

March 23, 1948.

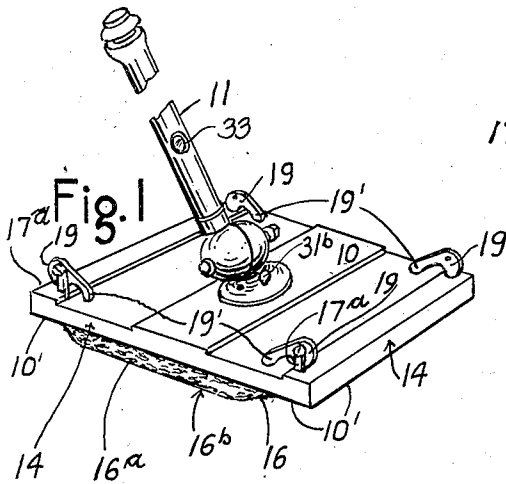
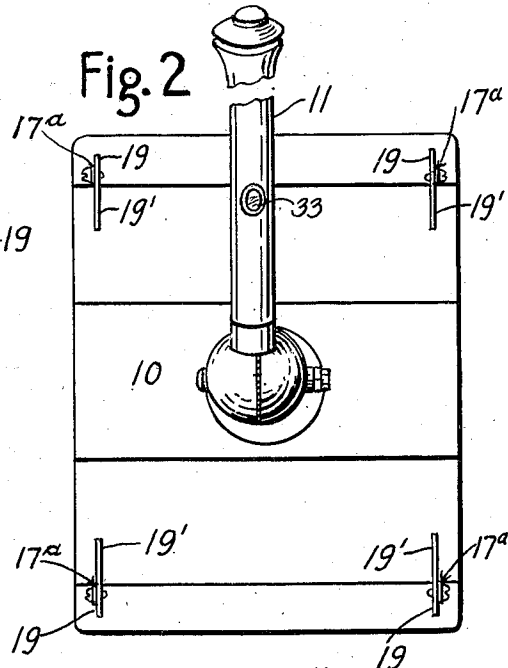
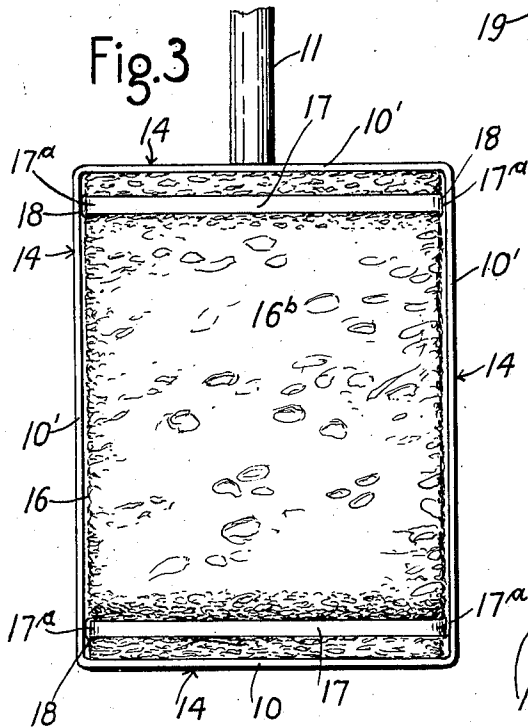
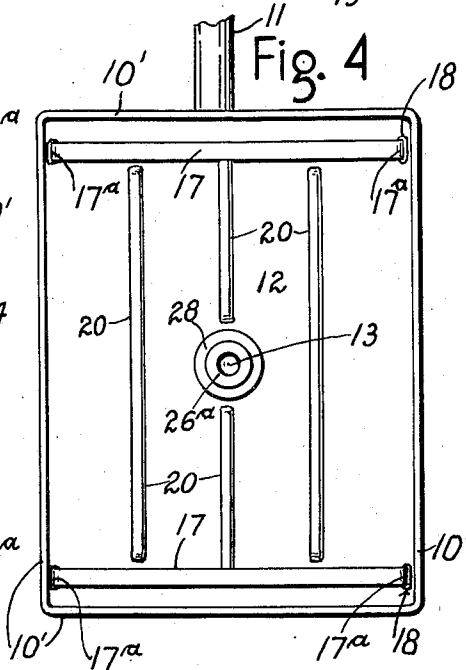
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2,438,338

PAD-MOUNTING DEVICE FOR APPLYING AND DISTRIBUTING WAX, OIL
AND OTHER LIKE MATERIAL TO FLOORS AND LIKE SURFACES

Filed July 29, 1944

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 5

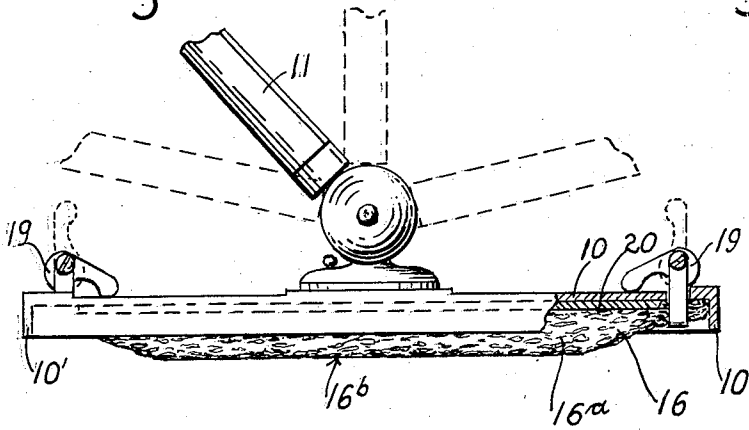


Fig. 7

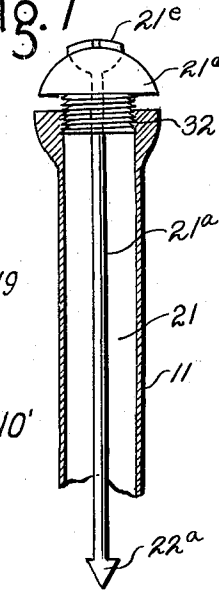


Fig. 6

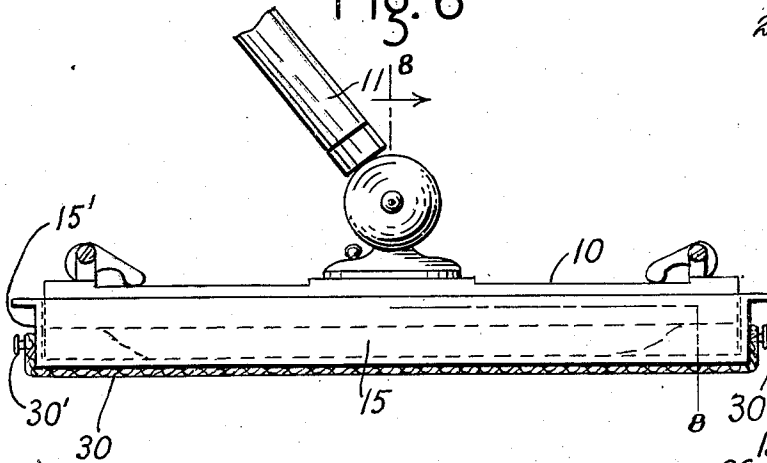


Fig. 8

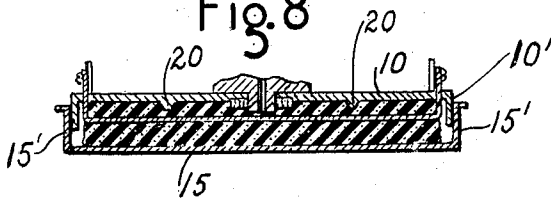
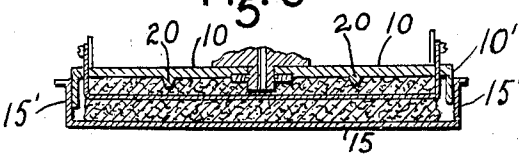
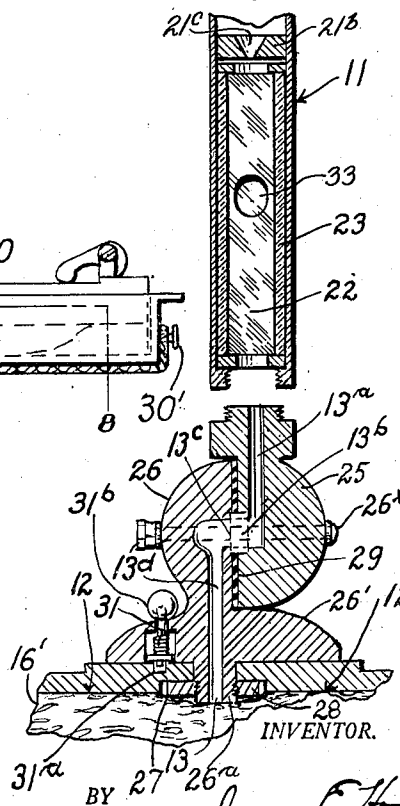


Fig. 9



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PAD-MOUNTING DEVICE FOR APPLYING
AND DISTRIBUTING WAX, OIL, AND
OTHER LIKE MATERIAL TO FLOORS
AND LIKE SURFACES

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4 Claims. (Cl. 15—131)

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This invention relates to improvements in pad-mounting devices for applying and distributing wax, oil and other like material to floors and like surfaces.

In conventional waxing methods, a pad or mop of soft, non-scratching material is mounted on a base member, and a given amount of wax for a given surface is applied on the surface, either separately or through openings in the pad, and is then distributed by the pad or mop of soft material on the floor to polish the same. Many waxing materials are self-polishing or glossing and no rubbing is required, but in others the pad not only distributes the material but is used to rub it in and polish the surface, and in all cases, the wax hardens on the pad or mop, so that it is unsuitable for another use without a difficult cleaning operation. In self-feeding devices, the wax is usually fed through ducts in the base member and thence to the surface to be polished, either to and through opening in a pad of soft material such as felt, or through spaces between strands of cotton, wool or like soft material. In all cases, the residual wax is left on the distributing or polishing pad or mop and in the mechanical distributing ducts after a single use and hardens in the fibres of such pad and ducts when the same is stored away, so that the mop or pad and the device becomes unsuitable for immediate use again until the pad is either thoroughly washed or renewed and the wax-delivery openings or spaces again opened up.

It is one of the objects of this invention to eliminate the difficulties above specified, and particularly to avoid and eliminate the use in a base member and/or pad or mop of open liquid-distributing and delivery ducts that become clogged during storage of the device.

Another object of this invention is in a machine of the type specified, to provide in combination with a suitable rigid base-member, a waxing or wax-applying pad of a porous spongy material, that though having a hard and rigid surface when dry, will be permeable to various types of wax now employed commercially as well as to other kinds or types of polishing materials; will, when wetted with such liquids possess natural ducts for the uniform distribution and application of such material to a surface to be treated, and will have and embody sufficient natural softness, when so wetted and permeated with the liquid material to permit application without scratching and thus to avoid or eliminate the use of distributing ducts in the mechanical parts of

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the apparatus, in combination with means for mounting said pad, and feeding material thereto.

Another object of my invention is to use, in a device of the character specified, a pad of commercial cellulose that has been blown or otherwise treated to make it spongy in character.

Another object of my invention is to provide in a device of the character specified means for mechanically distributing the material in cooperation with the natural distribution ducts of a pad of the type hereinabove specified.

Another object of this invention is to utilize a pad of the character specified in combination with means for excluding air from the pad when not in use and thus maintaining the same in condition for immediate use at all times.

Another object of my invention is to provide, in a device of the character specified, means for delivering to or supplying the pad with a regulated supply of the polishing or cleaning liquid.

Another object of this invention is to provide in cooperation with a pad having natural material-distributing ducts of means for mechanically distributing the liquid material in such ducts and preferably comprising ribs for providing material-distributing grooves in the feed-contacting surface of said pad and for damming the material within said pad and retaining the same within proper limits therein.

With these and other objects in view, the invention comprises the features, structures, combinations and arrangement of parts herein described and claimed, reference being had to the accompanying drawings, in which:

Fig. 1 is a perspective view of my waxing and oiling device;

Fig. 2 is a top plan view of the device shown in Fig. 1;

Fig. 3 is a bottom plan view of the device shown in Figs. 1 and 2;

Fig. 4 is a bottom plan view of the device shown in Fig. 3 with the pad removed;

Fig. 5 is a view in side elevation of the device with a part broken away;

Fig. 6 is a view in side elevation showing the pad enclosed in an air-excluding pan;

Fig. 7 is a section through the handle and an enlarged and fragmentary central part of the base member, and pad, showing the means for supplying and regulating the supply of material to the pad;

Fig. 8 is a section on the line 8—8 of Fig. 2 showing a pad of sponge rubber applied to the base member; and

Fig. 9 is a similar section on the line 8—8 of

Fig. 1 showing a pad of cellulose applied to said base member.

Referring now to these drawings, which illustrate a preferred embodiment of my invention, 10 indicates a base member to which a handle 11 is pivotally and centrally connected. As shown, the base member 10 comprises a rectangular plate of rigid material, such as aluminum, provided with depending edge flanges 10' extending perimetrically to produce a frame having its bottom depressed to produce a substantially flat, pad-seating surface 12 provided with a material-outlet 13 at its center and a perimetric outside edge 14 which provides a seat for the flanges of a pad-enclosing pan 15.

The pad-seating bottom surface 12 of the base member 10, is adapted to receive and serve as a holder for a similarly-shaped pad 16 of suitable thickness releasably mounted thereon and adapted to be firmly retained in position when the depressed base surface is inverted or faces downwardly to enable the bottom surface of the pad to be pressed against a floor or like surface to be treated, and mounting or fastening means also is provided to enable ready release of the pad from the base member and the reversal of the old pad or the mounting of a new pad, when necessary.

The pad 16 is so mounted as to have one of its flat surfaces, and, as shown, its top surface 16' abutting said depressed surface 12 so as to receive treating material passed through said orifice 13. Said surface 16' is poriferous but the material is partially distributed thereon and then passes into a highly-expansive and compressible body portion 16a of suitable thickness and porosity to further distribute such material and to provide a substantially uniform film or layer of such material adjacent to the lower or bottom surface 16b. Said bottom surface 16b when wetted with the material will not leak, but is adapted to serve, when the pad is pressed against a floor or like surface to be treated as a material-applying and spreading surface.

The pad 16 is preferably composed of a commercially-available cellulose that has been treated to make the same highly poriferous. The pad of such material is when dry, hard and relatively thin, but becomes highly expansive and very soft when wetted with a liquid, such as wax and not only will provide the necessary natural channels and valvular ducts to distribute such material from the inner to the outer surfaces but because of its natural characteristics will expand to more than double its dry thickness and will hold a large quantity of such material within its body without leakage until it is compressed by pressure applied thereto. Upon the application of pressure, however, to said outer bottom surface by applying or pressing the device against a floor or like surface, the natural ducts will express and release and enable the spreading on said floor or like surface of a thin, uniform film or layer of such material, the thickness or volume of which film or layer may be increased or diminished in accordance with the pressure applied and the quantity of material passed through the material orifice 13, through the opposite upper face of the pad and into the body of the initially wetted soft material. Upon the expressing or release of material at the lower surface, and the release of pressure thereon, outlet ducts at said surface automatically stop the flow of material to prevent leakage and the pad will re-expand to suck additional material into and

through the top surface of its poriferous body portion. I have found also that when pressure is relieved by the lifting of the device free of the floor or like surface, the material within the pad will be occluded within the pores and ducts so thoroughly as to exclude from such occluded material sufficient air to cause a hardening of the wax or like treating material, and the pad will retain its wetted, expanded, soft, and liquid-retaining condition for a long period of time. The device may, therefore, after being used, be stored, if the periods between uses are not too long. A pad of this material, when mounted as illustrated and initially wetted or saturated with material will remain expanded and soft so long as it is wetted with the material and if exposed to air will then dry and harden at the outer surface, but I have found that upon the supplying of additional wax through the orifice 13, this outer surface of the pad will become soft and the pad will be made ready for immediate use on a floor. The usual washing and cleansing operation which is necessary with other types of mops or pads may thus be eliminated.

The pad 16 may be mounted in any suitable way that will hold it securely in place and ready for use, and as shown, it is mounted on said bottom surface of the base so as to depend therefrom by a pair of bails 17 extending transversely across the pad adjacent to its opposite ends. Angularly-disposed ends 17a of these bails pass through slits 18 at the corners of the base member 10 and extend above the top surface thereof where fastening means are provided. As shown, these ends have pivotally connected thereto cams or eccentric fasteners 19 which are manually movable by handles 19' about their pivots 19a into frictional engagement with the top surface of the base to pull up and tighten or to release and loosen the bails on the ends of the pads below the base member. In tightened or closed position, the cams are locked in contact with the top of the base member and the bails are tightened on the pad, while in open position, as shown in dotted lines in Fig. 5, the cams will loosen the bail to release the pad. In tightened position, the bails will be deeply embedded in the opposite ends of the pad to compress the material at such opposite ends against the base plate and its end flanges (as shown in Fig. 5) so as to securely fasten the same on the bottom surface of the base member and to leave a free middle, material-applying portion 16b between the bails.

Notwithstanding the fact that the pad of cellulose material has material-retaining characteristics as hereinabove described, I preferably provide additional means for excluding air from the pad as a whole, and for this purpose, I preferably provide an air-excluding pan 15 having a shape and size similar to the base member and provided with flanges 15' adapted to engage and closely fit a pan-seat formed by the outside perimetric edges of the base member 10. Obviously, when a pan of this type is properly applied, air will be thoroughly excluded and the device may be stored for any suitable length of time and will at all times, be ready for immediate use by a mere removal of the pan. The pan 15 may also have means such as the buttons 20' on opposite end-flanges for mounting on the bottom of the pan, a polishing cloth 22 that may be useful or necessary with some forms of wax that require rubbing.

While the pad 16, mounted as aforesaid, will

provide natural distributing channels, I prefer to combine therewith additional mechanical distributing means, and to this end I provide on the flat pad-seating surface 12 a plurality of ribs 20, preferably longitudinally-disposed, which, when the pad is tightened up upon said surface, will depress channels or grooves in the top contacting-surface of the pad, see Figs. 4, 8, and 9, and will assist in distributing the material passing through the outlet 13 and will also act as damming elements to prevent excessive movement or distributing of the material within the pad to the edges thereof.

In my said preferred embodiment, I also provide means for supplying to the pad 16 a regulated supply of wax or like material and to this end my handle 11 is preferably formed of a hollow tube having a storage chamber 21 communicating with a valve-controlled supply-chamber 22. As shown, the tube 11 is provided intermediate its ends with a partition 21b which separates the chambers 21 and 22 and has a valve seat 21c into which an adjustable valve 22a, carried at the lower end of a valve-controlling rod 21a, is adapted to seat. As shown, the valve-rod 21a is mounted in the cap 21d, extends through the chamber 21, and is movable by adjustment of the cap 21d to cause the valve 22a to be seated and unseated in the valve seat 21c. As illustrated, the valve-rod is provided with a head 21e connected with the cap 21d and the cap has a screw-threaded connection at 32 with the upper end of the tube 11 which enables adjusting movement of the valve 22a in relation to the valve seat 21c. The supply-chamber 22 is preferably provided with a glass-lining member 23 and communicates with the outlet 13 through suitable channels in a universal joint. These channels comprise the axial longitudinal bore 13a, horizontal bore 13b, an aperture in a flat intermediate rubber washer 29, horizontal bore 13c and longitudinal bore 13d. A peep-hole 33 is preferably provided to the supply-chamber 22 and extends through the wall of the tube 11. This hole is glazed by the glass-lining member 23 so that a user may note when the material being used is exhausted to the level of said peep-hole.

The universal-joint is spherical in shape and is composed of two co-acting semi-spherical parts 25 and 26 suitably connected together. As shown, the joint-member 25 is connected by a horizontal pivot pin 26x to swing in a vertical arc of 90 degrees with its co-acting member 26 which is fastened to the base member 10 through a swivelling boss 26'. The joint-member 26 and boss 26' are fastened to the base member by providing on the boss 26' a threaded nipple 26a, passing the same through a bore 27 in the base member and securing the same by a nut 28 seated in a depression in the surface 12. I preferably limit the swivelling movement of the boss and handle by releasably locking the boss 26' to the base member 10 by a spring-pressed pin 31b urged by spring 31 to enter holes 31a in the base 10. In this way, the swivelling movement of the handle is limited and it may be locked against swivelling movement in one or more positions relatively to the base member, and the locking pin is readily releasable by a small, finger-engageable knob on the pin 31b. The joint-member 25 is, as shown, provided with a head 34 having an upwardly-extending screw-threaded shank 34' which is adapted to be engaged with internal screw-threads on the tube 11.

The operation of the device will be obvious from the foregoing description.

I claim:

1. A pad-mounting device for applying and distributing liquid wax or oil and like liquid materials to floors or like surfaces, comprising a base member having on its bottom face a pad mounting surface provided with a material-outlet duct, a pad of absorptive poriferous spongy material mounted on said mounting surface and having a surface contacting and covering said material-outlet duct to absorb and distribute material passing therethrough, transverse bails of rigid material mounted adjacent to the ends of said base member and extending across the surfaces of said pad at the opposite ends thereof, and means for pulling up and tightening said bails to cause the same to be deeply embedded in and to compress the ends of said pad while leaving a free material-applying portion between said bails.

2. A pad-mounting device for applying and distributing wax or oil and like liquid materials to floors or like surfaces, comprising a base member having on its bottom surface a pad-mounting surface provided with a material-outlet duct, a thick pad of highly absorptive, poriferous spongy material mounted on said mounting surface and having a surface contacting and covering said material-outlet duct to absorb and distribute material passing therethrough, transverse bails of rigid material mounted at the ends of said base member and extending across the surfaces of said pad at the opposite ends thereof, each of said bails having portions extending through said base member and provided at their ends with pressure applying cams for pulling up and tightening said bails to cause the same to be deeply embedded in and to compress the ends of said pad while leaving a free material-applying portion between said bails.

3. A pad-mounting device for applying and distributing liquid wax or oil and like liquid materials to floors or like surfaces comprising a base member composed of a plate of rigid material provided with depending flanges extending perimetrically along the edges of said rigid plate to produce a pad seat having at its bottom portion a depressed substantially flat pad-mounting surface provided with an outlet duct for liquid material, a pad composed of a thick plate of compressible and absorptive, poriferous and spongy cellulose fitting within said seat and having edges contacting said depending flanges, said pad being provided with natural ducts for the distribution of liquid material and having opposite surfaces in substantially parallel planes, one of said surfaces contacting and covering said material-outlet duct to absorb material passing therethrough and being of a thickness adapted to distribute the material fed to said contacting surface through the pad to the opposite surface thereof, transverse bails of rigid material mounted within said seat at opposite ends thereof, and means for pulling up and tightening said bails to cause the same to be deeply embedded in and to compress the ends of said pad while leaving a free material-applying portion between said bails.

4. A pad-mounting device for applying and distributing liquid wax or oil and like liquid materials to floors or like surfaces, comprising a base member composed of a plate of rigid material provided with depending flanges extending

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perimetrically along the edges of said rigid plate to produce a pad seat having at its bottom portion a depressed substantially flat pad-mounting surface provided with an outlet duct for liquid material, a pad composed of a thick plate of compressible and absorptive, poriferous and spongy cellulose fitting within said seat and having edges contacting said depending flanges, said pad being provided with natural ducts for the distribution of liquid material and having opposite surfaces in substantially parallel planes, one of said surfaces contacting and covering said material-outlet duct to absorb material passing therethrough and being of a thickness adapted to distribute the material fed to said contacting surface through the pad to the opposite surface thereof, transverse bails of rigid material mounted within said seat at opposite ends thereof, means for pulling up and tightening said bails to cause the same to be deeply embedded in and to compress the ends of said pad while leaving a free material-applying portion between said bails, said material-outlet being positioned at the center of the base plate and the said mounting surface being provided with ribs

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adapted to depress distribution channels in the contacting surfaces of the pad and means for supplying a regulated amount of liquid material to said material-outlet in the base.

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