

667751

P/00/001
Section 29

AUSTRALIA
Patents Act 1990

PATENT REQUEST : STANDARD PATENT

I/We, being the person(s) identified below as the Applicant(s), request the grant of a Standard Patent to the person(s) identified below as the Nominated Person(s), for an invention described in the accompanying complete specification.

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Invention Title: UNDERWATER CLEANING DEVICE

Name(s) of Actual Inventor(s): GEORGE VICTOR RISSIK
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BASIC CONVENTION APPLICATION DETAILS

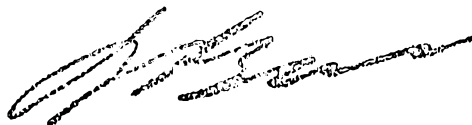
Application No: 93/6257 **Country:** ZA **Application Date:** 26 August 1993

Drawing number recommended to accompany the abstract: 1

DATED: 27 October 1993

George Victor RISSIK
Wilbraham Charles Kruger VICKERS

GRIFFITH HACK & CO.



1050 1993 27 10 93

Patent Attorney for and
on behalf of the Applicant

AUSTRALIA

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NOTICE OF ENTITLEMENT

INSTRUCTIONS

(a) Name of person making statement 1(a)

(b) Position of that person (b)

(c) Name of applicant of (c)

(d) Address of of (d)

(1) GEORGE VICTOR RISSIK and
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State the following:-

(e) Delete as necessary 1. The nominated person (applicant) is entitled to the grant of a patent
(e) (i) as assignee of the actual inventor(s)
(ii) by contract of employment of the actual inventor(s)
(f) Insert details if not covered by (i) or (ii) or (iii) (f) The nominated persons are the actual inventors.

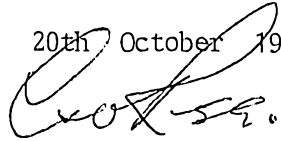
(g) Delete as necessary 2. The nominated person (applicant) is entitled to claim priority from the basic convention application(s).
(g) (i) as applicants of the said application(s)
(ii) as the assignee of the applicants of the said application(s)
(iii) with the consent of the applicants of the said application(s)

(h) Delete for non-convention applications 3. The basic convention application(s) was/were the first made in a Convention country in respect of the invention the subject of the application. (h)


(i) Insert DATE of signing

Dated (i) 20th October 1993

(j) Signature(s) of person making

(j) 
GEORGE VICTOR RISSIK

statement


WILBRAHAM CHARLES KRUGER VICKERS

Note: No legalization or other witness required

To: The Commissioner of Patents

GRIFFITH HACK & COMPANY
Patent and Trademark Attorneys
509 St. Kilda Road
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(12) PATENT ABRIDGMENT (11) Document No. AU-B-50294/93
(19) AUSTRALIAN PATENT OFFICE (10) Acceptance No. 667751

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- (56) Prior Art Documents
US 4463468
US 5014382
GB 2153209A
- (57) Claim

1. A device for use in cleaning underwater surfaces wherein the device includes a body having an inlet and an outlet adapted for connection to a flexible suction hose, a flexible planar member adapted to at least partially surrounded the inlet, means for repeatedly interrupting a flow of liquid between the inlet and the outlet, and guide means projecting from the body on the direction of the movement thereof, wherein said guide means comprises an arm adapted to extend from the body and terminating in a rotatable wheel lying transversely to the axis of the inlet of the body.

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COMPLETE SPECIFICATION
STANDARD PATENT

Applicant(s):

- 1) George Victor RISSIK
- 2) Wilbraham Charles Kruger VICKERS

Invention Title:

UNDERWATER CLEANING DEVICE

The following statement is a full description of this invention, including the best method of performing it known to me/us:

UNDERWATER CLEANING DEVICE

INTRODUCTION TO THE INVENTION

THIS INVENTION relates to a device for cleaning underwater surfaces such as are found in swimming pools and the like.

BACKGROUND TO THE INVENTION

5 One common type of device includes a planar member of flexible material which is adapted to move across the surface to be cleaned. The flexible

member surrounds a suction orifice which is connected via a mechanism to move the device and a flexible hose to the inlet of a filter system for the pool. These features are well known and will not be described in any greater detail.

- 5 As the device moves across a surface it may become lodged in a corner or against a step for example and be unable to move. Unless the device is guided out of such situations it will remain in that position and not be able to fulfil its designated function.
- 10 An object of this invention is to provide a device of the type described including means for guiding the device.

SUMMARY OF THE INVENTION

- 15 According to the present invention there is provided a device for use in cleaning underwater surfaces wherein the device includes a body having an inlet and an outlet adapted for connection to a flexible suction hose, a flexible planar member adapted to at least partially surrounded the inlet, means for repeatedly interrupting a flow of liquid between the inlet and the outlet, and guide
- 20 means projecting from the body in the direction of the movement thereof, wherein said guide means comprises an arm adapted to extend from the body and terminating in a rotatable wheel lying transversely to the axis of the inlet of the body.
- 25 Preferably a device as claimed in claim 1 in which the wheel is loosely mounted to the arm by means of a short axle projecting, in use, towards a surface to be cleaned.

Preferably a device as claimed in claim 2 in which the axle



is movable in a mounting and this movement includes movement in an axial direction.

Preferably a device as claimed in claim 1 in which the guide means incorporates cleaning means.

- 5 Preferably a device as claimed in claim 4 in which the cleaning means comprises at least one brush.

Preferably a device as claimed in claim 1 in which said guide means is removably attached to said body.

BRIEF DESCRIPTION OF THE DRAWINGS

- 10 An embodiment of the invention, described by way of example only, follows with reference to the accompanying drawings in which:

Figure 1 is a side elevation of a pool cleaner;
and

- 15 Figure 2 is a plan of the guide means for the cleaner.

DETAILED DESCRIPTION OF THE DRAWINGS

- 20 In this embodiment of the invention a device (1) for use in cleaning the submerged surfaces of swimming pools is provided.

- The device (1) comprises a body (2) having an inlet (3) at the bottom (4) thereof and two outlets (5) at the top of the body and having their axes at an acute angle to the bottom of the body. The outlets (5) are adapted to be
25 connected via elongated



passages to a flexible suction hose and hence to the filtration system of a swimming pool.

5 Surrounding the inlet (3) is a flexible foot member (6) which is adapted to be located against the submerged surface to be cleaned.

At the rear (7) of the body is a hinged float member (8).

All of the above aspects of the device are well known in the art of pool cleaning devices.

10 The device (1), in use, moves in the direction indicated by arrow "X" in the drawing. Fixed to the forward side (9) of the body is a guide means (10) which projects forwardly and downwardly in direction "X".

15 The guide means (10) comprises an elongated arm (11) having an aperture (12) and a locating formation (13) in one end (14). The arm is adapted to be fixed to a formation on the body by means of a pin or nut and bolt extending through the



aperture (12). The locating formation (13) engages with a cooperating formation on the body to prevent pivoting of the arm about the pin or bolt through aperture (12).

5 The other end (15) of the arm is enlarged and includes a central mounting aperture to loosely accommodate the short axle (16) of a rotatable guide wheel (17). The axle (16) includes a flanged top (18) to prevent removal of the axle from the
10 aperture.

Because of the loose fit the guide wheel (17) can not only rotate about its axis but can move in an axial direction and also swivel about its axis.

15 The guide wheel (17) includes four circular apertures (19) therein. These apertures may be used as mounting apertures for short brushes (not shown) which extend downwardly from the bottom surface (20) of the wheel and which perform a cleaning function in use.

20 It is envisaged that the guide means will serve to assist in moving the device (1) out of difficult



THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A device for use in cleaning underwater surfaces wherein the device includes a body having an inlet and an outlet adapted for connection to a flexible suction hose, a
5 flexible planar member adapted to at least partially surrounded the inlet, means for repeatedly interrupting a flow of liquid between the inlet and the outlet, and guide means projecting from the body on the direction of the movement thereof, wherein said guide means comprises an arm
10 adapted to extend from the body and terminating in a rotatable wheel lying transversely to the axis of the inlet of the body.

2. A device as claimed in claim 1 in which the wheel is loosely mounted to the arm by means of a short axle
15 projecting, in use, towards a surface to be cleaned.

3. A device as claimed in claim 2 in which the axle is movable in a mounting and this movement includes movement in an axial direction.

4. A device as claimed in claim 1 in which the guide
20 means incorporates cleaning means.

5. A device as claimed in claim 4 in which the cleaning means comprises at least one brush.

6. A device as claimed in claim 1 in which said guide means is removably attached to said body.



7. A device substantially as hereinbefore described with reference to figures 1 and 2.

DATED THIS 29th DAY OF January 1996

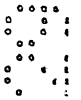
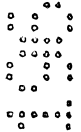
GEORGE VICTOR RISSIK AND

5 WILBRAHAM CHARLES KRUGER VICKERS

By Its Patent Attorneys:

GRIFFITH HACK & CO.,

Fellows Institute of Patent
Attorneys of Australia



ABSTRACT

A device for use in cleaning underwater surfaces has a body with an inlet and an outlet for connection to a flexible suction hose; a flexible foot member adapted to at least partially surround the inlet; means for interrupting the flow between the inlet and the outlet and guide means projecting from the body in the direction of movement thereof. The guide means preferably comprising an arm adapted to extend from the body and terminating in a rotatable wheel lying transversely to the axis of the inlet of the body.

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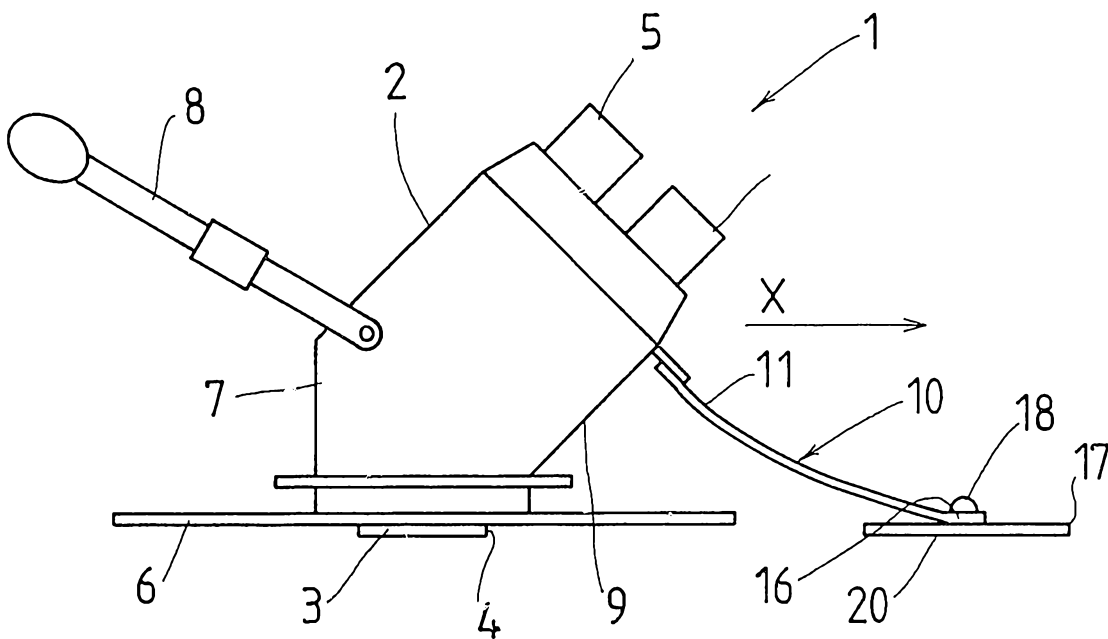


FIG. 1

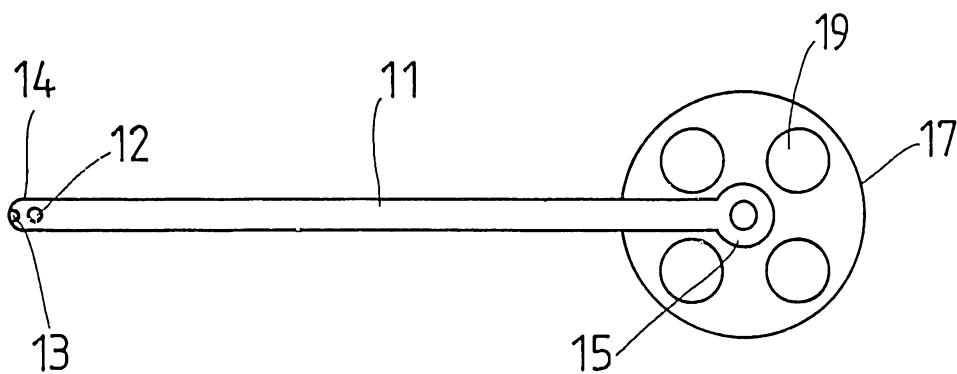


FIG. 2

