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LIQUID DISPENSING APPARATUS

Filed June 1, 1923

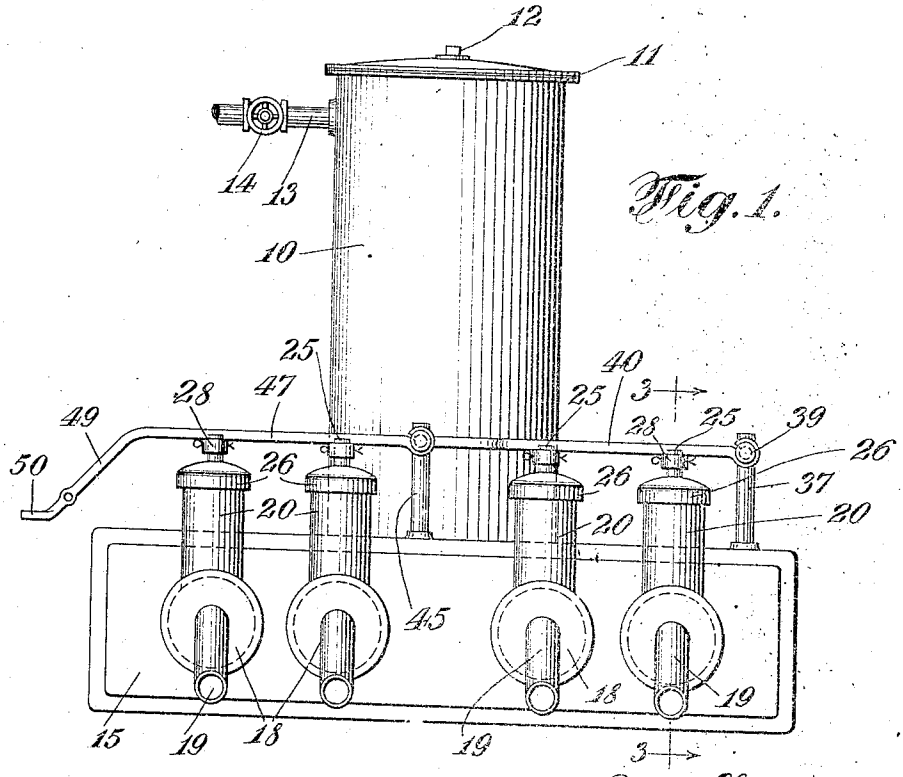



Fig. 1.

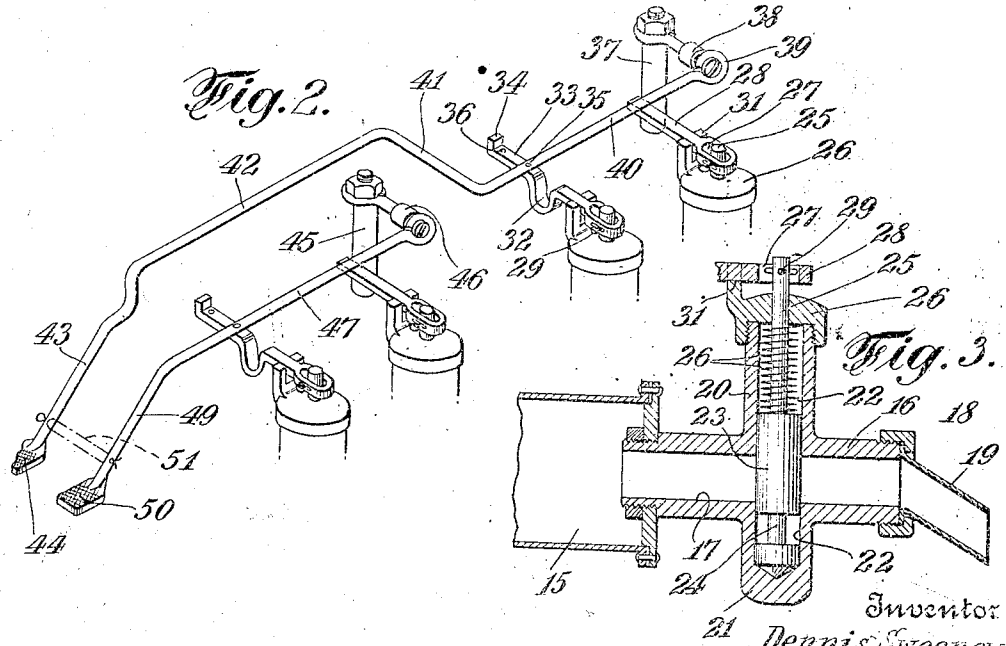



Fig. 2.

Fig. 3.

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# UNITED STATES PATENT OFFICE.

DENNIS SWEENEY, OF BROOKLYN, NEW YORK.

## LIQUID-DISPENSING APPARATUS.

Application filed June 1, 1923. Serial No. 642,851.

*To all whom it may concern:*

Be it known that I, DENNIS SWEENEY, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Liquid-Dispensing Apparatus, of which the following is a full, clear, and exact specification.

This invention relates to improvements in devices for applying a liquid substance to the face of dies as used in drop forging, shaping, cutting and trimming presses operated by power, in the production of metal parts.

One of the several objects of the invention is to provide a device for supplying such liquid substances as oils, brine or water, in required quantity and at such times as may be desired, to the faces of the dies in a positive manner, under the effect of a current of compressed air and without waste or loss.

Another purpose is to produce a device that is inexpensive to construct and install, that operates at a negligible expense, and avoids hand labor, with its consequent danger and risk.

A further aim is in the provision of a simple and efficient device for sprinkling liquids where desired and which by reason of preventing waste of the liquid and time ordinarily used in applying the same, is highly economical.

These several aims and objects are attained by the novel construction, combination and arrangement of parts hereinafter described and shown in the annexed drawing, forming part hereof, and in which:—

Figure 1 is a front elevational view showing an embodiment of the invention as arranged for a plurality of presses.

Figure 2 is a perspective view of the valve operating mechanism.

Figure 3 is an enlarged fragmentary sectional view taken through one of the discharge valves.

Referring to the drawing more in detail, the numeral 10 designates a tank having a tight cover 11 which contains an inlet or filling nozzle supplied with a removable plug or cap 12, this tank carrying a supply of the liquid substance to be used.

A pipe 13, leading from any convenient supply of compressed air, is provided with a valve 14 that can be closed when so desired.

The lower end of the tank 10 rests upon and communicates with a hollow base 15 from the front wall of which extend a plurality of cross shaped valve bodies 16, having a clear horizontal bore 17, a cap 18 at the outer end being used to secure a discharge pipe 19 leading to the point of application.

The vertical elements 20 and 21 of the valve body contain a bore 22, open at the top and arranged to intersect the bore 17 and fitted to slide in the bore 22 is a valve plunger 23 adapted to control the passage.

The lower portion of the plunger has an annular recess 24, which may be raised into registration with the bore 17, thus opening the valve, the extremity of the plunger acting at that time as a guide.

The stem 25 of the plunger is encircled by a coiled compression spring 26 disposed in the bore 22, said spring abutting respectively the plunger 23 and a cap 26' on top of the valve body element 20, through which the stem 25 passes.

The upper end of the stem operates in a slot 27 in the enlarged outer end of a lever 28, the stem being held by a pin 29 working in a slot 30 passing transversely through the walls of the slot 27, the lever being mounted on a fulcrum between a pair of forks 31 extending from the cap 26.

Certain of the levers have downwardly extending loops 32 and then continuing, as at 33, terminate in raised lugs 34, there being holes 35 and 36 formed respectively in the lever arms and actuating bars which will later be described.

Near one end of the base 15, on its upper surface, is fixed a post 37 having removably engaged, at its top, a forwardly extending arm 38 to which is pivotally engaged an eye 39 formed at the end of a bar 40 which extends over the end of the first lever 28 and the next adjacent lever, to which it may be secured by passing a readily removable pin through the holes 35 and 36, or the bar may be swung towards the front so that when its free end is depressed, as to enter the loop 32.

The bar is bent as at 41, and then continued in parallel as at 42, finally being bent downward as at 43 and terminates in a foot pedal 44 by which it is operated.

In a similar manner a post 45 fixed midway the length of the base supports an arm 46 carrying a bar 47, parallel to the bar element 42, downturned at 49 and ending in a

pedal 50, this bar operating the next adjacent pair of valves as shown and these two bars may be connected by a rod 51 to operate in unison, as shown in broken lines in Figure 2.

Thus the first valve to the right may be operated singly or in connection with the next adjacent the first and third operated together, the first, second and third, or all four may be operated simultaneously by proper action of the pedals, which are arranged for convenient operation, as best seen in Fig. 2, and it will be obvious that upon release of the pedals, the springs 26 return the plungers to closed position, shutting off the flow of material.

From the foregoing it will be seen that an inexpensive device for attaining the objects set forth has been disclosed.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A liquid dispensing apparatus comprising a tank, a plurality of valves controlling the outlet from the tank, dispensing nozzles adjustably secured to the ends of said valves, and a pair of pedally operated levers for controlling the passages in said valves individually, in pairs or collectively and means for permitting a shifting of said levers to open one or both valves in each pair.

2. A liquid dispensing apparatus comprising a tank, a hollow base open to said tank and adapted to contain a liquid, means for supplying said tank with compressed air, a plurality of valves arranged in pairs and extending from said base, means for distributing liquid discharged from said valves, and variable pedally operated levers for controlling the passage through said valves, singly, in pairs or aggregatively and means permitting a shifting of said levers to open one or both valves in each pair.

3. A liquid dispensing apparatus comprising a tank, a hollow base open to said tank and adapted to contain a liquid, means for supplying said tank with compressed air, a plurality of valves arranged in pairs and extending from said base, means for distributing liquid discharged from said valves, means for normally maintaining said valves closed, a pair of pedally operated levers pivoted at remote points on said base, each lever operating a pair of valves, and means permitting shifting the levers to open one or both valves in each pair.

DENNIS SWEENEY.