the transporting carriage **6**, there is a lug **53** which can be inserted in a recess **7.1**, this lug **53** having an air flow aperture **56** passing through the lug **53** as far as the area of the connection of the air feed pipe **42**.

When the gripping tong **50** are not inserted, the lug **53** is bent upwards, by means of a spring **53'** inserted in the elastic material of the lug **53** and the lower portion **52** of the tongs to such an extent that the air flow aperture **56** is sealed off, and in some cases an articulated valve may be provided.

When the lug is pushed into the recess **7.1** and the lower portion **52** of the tongs is fixed by means of a position marking means **7.2**, e.g. a step formed on the tranverse arm **7.6**, the air flow aperture **56** is opened and the air then flows through the air flow aperture **56** passing through the lug **53** and lower portion **52** of the tongs, into the connection for the air feed pipe **42**, leading through the closure member **40** into the primary vessel **9**. The air is supplied through an aperture **7.7** or the vertical arm thereof to the air connection (not shown) of the diluter **10**. In the delivery position, the lower portion **52** of the tong is held by means of a magnetic connection **7.22** provided on the transverse arm **7.6** of the clamping means **7**. The sample is delivered as explained with reference to FIG. **1**. Positions **40** and **51** are secured in position by any desired means to prevent them from rotating relative to each other.

It may also be appropriate to provide an optical outflow monitoring device. In this case, it is advisable to provide optical carriers **7.4** designed to receive suitable monitoring means **7.5**.

FIG. **7** shows an embodiment wherein, without the use of the intermediate carrier in the form of gripping tongs **50**, the air passes directly through the clamping means **7**, the transverse arm **7.6** thereof and the air aperture **7.7** into the recess **7.8** provided with a stop followed by **7.88** for the inserted portion **44** of the closure member **40**. The stop makes it possible to provide an air space from which the air enters the primary vessel **9**, directed towards the abutment portion **45**, starting from the connecting port for the feed pipe **42**, this port passing through the closure member **40**.

The primary vessel **9** is held at the bottom by means of an inwardly conical hollow member **7.9** mounted on a transverse arm **7.10** of the clamping means **7** and movable thereon along a longitudinal guide **7.12**, while a spring **7.11** presses the primary vessel **9**, via the hollow member **7.9**, against the abutment portion **45** of the closure member **40**, so as to form a seal.

As in this example, the air aperture **7.7** may be connected to the diluter **10** via the pivot motor shaft **7.13** mounted in a stationary position on the clamping means **7**, via a coil **7.14** which absorbs the pivoting movement and another line. The pivot motor **7.15** rotating through 180° is fixedly connected to the transporting carriage **6**.

While the present invention has been illustrated with the aid of certain specific embodiments thereof, it will be readily apparent to others skilled in the art that the invention is not limited to these particular embodiments, and that various changes and modifications may be made without departing from the spirit of the invention or the scope of the appended claims.

We claim:

1. An apparatus for sampling and distributing liquid material which comprises:

a plurality of primary vessels containing liquid sample material, each said primary vessel having a vertical longitudinal axis and an open upper end;

support means for holding said primary vessels such that said open ends are upwardly positioned;

a closure means engaging each said open end, each closure means comprising a pourer means and an air flow aperture means;

carrier means having vertically arranged clamping means to fixedly engage the closure means of one of said primary vessels, said clamping means having separate passage means for respectively communicating with said pourer means and said air flow aperture means of said closure means, said carrier means further having means for rotating said primary vessel 108° about an axis that is perpendicular to the longitudinal axis of said primary vessel so that said open end points downwardly;

diluter means to convey air to said primary vessel engaged by said clamping means, said diluter means being in fluid communication with said primary vessel through one of said separate passage means in said clamping means in response to a control means, the diluter means being adapted to evacuate air from said primary vessel until surface tension of liquid sample material therein prevents further outflow;

means for holding and containing a plurality of secondary vessels into which predetermined quantities of liquid sample material are to be deposited, said carrier means further having means for positioning one of said primary vessels above a respective secondary vessel; and

means for transferring liquid sample material from said primary vessel to said secondary vessel through said pourer means.

2. An apparatus of claim **1**, wherein said clamping means is constructed as gripping means for said primary vessel, into which said primary vessel can be inserted either manually or by means of program-controlled means, the inserted portion of said closure means engaging in a horizontally guided transverse arm of said clamping means has uniform dimensions, while the abutment portion of said closure means directed towards said primary vessel is adapted to fit the opening of said primary vessel used or is conical in construction, a hollow member which is inwardly conical in construction and can be clamped in the direction of the longitudinal axis of said primary vessel engages over the base of said primary vessel, said hollow member is guided on a transverse arm having a longitudinal arm of said clamping means, and said primary vessel is clamped axially against said closure means by means of a spring through the hollow member.

3. An apparatus of claim **1**, wherein the carrier means comprises a pair of gripping tongs opening counter to pressure and having upper and lower portions each having proximal and distal ends, the distal end of said lower portion is directed away from said pourer means and engages said closure means, said lower portion distal end contains a recess for the insertion of, said closure means and power means and further includes a through opening for the passage of the pourer means said lower portion distal end including a second air flow aperture means directed substantially perpendicularly to the longitudinal axis of said primary vessel and to the vertically arranged clamping means of said carrier means, said distal end of said lower portion of said gripping tongs comprises a hinged or flexible lug, which distal end is bent upwards in a non-engaged position by a spring or other tensioning means and thus blocks said