



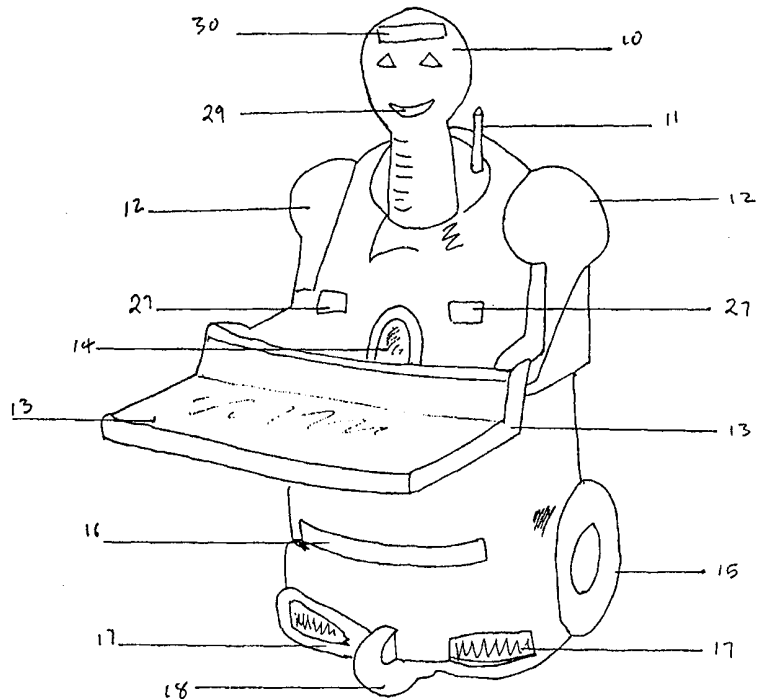
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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<p>(21) International Application Number: PCT/GB99/01422 (22) International Filing Date: 6 May 1999 (06.05.99) (30) Priority Data: 9828288.2 22 December 1998 (22.12.98) GB (71)(72) Applicant and Inventor: VARVARIDES, Maria [GB/GB]; 23 Brookhill Rd, East Barnet EN4 8SE (GB).</p>		<p>(81) Designated States: AT, CA, CH, CN, DE, JP, KR, SE, SG, US. Published <i>With international search report.</i></p>

(54) Title: ROBO-NURSE SOLDIER

(57) Abstract

A Robo-nurse is to assist a human nurse in the lifting, moving, and carrying of bed ridden or chair-bound patients. The Robo-nurse would safely slide the extendible padded lifter (fig. 1. 13) under the patient the human nurse would guide the patient safely on to the padded lifter and fit the seat belt around the patients waist (fig. 2. 26). The Robo-nurse will now be ready for the command to start the desired operation, this could be done either by remote control, voice command or manually by the human nurse. The Robo-nurse will set off to do the command and will either be showing the operation in process by the flashing screen with the command written on the screen (fig. 1. 30), or by sound alerting the operation in process (fig. 1. 29). When the command has been completed the brakes would automatically be in place with task completed on the screen, if at any time during a command the proximity sensors (fig. 1. 17) sense an obstacle the Robo-nurse will automatically sound an alarm with alert and stop with brake lights on, until the human nurse has given the all clear and will then continue with the completion of the command, the Robo-nurse will be made soft and comfortable for the patient, and if it is for a children's ward would be colourful and fun, all the information and control will be in the C.P.U. housing (fig. 1. 10) and will be run on collective energy as well as electrical powered no wires will be restricting the Robo-nurse for the safest of operation. The Robo-nurse can be activated by the pager receiver (fig. 1. 11) by remote control or by voice activating commands. The body and shoulders will be padded (fig. 1. 12) to give comfort to the patient, the tyres will be of non slip rubber (fig. 1. 15).



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ROBO-NURSE \ SOLDIER.
INTRODUCTION.

The invention relates to a Robo-Nurse \ Soldier, which may be used either for the purpose of assisting a nurse or a soldier, it will have the ability of lifting, moving, holding, releasing, carrying, and will have a human like body, with a computer brain as a control box, and will be electronically powered with no wires restricting the movement.

The Robo-nurse, will enable to assist all bed ridden disabled people by lifting them from the bed to the wheel-chair, from wheel-chair to loo, or bath, also be able for the patients to hold on to the shoulders, of the robo-nurse, and be lifted, and at the same time the Robo-nurse will hold the patient safely around the waist with a seat belt, and take over all the lifting, lowering, and caring that is now done by our nurses, even if the sheets of the bed of a patient have to be changed the patient has to be lifted and at the moment we need three nurses to move a patient just for that. This invention not only will it take all the strain from the lifting and caring that the nurses have to do to care for such a patient, but also will solve the problem all the back injuries and loss of working hours suffered by the nurses, and freeing them for the more important nursing duties.

The Robo-Soldier, will be used by the Army, Navy, Airforce, in the way as to sending in to dangerous, areas for removing, lifting, and caring any dangerous items necessary, so saving our soldiers from the risk of losing their lives or limbs or being in contact with dangerous objects that would leave them with such injuries.

Accordingly this invention provides a body that is mechanical, and can be reconstructed, when it is damaged and so saves the lives of our soldiers, and also provides the nurses with a mechanical body to do all the lifting and carrying necessary in the care of the patients.

The hospital will benefit from my invention, and should provide one in each ward in all hospitals as this will take all the strain from the nurses as at present there are so many nurses claiming injuries and time lost from work and law suits against them. Insurance companies would also benefit from this they pay out so many claims for back injuries. The Robo-nurse \ Soldier, would also benefit the Forces as they are losing good men, and paying to provide compensation for the soldiers injured in the dangerous tasks when the Robo-nurse \ soldier could be used instead.

ROBO-NURSE \ SOLDIER.
DESCRIPTION OF ROBO-NURSE \ SOLDIER PARTS.

10. C.P.U. HOUSING.
11. PAGER RECEIVER.
12. CUSHIONED SHOULDERS.
13. PADDED EXTENDIBLE LIFTER & SEAT.
14. FRONT & BACK MANUAL CONTROL KEY PAD.
15. NONE SLIP TYRES.
16. EXTENDIBLE FOOT REST.
17. PROXIMITY SENSORS & ALERT ALARM.
18. NAVIGATION WHEEL WITH 180 DEGREES MOTION.
19. PATIENT IN SITTING POSITION & ARM AROUND PADDED SHOULDERS.
20. NURSE MANUALLY OPERATING THE ROBO-NURSE.
21. EXTENDIBLE PADDED LIFTER.
22. EXTENDIBLE FOOT REST.
23. NAVIGATION WHEEL.
24. PROXIMITY SENSORS AND ALARM ALERT.
- 25 SEAT BELT ATTACHED TO ROBO-NURSE.
26. EXTENDIBLE SEAT BELT TO GO AROUND THE WAIST OF THE PATIENT.
27. EXTENDIBLE SEAT BELT FOR HORIZONTAL TRAVEL PATIENTS.
28. EXTENDIBLE SEAT BELT.
29. SOUND ACTIVATOR WITH REPEAT COMMAND OF OPERATION IN MOTION.
30. FLASHING LIGHTS WITH SCREEN WITH WRITTEN COMMAND IN MOTION, WHEN IN MUTE.
31. THE MATERIAL TO BE USED IS A NON-ALLERGENIC SOFT AND COMFORTABLE WATER AND FIRE RESISTANT.
32. COLOURFUL FOR CHILDREN'S WARD.

ROBO-NURSE \ SOLDIER.
CLAIMS.

1. The Robo-nurse will safely move, lift, carry, and transfer the patient from bed to chair, from chair take to the loo, from loo to chair and from chair travel back to the bed. Carry to bathroom lift and lower into the bath, and lift out of the bath , from a lying position to a sitting , lowering, into, or lifting on to position.
2. The Robo-nurse will completely and safely transport the patient.
3. The Robo-nurse will take the strain of the weight of the patient with only guided help from the human nurse.
4. The Robo-nurse will take the work load of two even three human nurses, freeing them for the moor rewarding duties of nursing.
5. As the Robo-nurse will take all the strain and weight of the patient, this will save the human nurse from the back ace of lifting and carrying, of heavy patients, giving them moor working hours from days off sick taken by the nurses.
6. The hospital will also benefit as this will cut down from all the law suits from injuries coursed by the lifting and carrying of heavy patients, and also benefit as one Robo-nurse will give continuos hours of work night and day cutting down the cost of nursing.

FIGURE. 1.

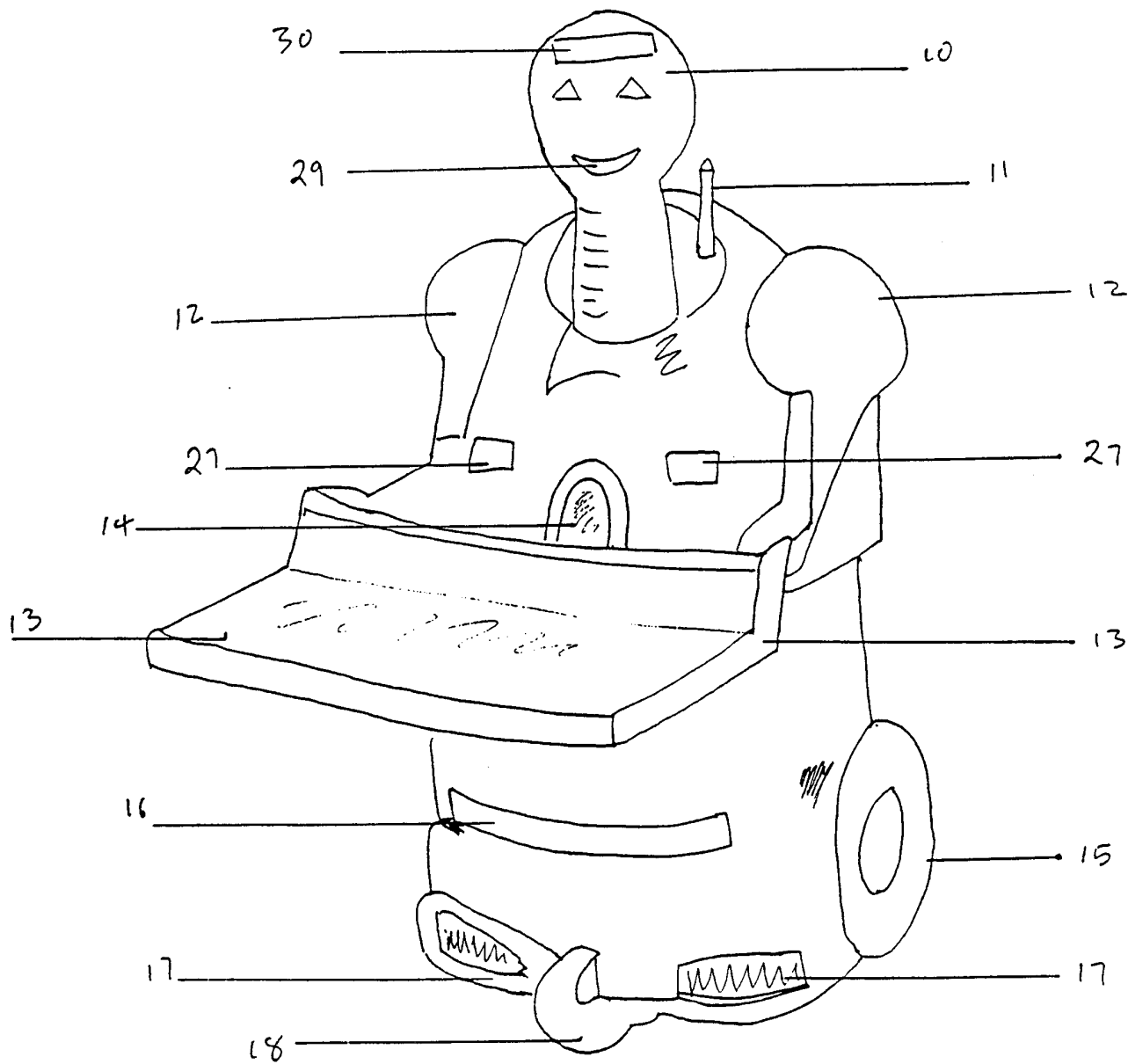
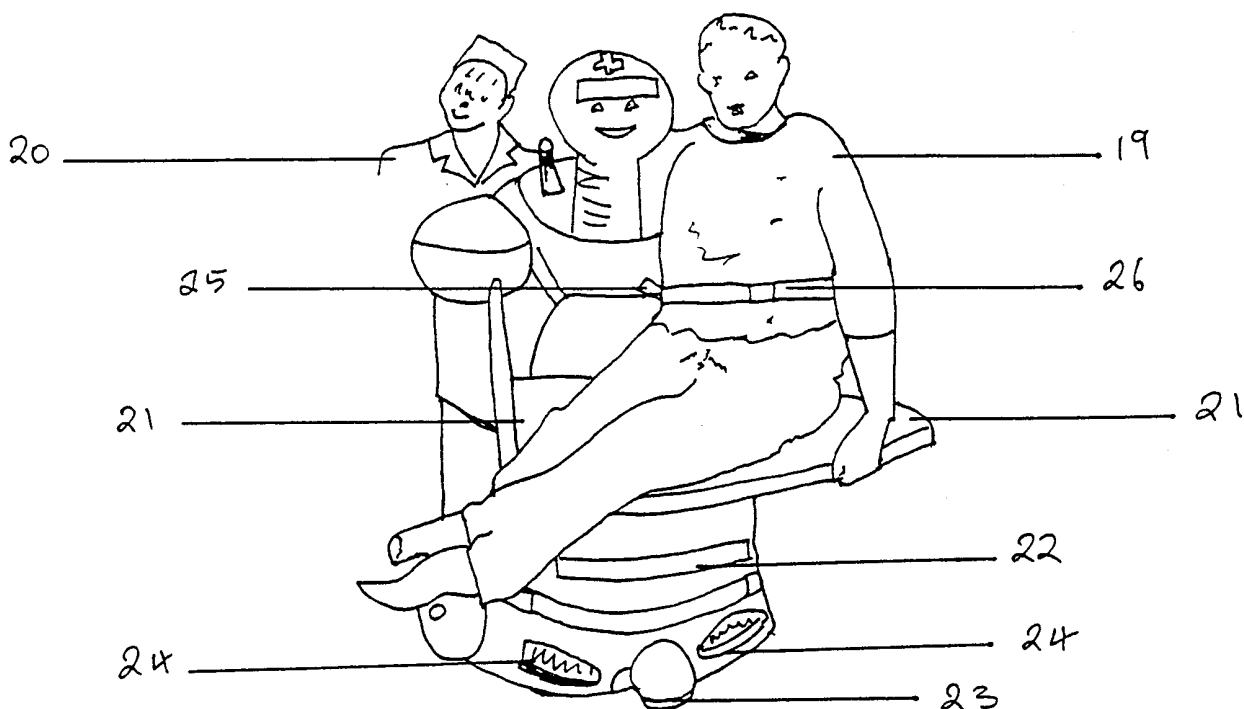


FIGURE. 2.



INTERNATIONAL SEARCH REPORT

International Application No
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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 B25J9/00				
According to International Patent Classification (IPC) or to both national classification and IPC				
B. FIELDS SEARCHED				
Minimum documentation searched (classification system followed by classification symbols) IPC 7 B25J				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched				
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
X	ENGELHARDT K G: "AN OVERVIEW OF HEALTH AND HUMAN SERVICE ROBOTICS" ROBOTICS AND AUTONOMOUS SYSTEMS, vol. 5, no. 3, 1 November 1989 (1989-11-01), pages 205-226, XP000081385 ISSN: 0921-8890 page 212 - page 214 -----	1-6		
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Date of the actual completion of the international search <h2 style="text-align: center;">3 September 1999</h2>		Date of mailing of the international search report <h2 style="text-align: center;">14/09/1999</h2>		
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer <h2 style="text-align: center;">Haegeman, M</h2>		