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(54) **Electric pump**

(57) Electric pump for the impulsion of liquids comprises a suction chamber (5), a diffusion chamber and a pressure chamber (6) through which the impelled liquid exits. The portion of the pump body (2) that delimits said pressure chamber (6) is provided with at least two

external suction inlets (9;9'), adapted for receiving the liquid to be impelled, and a selection device (10) which, acting as if it were a valve, selectively permits the inflow of the liquid by one of the inlet channels, by several channels at the same time, or by none, adapting itself to the different needs of the installation.

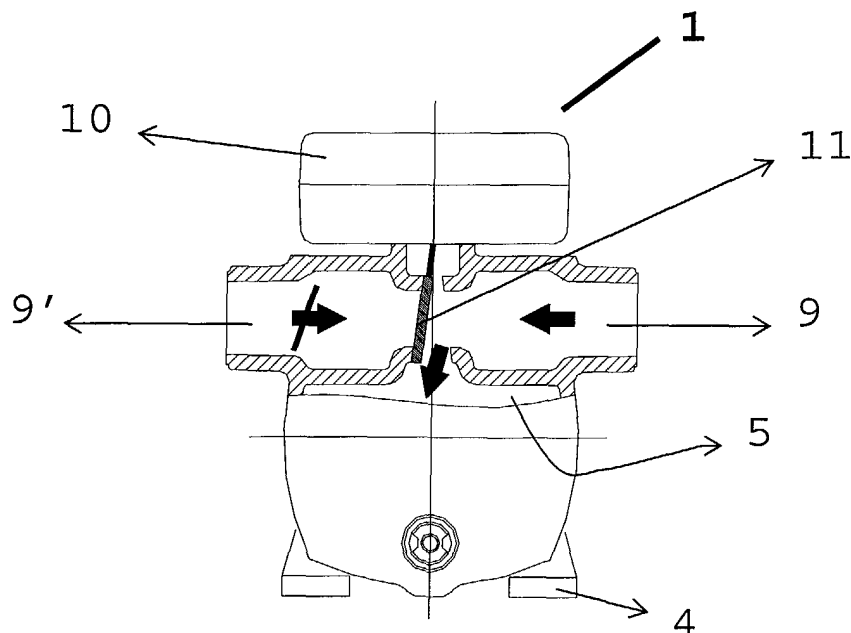


Fig. 2

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## Description

### Technical sector of the invention

**[0001]** The present invention relates to an electric pump for the impulsion of liquids, of the type which comprises a suction chamber that receives the liquid sucked in, a water impelling element arranged in the diffusion chamber and a pressure chamber through which the impelled liquid exits.

### Background to the invention

**[0002]** In the known electric pumps for the re-circulation, impulsion or pumping of liquids an impulsion device, housed in a diffusion chamber, sucks in the liquid housed in the suction chamber and impels it towards the outlet duct arranged in the electric pump itself.

**[0003]** In such embodiments, the liquid directly penetrates inside the suction chamber through a fixed inlet fitted in said chamber, or through an external suction inlet, which in some embodiments can be fixed in several positions in order to thus ease the positioning of the electric pump with regard to the liquid inlet duct. Said water inlet or suction inlet is connected to the pipe or tube that links with the receptacle or tank that stores the water to be impelled.

**[0004]** Nevertheless, in some installations or in some situations, the case may arise wherein the liquid that one wishes to pump or impel is stored in several different tanks, so, there are several pipes, each of which are connected to their respective tanks. In these cases, if one wishes to be able to selectively pump the liquid from each of the existing tanks, the solution consists of using a different electric pump for each tank, or else to connect, the electric pump having been switched on, the different inlets, compelling the user to make changes in its installation and increasing the costs of same.

**[0005]** Therefore, pointed out herein, is the need for an electric pump which anticipates future enlargements of a water pumping installation, as well as an electric pump ready for receiving more than one inlet and able to pump, selectively, the liquid proceeding from each of the possible different inlets.

### Explanation of the invention

**[0006]** With the aim of providing a solution to this problem, an electric pump for the impulsion of liquids is herein disclosed.

**[0007]** In essence, the electric pump object of the invention is of the type which comprises a suction chamber which receives the liquid sucked in, a water impelling element arranged in the diffusion chamber and a pressure chamber through which the impelled liquid exits, and is characterised in that the portion of the pump body that delimits said pressure chamber is provided with at least two external suction inlets, adapted for receiving

the liquid to be impelled, and a selection device which, acting as if it were a valve, selectively permits the inflow of the liquid by one of the inlet channels, by several channels at the same time, or by none, adapting itself to the different needs of the installation.

### Brief description of the drawings

**[0008]** A detailed description of the electric pump object of the invention is made below, accompanied by drawings to aid comprehension and given merely by way of non-limiting example, in which:

Fig. 1 is a side elevation view, in partial section, of a preferred mode of embodiment of the electric pump with multiple suction inlets object of the invention; and

Fig. 2 shows a front elevation view, in partial section, of the electric pump in Fig. 1.

### Detailed description of the drawings

**[0009]** In said drawings it can be appreciated that the electric pump 1 comprises a pump body 2 and an electric pump 3, coupled to each other and assembled on supports 4.

**[0010]** The pump body 2 comprises a suction chamber 5, a pressure chamber 6, a water impelling element 7 and a pressure chamber provided with an outlet 8, through which the liquid impelled from the electric pump exits.

**[0011]** Naturally, it can be a rotary, piston, electromagnetic electric pump ...etc, and can be arranged vertically or horizontally, provided that the pump body comprises a suction chamber with its corresponding inlet device of the liquid to be impelled, in this case one or several suction inlets.

**[0012]** The suction chamber 5 of the electric pump 1 is fitted with several suction inlets 9, adapted for receiving the liquid to be impelled. In the mode of embodiment represented in Fig. 1, the two suction inlets 9 and 9' are arranged transversally in relation to the longitudinal axis of the electric pump and symmetrically as regards said axis.

**[0013]** Coupled to the pump body 1, the selection device 10 commands an element 11 which, acting as if it were a valve, selectively permits the inflow of the liquid by one of the inlets 9, by the two at the same time or by none of them.

**[0014]** In the view in Fig. 2 and by way of example, the element 11 blocks the inflow of the liquid through the suction inlet or channel 9', this action being represented in the drawings with the symbol of a slashed arrow. On the other hand, the selection device 10, through the element 11, permits the inflow of liquid through the suction inlet 9, so that the liquid flows, in accordance with the direction indicated by the arrow in Fig. 2, towards the suction chamber 5.

**[0015]** This way, it avoids making changes or alterations in the existing installations and prevents future enlargements or new needs to pump liquids that come from more than one tank or receptacle.

**[0016]** It is hereby noted that the constructive details of the electric pump, sizes and shapes, as well as the characteristic of the liquid impelling element, are completely independent of the scope of the invention, all of the possible variations of the previous ones being under the protection of the scope of the claims.

## Claims

1. Electric pump for the impulsion of liquids, of the type which comprises a suction chamber that receives the liquid sucked in, a water impelling element arranged in the diffusion chamber and a pressure chamber through which the impelled liquid exits, **characterised in that** the portion of the pump body that delimits said pressure chamber is provided with at least two external suction inlets, adapted for receiving the liquid to be impelled, and a selection device which, acting as if it were a valve, selectively permits the inflow of the liquid by one of the inlet channels, by several channels at the same time, or by none, adapting itself to the different needs of the installation.

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