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(51) INT CL<sup>5</sup>  
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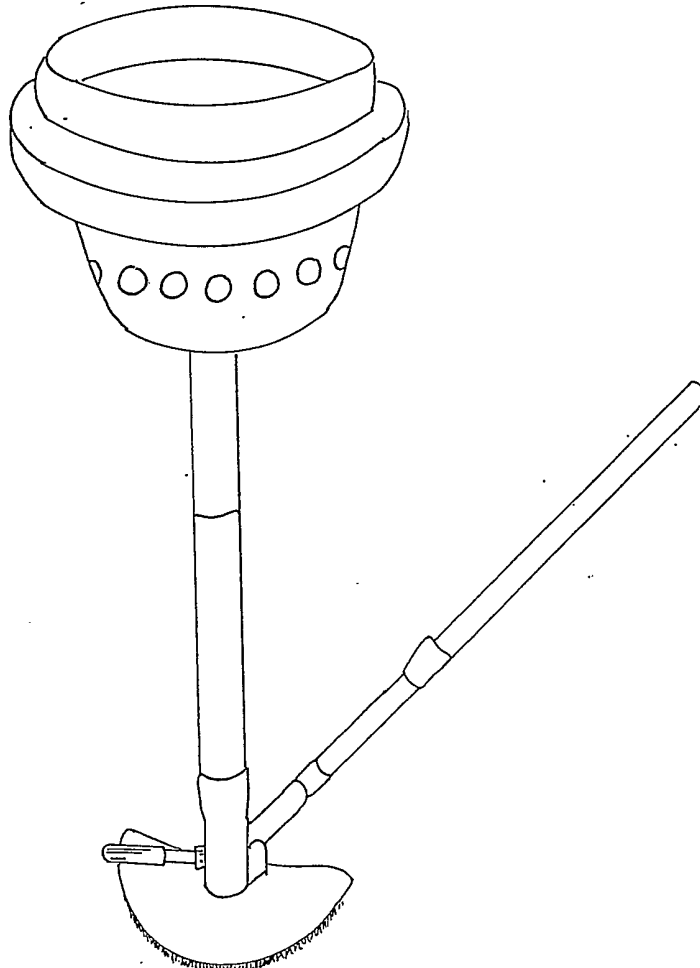
(52) UK CL (Edition L)  
A4F FD11 FFB203 FFB226 FK  
B1D DNKA  
U1S S1245 S1256 S1752

(56) Documents cited  
GB 1237545 A GB 1174853 A GB 0961828 A  
GB 0692623 A US 5139659 A US 4498206 A  
US 4275474 A US 3826371 A

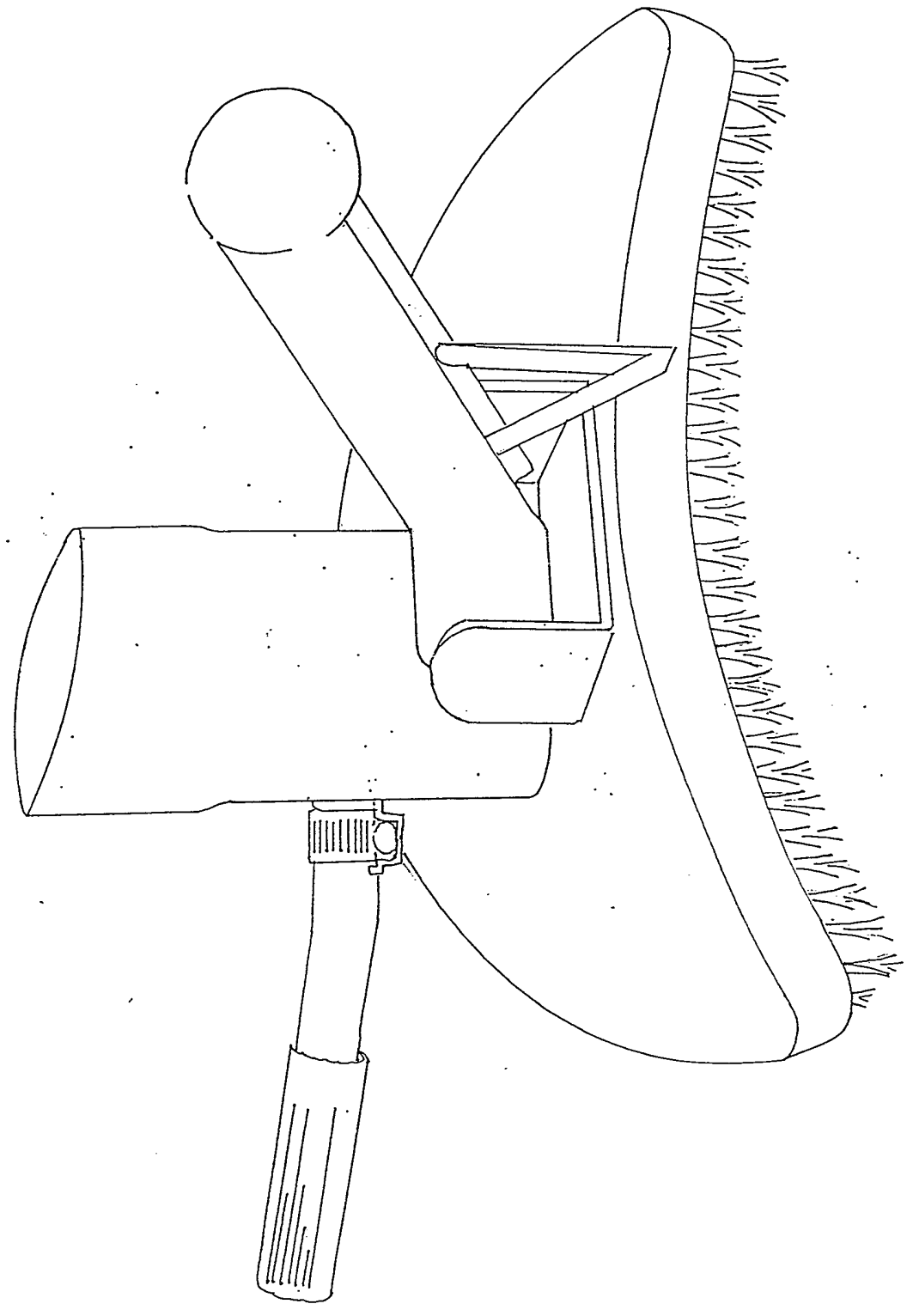
(58) Field of search  
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INT CL<sup>5</sup> A01K 63/04, B01D 35/02 35/05, E04H 4/16  
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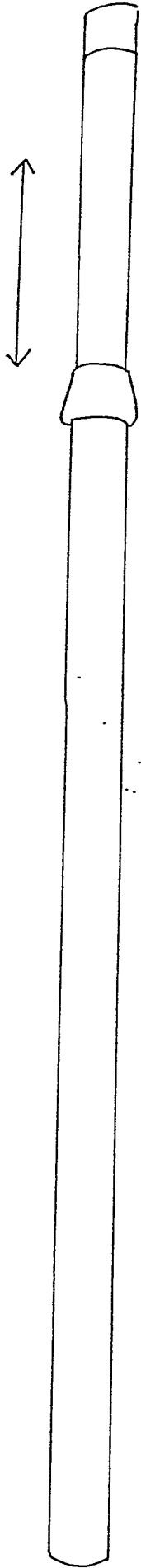
(54) Cleaning ponds

(57) Apparatus for cleaning ponds or swimming pools utilises an air-lift pump to convey water and entrained debris from a suction head to a floating filter comprising a basket provided with an annular buoyancy means. The basket is lined with a fine mesh filter to remove solid material and a fibre filter to clean the water. The cleaned water then returns to the pond etc via holes in the basket.

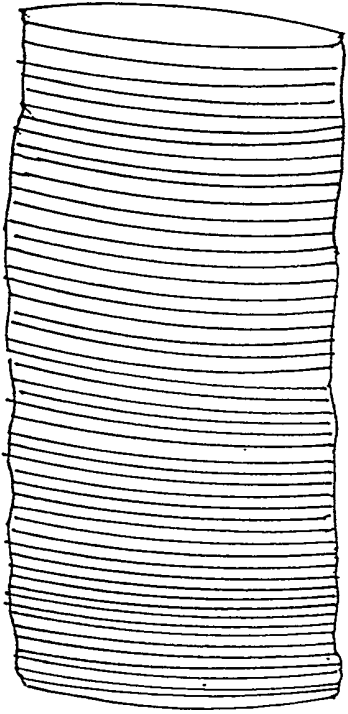


THE VACUUM HEAD

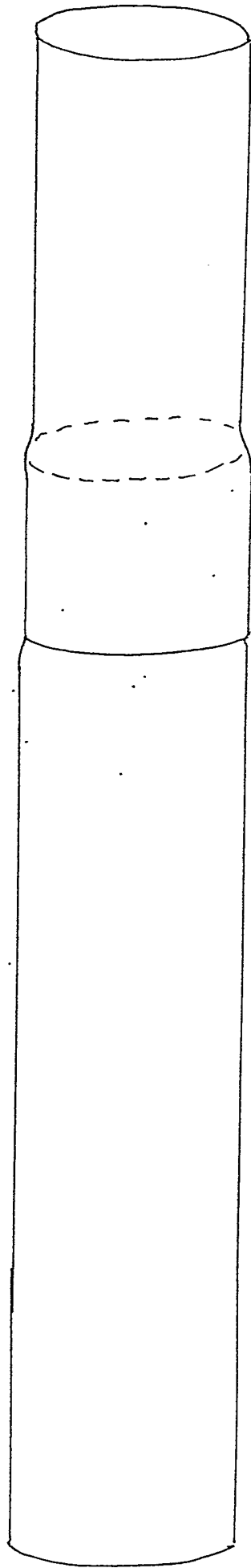


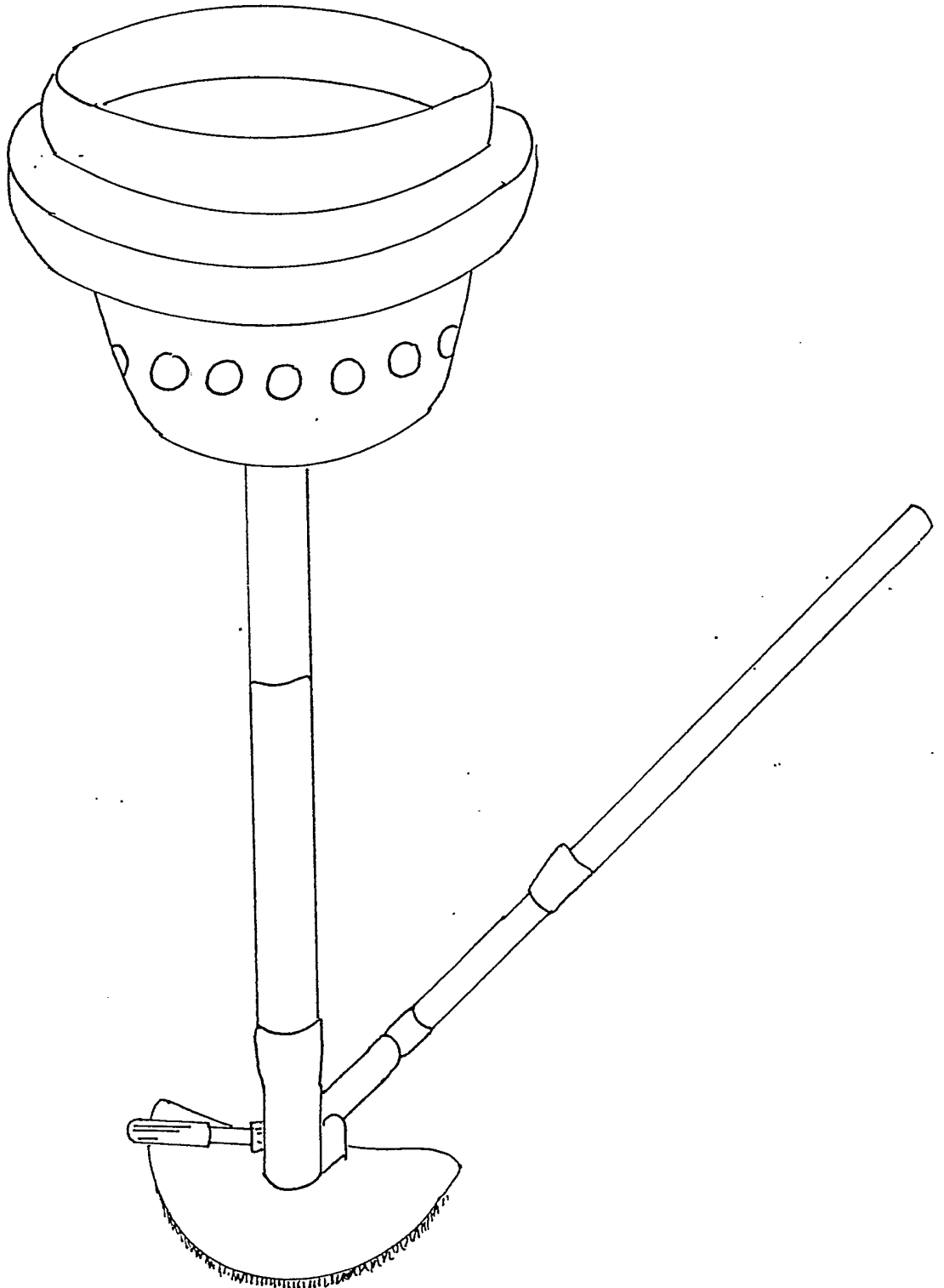


EXTERNAL OPTIONAL EXTENSION



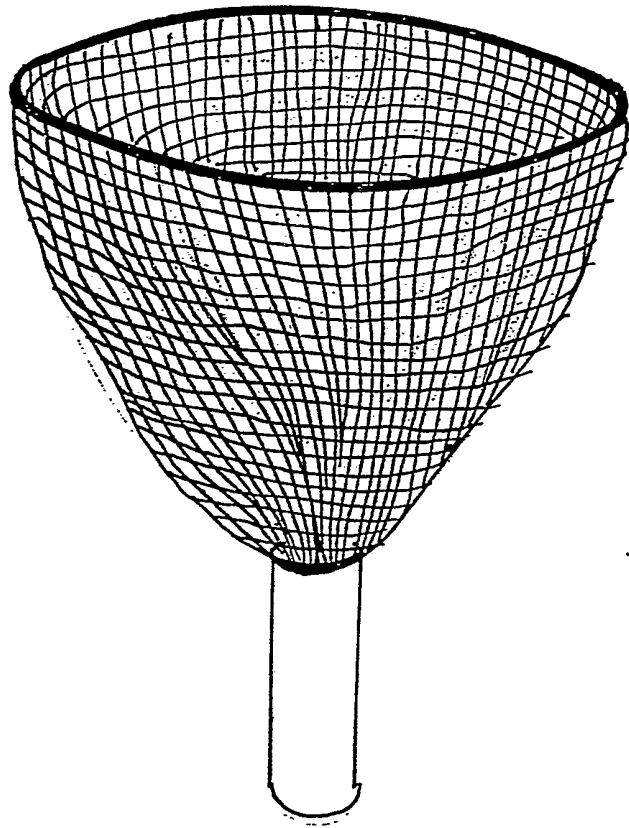
VACUUM PIPE & EXTENSION





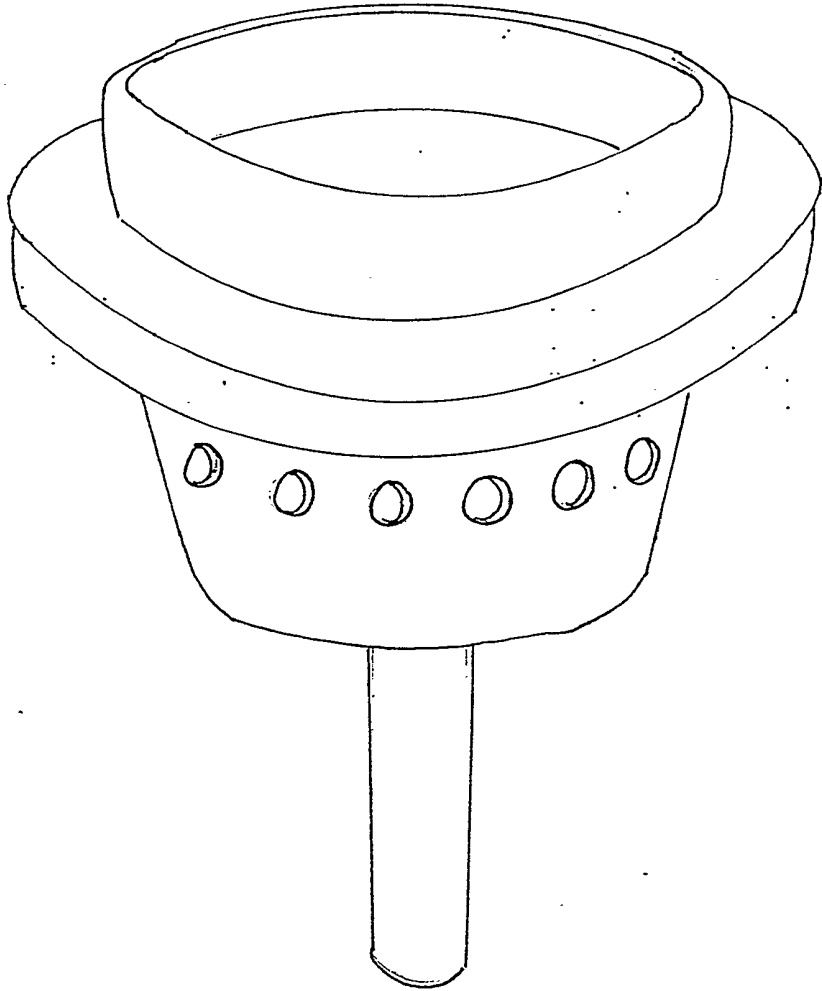
NET ATTACHMENT FOR BASKET

4/5



R-SKET

315



WATER CLEANER

This invention relates to a water cleaner, for example to clean pond water of weed etc. The invention is not intended to be limited thereto, however

## COMPRESSOR

Air is pumped down by the compressor and goes into the vacuum pipe. This pushes the water up the pipe to the surface which creates a vacuum that sucks all the waste into the basket.

To fit into the basket there is a fine net which is stapled to a pipe running through the bottom. The pipe is about 8" long. To strengthen the top of the net bag, a ring has also been stapled round it to keep it rigid and two removal handles stop the ring from being weakened by removal. This net fits on top of the filter wall, with another layer of fine net fitted to the basket bottom, and can be easily cleaned out.

## VACUUM HEAD

The crescent shaped vacuum head has 1½" vacuum pipe handle attachment and brushes on the base which are 5mm apart. The ½ inch copper pipe has an olive on the end to prevent the pipe coming through the hole and a piece of hose pushed on the end with a jubilee clip on the top. The airline hoses are joined by a piece of washing machine pipe.

The 1½" pipe, which is 1½ feet long, fits into the vacuum head and if necessary the extension pipe can be used for variable depths in the pond. The one and a half inch pipes are swaged at the end so that they fit together.

The telescopic pole, which fits on to the vacuum head, is six feet long and can extend to a possible 12 feet. To lock the pole you must twist the handle.

The basket is 15" in diameter and has a circular polystyrene float to keep it on the ponds surface. It has 2" inch pipe going into & through the centre of the basket and 1¼" holes around the diameter to let the water come out again. A fine net inside the basket catches stones, blanket weed, leaves and fish waste. It also has filterfibre to clean the water before it is returned to the pond.

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### CLAIMS

1. Water cleaner pumps air down into a pipe. Then it mixes with water which causes a vacuum.
2. It has a floating barskit which the pipe is connected to.
3. The floating barskit has a fine netting unit so the water goes through it and the leaf get caught in it.
4. It has more suction than the ones on the market.



**Patents Act 1977**  
**Examiner's report to the Comptroller under**  
**Section 17 (The Search Report)**

Application number

GB 9203312.5

**Relevant Technical fields**

- (i) UK CI (Edition L ) A4F, BID (DNKA, DNRA)
- (ii) Int CI (Edition 5 ) AOIK 63/04; BOID 35/02, 35/05  
E04H 4/16

**Search Examiner**

A C HOWARD

**Databases (see over)**

- (i) UK Patent Office
- (ii) ONLINE DATABASE: WPI

**Date of Search**

25 MARCH 1993

Documents considered relevant following a search in respect of claims 1 AT LEAST

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
X	GB 1237545 - (EWM SWIMMING POOLS) whole specification relevant	1 AT LEAST
X	GB 1174853 - (HOREMAN) whole specification relevant	1 AT LEAST
X	GB 961828 - (BENN & DAWSON) see figure 2 and page 2 lines 16-32	1 AT LEAST
X	GB 692623 - (SMITH & HOREMAN) see figure 2 and page 2 lines 44-64	1 AT LEAST
X	US 5139659 - (SCOTT) see figure 5 and column 5 lines 24-36	1 AT LEAST
A	US 4498206 - (BRAUKMANN) see figures 1,2	1 AT LEAST
A	US 4275474 - (WOODARD) see figures 1,2	1 AT LEAST
X	US 3826371 - (ADAMSON) see figure 1	1 AT LEAST



Category	Identity of document and relevant passages	Relevant to claim(s)

**Categories of documents**

X: Document indicating lack of novelty or of inventive step.

Y: Document indicating lack of inventive step if combined with one or more other documents of the same category.

A: Document indicating technological background and/or state of the art.

P: Document published on or after the declared priority date but before the filing date of the present application.

E: Patent document published on or after, but with priority date earlier than, the filing date of the present application.

&: Member of the same patent family, corresponding document.

**Databases:** The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).