shaft **10**. Hereinafter I shall refer to the configuration of the shaft **10**, frame member **12** and frame member **13** as being J shaped. Extending at right angles from the frame portion **13** is the frame portion **14** upon which handle **15** is mounted. As to these features, my paint roll and paint roll mounting is conventional except as to the features now to be described.

It has heretofore been suggested that a paint roll which has the usual lambs wool or pile fabric applicator surface or clothing material **16** upon a revoluble cylinder **17** mounted upon a shaft such as the shaft **10**, may be cleaned by centrifugal forces, and the usual procedure is to remove the roll **11** from shaft **10** and mount it in a fixture so that it may be spun upon its axis at relatively high speeds in a cleaning operation. In keeping with my invention it is possible, as shown in my drawings, to spin the roll **11** in a centrifugal cleaning operation without removal of the roll **11** from the shaft **10** and in fact without dis-assembling any of the mechanical elements of the roll and roll mount shown in Figure 1.

In accord with my invention I provide an elongated shaft **10** upon which the roll **11** may be mounted and I provide adjacent the frame portion **12** and between the roll **11** and such frame portion, a device which will turn with the roll and which may be used as a manual or power application element to induce the necessary rapid rotation of the roll in the cleaning operation. As indicated in Figure 4, a relatively deep container **20**, having an inturned upper flange **21** to prevent spillage, is used to provide a container for cleaning liquid and to provide a receptacle in which the roll may be spun in a centrifugal cleaning and drying operation. The J shape of the shaft **10**, and frame portions **12** and **13** make it possible for the user to hold the handle **15** during a motorized drive of the roll **11**. A motor **22** with a friction disk **23** on its shaft **24** may be used to apply rotative power frictionally to a friction drum **25** forming a part of the roll assembly. In this cleaning operation as thus motorized, the user may grasp the handle **15** with one hand and the stationary frame portions **12** and **13** to hold the drum **25** against friction disk **23** as will be readily apparent from an examination of Figure 4.

If motorized means such as shown in Figure 4 are not available, an ordinary knurled sleeve **26** forming part of the assembly of the roll **11** may be used at a time when the roll **11** is positioned in container **20** and the palms of the hands of the user may be disposed on either side of the sleeve **26** in an equal and opposite reciprocation of the palms of the hands against the sleeve to cause the roll **11** to spin.

It will be noted that the shape of the shaft **10** and frame portions **12** and **13** is such that the manual rotation of the sleeve between the palms of the hands of the user is not impeded and because the sleeve **26** is of smaller diameter than the exterior diameter of the roll **11**, a considerable surface speed of rotation of the roll surfacing material **16** is possible.

In Figure 3 I have shown in greater detail a mounting of a paint roll upon shaft **10**. This mounting includes a roll sleeve **30**, a hub **31** and an exterior roll cylinder **17** bearing snugly against the cone shaped surface **32**. The extended portion of the hub **31** at **33** is grooved at **34** for a belt drive to any form of motorized apparatus such as that shown at **22, 23, 24** where the disk **23** may be grooved to receive a belt (not shown). Figure 2 shows at the extreme right a hub oppositely conically shaped to receive cylinder **17**, and it will be noted that in Figure 2 the sleeve **30'** of the roll mount extends well beyond the hub as shown in Figure 3, and it is this extended portion which provides the knurled end **26** as shown in Fig. 1. It will be further noted that to prevent the cramping of the knurled sleeve **26** at the bend of the shaft **10**, a friction cup nut **35** is threadedly secured to the end of the sleeve **30** and a headed screw **36** threaded into a bore **37** in shaft **10** limits the movement of the sleeve **30** to the right as seen in Figure 2.

Other means for imparting rotative motion to the roll would include a wrap around string or cord for a pulley **33** or knurled sleeve **26** to be pulled by hand, or reciprocated in "boy scout" fashion with a bow or other tension member.

From the above description it will be seen that a relatively simple mechanical mounting for a paint roll and the extension of a relatively small diameter sleeve **26** facilitates the manual or power rotation of a paint roll in a centrifugal cleaning operation.

I claim:

1. In a paint roll device having a handle mounting including an open ended shaft, a paint roll sleeve journalled

upon the shaft and provided with a paint roll one end of which is approximately coterminous with the open end of the shaft, said sleeve having integrally an exposed rotative power receiving portion at the end thereof opposite said open end of the shaft.

2. In a paint roll and paint roll mounting assembly a handled frame including an open ended shaft, the frame providing at least a J shaped configuration in which the shaft comprises the straight leg of the J shape, a paint roll journalled on the shaft, said paint roll having a sleeve extending throughout the length of the roll and extending integrally beyond the roll at the end thereof opposite the open end of the shaft, the thickness of the material of the frame adjacent the curve of the J shaped frame being substantially less than the diameter of the paint roll, and a power receiving pulley secured to the paint roll for rotation therewith and disposed as an extension of the

paint roll at the end thereof spaced from the open end of the shaft, the diameter of the pulley being less than the diameter of the paint roll and greater than the thickness of said frame.

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