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PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53(c).

Express Mail Label No.

INVENTOR(S)

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Robert Michael	Turner	Boyds, Maryland

Additional inventors are being named on the 1 *separately numbered sheets attached hereto*

TITLE OF THE INVENTION (500 characters max)

The Pet Butler

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ENCLOSED APPLICATION PARTS *(check all that apply)*

☑ Specification *Number of Pages* 4
☑ Drawing(s) *Number of Sheets* 4
☐ Application Data Sheet. See 37 CFR 1.76
☐ CD(s), Number
☐ Other (specify)

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☑ No.
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Respectfully submitted,

Date March 19, 2004

SIGNATURE

REGISTRATION NO. *(if appropriate)*

TYPED or PRINTED NAME Robert Michael Turner

Docket Number:

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Number 1 of 1

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"The Pet Butler"

The invention provides an apparatus and methodology for feeding animals (domestic and other) in a controlled, selective and discriminative manner. The methodology includes selective feeding programs predetermined by the product user, identification of specific animals, determination of specific diet of identified animal, dispensing of various selected diets according to the programs for specific animal, monitoring and storage of the programs and actions of the mechanical unit, and monitoring and storage of the feeding actions of the animal feeding from the mechanical unit.

- The invention will consist of main base unit plus add on accessory storage units. They will function as single stand alone units.
- The animal to be identified will wear a collar with an onboard microchip in a portion of the collar.
- The program will be contained in base unit. The base unit contains control and mechanical systems to identify collar/animal and dispense diet accordingly.
- The program may be initially entered into base unit through permanent keypad and digital display. The program will be stored on base unit.
- The base unit includes sealed and protected storage area for diet, bowl area for diet to be dispensed. The dispensing areas may be automatically closed/sealed off to prevent feeding in response to program. The base unit will include a removal, washable bowl. Base unit will be AC powered.
- The diet will be dispensed in amounts, on-demand, with minimum and maximum amounts and frequencies of the diet, as determined by the program.
- The program will identify the animal, other animals in a predetermined radius of the base unit, access the stored program, determine correct diet and feeding permissions according to the situation, decide if permission is granted or denied, and dispense or not dispense. The base unit, via the program, may also order the mechanical systems to open/close the diet feeding chamber.
- The invention's purpose is to permit specific animals to feed on specific diets, in specific quantities, at specific times, in specific areas, in presence or not presence of other specific animals. In addition, the invention will be able to store dispensing activity for use in determining if and how much diet was dispensed. This may be use to monitor the feeding activity of the animal.
- The invention will protect specific animals from eating too much, too frequently, the incorrect diet, at the same time as other specific animals. It will have ultimate control over the dispensing of the diet as well as which animal is able to trigger the unit to dispense the diet.

Example of Process

There are two (2) cats, Fluffy and Joe. Fluffy is overweight and requires Diet A. Joe is not overweight and doesn't require the same diet as Fluffy, but feeds on Diet B. The owner desires to feed Fluffy only Diet A and Joe only Diet B. The owner of the cats buys two (2) base. The owner fills one unit with Diet A for Fluffy and the second unit with Diet B. The owner accesses the programming module of the base unit(s) and enters into the program the identification of the each microchip to be recognized, the specific dispensing apparatus, the amount of the diet to be dispensed, the frequency the diet my be dispensed, and the time intervals that must pass before dispensing again. The owner then fills each storage compartment with the diet(s) and installs a collar with the specific microchips on each Fluffy and Joe.

The units will act as follows:

1) Wait for an animal with collar and microchip to enter a predetermined range of the base unit.
2) The base unit will sense the microchip, read its identification as Fluffy or Joe. If this unit has been programmed to only feed Fluffy, it will open, and dispense or not dispense the diet into the feed bowl, according to the program.
3) If the unit identifies that both Fluffy and Joe are present, the unit will not open nor dispense. If Joe leaves the predetermined radius, the unit will allow Fluffy to feed.
4) If Fluffy begins to feed (the unit opened because she was present alone) and Joe comes within the predetermined radius, the feeding bowl area will close. If Joe leaves the predetermined radius, the unit will then return to actions to allow Fluffy to feed.
5) When Fluffy ceases feeding and retreats outside the predetermined radius, the unit's feed bowl will close.
6) Fluffy can return at anytime and the feed bowl will open to display pre-dispensed diet, dispense diet, or remain empty according to the predetermined program.
7) Joe's unit will behave the same as Fluffy's unit, but in accordance with Joe's program.
8) Single and multiple units will act in the same manner.

The electronics and software requirements for these are:

ID Tag

The ID Tag has the following requirements:

- It does not require a battery.
- It derives its power from an excitation field.
- It transmits an ID number when it is polled.
- It uses RF (radio Frequency) for transmission of ID data.
- The ID tag can be read when it is in a distance of 12 inches or less from the reader. Note, this will be tested and verified in the preliminary design phase of this project. Most Battery-less RFID tag systems work at 6 inches or less. Antenna Power, Orientation and Size, as well as Tag size all play into the response distance.

Feeder Dish

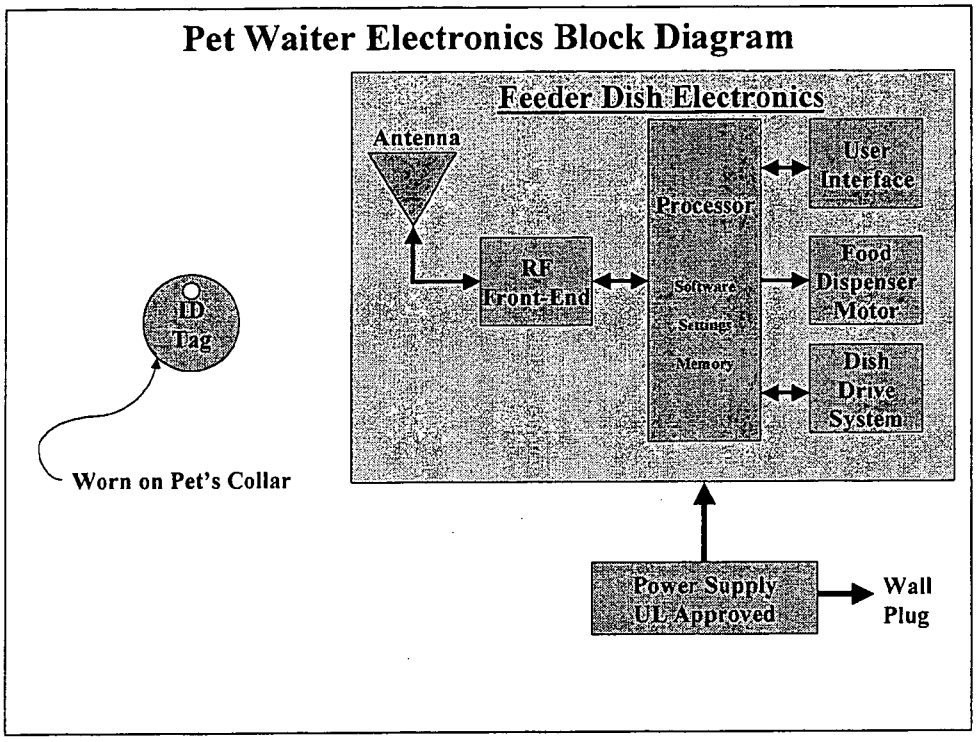
The feeder dish has the following requirements:

- It generates an excitation field from its antenna in order to power the ID tag.
- It uses RF (radio Frequency) for communicating with the ID tag.
- It includes the blocks shown in the diagram above: Antenna, RF Front End, Processor, User Interface, Interface to Food Dispenser Motor, Interface to Dish Drawer.
- The food dispenser interface will require a stepper motor driver system for controlling the rotation of an auger.
- The dish drawer interface will include a DC motor driver and limit switches for determining the open and close positions of the drawer.
- User Interface:
    - LED 1 – shows power ON
    - LED Bar 1 – shows number of feedings per day 1 to 16
    - LED 2 – indicates Program Mode is active
    - Button 1 – Open/Close the dish drawer
    - Button 2 - Food Quantity - Cycles through 16 levels of food quantity
    - Button 3 – Mode – Enter or exit program mode. Program mode is used to define if a tag is accepted or rejected by the feeder dish.

Power Supply

The requirements for the power supply are:

- Must be UL approved.
- Must provide the necessary voltage(s) and current rating(s) for the feeder dish electronics. These will be determined in phase 2 – the preliminary design.

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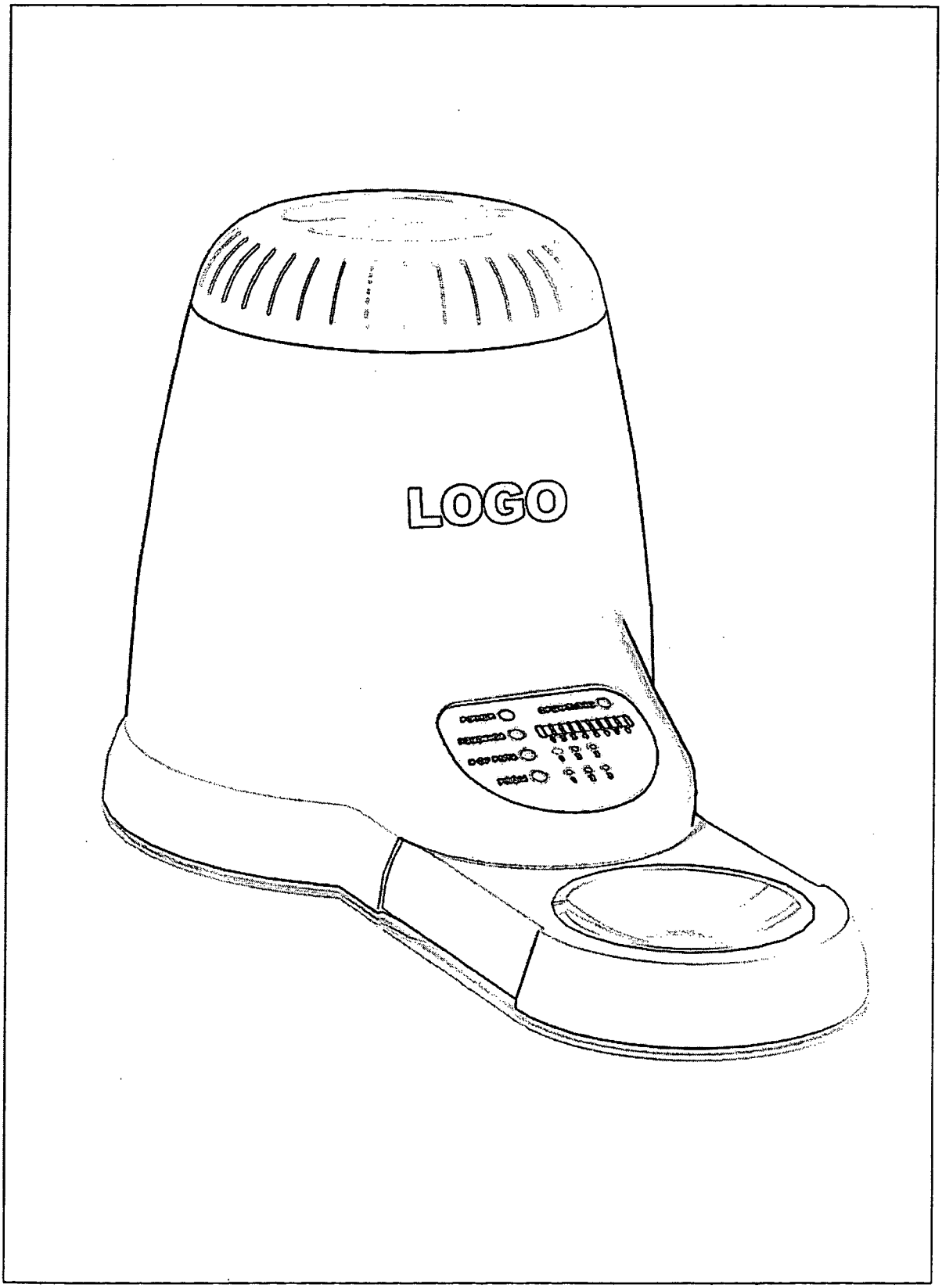
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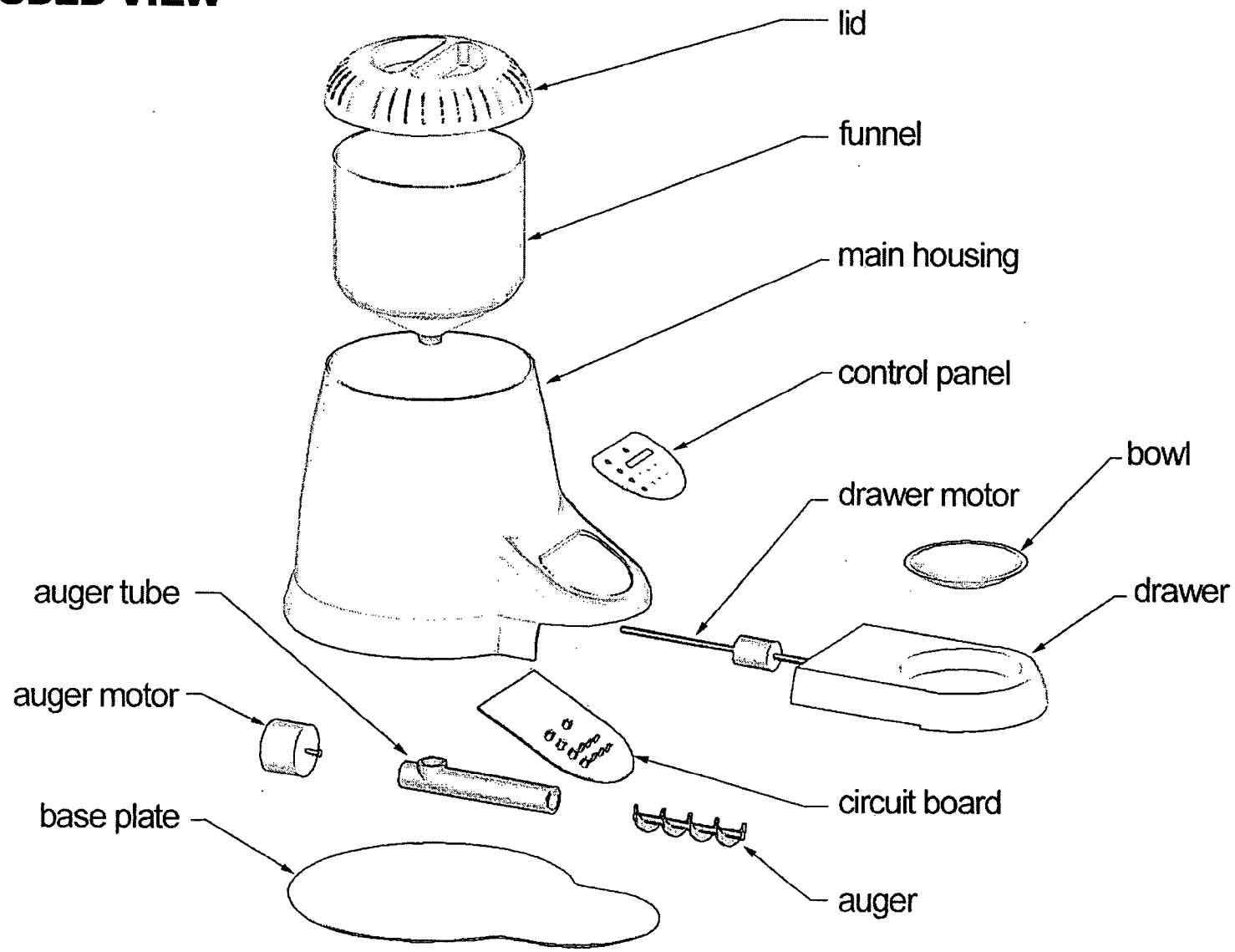
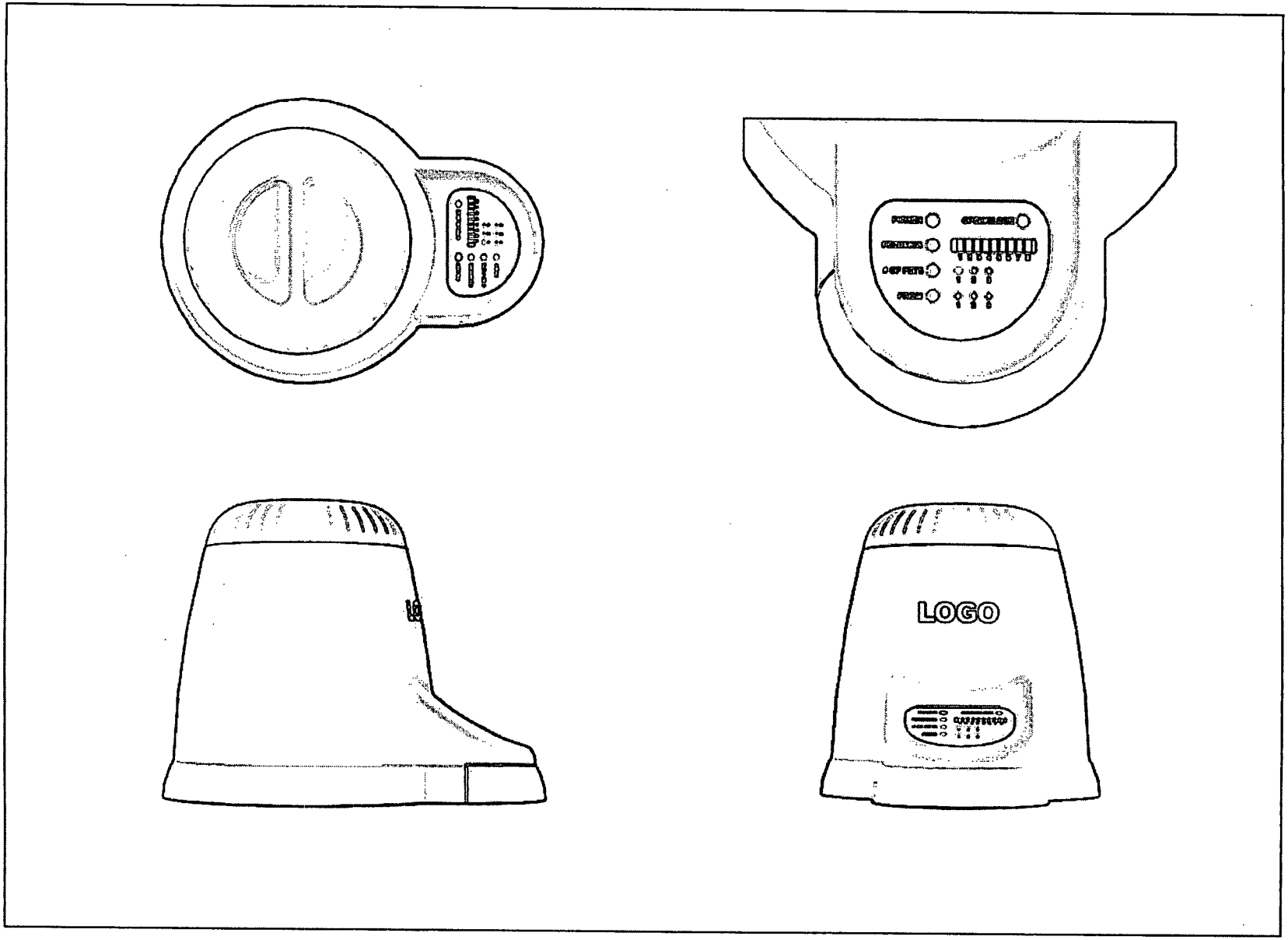
EXPLODED VIEW

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