nel **2***a*. The driving unit **3***c* is provided, for example, on the rear surface side of the valve core portion **301**.

[0084] In the valve changeover unit **303**, the valve body **305** and an air-exhaust port **307** are provided. The valve body **305** operates so as to shut off or open the air-exhaust port **307** by obtaining the drive-power of the driving unit **3***c*. The air-exhaust port **307** communicates to the flow channel **2***b*. As the valve body **304** or **305**, a plate rubber sheet member having a long oval shape is used.

[0085] In the above-mentioned embodiment, when the valve body **304** is opened through the driving unit **3***c*, the air supplied from the blower **3***b* is passed through the air-exhaust port **306** and the flow channel **2***a* and is introduced to the apertures p**1** to p**3** (not shown in FIG. **2**A), the apertures p**4** to p**12** and the apertures p**13** to p**17** (not shown in FIG. **2**A). Also, when the valve body **305** is opened, the air supplied from the blower **3***b* is passed through the air-exhaust port **307** and the flow channel **2***b* and is introduced to the apertures P**18**, p**19**, and the apertures p**20** to p**24** (not shown in FIG. **2**A).

[0086] When the valve bodies **304**, **305** are opened at the same time, the air supplied from the blower **3***b* is passed through the air-exhaust port **306** and the flow channel **2***a* and is introduced to the apertures p**1** to p**17** and at the same time, the air supplied from the blower **3***b* is passed through the air-exhaust port **307** and the flow channel **2***b* and is introduced to the apertures p**18** to p**24**. Also, when the valve bodies **304**,**305** are closed at the same time, the air supply to the apertures p**1** to p**24** stops.

[0087] Accordingly, the programmable air-circulation unit **3** is constituted to send the air to the apertures for every group such as the plurality of apertures p**1** to p**17** and the plurality of apertures p**18** to p**24** which are perforated in the base member **1**, or to take in the air from the apertures for every group such as the apertures p**1** to p**17** and the apertures p**18** to p**24**. AS shown in FIG. **2**B, in the touch-sensitive sheet member **100**, the air supplied from the air-circulation unit **3** by passing it through the flow channel **2***a* and the like can be blown out to the outside from the aperture p**5**, the aperture p**8**, the aperture p**10** or the like. It should be noted that realizing air-taking from the apertures p**1** to p**17** and the apertures p**18** to p**24** is allowed by exchanging the connections of the flow channels **2***a*, **2***b* and the air-exhaust ports **306**, **307**.

[0088] FIG. **3** shows a configuration of the blower **3***b*. The blower **3***b* shown in FIG. **3** is a blower having a piston type structure and contains an apparatus main body **311**, an air-intake port **312**, a valve body **313**, a piston unit **314**, a piezoelectric unit **315**, a valve body **316**, an air-exhaust port **317** and a pedestal **318** in concurrent use of a lid. The apparatus main body **311** has a rectangular sectional shape and has internal volume in which the piston unit **314** is reciprocated. The apparatus main body **311** is constituted, for example, by a housing member formed by molding a resin or a light metal using a die.

[0089] In the apparatus main body **311**, the air-intake port **312** and the air-exhaust port **317** are provided which have predetermined sizes (aperture diameters). The air-intake port **312** and the air-exhaust port **317** are provided together in parallel in, for example, the up/down on one of the side surfaces of the apparatus main body **311**. The aperture diameters of the air-intake port **312** and the air-exhaust port **317** are set to have the same diameter, or are set so that the aperture diameter of the air-exhaust port **317** is larger than that of the air-intake port **312**. The reason why the aperture diameter of the air-exhaust port **317** is set larger is because the air-exhaust resistance is decreased.

[0090] The valve body **313** is movably mounted on the air-intake port **312**, and is opened when the air is taken in the apparatus main body **311**. The valve body **313** is closed when the air is released to the outside from the inside of the apparatus main body **311**. In the inside of the apparatus main body **311**, the piston unit **314** having a predetermined shape is provided. The piezoelectric unit **315** is mounted on one side of the piston unit **314** and the piston unit reciprocates by obtaining a driving force of the piezoelectric unit **315**.

[0091] The valve body **316** is movably mounted on the air-exhaust port **317** and is opened when the air is released to the outside from the inside of the apparatus main body **311**. The valve body **316** is closed when the air is taken in the apparatus main body **311**. As the valve body **313** or **316**, a plate shaped rubber sheet member is used. The piezoelectric unit **315** is mounted on the pedestal **318** concurrent used as the lid body. For the piezoelectric unit **315**, a piezoelectric device (PZT: Actuator) is used. The pedestal **318** concurrent used as the lid body is assembled so as to close the apparatus main body **311**. In this manner, the blower **3***b* is constituted which can supply the air to the flow channel panel **2** through the flow channel changeover unit **3***a*.

[0092] Although, in this embodiment, the blower **3***b* of a piston type has been described, the blower is not limited to this; a blower in which a Venturi effect is used may be used. A blower of Venturi type includes a diaphragm in a pump room and a Venturi tube unit is communicated to one end of the pump room. The Venturi tube unit is provided with an intake port and an exhaust port.

[0093] According to this blower, the diaphragm pushes air in the pump room out, so that the high speed air current occurs toward the Venturi tube unit from the pump room. The Venturi tube unit is designed to have an aperture diameter smaller than ones of the intake port or the exhaust port, so that the current speed of air (gas) becomes very high speed as compared with ones of the outside of the exhaust port.

[0094] On the other hand, the outside of the exhaust port is an atmospheric pressure (one atm), but the Venturi tube unit becomes negative pressure because the air current speed is big. Here, Bernoulli's theorem is formed between the Venturi tube unit and the outside of the exhaust port. When an air density is made asp, the speed of the air in the Venturi tube unit is made as v**1**, the pressure thereof is made as P**1**, the speed of the air at the outside of the exhaust port is made as v**2** and the pressure thereof is made as P**2**, a formula (1) is obtained from the relationship of v**1**>v**2**, P**1**<P**2**, specifically as follows.

$$\rho * v1^2 + 2 * P1 = \rho * v2^2 + 2 * P2 \quad (1)$$

[0095] The P**2** is an atmospheric pressure and P**1** is lower than an atmospheric pressure, so that air is taken from the intake port through the flow channel. Specifically, the air having volume more than volume of the pushed air in the pump room is blown out of the exhaust port.

[0096] Further, when the diaphragm pulls air in the pump room, high speed air current occurs toward the pump room from the Venturi tube unit. In this case, similarly as the above, negative pressure occurs because the current speed of air of the Venturi tube unit is larger as compared with that of air of the outside of the exhaust port. This enables air to be taken from the intake port through the flow channel. It is also