PATENT CLAIMS

1. Teat unit with a teat (4), a securing device (2, 3) for securing the teat (4) on a liquid container (1), and an air valve (23, 310), the securing device having a first securing part (2) and a second securing part (3), and the air valve (23, 310) having at least a first valve part (23) and a second valve part (310), characterized in that
a) the first valve part (23) is arranged in the first securing part (2), and the second valve part (310) is arranged in the second securing part (3) or
b) the air valve (23, 310) opens or closes with respect to the second securing part (3) and the first valve part (23) and the second valve part (310) are arranged in the first securing part (2).

2. Teat unit according to Claim 1, wherein the teat (4) can be clamped sealingly between the two securing parts (2, 3).

3. Teat unit according to one of Claims 1 or 2, wherein the air valve (23, 310) is a diaphragm valve, and the first part is a valve diaphragm (23).

4. Teat unit according to one of Claims 1 to 3, wherein the two securing parts (2, 3) are rigid, at least in the area of the air valve (23, 310), and wherein they are designed such that they can be connected to each other.

5. Teat unit according to one of Claims 1 to 4, wherein the teat (4) is arranged independently of the air valve (23, 310).

6. Teat unit according to one of Claims 1 to 5, wherein the two securing parts (2, 3) form an air channel that opens into at least one air opening (281) leading to the outside.

7. Teat unit according to one of Claims 1 to 6, wherein the diaphragm has an air through-flow opening (230) that is designed permanently open and that can be closed by means of the second securing part (2).

8. Teat unit according to Claim 7, wherein the air through-flow opening (230) is strengthened at its circumference.

9. Teat unit according to one of Claims 7 and 8, wherein the air through-flow opening (230) is circular, elliptic, oval or annular.

10. Teat unit according to one of Claims 7 to 9, wherein the diaphragm has a plane main surface (232) and a truncated cone (231) arranged in the main surface (232), the air through-flow opening (230) being arranged in the truncated cone (231).

11. Teat unit according to one of Claims 1 to 10, wherein the diaphragm is secured about its entire periphery in the first securing part (2).

12. Teat unit according to one of Claims 1 to 11, wherein the first securing part (2) has a circumferential sealing ring (22) for bearing in a leaktight manner on an end face of the liquid container (1), and wherein the diaphragm and the sealing ring (22) are preferably designed together in one piece.

13. Teat unit according to one of Claims 1 to 12, wherein the first securing part is a base part (2) and the second securing part is a receiving head (3), wherein the receiving head (3) and the base part (2) can be connected to each other via a releasable plug connection (21, 30), wherein the receiving head (3) for this purpose has plug elements (30) that can be plugged into the base part (2) and that are designed to secure the assembled base part (2) and receiving head (3) on the liquid container (1).

14. Teat unit according to one of Claims 1 to 13, wherein the first securing part (2) has an annular main body (20) and a truncated cone (25) formed integrally in the main body (20), wherein a liquid through-flow channel extends along a longitudinal centre axis of the truncated cone (25), and wherein the diaphragm of the air valve (23, 310) is arranged in a circumferential surface of the truncated cone (25).

15. Teat unit according to Claim 14, wherein the diaphragm of the air valve (23, 310) is substantially flush with the circumferential surface of the truncated cone (25).

PATENT CLAIMS

1. Teat unit with a teat, a securing device for securing the teat on a liquid container, and an air valve, the securing device having a first securing part and a second securing part, and the air valve having at least a first valve part and a second valve part, wherein the two securing parts are rigid, at least in the area of the air valve, and
   a) the first valve part is arranged in the first securing part, and the second valve part is arranged in the second securing part or
   b) the air valve opens or closes with respect to the second securing part and the first valve part and the second valve part are arranged in the first securing part.

2. Teat unit according to Claim 1, wherein the teat can be clamped sealingly between the two securing parts.

3. Teat unit according to one of Claims 1 or 2, wherein the air valve is a diaphragm valve, and the first part is a valve diaphragm.

4. Teat unit according to any one of Claims 1 to 3, wherein the first securing part and the second securing part are designed such that they can be connected to each other.

5. Teat unit according to any one of Claims 1 to 4, wherein the teat is arranged independently of the air valve.

6. Teat unit according to any one of Claims 1 to 5, wherein the two securing parts form an air channel that opens into at least one air opening leading to the outside.

7. Teat unit according to any one of Claims 3 to 6, wherein the diaphragm has an air through-flow opening that is designed permanently open and that can be closed by means of the second securing part.

8. Teat unit according to Claim 7, wherein the air through-flow opening is strengthened at its circumference.

9. Teat unit according to any one of Claims 7 or 8, wherein the air through-flow opening is circular, elliptic, oval or annular.

10. Teat unit according to any one of Claims 7 to 9, wherein the diaphragm has a plane main surface and a truncated cone arranged in the main surface, the air through-flow opening being arranged in the truncated cone.

11. Teat unit according to any one of Claims 3 to 10, wherein the diaphragm is secured about its entire periphery in the first securing part.

12. Teat unit according to any one of Claims 3 to 11, wherein the first securing part has a circumferential sealing ring for bearing in a leaktight manner on an end face of the liquid container, and wherein the diaphragm and the sealing ring are designed together in one piece.

13. Teat unit according to any one of Claims 1 to 12, wherein the first securing part is a base part and the second securing part is a receiving head, wherein the receiving head and the base part can be connected to each other via a releasable plug connection, wherein the receiving head for this purpose has plug elements that can be plugged into the base part and that are designed to secure the assembled base part and receiving head on the liquid container.

14. Teat unit according to any one of Claims 3 to 13, wherein the first securing part has an annular main body and a truncated cone formed integrally in the main body, wherein a liquid through-flow channel extends along a longitudinal centre axis of the truncated cone, and wherein the diaphragm of the air valve is arranged in a circumferential surface of the truncated cone.

15. Teat unit according to Claim 14, wherein the diaphragm of the air valve is substantially flush with the circumferential surface of the truncated cone.

16. A nipple apparatus for a feeding bottle having a pressure regulating feature, comprising:
a flexible teat having an internal conduit through which liquid passes from a supply to an exit port;
a securing device attaching said teat to a container, said securing device having first and second securing parts, said first securing part being located toward a container interior relative to said second securing part;

a valve element provided on said first securing part, said valve element having a first valve part which is movable relative to said first securing part, with an orifice formed in said first valve part communicating with the container interior, said second securing part having a portion against which said first valve part engages to thereby close said orifice in a first state;

a channel for ambient air to enter between said first and second securing parts and pass through said orifice into the container interior in a second state, said channel being closed to the container interior in said first state, the container interior otherwise being sealed against entry of air by said securing device;

said first valve part moving away from said portion of said second securing part and toward the container interior upon removal of liquid through said teat internal conduit to thereby open said channel for air to pass, the removal of liquid creating an underpressure in the container interior in said second state.

17. Teat unit with a teat, a securing device for securing the teat on a liquid container, and an air valve, the securing device having a first securing part and a second securing part, and the air valve having at least a first valve part and a second valve part,

a) the first valve part is arranged in the first securing part, and the second valve part is arranged in the second securing part or

b) the air valve opens or closes with respect to the second securing part and the first valve part and the second valve part are arranged in the first securing part,

wherein the first securing part is a base part and the second securing part is a receiving head, wherein the receiving head and the base part can be connected to each other via a releasable plug connection, wherein the receiving head for this purpose has plug elements that can be plugged into the base part and that are designed to secure the assembled base part and receiving head on the liquid container.

18. Teat unit with a teat, a securing device for securing the teat on a liquid container, and an air valve, the securing device having a first securing part and a second securing part, and the air valve having at least a first valve part and a second valve part,

a) the first valve part is arranged in the first securing part, and the second valve part is arranged in the second securing part or

b) the air valve opens or closes with respect to the second securing part and the first valve part and the second valve part are arranged in the first securing part,

wherein the first securing part has an annular main body and a truncated cone formed integrally in the main body, wherein a liquid through-flow channel extends along a longitudinal centre axis of the truncated cone, and wherein the first valve

part of the air valve is arranged in a circumferential surface of the truncated cone.

19. Teat unit according to claim 17 or 18, wherein the first valve part is a diaphragm.

20. A nipple apparatus according to claim 16, wherein the first valve part is a diaphragm.