

No. 634,786.

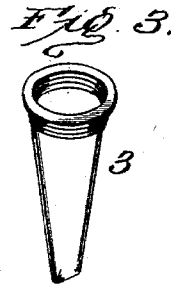
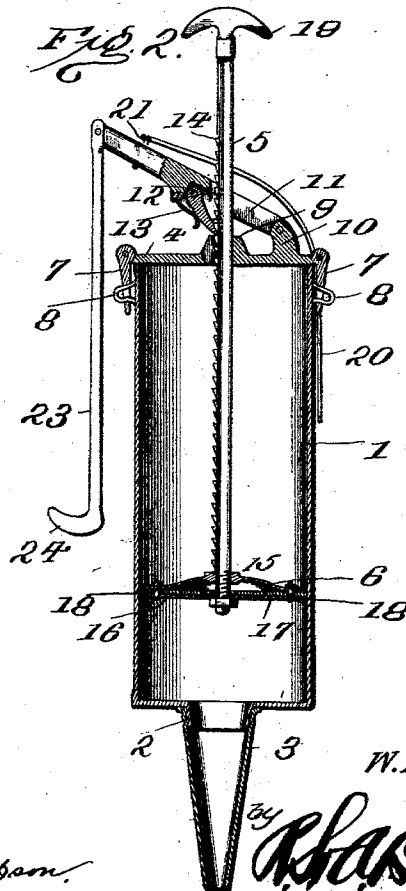
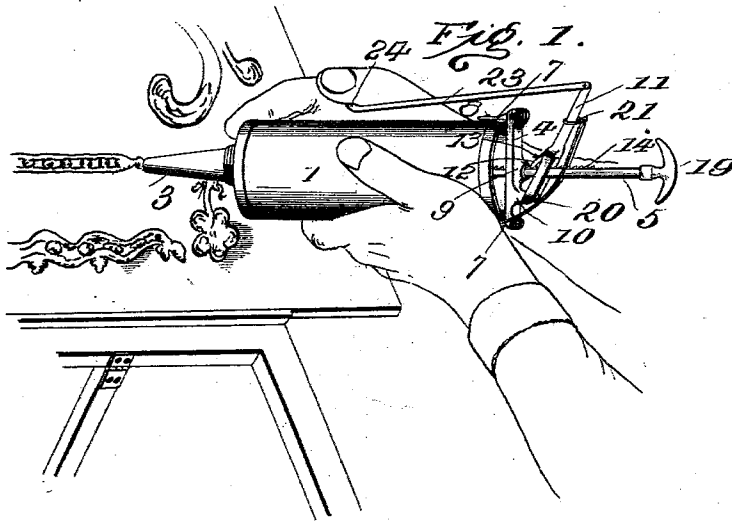
Patented Oct. 10, 1899.

W. A. WILLOWER.

DEVICE FOR MAKING FREE HAND RELIEF DECORATIONS.

(Application filed Mar. 23, 1899.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

WILBERT A. WILLOWER, OF LIMA, OHIO.

DEVICE FOR MAKING FREE-HAND RELIEF DECORATIONS.

SPECIFICATION forming part of Letters Patent No. 634,786, dated October 10, 1899.

Application filed March 23, 1899. Serial No. 710,234. (No model.)

To all whom it may concern:

Be it known that I, WILBERT A. WILLOWER, a citizen of the United States, residing at Lima, in the county of Allen and State of Ohio, have invented certain new and useful Improvements in Devices for Making Free-Hand Relief Decorations; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Apparatus as heretofore generally constructed for free-hand relief-work in decorating walls and ceilings by laying on strips, fillets, or ribbons of plastic material are not easy of management and control and great difficulty has been experienced in obtaining a uniform feed of the material.

The present invention is designed to provide an apparatus of the character aforesaid possessing the following advantages: capable of being easily handled, manipulated, and cleaned; enabling a steady and uniform flow of the material; providing for a quick refilling of the can or receptacle; enabling both hands being used to grasp the can and direct its movements; have the parts readily accessible for inspection, cleaning, and the making of repairs, and which will involve a simple construction and produce satisfactory results.

With these and such other ends as may result from the special construction of the apparatus, the invention consists of the novel formation and combinations of the parts, which hereinafter will be more fully described, illustrated, and claimed.

The size and capacity of the apparatus may be varied and the nozzle replaced by another of different form to suit the nature and requirements of the work, and such other changes in the form, proportion, and minor details of construction may be resorted to in adapting the invention to special needs without departing from or sacrificing any of its advantages.

In the drawings, Figure 1 is a detail view showing the invention in operation. Fig. 2 is a vertical central section. Fig. 3 is a detail view of a different form of nozzle.

Corresponding and like parts are referred to in the following description and indicated

in all the views of the drawings by the same reference characters.

The vessel or receptacle 1 is preferably of cylindrical form and is open at its upper end and closed at its lower or delivery end, the latter being provided with a screw-threaded collar for detachable connection therewith of a nozzle 3. The collar 2 is of conical form, and by having the nozzle 3 detachably connected therewith a nozzle of required size and form may be placed in position, and when it is required to refill the vessel the nozzle can be detached and the collar 2 dipped into the batter or material employed in the decorative work. A cross-bar 4 is removably fitted to the open end of the receptacle 1 and is centrally apertured for the passage therethrough of the rod 5, carrying at its inner end a piston 6, by means of which the composition is forcibly expelled through the nozzle 3. The cross bar or support 4 is secured to the receptacle at its ends in any convenient and substantial manner, and, as shown, it is provided with plates 7, hinged thereto and apertured or slotted to engage with ears, stops, or lateral extensions 8, projecting from the sides of the vessel. The ears or stops 8 are slightly depressed in their lower portions, so as to make positive engagement with the pivoted plates 7, and are constructed so as to yield slightly, thereby permitting the plates to ride thereover when securing the part 4 after being properly positioned. A boss 9, formed upon the top side of the cross-bar in line with the central opening thereof, is apertured to admit of the rod 5 operating freely therethrough. A bracket-lug 10 is formed with the cross-bar near one end, and an arm 11 is pivoted thereto and carries a pawl or dog 12, by means of which the piston is advanced as required to secure a proper delivery of the plastic composition. A spring 13 is attached at one end to the arm 11, and its free end braces the dog 12 and holds its active end in engagement with the teeth 14 of the rod 5. This spring can be turned aside upon its fastening, so as to permit the dog 12 to fall away from the teeth 14, thereby enabling the rod to be freely withdrawn at any time.

The piston is composed of a back plate 15, a clamp-plate 16, and an intermediate packing 17 of leather, rubber, or like flexible ma-

terial commonly employed in devices of this nature. The packing 17 is clamped between the plates 15 and 16 and is held in place by bolts or fastenings 18 passing through corresponding openings in the several parts. The lower end of the rod 5 is threaded and makes screw-thread connection with the piston, whereby the latter can be readily disconnected from its operating-rod when required. A series of ratchet-teeth 14 are formed upon one side of the rod 5 and extend nearly the entire length thereof. These teeth cooperate with the dog 12, when the apparatus is in operation, to obtain a proper delivery of the material to the wall or surface being decorated. A handle 19 is formed with or applied to the outer end of the rod 5 and provides a grip to enable the piston to be withdrawn from the receptacle when it is desired to recharge the apparatus.

The pivoted arm 11 is bifurcated and the rod 5 and bracket-lug 10 are received in the space formed between the bifurcations. The outer or free end of the pivoted arm is normally held outward from the cross bar or support 4 by means of a suitably-arranged spring. As illustrated, the spring 20 is formed of a single length of wire doubled upon itself and curved longitudinally, the outer end of the spring being bent to form a loop or eye 21, which embraces the arm 11, and the inner or opposite end of the spring-wire being secured by any form of fastening means to a side of the receptacle. The inner or lower portion of the spring spans the adjacent pivoted plate 7 and obtains a bearing against the side of the receptacle 1, to which it is secured in any substantial manner. Obviously the spring may be secured to the side of the receptacle or a convenient portion of the support 4 when found advantageous and if preferred. The construction illustrated is desirable, as it admits of the piston, the support 4 and adjunctive parts being readily disconnected from the receptacle for any desired purpose.

In practice the pivoted arm 11 is oscillated in order to advance the piston step by step in order to expel the material as the work of decorating progresses. Any convenient means may be employed for imparting movement to the arm. As disclosed, a bar 23 is pivotally connected at its outer end to the extremity of the arm 11, and its inner or lower end is expanded and provided with a finger or thumb-rest 24. This bar extends along the side of the receptacle 1 a sufficient distance to enable the rest 24 to be conveniently reached by the thumb or finger and yet allow the hand to firmly grasp the receptacle and direct it over the surface to be embellished or decorated.

The composition, which may be a batter of plaster-of-paris of the proper consistency, is supplied to the receptacle 1 either by removing the piston and filling the batter to the vessel through its upper end or by dipping the lower end of the vessel into the batter and

withdrawing the piston previously forced into the receptacle to the limit of its inward movement. When the piston is utilized for charging the apparatus, the spring 13 is turned aside so as to permit the dog 12 to fall away from the ratchet-teeth 14. After the apparatus has been charged and the required nozzle placed in position the receptacle is grasped by both hands, about as shown in Fig. 1 of the drawings, the thumb engaging with the rest 24. An oscillation of the pivoted arm 11 depresses the piston and forcibly ejects the material through the nozzle 3 in a strip, ribbon, or fillet, according to the size and shape of the said nozzle. As the material emerges from the nozzle it is laid on the surface to be decorated by properly manipulating and directing the apparatus over the surface, as experience will dictate and as well understood in the art.

Having thus described the invention, what is claimed as new is—

1. In apparatus of the character described, a receptacle having a discharge-nozzle, a centrally-apertured support, and means for detachably connecting the said support with the receptacle, in combination with a piston carried by said support and directed in its movements thereby and adapted to expel the material from the receptacle, and actuating means applied directly to the aforesaid support and movable therewith and adapted to advance the piston to its work, substantially as described.

2. In apparatus of the nature described, a receptacle provided with a discharge-nozzle, a centrally-apertured support, means for detachably connecting the support with the receptacle, a piston carried by the said support and directed in its movements thereby and having a handle at the outer end of its rod, a vibrating arm pivoted to the support and carrying a dog to engage with the piston-rod, and a spring for holding the vibrating arm in a normal position to advance the piston to its work, substantially as set forth.

3. In apparatus of the nature specified, a receptacle, a piston operating in the receptacle, a pivoted arm provided with operating means for actuating the piston, and an operating-rod applied to the pivoted arm and extending along the side of the receptacle and provided at its inner end with a rest for the thumb or finger of the hand to obtain a purchase upon when the apparatus is in operation, substantially as specified.

4. In apparatus of the type described, a receptacle having a discharge-nozzle, a piston operating in the receptacle, a pivoted arm provided with actuating means for operating the piston, and a spring for returning the pivoted arm to a normal or starting position and secured to a side of the receptacle and comprising companion members, substantially as and for the purpose described.

5. In apparatus of the character described, a receptacle provided with a discharge-noz-

zle, a piston, a vibratory arm provided with means for actuating the piston, and a spring having an end portion placed against the side of the receptacle and having its opposite end portion extending over the receptacle and embracing the outer end portion of the operating-arm, substantially as described.

6. In apparatus of the variety set forth, a receptacle, a piston operating therein, a support for directing the piston in its movements by direct engagement with the piston-rod, apertured plates having pivotal connection with the support, and ears or stops at the sides of the aforesaid receptacle to cooperate with the pivoted plates for securing the support in place when positioned, substantially as described.

7. In combination, a receptacle having a nozzle detachably fitted thereto, a support removably applied to the opposite end portion of the receptacle and centrally apertured and

provided with a bracket-lug, a piston having its rod operating through the opening of the support and provided along its length with a series of teeth, an arm pivoted to the bracket-lug and embracing the sides of the piston-rod, a spring-actuated dog applied to the pivoted arm and adapted to cooperate with the teeth of the piston-rod, a spring for returning the pivoted arm to a normal position, and an operating-rod having connection with the pivoted arms and provided at its inner end with a rest, the parts being combined and arranged to operate substantially in the manner and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

WILBERT A. WILLOWER. [L. s.]

Witnesses:

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