

## FLY AND INSECT TRAP

### FIELD OF THE INVENTION

This invention relates to insect traps, and more particularly to a trap for flies and similar winged insects which kills by depositing glue on the insects so that they may no longer fly.

### BACKGROUND OF THE INVENTION

Flies, mosquitoes and similar flying insects are an age old nuisance. Numerous devices have been proposed with which to catch and kill flies, with varying degrees of efficacy. Furthermore, modern devices typically rely on harsh poisons—often, the more effective the device, the stronger the poison it uses. Poisons, however, themselves cause recognized problems. Insect poisons can be hazardous to humans, animals, and even plants, both in the use and the later disposal thereof. Such concerns are particularly acute in domestic environments, where poison hazards in fly traps may extend to children and pets—both of which are more susceptible to acute poisoning and long-term toxic tissue accumulations than are adult humans.

While devices have been proposed within which to trap flies and the like by drowning them in water, such devices have not been particularly effective—principally because of the difficulty in forcing the flies into the water. Merely exhausting the entrapped flies until they fall into water takes a long time, during which many succeed in finding their way back out of the trap.

There is a need, therefore, for a fly and insect trap which is both effective and non-toxic to humans and to animals, and to the environment in general.

Prior developments in this field may be generally illustrated by reference to the following information disclosure statement:

| U.S. Pat. No. | Patentee           | Issue Date    |
|---------------|--------------------|---------------|
| 4,802,303     | J. Floyd III       | Feb. 07, 1989 |
| 4,986,024     | T. Peek et al.     | Jan. 22, 1991 |
| 4,244,135     | H. Harwoods        | Jan. 13, 1981 |
| 1,297,894     | S. Navrot          | Mar. 18, 1919 |
| 983,977       | A. Lilge           | Feb. 14, 1911 |
| 1,360,127     | T. McKay           | Nov. 23, 1920 |
| 4,662,103     | L. Cheng           | May 5, 1987   |
| 5,406,743     | B. McSherry et al. | Apr. 18, 1995 |

U.S. Pat. No. 4,802,303 teaches a fly trap that uses a wick-fed liquid chemical attractant to draw the flies. The flies land on a non-wicked surface coated with a solid comprised of sugar and the poison DDYP—which causes them to die.

U.S. Pat. No. 4,986,024 teaches a insect trap used to attract flies by luring them with non-wicked chemical attractant. The flies land on a surface coated with the same solid poison.

U.S. Pat. Nos. 1,297,894, 983,977 and 1,360,127 teach fly traps which provide a food lure that causes them to become entrapped in the interior of the devices. They eventually die by drowning in a poisonous liquid or in water.

The rest of the patents are representative of what is to be found in the art.

### SUMMARY OF THE INVENTION

The present invention is a fly catcher apparatus having a cylindrical body with a single fly inlet port on its wall, near

the bottom thereof. A central tube holds a wick of cloth or similar liquid-permeable material. Midway up the tube are a series of regularly spaced cloth fly-contacting (and other insect-contacting) members, preferably colored and shaped like leaves. These are attached in fluid communication with the wick and exit out the side of the tube into the interior cavity of the body.

At the top of the tube is a cup for holding odoriferous bait, in the form of decaying meat, fish or the like. One or more aroma ports allow the smell of the bait to exit out the removable cap of the cup. Additional perforations for the outlet of the aroma of bait decay are located on the side wall of the bait cup. The top of the wick forms one or more bait-moistening members which exit out the top or side of the tube into the cup. Moisture carried up the wick (see below) keeps the bait moist—which is important for keeping it odoriferous.

The device uses a novel aqueous trapping solution which, while acting as a form of "poison," actually is non-toxic to humans—adult or child. The solution preferably comprises about three parts water to about one part white household glue of the type sold under the trademark ELMER'S, available from Borden Inc. This brand is known to be almost fully non-toxic—even if directly consumed by children. Other non-toxic domestic glues made from processed animal protein or vegetable mucilage are readily available, and may be used in aqueous solution to practice this invention.

Into the cavity of the body is poured the fly-trapping solution, up to a level below the fly inlet port opening. The wick draws the solution up and onto the fly-contacting members, as well as into the bait cup and onto the bait. The wick and the contacting members become saturated with the glue-bearing solution. Neither will dry out for a very long period of time. Specifically to catch mosquitoes, a wick-fed obstacle net may be substituted for the fly-contacting members.

A small amount of air enters the body of the trap, chiefly through the inlet port, and enters the cup via perforations in the bottom of the cup which communicate with the container's inner cavity. From the cup, the air travels up past the bait and out through one or more vapor vents or ports in the cap of the cup. This releases the odor of decay into the air, attracting flies and other flying insects. Additional small perforations may be formed in the side of the container near the fly inlet port so that odor can travel down and out the inlet port and the nearby perforations. This attracts the flies directly to the inlet port, which they then use to fly into the container. Preferably, only one fly inlet port is provided—to minimize the number of flies which accidentally find their way back out of the device.

Once in the container, the flies cannot reach the bait. However, they fly around looking for the bait, or for an exit, until they become tired. They inevitably land on one of the leaf-like wicked contacting members. This immediately causes them to pick up small amounts of glue on their footpads, tongue, antennae and the like. In an attempt to rid themselves of the glue, they groom the affected parts. This merely spreads the glue to other body parts—in particular, to their wings. Once their wings have glue on them, the insects no longer can fly. They drop down into the solution and drown.

After a sufficient quantity have been captured, the cap and cup can be removed, the dead flies and other insects disposed of, and the bait and solution replaced for reuse of the device.

### Features and Advantages

An object of this invention is to disclose a fly and insect trap apparatus including a body forming an interior cavity;