CLAIMS

1. A hand-held vacuum cleaner (10) having:
a body (12) with a substantially planar base (22) upon which the vacuum cleaner can rest when not in use, the body having a carrying handle (20), a motor (14) and an impeller (16) located within the body, the vacuum cleaner also having a collector (26, 126) and a battery (18), the battery having a housing which provides at least a part of the base (22), the motor (14) and the impeller (16) being located between the base (22) and the collector (26, 126), the vacuum cleaner having a nozzle which is spaced from the base.

2. The hand-held vacuum cleaner (10) according to claim 1 in which the motor (14) and the battery (18) are located below the centre (C-C) of the carrying handle (20).

3. The hand-held vacuum cleaner (10) according to claim 1 or claim 2 in which the carrying handle (20) forms a closed loop with the remainder of the body (12) of the vacuum cleaner.

4. The hand-held vacuum cleaner (10) according to any one of claims 1-3 in which the carrying handle (20) has a longitudinal axis which is at an acute angle (α) to the base (22).

5. The hand-held vacuum cleaner (10) according to claim 4 in which the acute angle (α) is between 50º and 70º.

6. The hand-held vacuum cleaner (10) according to claim 4 or claim 5 in which the angle (α) is approximately 60º.

7. The hand-held vacuum cleaner (10) according to any one of claims 1-6 in which a dust brush (30) is mounted upon the nozzle (24).

8. The hand-held vacuum cleaner (10) according to any one of claims 1-7 in which at least part of the carrying handle (20) is hollow and adapted to locate a crevice tool (60).

9. The hand-held vacuum cleaner (10) according to any one of claims 1-8 in which the nozzle (24) is in communication with the collector (26, 126) by way of an extendable flexible hose (44, 70, 80), the nozzle being spaced from the base when the extendable flexible hose is not extended.

10. The hand-held vacuum cleaner (10) according to claim 9 in which the extendable flexible hose (44, 70, 80), when not extended, is located within a substantially rigid tubular housing (46).

11. The hand-held vacuum cleaner (10) according to any one of claims 1-10 having a lighting unit (8) adapted to illuminate the region adjacent to the nozzle (24).

12. The hand-held vacuum cleaner (10) according to claim 11 having a single control switch (28) to actuate the motor (14) and the lighting unit (8).

13. The hand-held vacuum cleaner (10) according to claim 12 in which the control switch (28) is a two-position switch, a first position actuating the lighting unit (8) and a second position actuating the motor (14).

14. The hand-held vacuum cleaner (10) according to any one of claims 1-13 having a baffle (128) within the collector (126) adapted to direct the air flow towards the bottom of the collector.

15. The hand-held vacuum cleaner (10) according to claim 14 in which the baffle (128) has a second surface (128b) adapted to direct the air flow towards the bottom of the collector, and also has a first surface (128a) adapted to direct the air flow to circulate around the collector (126).

16. The hand-held vacuum cleaner (10) according to any one of claims 1-15 having an extendable hose (70, 80) comprising a coil spring (72, 76, 88, 92) and an airtight material (74, 90), the hose having a first part (82) and a second part (84), the first part of the hose having a first coil spring (72, 88) and the second part having a second coil spring (76, 92), the winding direction of the first coil spring being opposite to the winding direction of the second coil spring.

17. The hand-held vacuum cleaner (10) according to claim 16 in which the first coil spring (72, 88) and the second coil spring (76, 92) are of similar lengths, and are made from the same material.

18. The hand-held vacuum cleaner (10) according to any one of claims 1-17 in which the collector (26, 126) is located between the carrying handle (20) and the nozzle (24), the vacuum cleaner having an inlet (124) to the collector, the inlet being located at side of the collector facing the carrying handle.

19. The hand-held vacuum cleaner (10) according to claim 18 in which air passes over the top of the collector (26, 126) as it flows from the nozzle (24) to the inlet (124).

20. The hand-held vacuum cleaner (10) according to claim 18 or claim 19 having a further tube (48) between the nozzle (24) and the collector (26, 126), the vacuum cleaner being configured so that the further tube (48) is substantially a continuation of the carrying handle (20).

21. The hand-held vacuum cleaner (10) according to claim 20 in which the nozzle (24) has a longitudinal axis (B-B) which is substantially parallel with the base (22), and the carrying handle (20) has a longitudinal axis (A-A) which is at an acute angle (α) to the base (22).

22. The hand-held vacuum cleaner (10) according to claim 21 in which the angle (α) is approximately 60º.

CLAIMS

1. A hand-held vacuum cleaner having:
a body with a substantially planar base upon which the vacuum cleaner can rest when not in use, the body having a carrying handle, a motor and an impeller located within the body, the vacuum cleaner also having a collector and a battery, the battery located in a battery housing which provides at least a part of the base, the battery housing being removable, the motor and the impeller being outside the battery housing and located between the base and the collector, the vacuum cleaner having a nozzle which is spaced from the base, and, when the vacuum cleaner is located with its base upon a horizontal surface, the motor and the battery are located below the horizontal plane which passes through the approximate centre of the carrying handle.

2. The hand-held vacuum cleaner according to claim 1 in which the carrying handle forms a closed loop with the remainder of the body of the vacuum cleaner.

3. The hand-held vacuum cleaner according to claim 1 or claim 2 in which the carrying handle has a longitudinal axis which is at an acute angle to the base.

4. The hand-held vacuum cleaner according to claim 3 in which the acute angle is between 50° and 70°.

5. The hand-held vacuum cleaner according to claim 3 or claim 4 in which the angle is 60°.

6. The hand-held vacuum cleaner according to any one of claims 1-5 in which a dust brush is mounted upon the nozzle.

7. The hand-held vacuum cleaner according to any one of claims 1-6 in which at least part of the carrying handle is hollow and adapted to locate a crevice tool.

8. The hand-held vacuum cleaner according to any one of claims 1-7 in which the nozzle is in communication with the collector by way of an extendable flexible hose, the nozzle being spaced from the base when the extendable flexible hose is not extended.

9. The hand-held vacuum cleaner according to claim 8 in which the extendable flexible hose, when not extended, is located within a substantially rigid tubular housing.

10. The hand-held vacuum cleaner according to any one of claims 1-9 having a lighting unit adapted to illuminate the region adjacent to the nozzle.

11. The hand-held vacuum cleaner according to claim 10 having a single control switch to actuate the motor and the lighting unit.

12. The hand-held vacuum cleaner according to claim 11 in which the control switch is a two-position switch, a first position actuating the lighting unit and a second position actuating the motor.

13. The hand-held vacuum cleaner according to any one of claims 1-12 having a baffle within the collector adapted to direct the air flow towards the bottom of the collector.

14. The hand-held vacuum cleaner according to claim 13 in which the baffle has a second surface adapted to direct the air flow towards the bottom of the collector, and also has a first surface adapted to direct the air flow to circulate around the interior of the collector.

15. The hand-held vacuum cleaner according to claim 8 or claim 9 in which the extendable flexible hose comprises a coil spring and an airtight material, the hose having a first part and a second part, the first part of the hose having a first coil spring and the second part having a second coil spring, the winding direction of the first coil spring being opposite to the winding direction of the second coil spring.

16. The hand-held vacuum cleaner according to claim 15 in which the first coil spring and the second coil spring are of similar lengths, and are made from the same material.

17. The hand-held vacuum cleaner according to any one of claims 1-16 in which the collector is located between the carrying handle and the nozzle, the vacuum cleaner having an inlet to the collector, the inlet being located at side of the collector facing the carrying handle.

18. The hand-held vacuum cleaner according to claim 17 in which air passes over the top of the collector as it flows from the nozzle to the inlet.

19. The hand-held vacuum cleaner according to claim 17 or claim 18 having a further tube between the nozzle and the collector, the vacuum cleaner being configured so that the further tube is substantially a continuation of the carrying handle.

20. The hand-held vacuum cleaner according to claim 19 in which the nozzle has a longitudinal axis which is substantially parallel with the base.