June 30, 1964 G. C. CARRONA 3,138,814

ROLLER TYPE APPARATUS FOR CARRYING, FEEDING, AND APPLYING AN APPLICATORY LIQUID

Filed March 18, 1963 3 Sheets-Sheet 1

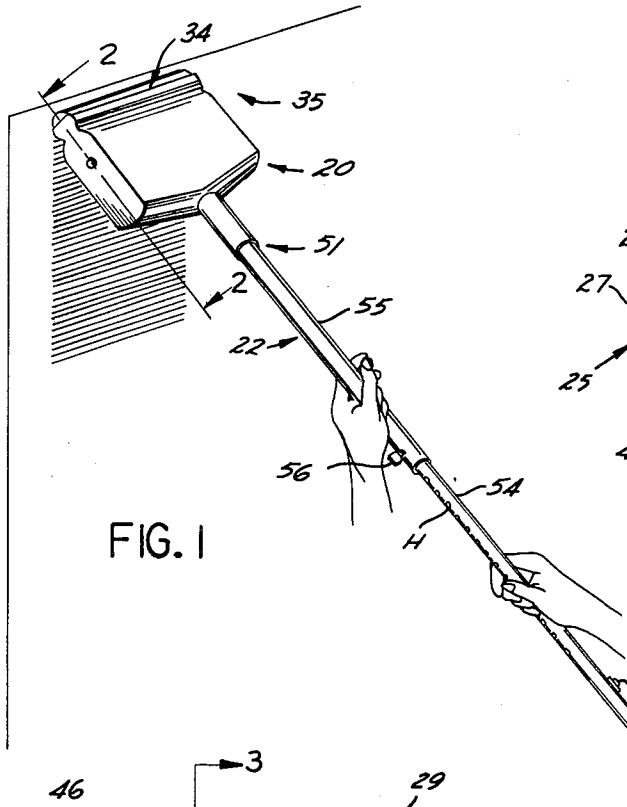


FIG. 1

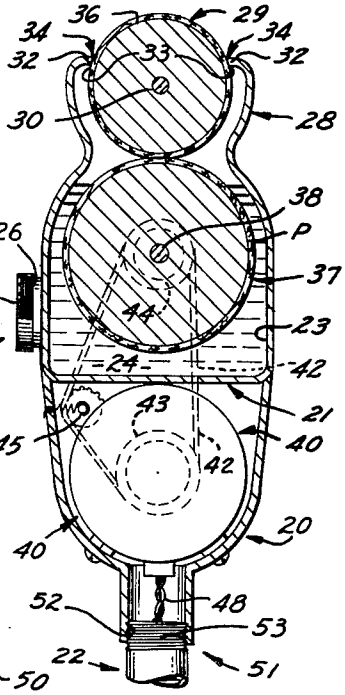


FIG. 3

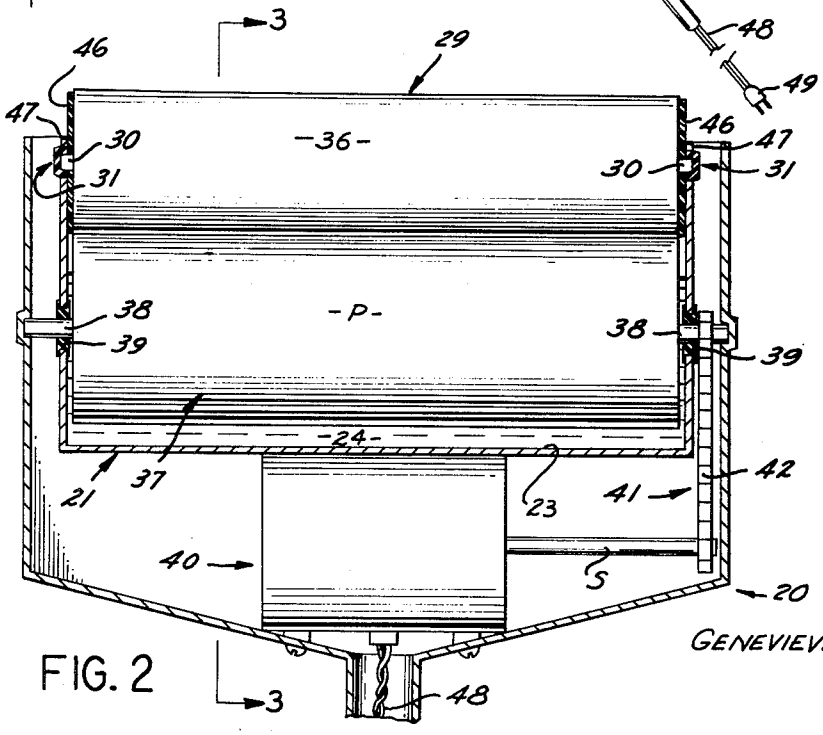


FIG. 2

INVENTOR.
GENEVIEVE C. CARRONA

June 30, 1964 G. C. CARRONA 3,138,814

ROLLER TYPE APPARATUS FOR CARRYING, FEEDING, AND APPLYING AN APPLICATORY LIQUID

Filed March 18, 1963 3 Sheets-Sheet 2

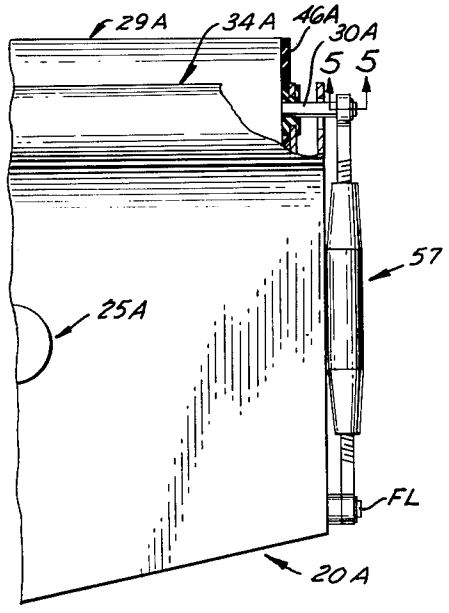


FIG. 4

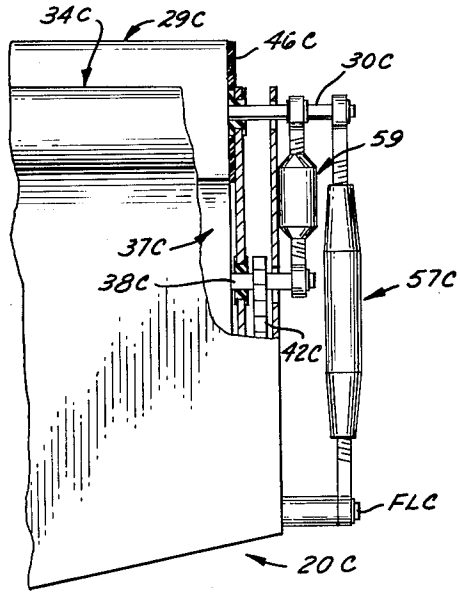


FIG. 6

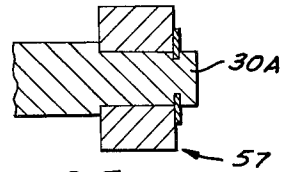
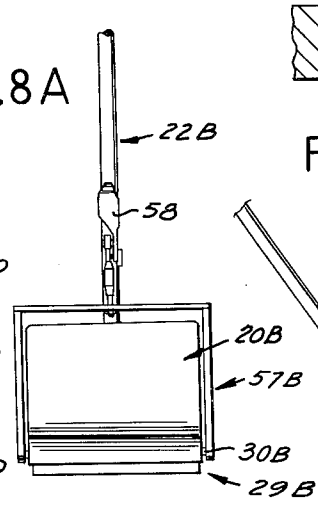


FIG. 5

FIG. 8A



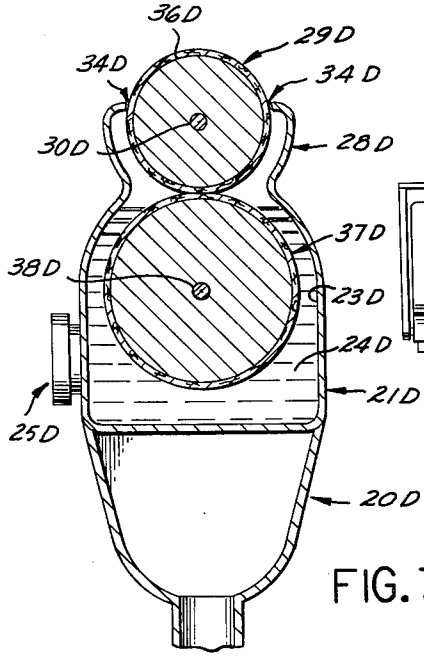


FIG. 7

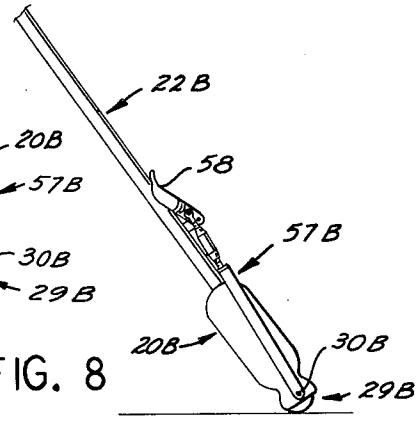


FIG. 8

INVENTOR.
GENEVIEVE C. CARRONA

June 30, 1964 G. C. CARRONA 3,138,814

ROLLER TYPE APPARATUS FOR CARRYING, FEEDING, AND APPLYING AN APPLICATORY LIQUID

Filed March 18, 1963 3 Sheets-Sheet 3

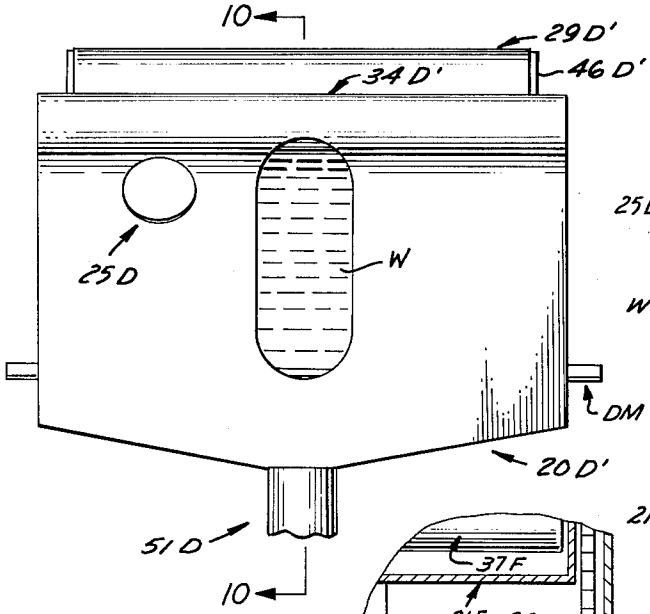


FIG. 9

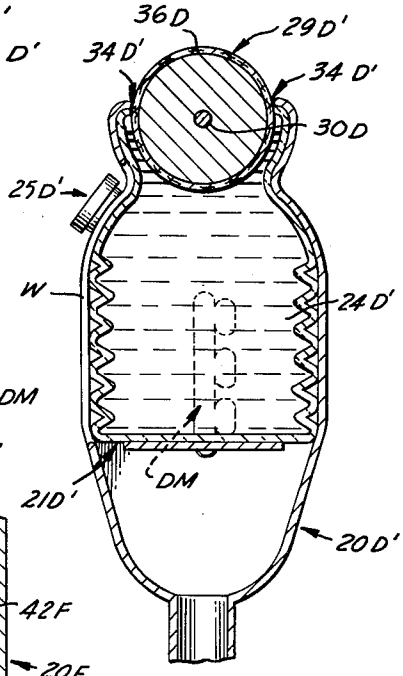


FIG. 10

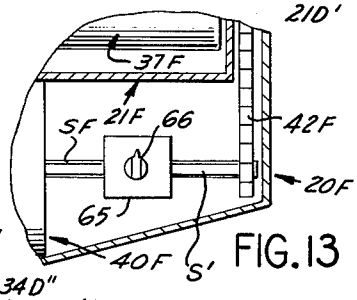


FIG. 13

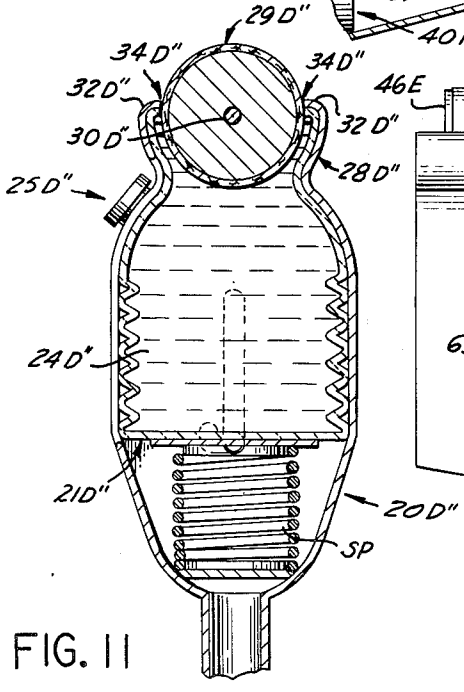


FIG. 11

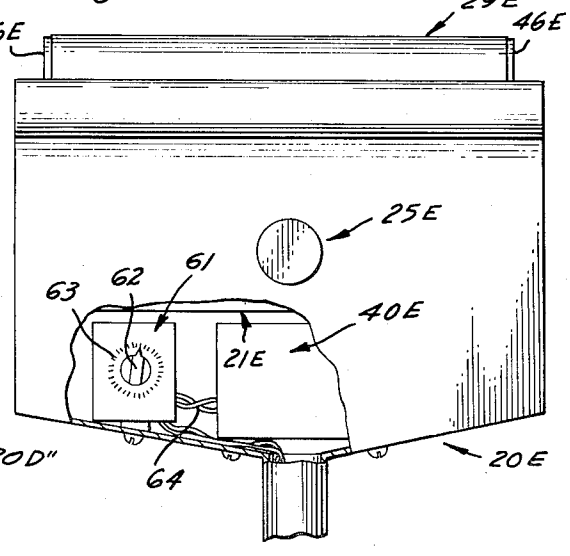


FIG. 12

INVENTOR.
GENEVIEVE C. CARRONA

United States Patent Office 3,138,814 Patented June 30, 1964

3,138,814

ROLLER TYPE APPARATUS FOR CARRYING, FEEDING, AND APPLYING AN APPLICATORY LIQUID

Genevieve C. Carrona, La Jolla, Calif.
(32661 Mediterranean Drive, South Laguna, Calif.)

Filed Mar. 18, 1963, Ser. No. 265,721
14 Claims. (Cl. 15—98)

Generally speaking, the present invention relates to apparatus for applying a liquid to a surface and, more particularly, in one specific form of the invention, pertains to a specific and novel roller type apparatus for carrying, feeding, and applying paint, or the like, to a surface which is to be painted.

Throughout this application, the apparatus will be described primarily in connection with the above-mentioned aspect of the invention wherein it is adapted to carry, feed, and apply paint, or the like, to a surface. However, it should be clearly noted that this is done for exemplary purposes only and that the invention is not specifically so limited and may be employed for applying various different types of applicatory liquids other than paint and to a great variety of different types of effective surface means. Therefore, the specific description which follows hereinafter is to be considered as exemplary and is to be construed broadly in keeping with this.

The invention includes container or reservoir means which is usually provided with operating handle means extending therefrom and which is adapted to contain an applicatory liquid such as paint, or the like, therein and which has an open liquid-egress portion (which is usually forwardly directed in opposition to the operating handle means, although not specifically so limited).

The liquid-egress portion is provided with, and rotatably effectively mounts and partially receives therein, a substantially cylindrical applicatory roller means having an axis of revolution transversely directed across the liquid-egress portion with an arcuate portion of said roller means lying inside of said egress portion and extending rearwardly therefrom toward the interior of the container or reservoir means. The remaining or forward arcuate portion of the applicatory roller means lies outside of said egress portion and normally extends forwardly therefrom into a projecting position for convenient application of a liquid such as paint, or the like, to any desired surface.

In one preferred version of the invention, the egress portion has spaced, substantially parallel, transversely directed dispensing edges cooperable with the corresponding arcuate dispensing surface portions of the applicatory roller means along spaced transversely directed dispensing portions thereof adjacent to and in opposition to said dispensing edges whereby to normally prevent the escape of applicatory liquid, such as paint or the like, from within said container or reservoir means through the junction region defined between said dispensing edges and said dispensing roller portions but adapted to controllably allow egress of the applicatory liquid, such as paint or the like, from within the container or reservoir means upon rotation of the applicatory roller means. Thus, it will be seen that the arrangement is such that normally the paint is retained in the container or reservoir means in a non-leaking manner but will be dispensed by the applicatory roller means when it is controllably rolled along a surface which is to be painted.

In one preferred form of the invention, the applicatory roller means has an absorptive porous outer surface portion adapted to absorb a substantial quantity of applicatory liquid, such as paint or the like, upon its contact therewith in the container or reservoir means and to then carry said substantial quantity of applicatory liquids, such as paint or the like, outwardly past the dispensing edges of the egress portion as the applicatory roller means is rolled along a surface which is to be painted. This arrangement will provide for the application of sufficient paint to provide virtually complete covering action in one coat of paint, although the invention is not specifically so limited.

In one preferred form of the invention, the transversely directed dispensing edges of the egress portion are positioned for retaining cooperation with the applicatory roller means along said dispensing surface portions of said cylindrical roller means at locations beyond the axis of revolution of the cylindrical applicatory roller means whereby to position within said egress portion more than one-half of the circumferential extent of said roller means.

In one version of the above-mentioned form of the invention, the applicatory roller means may be mounted by resilient mounting means in the normal effectively closed sealing position for forcible rearward resilient displacement slightly away from said dispensing edges during applicatory use of the device whereby to increase the clearances between said dispensing edges and said dispensing roller portions to allow a quantity of liquid such as paint, or the like, to be passed therethrough from the interior of the container or reservoir means outwardly to the front surface of the applicatory roller means as it is rolled along a surface which is to be painted or to which the applicatory liquid is to be applied. In this version of the invention, the quantity of liquid dispensed will be a direct function of the forced rearward displacement of the cylindrical applicatory roller means and of the size of the above-mentioned clearances between the dispensing edges and the dispensing roller portions.

In one preferred form of the invention, the reservoir means may be provided with base means which removably carries the hereinbefore-mentioned operating handle means.

In one specific form of the present invention, the base means may be provided with driving motor means (such as electric motor means, although not specifically so limited) and coupling means effectively coupling the motor means with respect to the applicatory roller means whereby to power-rotate said roller means for applying paint to a surface. In certain versions of this form of the invention, the coupling means may be controllably adjustable in one manner whereby to vary the degree of coupling between maximum and minimum values and/or another manner whereby to vary the effective input-to-output ratio thereof.

One form of the invention may include auxiliary feed roller means positioned within the container or reservoir means for contact with the applicatory liquid, such as paint or the like, adapted to be contained therein and having a forward portion positioned for rolling and liquid-transferring contact with the rear portion of the applicatory roller means whereby to rollingly supply the applicatory liquid, such as paint or the like, from the container or reservoir means to the applicatory roller means.

In one form of the invention, the coupling means may include power transmission means connected between the driving motor means and the feed roller means, with the feed roller means being in frictional driving contact (in certain cases, controllably adjustable frictional driving contact) with the applicatory roller means.

Certain forms of the present invention may include

means for controllably adjusting the speed of rotation of the applicatory roller means. In one form, this may comprise input-to-output ratio adjusting means comprising a portion of the above-mentioned coupling means. In another form, said adjusting means may comprise motor speed adjusting means.

A preferred form of the invention includes controllably openable and closeable aperture means for filling and emptying the interior of said container or reservoir means.

It is an object of the present invention to provide novel roller type apparatus for carrying, feeding, and applying an applicatory liquid; said apparatus being of the generic type referred to hereinabove and/or of any of the specific varient forms thereof referred to hereinabove and intended for the convenient application of a liquid, such as paint or the like, to virtually any desired type of surface with an absolute minimum of labor involved in the applicatory operation and with no time wasted in dipping the applicatory roller into the applicatory liquid at frequent intervals in the customary disadvantageous prior art manner.

It is a further object to provide apparatus of the character set forth in the preceding object which is of extremely simple, cheap, easy-to-operate, easy-to-maintain, easy-to-keep clean, virtually foolproof construction such as to be conductive to widespread use thereof.

Further objects are implicit in the detailed description which follows hereinafter for exemplary rather than for limiting purposes and will be apparent to persons skilled in the art after a careful study thereof.

For the purpose of clarifying the nature of the present invention, several exemplary embodiments are illustrated in the hereinbelow-described figures of the accompanying drawings and are described in detail hereinafter.

FIG. 1 is a perspective view of one illustrative form of the invention in operative use.

FIG. 2 is a fragmentary, enlarged view, partly in section and partly in elevation, taken in the direction of the arrows **2—2** of FIG. 1.

FIG. 3 is a view taken in the direction of the arrows **3—3** of FIG. 2.

FIG. 4 is an enlarged fragmentary view similar to the right portion of FIG. 2, but illustrating a slight modification of the invention including positive means for controllably adjusting the clearance between the applicatory roller means and the adjacent dispensing edges.

FIG. 5 is an enlarged sectional detail taken in the direction of the arrows **5—5** of FIG. 4.

FIG. 6 is a view similar to FIG. 4, but illustrates a further modification including positive means for controlling the spacing between the applicatory roller means and the feed roller means.

FIG. 7 is a view similar to FIG. 3, but illustrates a modified form of the invention wherein the motor means is eliminated and the device is adapted to be entirely manually operated.

FIG. 8 is a greatly reduced-size fragmentary view illustrating a further modification of the invention including a novel type of snap-action overcenter lever means for positively rearwardly displacing the applicatory roller means away from the dispensing edge means whereby to provide a desired and controllably adjustable amount of dispensing clearance for the paint.

FIG. 8A is a further view illustrating the detail of the snap-action overcenter lever means of FIG. 8.

FIG. 9 is a top plan view of a further modified form of the invention wherein the quantity of paint or other liquid in the reservoir can be visibly observed from the exterior thereof through a viewing window and wherein the reservoir is controllably collapsible by novel slide rod and detent means extending through the side walls of the base.

FIG. 10 is a view taken in the direction of the arrows **10—10** of FIG. 9.

FIG. 11 is a view similar to FIG. 10 but illustrates a further modification wherein the means for collapsing the reservoir is of an automatic type and comprises biasing spring means.

FIG. 12 is a partly broken-away top plan view of a further slight modification including means for controlling the speed of the motor whereby to control the rate at which the applicatory roller means is driven.

FIG. 13 illustrates another means for controlling the speed of the applicatory motor means taking the form of means for controllably adjusting the coupling between the motor means and the applicatory roller means.

Referring to FIGS. 1–3 for exemplary purposes, one illustrative embodiment of the invention takes a typical exemplary form wherein it comprises base means, indicated generally at **20**, carrying reservoir means, generally indicated at **21**, and operating handle means, generally indicated at **22**, extending from the base means **20** in a direction opposite from and remote from the reservoir means **21**.

The reservoir means **21** has a hollow interior as indicated at **23** adapted to contain an applicatory liquid such as that shown at **24**. The applicatory liquid may comprise paint or any of various other liquids which is to be applied to a surface of any of a number of different types. However, the liquid **24** may comprise any type of liquid or liquid and solid mixture adapted to be applied to a variety of surfaces.

The reservoir means **21** is provided with controllably openable and closeable inlet aperture means, indicated generally at **25**, which, in the specific example illustrated, comprises a threaded portion **26** carried by the reservoir means **21** and a correspondingly threaded closure cap portion **27** sealingly and controllably removably cooperable therewith. This provides convenient means for filling the interior chamber **23** with paint prior to a paint-applying operation and/or for removing any excess paint left at the completion of such a paint-applying operation.

The container or reservoir means **21** has a forwardly open liquid-egress portion, indicated generally at **28**, provided with, and rotatably mounting and partially receiving therein, cylindrical applicatory roller means indicated generally at **29**.

The applicatory roller means **29** has an axis of revolution concentric with the pivot pin or axle means **30** which extends transversely across the interior of said egress portion **28** with the rear arcuate portion (in the example illustrated in FIGS. 1–3, a portion of greater than 180-degree circumferential extent) of said roller means **29** lying inside of the egress portion **28** and extending rearwardly toward the container or reservoir interior chamber **23**.

The remaining or forward arcuate portion (less than 180 degrees of circumferential extent as shown in FIGS. 1–3) of said roller means **29** lies outside of said egress portion **28** and extends forwardly therefrom.

In the specific example illustrated in FIGS. 1–3 said applicatory roller means is mounted in the position described above by means of the pivot pin or axle means **30** which is carried by resiliently deflectable mounting means **31** carried in opposite side wall portions of the reservoir means **21** for purposes which will be described in greater detail hereinafter.

The egress portion **28** has spaced, substantially parallel, transversely directed dispensing edges **32** cooperable with the corresponding arcuate dispensing surface portions, indicated at **33**, of the applicatory roller means **29** whereby to define the two longitudinal dispensing junction regions, designated generally by the reference numerals **34**, which are normally effectively sealingly closed in the manner shown in FIG. 3 so as to prevent the inadvertent or accidental leakage therethrough of the paint **24**, but which are adapted to be controllably open when the cylindrical applicatory roller means **29** is used for applying the paint **24** to a surface such as that indicated generally at **35**.

In the specific example illustrated in FIGS. 1–3, this is accomplished by reason of the fact that the resilient mounting means 31 is capable of being forcibly rearwardly deflected to a small extent as a result of forcing the applicatory roller means 29 against the surface 35 during a paint-applying operation. This will cause the entire roller means 29 to move backwardly a small distance such as to increase the clearances in the dispensing junction regions 34 sufficiently to allow a desired amount of the paint 24 to be dispensed therethrough on the absorptive porous outer surface portion 36 of the applicatory roller means 29 which has the paint 24 effectively fed to it at the rear end of the applicatory roller means 29.

In the specific example illustrated in FIGS. 1–3, the means for feeding the paint 24 from the interior reservoir chamber 23 to the absorptive porous outer surface portion 36 of the applicatory roller means 29 comprises the feed roller means indicated generally at 37. The feed roller means 37 is mounted by pin or axle means 38 having end portions carried in resilient mounting means 39 carried by side wall parts of the reservoir means 21. This allows the roller means 37 to be slightly rearwardly displaced whenever the applicatory roller means 29 is forcibly rearwardly displaced in the manner described hereinabove.

In the specific example illustrated in FIGS. 1–3, the feed roller means 37 is also provided with a porous absorptive outer surface portion P lying in the paint 24 and adapted to absorb a quantity thereof and rotate it into paint-transferring contact with the similar porous absorptive portion 36 of the applicatory roller means 29 during a paint-applying operation.

In the specific form of the invention illustrated in FIGS. 1–3, the feed roller means is adapted to be power-driven by driving motor means, indicated generally at 40, and power transmission means indicated at 41 (in this specific example, comprising sprocket chain means 42 connecting the motor drive sprocket wheel 43 to the sprocket wheel 44 carried by the shaft 38 of the feed roller means 37).

The entire power transmission means 41 plus the feed roller means 37 may be said to comprise coupling means effectively coupling the motor means 40 with respect to the applicatory roller means 29 whereby to provide a frictional drive for same during a paint-rolling-on or paint-applying operation.

Spring biased idler sprocket wheel means 45 is positioned within the base means 20 between the motor-driven sprocket wheel 43 and the feed roller sprocket wheel 44 and in engagement with the sprocket chain 42 for the purpose of taking up any slack therein which may occur as a result of the slight rearward movement of the feed roller 37 and applicatory roller 29 described hereinabove.

In the specific example illustrated, the ends of the applicatory roller means 29 are provided with extremely slippery end surface means 46 characterized by extremely low friction and very low adhesive characteristics which are positioned in rotating effectively sealing relationship with respect to end edges 47 of the egress portion 28.

In the specific example illustrated in FIGS. 1–3, the driving motor means 40 is an electric motor provided with suitable electrical cord means 48 and plug means 49 for connection to an electric power-supplying receptacle.

In circuit with the lead means 48 is power-controlling switch means 50 for use in controllably energizing or de-energizing the motor means 40. The switch means 50 is preferably located on the handle means 22 at a location such as that shown at FIG. 1 for convenient operation during actual paint-applying use of the device so that the applicatory roller means 29 can be started or stopped whenever desired.

In the specific form illustrated in FIGS. 1–3, the handle means 22 is removably engaged with respect to the rear

end of the base means 20 by the controllably engageable and disengageable means designated generally by the reference numeral 51. In the form illustrated, said means 51 comprises an interiorly threaded receiver portion 52 attached to the base means 20 and a removably threadedly cooperable exteriorly threaded end portion 53 at the forward end of the handle means 22.

It should further be noted that the handle means 22 is adapted to be of a controllably extendable nature for use in reaching relatively inaccessible spots during a painting operation. This may be accomplished by way of the upper telescopic extension portion 54 which is slidably engaged with respect to the lower handle portion 55 and which carries fastening or locking screw or pin means 56 cooperable with multiple apertures H along the length of the extension portion 54. This makes it possible to extend the handle means 22 to any of several different desired lengths and to lock it in the selected extended relationship until such time as it is to be collapsed for storage during non-use periods.

FIGS. 4 and 5 illustrate fragmentarily a slight modification of the first form of the invention illustrated in FIGS. 1–3. Similar parts are indicaed by similar reference numerals, followed by the letter "A," however.

In this modification, adjustable threaded means indicated generally at 57 is effectively connected between ends of the applicatory roller axle 30A and a fixed location FL whereby to allow adjustment thereof for the purpose of effectively varying the clearance spaces 34A (of the type shown at 34 in the first form of the invention) so as to cause any desired rate of feeding of the paint during a paint-applying operation.

FIGS. 8 and 8A illustrate a slight modification of the form of the invention shown in FIGS. 4 and 5, with similar parts being indicated by similar reference numerals, followed by the letter "B," however. In this modification, a different type of adjusting means 57B is employed for controllably varying the clearance spaces (such as those shown at 34 in the first form of the invention) for the purpose of varying the rate at which paint is fed to the applicatory roller means 29B during a painting operation. This particular type of adjusting means is of a lever-action type effectively connected between ends of the applicatory roller axle 30B and the handle means 22B for easy operation by way of the snap-action, overcenter type of operating lever 58.

FIG. 6 illustrates a modification of the form of the invention shown in FIGS. 4 and 5 wherein similar portions are indicated by similar reference numerals, followed by the letter "C," however. In this modification, controllably adjustable means, indicated at 59, is effectively connected between the applicatory roller axle 30C and the feed roller axle 38C whereby to controllably adjust the spacing therebetween for the purpose of adjusting the frictional engagement of the feed roller 37C and the applicatory roller 29C. This adjustment may be made sufficiently light to allow it to be overridden during a paint-applying operation whenever desired, thus giving greater flexibility to the apparatus.

FIG. 7 illustrates a modification of the invention wherein similar parts are indicated by similar reference numerals, followed by the letter "D," however. In this modification, the driving motor means and the power transmission means, such as those designated by the reference numerals 40 and 41 in the first form of the invention, are eliminated and the rolling action of both the applicatory roller means 29D and the feed roller means 37D is brought about as a result of forced manual rolling of the applicatory roller means 29D along a surface during a painting operation.

It will readily be understood that the form of the invention referred to above may be further modified in certain instances by eliminating the feed roller means 37D and by enlarging the applicatory roller means 29D, while re-

ducing the size of the interior chamber 23D of the reservoir means 21D so that the rear portion of the applicatory roller means 29D will be in contact with the interior paint means 24D at virtually all times until the paint has been virtually entirely used. This form of the invention may also employ a progressively collapsible reservoir means as shown in FIGS. 9 and 10 or as shown in FIG. 11, which initially may be fully expanded and containing a large volume of paint and which can be progressively collapsed by controllable or automatic collapsing means so as to always maintain the paint in contact with the rear portion of the applicatory roller means. This collapsing operation may be guided, in the case of the form of FIGS. 9 and 10, by having the exterior of at least a portion of the reservoir means 21D' transparent or translucent, as by the window W, so that the level of the paint inside thereof can be viewed to determine when such controllable collapsing of the reservoir means 21D' is desirable. Rod, slot, and multiple recess type of detent means for holding the collapsed reservoir means 21D' in various positions is indicated at DM. In the case of FIG. 11, the spring SP will automatically collapse the reservoir 21D''. Parts similar to those of FIG. 10 are indicated by similar reference numerals, doubly primed.

FIG. 12 is a top plan view of a modified form of the invetion wherein the modification lies in the fact that the driving motor means 40E is effectively provided with means for controlling the output speed of rotation thereof. As shown in FIG. 12, said speed controlling means is generally designated by the reference numeral 61 and includes a manually rotatably adjustable knob 62 cooperable with respect to a circular scale 63 whereby to provide for adjustment of the electrical characteristics of electric current flowing to and from the motor by way of the lead means 64 in a manner such as to correspondingly adjust the output speed of rotation of the motor 40E.

The speed controlling means 61 may comprise any current-varying means, such as a rheostat, a variable inductor, or any functional equivalent thereof capable of modifying the current flow to the motor means 40E.

On the other hand, it may comprise means for supplying the motor means 40E with a variable frequency electrical current. In this type of arrangement, the motor means 40E will, of course, comprise a frequency-responsive type of motor, such as a synchronous motor means or the like, which has an output speed which varies as a direct function of the frequency of the electrical current supplied thereto.

Also, various other speed controlling means may be employed in lieu of the arrangement shown at 61 and described in several slightly variant forms above.

The remaining parts of this modification of the invention are generally similar to those described in detail hereinbefore and illustrated in others of the figures of the drawings. Therefore, said similar parts are indicated by similar reference numerals, followed by the letter "E," however.

FIG. 13 is a fragmentary view generally similar to the lower right hand portion of FIG. 2 but illustrates a modification thereof wherein the output shaft S of the motor means 40 of FIG. 2 is additionally provided, in series therewith, with controllably adjustable coupling means 65 which effectively comprises a variable input-to-output ratio power transmission means controllably adjustable by adjusting knob means 66 so as to vary the speed of the output portion S' of the shaft driven by the motor means. It should, of course, be understood that any suitable type of variable ratio power transmission or coupling means may be employed at 65, or elsewhere in the effective power transmission path between the motor means and the driven portions of the apparatus, whereby to make it possible to controllably adjust the rate at which the applicatory roller means is driven. The remaining parts of this modification of the invention are generally similar to those described in detail hereinbefore and illustrated in others of the figures of the drawings. Therefore, said similar parts are indicated by similar reference numerals, followed by the letter "F," however. Numerous modifications and variations of the present invention will occur to those skilled in the art and all such within the basic spirit and scope of the broad inventive concept as defined by the appended claims are intended to be included and comprehended herein as fully as those specifically described and illustrated herein. For example, it is quite apparent that either or both of the roller means may have different types of surfaces from the specific absorptive porous outer surface portions specifically illustrated in the drawings and described hereinbefore. It is also apparent that the driving means and the coupling means may be substantially modified and may include means for varying the input-to-output ratio thereof and/or the speed of the driving motor means whereby to adjust the speed of rotation of the applicatory roller means to any desired value.

I claim:

1. Roller type apparatus for carrying, feeding, and applying an applicatory liquid, comprising: reservoir means adapted to contain an applicatory liquid and having a forwardly open liquid-egress portion provided with, and effectively rotatably mounting and at least partially receiving therein, substantially cylindrical applicatory roller means having an axis of revolution transversely directed across said liquid-egress portion with an arcuate portion of said roller means lying inside of said egress portion and extending rearwardly therefrom toward the interior of said reservoir means, and with a remaining forward arcuate portion of said applicatory roller means lying substantially outside of said egress portion and extending forwardly therefrom into an effectively projecting position for convenient application of said applicatory liquid to any desired surface, said liquid-egress portion having spaced, substantially parallel, transversely directed, dispensing edges effectively cooperable with corresponding arcuate dispensing surface portions of said applicatory roller means along spaced longitudinal transversely directed dispensing parts thereof adjacent to, and in opposition to, said dispensing edges for normally preventing the inadvertent escape of said applicatory liquid from within said reservoir means through the longitudinal junction regions defined between said edges and said opposed dispensing portions of said roller means but adapted to allow egress of said applicatory liquid from within said reservoir means in response to applicatory rotation of said applicatory roller means; and means for controllably adjusting the position of said applicatory roller means with respect to said dispensing edges for correspondingly varying the dispensing clearances between said dispensing edges of said liquid-egress portion and said dispensing surface portions of said applicatory roller means, said means for controllably adjusting the position of said applicatory roller means including resilient mounting means for resiliently controllably rearwardly displaceably mounting said applicatory roller means in said position for controllable forced rearward displacement thereof during applicatory use of the apparatus, and further including force-applying means effectively connected between said applicatory roller means and a fixed reference location positioned therebehind.

2. Apparatus as defined in claim 1, wherein said applicatory roller means is provided with an absorptive porous outer surface portion adapted to absorb and carry a substantial quantity of said applicatory liquid, upon contact therewith in said reservoir means, and to then carry and transport said substantial quantity of applicatory liquid outwardly past one of said dispensing edges of said liquid-egress portion as said applicatory roller means is rolled along a surface to which said applicatory liquid is to be applied.

3. Apparatus as defined in claim 1, wherein said spaced, substantialy parallel, transversely directed dispensing edges of said liquid-egress portion are positioned for retaining

cooperation with respect to said applicatory roller means along said dispensing surface portions thereof at locations forwardly beyond the axis of revolution of said applicatory roller means whereby to position within said liquid-egress portion more than half of the circumferential extent of said applicatory roller means.

4. Apparatus as defined in claim 1, wherein said reservoir means is provided with base means and controllably removable longitudinal operating handle means extending from said base means in a direction away from said applicatory roller means.

5. Apparatus as defined in claim 1, wherein said reservoir means is provided with base means and controllably removable longitudinal operating handle means extending from said base means in a direction away from said applicatory roller means, said base means being provided with driving motor means and coupling means effectively coupling said motor means with respect to said applicatory roller means.

6. Apparatus as defined in claim 1, wherein said reservoir means is provided with base means and controllably removable longitudinal operating handle means extending from said base means in a direction away from said applicatory roller means, said base means being provided with driving electric motor means and controllably engageable and disengageable coupling means effectively coupling said motor means with respect to said applicatory roller means.

7. Apparatus as defined in claim 1, wherein said reservoir means is provided with base means and controllably removable longitudinal operating handle means extending from said base means in a direction away from said applicatory roller means, said base means being provided with driving motor means and coupling means effectively coupling said motor means with respect to said applicatory roller means, said coupling means being controllably adjustable whereby to vary the coupling ratio between predetermined maximum and minimum values and to thus vary the effective input-to-output ratio of revolutions thereof.

8. Apparatus as defined in claim 1, including feed roller means positioned within said reservoir means for contact with said applicatory liquid and having a forward portion positioned for rolling and liquid-transferring and feeding contact with the rear portion of said applicatory roller means whereby to rollingly supply said applicatory liquid from said reservoir means to said applicatory rollers means.

9. Roller type apparatus for carrying, feeding, and applying an applicatory liquid, comprising: reservoir means adapted to contain an applicatory liquid and having a forwardly open liquid-egress portion provided with, and effectively rotatably mounting and at least partially receiving therein, substantially cylindrical applicatory roller means having an axis of revolution transversely directed across said liquid-egress portion with an arcuate portion of said roller means lying inside of said egress portion and extending rearwardly therefrom toward the interior of said reservoir means, and with a remaining forward arcuate portion of said applicatory roller means lying substantially outside of said egress portion and extending forwardly therefrom into an effectively projecting position for convenient application of said applicatory liquid to any desired surface, said liquid-egress portion having spaced, substantially parallel, transversely directed, dispensing edges effectively cooperable with corresponding arcuate dispensing surface portions of said applicatory roller means along spaced longitudinal transversely directed dispensing parts thereof adjacent to, and in opposition to, said dispensing edges for normally preventing the inadvertent escape of said applicatory liquid from within said reservoir means through the longitudinal junction regions defined between said edges and said opposed dispensing portions of said roller means but adapted to allow egress of said applicatory liquid from within said reservoir means in response to applicatory rotation of said applicatory roller means; and feed roller means positioned within said reservoir means for contact with said applicatory liquid and having a forward portion positioned for rolling and liquid-transferring and feeding contact with the rear portion of said applicatory roller means whereby to rollingly supply said applicatory liquid from said reservoir means to said applicatory roller means, and driving motor means provided with coupling means for effectively coupling said motor means with respect to said applicatory roller means by way of said feed roller means.

10. Roller type apparatus for carrying, feeding, and applying an applicatory liquid, comprising: reservoir means adapted to contain an applicatory liquid and having a forwardly open liquid-egress portion provided with, and effectively rotatably mounting and at least partially receiving therein, substantially cylindrical applicatory roller means having an axis of revolution transversely directed across said liquid-egress portion with an arcuate portion of said roller means lying inside of said egress portion and extending rearwardly therefrom toward the interior of said reservoir means, and with a remaining forward arcuate portion of said applicatory roller means lying substantially outside of said egress portion and extending forwardly therefrom into an effectively projecting position for convenient application of said applicatory liquid to any desired surface, said liquid-egress portion having spaced, substantially parallel, transversely directed, dispensing edges effectively cooperable with corresponding arcuate dispensing surface portions of said applicatory roller means along spaced longitudinal transversely directed dispensing parts thereof adjacent to, and in opposition to, said dispensing edges for normally preventing the inadvertent escape of said applicatory liquid from within said reservoir means through the longitudinal junction regions defined between said edges and said opposed dispensing portions of said roller means but adapted to allow egress of said applicatory liquid from within said reservoir means in response to applicatory rotation of said applicatory roller means; and feed roller means positioned within said reservoir means for contact with said applicatory liquid and having a forward portion positioned for rolling and liquid-transferring and feeding contact with the rear portion of said applicatory roller means whereby to rollingly supply said applicatory liquid from said reservoir means to said applicatory roller means, and driving motor means provided with coupling means for effectively coupling said motor means with respect to said applicatory roller means by way of said feed roller means, said coupling means including power transmission means connected between said driving motor means and said feed roller means, with said feed roller means being in controllably adjustable frictional driving contact with respect to said applicatory roller means.

11. Apparatus as defined in claim 1, including means for controllably adjusting the speed of rotation of said applicatory roller means.

12. Apparatus as defined in claim 1, wherein said reservoir means is provided with base means and controllably removable longitudinal operating handle means extending from said base means in a direction away from said applicatory roller means, said base means being provided with driving motor means and coupling means effectively coupling said motor means with respect to said applicatory roller means, and including means for controllably adjusting the speed of rotation of said applicatory roller means, said means comprising variable input-to-output ratio adjusting means comprising a portion of said coupling means.

13. Apparatus as defined in claim 1, wherein said reservoir means is provided with base means and controllably removable longitudinal operating handle means extending from said base means in a direction away from said applicatory roller means, said base means being pro-

vided with driving motor means and coupling means effectively coupling said motor means with respect to said applicatory roller means, and including means for controllably adjusting the speed of rotation of said applicatory roller means, said means comprising motor speed-adjusting means.

14. Apparatus as defined in claim 1, including controllably openable and closable apertures means for filling and emptying the interior of said reservoir means.

References Cited in the file of this patent

UNITED STATES PATENTS

2,528,657	Hobe	Nov. 7, 1950
2,730,738	Humes	Jan. 17, 1956
2,732,575	Faust	Jan. 31, 1956

FOREIGN PATENTS

746,499	Great Britain	Mar. 14, 1956