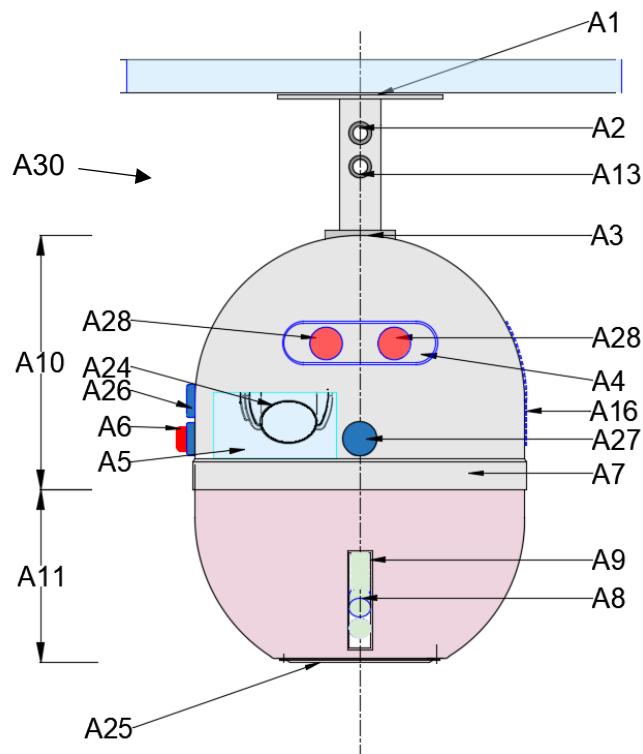


Title

An Artificial Intelligence analytic based Laser Beam Bird Repellent System for Indoor use



Abstract

According to an aspect of the present application, a bird repellent system for indoor use is proposed comprising a self-contained apparatus that is suspended at high level of a indoor area is useful especially for repelling birds trying to roost or scavenge for food in Wet Market, Warehouse, Cafeteria, Food court, etc where wholesale or cooked food are stored or served.

The self-contained apparatus having at least sensory mechanism, laser gun/s, servo motors for rotation in either x-axis and/ y-axis with the former used for visual and audible detection of birds integrated with Artificial Intelligence analytic software embedded in the Central Processing Unit to plot out the azimuth and area of protection, and upon detection will emit guided laser beams at the target area where the birds are present, be it at low or high level, as determined by the visual and audible detection system.

The laser beams will be emitted with a disruptive dissonance, with variation to intensity, duration and non- linear polarisation at plane to confuse the bird/s ability to adapt through cognitive learning.

Title

An Artificial Intelligence analytic based Laser Beam Bird Repellent System for Indoor use.

Field of the Invention

This invention relates generally to a Pest Repellent system. In particular, this invention relates to a Pest Repellent system solely for Indoor use to provide an indoor area from Birds against roosting, food scavenging and posing a hygiene risk to humans.

Background

The conventional Canteen, Cafeteria, Eateries, Market places, etc are indoor structures for humans to congregate to store, purchase, procure cooked food, uncooked food and food waste; these usually becomes a source of attraction for pests such as birds, rodents, etc to either nest, seek shelter or scavenging, and they will bring along a hygiene risk to food safety.

There are no known effective means of deterring pests from indoor structures. Pests (primarily birds such as mynah, pigeons, crows, seagulls, etc) may be fearless of humans and work collectively to ensure no harm comes to them during scavenging. The teamwork¹ among birds requires one bird to be perch at high ground acting as a scout for the area of preying, who will direct other scavenging birds to the food when it is left unattended. This task is rotated until all birds have eaten their fills.

The solution to this indoor pest problem has been human intervention is usually the sole method in deterring pests but usually happens after the food or food waste has already been attacked by the pest. Mitigation of food leftover through regular table cleaning to unmanned disposal centers helps to reduce pest infestation but is not efficacious.

Alternative unconventional method such as anti-bird spikes r anti bird netting placed on steel girders, top of walls is passive Repellent method which prevent pest from reaching out to the high places to stake out or await their opportunity to scavenge. Pest usually adapt to their presence by avoiding these apparatuses and are able to continue their scavenging, nesting or sheltering actions. Where pests have been unfortunate to be caught in such spikes and anti-bird netting, their carcass may decompose and create health hazards. The use of these passive apparatus is a bane to the finished architectural form and structure.

Thus, a need clearly exists for an active yet non-invasive system that considers and retain the form and purpose of the structure, to be able to inject as measured repellent response that instil a sense of fear into the birds, to upset them, to cause them to be unable to scavenge for food nor roost within the structure and in doing so, in a humane way that does not harm them nor causing harm to human.

Accordingly, this invention seeks to provide Such a smart apparatus is self-contained inside an enclosure that is durable and dust-free, able to detect, identify humans from birds using Artificial Intelligence analytic, take constructive active action to deter pests (primarily birds) from the area of protection without the need for human intervention, whereby the above problems are able to duly ameliorated.

¹ https://en.wikipedia.org/wiki/Javan_myna