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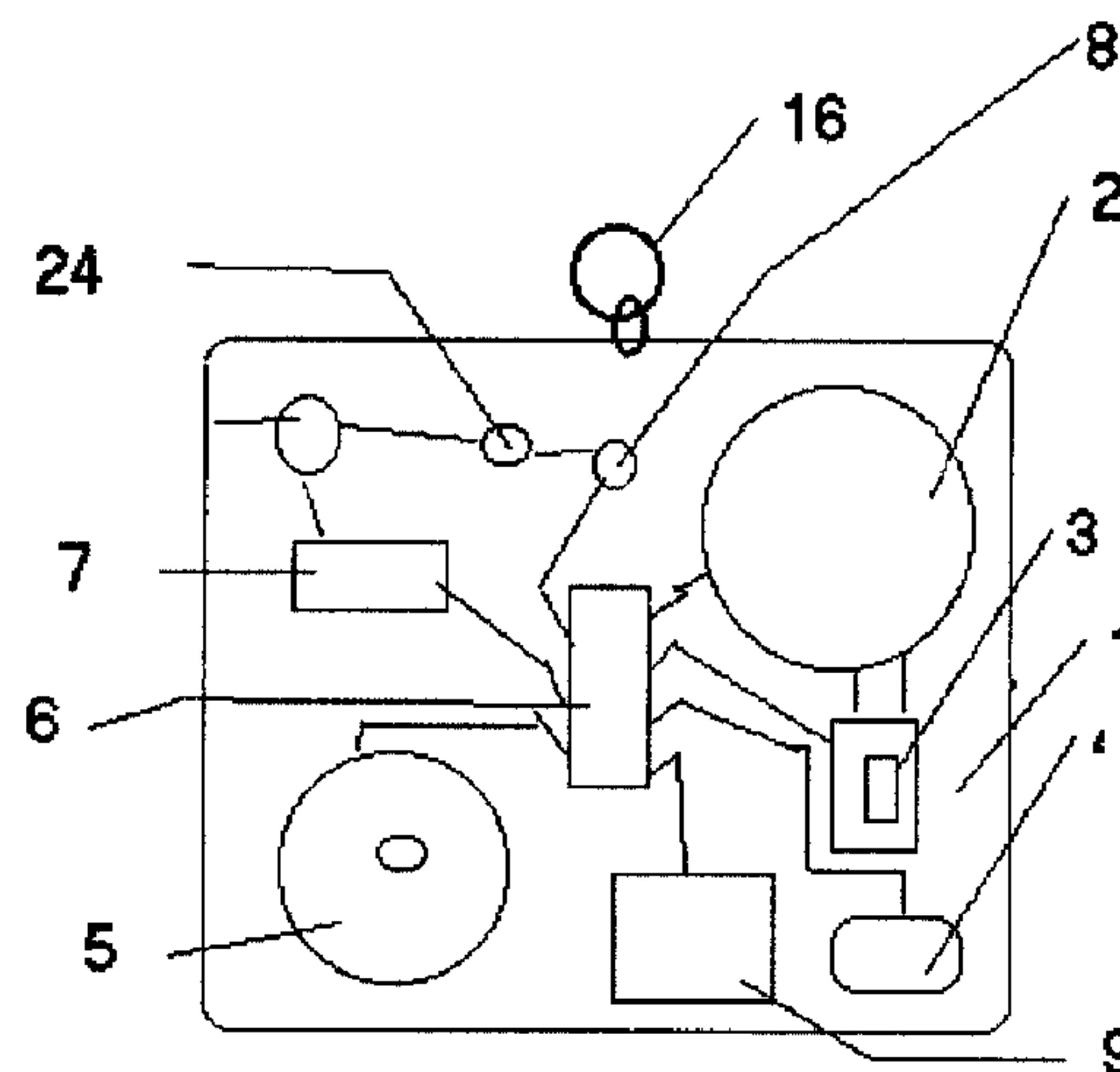
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(54) Titre : DISPOSITIF DE POSITIONNEMENT PERIMETRIQUE (DPP)

(54) Title: LOCATING PERIMETER DEVICE (LPD)



(57) **Abrégé/Abstract:**

The Locating Perimeter device consists of two separate units; one is a receiver and the other is a transmitter. The transmitter consists of a sound producer that features programmable sounds such as beep tunes, recorded voice or voice transmission. When the receiving unit is beyond a certain prescribed distance, the transmitter sounds an alarm to alert that the receiving unit is outside the prescribed or desired perimeter. For these purposes, alarm means preprogrammed or programmable sounds, including but not limited to beep tunes, recorded voice or voice transmission. The transmitting unit has a battery, loudspeaker, a circuit board, a microphone, a low battery indicator and a low frequency transmitter. The receiving unit has a low frequency receiver, a circuit board and a battery. Both transmitting and receiving units can accommodate a speaker to allow voice communication between them. The device allows people to keep track of loved ones, children, patients and/or pets. The device can be attached to collars or made as collars for pets such as dogs and cats. The device is also suitable for people suffering from Alzheimer's disease or Mental Dementia (MD). Specifically, the device can help care providers, in institutional or home environments, keep track of Alzheimer's or MD patients should they wonder beyond a required distance. The device can also help parents and guardians keep track of children at parks, theme parks, shopping malls, nurseries or places where a child or children are required to be within a desired perimeter. Notwithstanding the foregoing uses, the device can be used for other tracking and monitoring purposes and can be modified to accommodate different ranges.



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Title: Locating Perimeter Device (LPD)
Date: May 1, 2000

ABSTRACT:

Title: Locating Perimeter Device (LPD)

Abstract of Disclosure

The Locating Perimeter device consists of two separate units; one is a receiver and the other is a transmitter. The transmitter consists of a sound producer that features programmable sounds such as beep tones, recorded voice or voice transmission. When the receiving unit is beyond a certain prescribed distance, the transmitter sounds an alarm to alert that the receiving unit is outside the prescribed or desired perimeter. For these purposes, alarm means preprogrammed or programmable sounds, including but not limited to beep tones, recorded voice or voice transmission. The transmitting unit has a battery, loudspeaker, a circuit board, a microphone, a low battery indicator and a low frequency transmitter. The receiving unit has a low frequency receiver, a circuit board and a battery. Both transmitting and receiving units can accommodate a speaker to allow voice communication between them.

The device allows people to keep track of loved ones, children, patients and/or pets. The device can be attached to collars or made as collars for pets such as dogs and cats. The device is also suitable for people suffering from Alzheimer's disease or Mental Dementia (MD). Specifically, the device can help care providers, in institutional or home environments, keep track of Alzheimer's or MD patients should they wonder beyond a required distance. The device can also help parents and guardians keep track of children at parks, theme parks, shopping malls, nurseries or places where a child or children are required to be within a desired perimeter. Notwithstanding the foregoing uses, the device can be used for other tracking and monitoring purposes and can be modified to accommodate different ranges.

The Locating Perimeter Device (LPD) consists of two separate units, one is a receiver (diagram 2), and the other is a transmitter (diagram 1). The transmitter (diagram 1) consists of a sound producer that features programmable sounds such as beep tunes, recorded voice or voice transmission. When the receiving unit (diagram 2) is beyond a certain prescribed or required distance from the transmitting unit (diagram 1) the transmitter (diagram 1) sounds an alarm to signal that the receiving unit (diagram 2) is outside the prescribed or required perimeter. The transmitting unit (diagram 1) has a battery 10 that needs to be at least 3 volts, a resistor 8 and capacitors 14 which regulate the output voltage, a loudspeaker 5, a circuit board 15, a microphone 4, a low battery indicator 21 and a low frequency transmitter 7. The receiving unit (diagram 2) has a low frequency receiver 9; a circuit board 15, a battery 2 and can accommodate a speaker 5. The device allows people to keep track of loved ones, children, patients and/or pets. The unit can be attached to collars or made as collars for pets such as dogs and cats. The device is also suitable for people suffering from Alzheimer's

disease or Mental Dementia (MD). In such, or other similar, instances, the device assists care providers in institutional or home environments keep track of Alzheimer's or MD patients should they wonder beyond a required distance. The device also assists parents and guardians keep track of children at parks, theme parks, shopping malls, nurseries or places where a child or children are required to be within a desired perimeter. The device can also be used for other tracking and monitoring purposes and can accommodate different ranges.

To use the Locating Perimeter Device (LPD), transmitting unit (diagram 1) must first be activated by turning on said unit using switch 3. At this point, the transmitting unit (diagram 1) will sound alarm as means whereby transmitting unit (diagram 1) checks for the receiving unit (diagram 2) which is yet to be activated by setting switch 11. When both receiving and transmitting unit are activated, the alarm will stop to indicate that receiver is within range as well as in a state of readiness. At this point, the receiver (diagram 2) is to be carried, attached, worn, placed, clasped, button or clipped 25, onto child/children, pet/pets, patient/patients and/or any other intended source or bearer. The child/children, pet/pets, patient/patients or intended bearer may freely roam within the programmed or prescribed perimeter without causing the transmitter to sound alarm. Notwithstanding, if for any reason, frequency becomes broken within the required perimeter, the transmitter will sound alarm. This feature is an added security measure to ensure safety and guard against tampering. The transmitting unit (diagram 1) will test for the distance using the program of the integrated circuit 6 at which point the LCD display 23 will show distance of receiving unit (diagram 2) away from transmitting unit (diagram 1). If the receiving unit (diagram 2) is out of range the integrated circuit 6 will send a signal that is received by the speaker 5. The speaker having received the signal or information then sends out the audible message, sound or facilitates voice communication.

The microphone 4 of the transmitting unit (diagram 1) can also be featured on the receiving unit (diagram 2) and is suited for receiving units worn by children or patients whereby parent, guardian or caregiver can communicate with children or patients. Communication is facilitated when the receiving unit (diagram 2) receives information sent through a separate low frequency from the transmitting unit (diagram 1). The coding is then unscrambled by the integrated circuit 13, which then allows the speaker 5 to announce the audible message received from the transmitting unit (diagram 1).

Claims of The Locating Perimeter Device (LPD)

CLAIM 1. Locating Perimeter Device, wherein the device includes two separate units, one unit is a receiver and the other a transmitter that includes a sound producer, able to emit preprogrammed or programmable sounds such as beep tones, recorded voice or voice transmission. When the receiving unit is beyond a prescribed distance, the transmitting unit sounds an alarm to signal that the receiving unit is beyond the required perimeter. The transmitting unit has a battery, a loudspeaker, a circuit board, a microphone, a low battery indicator and a low frequency transmitter. The receiving unit has a low frequency receiver, a circuit board, and a battery and can accommodate a speaker to allow two-way communication between receiving and transmitting units.

CLAIM 2. Locating Perimeter Device (LPD) of CLAIM 1, wherein the transmitter is capable to emit a low frequency wave that allows the receiving unit to send back a low frequency signal establishing a link between the two units. Should this link become broken, the transmitting unit will sound alarm.

CLAIM 3. Locating Perimeter Device (LPD) of CLAIM 1, wherein the alarm consists of different features such as alarm output or distance indicator; alarm output meaning that sound grows louder the further receiving unit is from transmitting unit; and distance indicator means digital display of distance between units in preferred measurements such as feet or meters.

CLAIM 4. Locating Perimeter Device (LPD) of CLAIM 1, wherein the device, specifically the transmitting unit, may consists of compass to identify location of receiving unit. Such a compass will be featured on digital display panel and may include arrow pointing to the cardinal points.

CLAIM 5. Locating Perimeter Device (LPD) of CLAIM 1, wherein the device is worn by a pet or animal via a collar. Notwithstanding, the device may be manufactured as a collar in entirety or become attachable to a collar or any other suitable accessories worn by pets and animals. Space may be provided on the receiving unit to allow for name identification.

CLAIM 6. Locating Perimeter Device (LPD) of CLAIM 1, wherein the device can be made to resemble, integrate or made into various items such as watches, bracelets, key chains, buttons, clip on gadgets, necklaces, collars, shoes, apparel, though not limited to such. And whereas the receiving and transmitting units can be housed in different forms such as a watch with wristband or any of the aforementioned items, such integration would allow for dual purpose or function.

CLAIM 7. Locating Perimeter Device (LPD) of CLAIM 1, wherein the receiving unit can be worn with respect to being pinned, fastened, buttoned, strapped or clipped onto children, pets, Alzheimer's patients, Mental Dementia patients or any intended bearer, the transmitting or base unit is carried by parents, guardians caregivers, or any such person or persons in the form of a key chain, watch, bracelet, button, necklace though not limited to such.

CLAIM 8. Locating Perimeter Device (LPD) of CLAIM 1, wherein the receiving unit is encased into a plastic that is water resistant and will be able to function in rainy or damp weather. Notwithstanding, the devices' water resistant feature does not permit immersion in water, other liquids forms or exposed to conditions that may cause the device to malfunction.

CLAIM 9. Locating Perimeter Device (LPD) of CLAIM 1, wherein each individual device consists of transmitting and receiving units both encoded with known frequencies linking them, providing for multiple devices to function in the same area without interference. The device also provides group monitoring where

multiple receiving units are encoded and linked to a central transmitter. In such cases, the transmitter would give a digital reading showing the unit or units beyond the prescribed perimeter. The digital output on the transmitting unit could also be programmed to identify out of range units by name or other means of identification.

CLAIM 10. Locating Perimeter Device (LPD) of CLAIM 2, wherein the speaker has an outer rim of the diaphragm and is clamped between a dome and a ring; and an outer surface of the dome so dimensioned as to be in direct gripping contact with an inner surface of the recess, that allow for clarity.

CLAIM 11. Locating Perimeter Device (LPD) of CLAIM 1, wherein the transmitting unit, the loudspeaker, the battery or solar cell, the circuit board together form a structurally integral assembled unit and the receiving unit also consists of loudspeaker, battery and circuit board together forming a structurally integral assembled unit and that both transmitting and receiving units consist of one integral device, though produced separately.

CLAIM 12. Locating Perimeter Device (LPD) of CLAIM 1, wherein the case is that the receiving and transmitting units, individually or together, are not assembled as the device claimed herein; the assembled receiving and transmitting units, respectively, exists as structurally coherent units. And the sound-producing device is functionally complete and capable of being operated to emit sounds either as assembled units or as separately distinctive component.

CLAIM 13. Locating Perimeter Device (LPD) of CLAIM 1, wherein the circuit board has electronically conductive coating on both sides thereof, and has electrical components of the sound-producing device and of the operating system located on both sides thereof.

Diagram 1

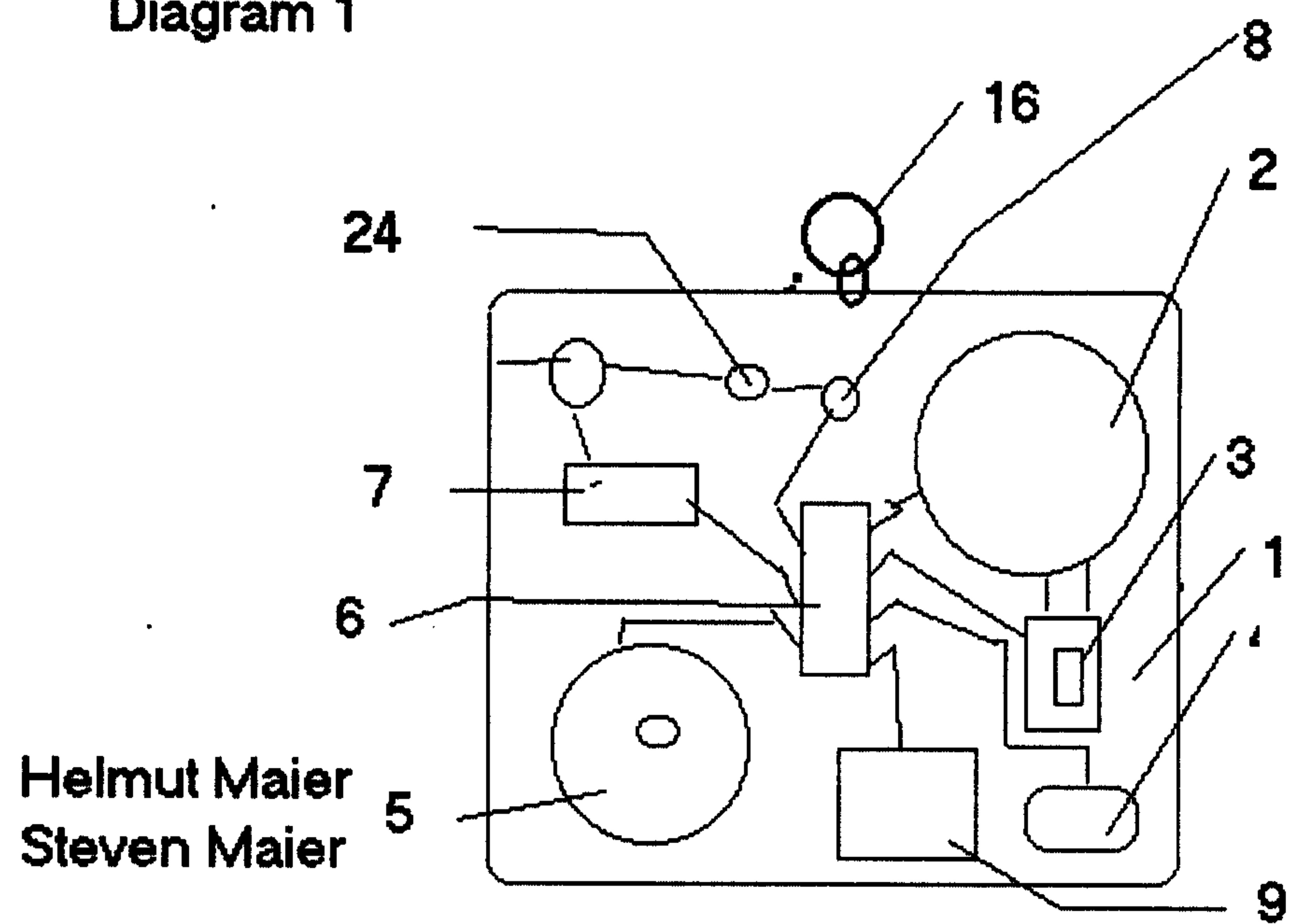


Diagram 2

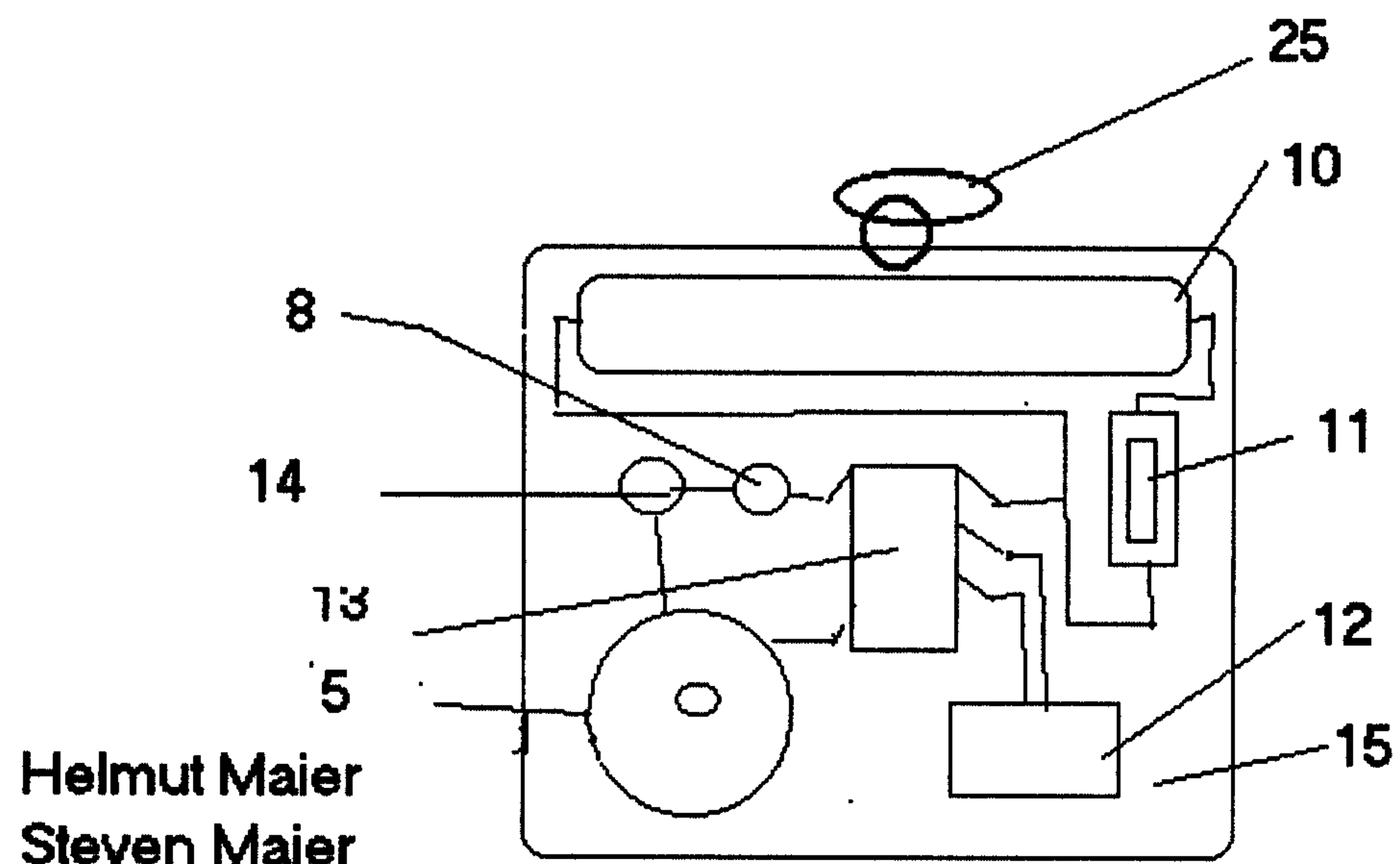
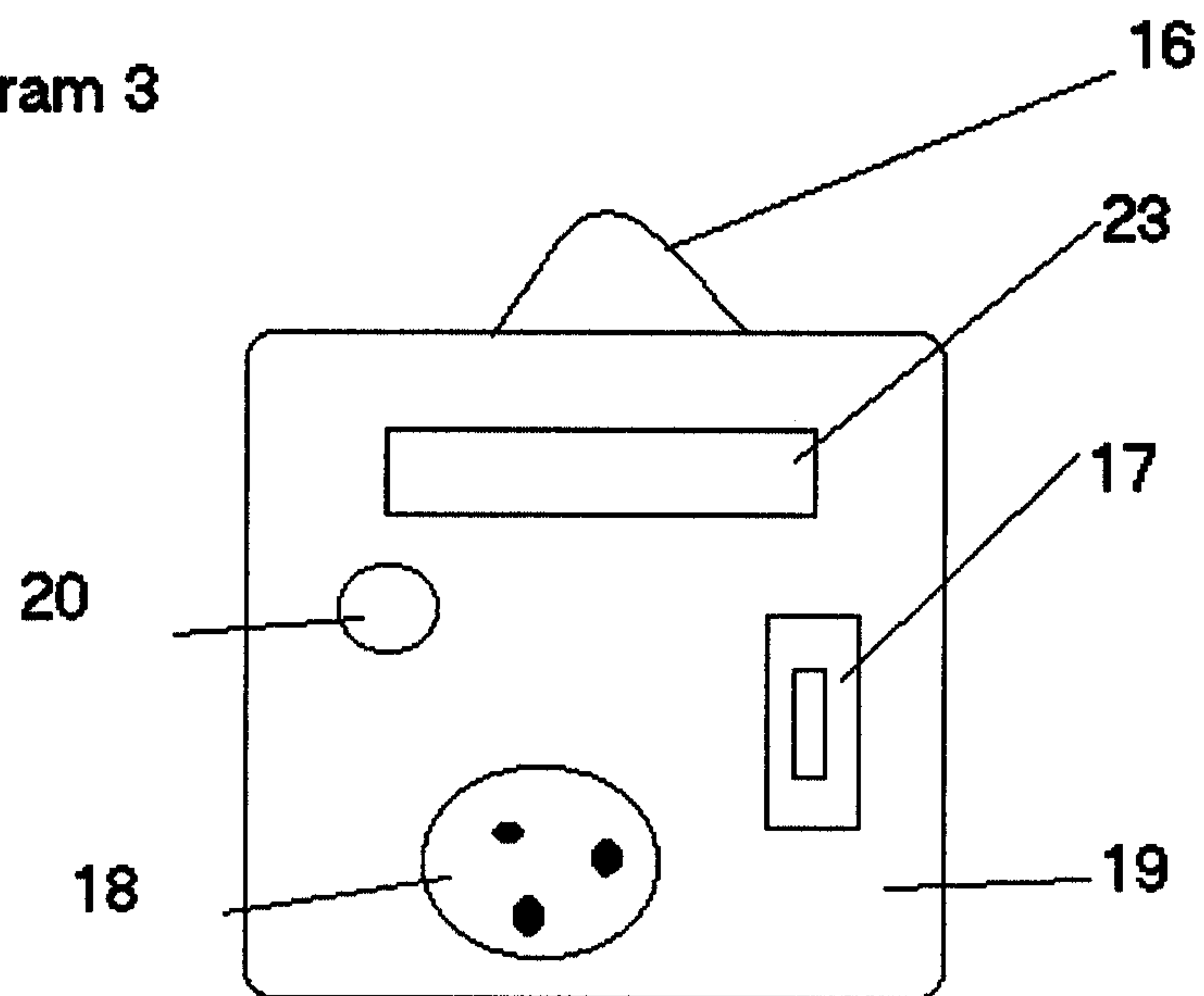
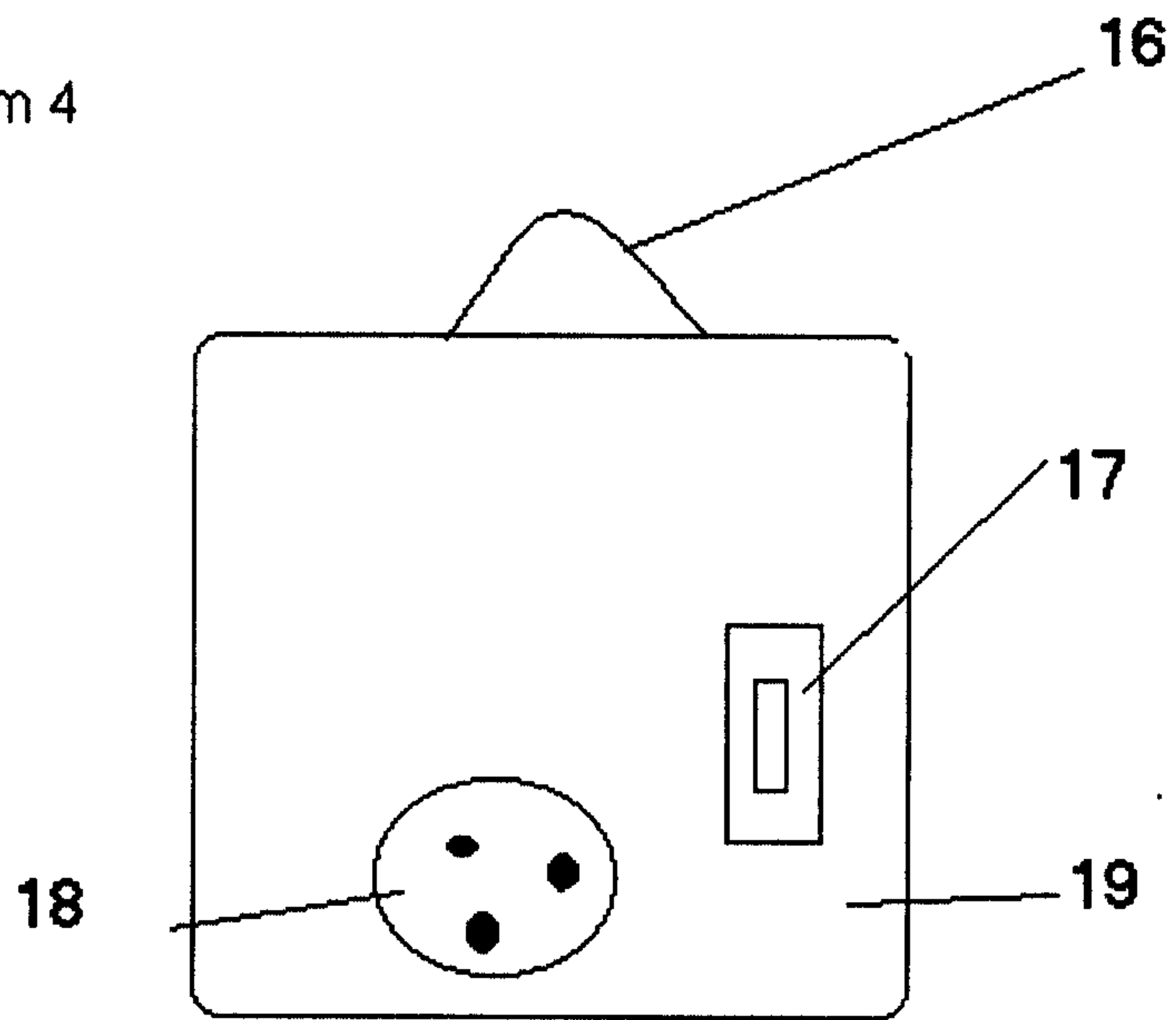


Diagram 3



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Diagram 4



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