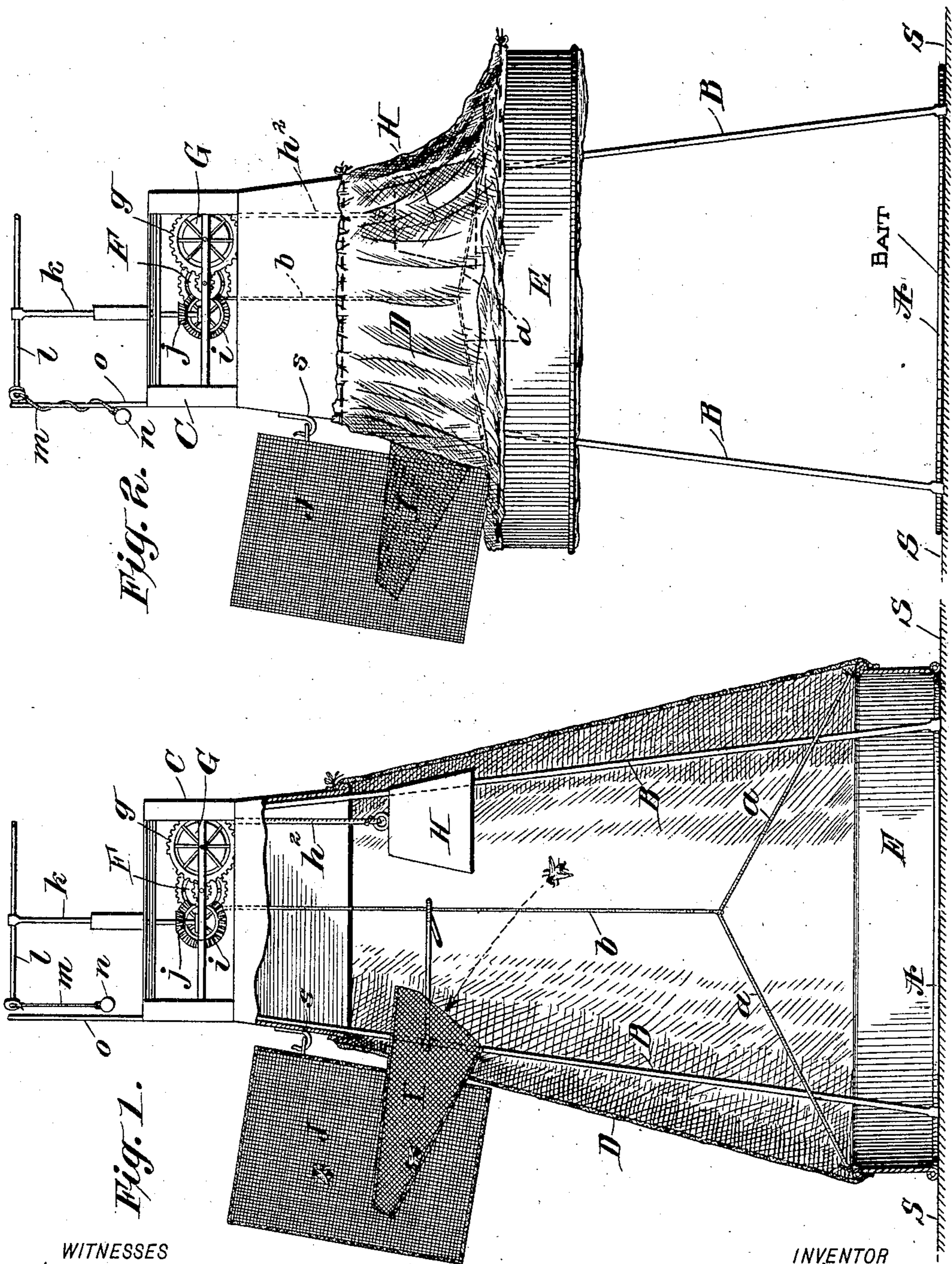


J. O. WINDUST.

FLY TRAP.

APPLICATION FILED OCT. 12, 1906.

2 SHEETS—SHEET 1.



WITNESSES

Samuel C. Wade,
Edw. W. Byrnes,

INVENTOR
JAMES O. WINDUST.

BY *Munn & Co.*

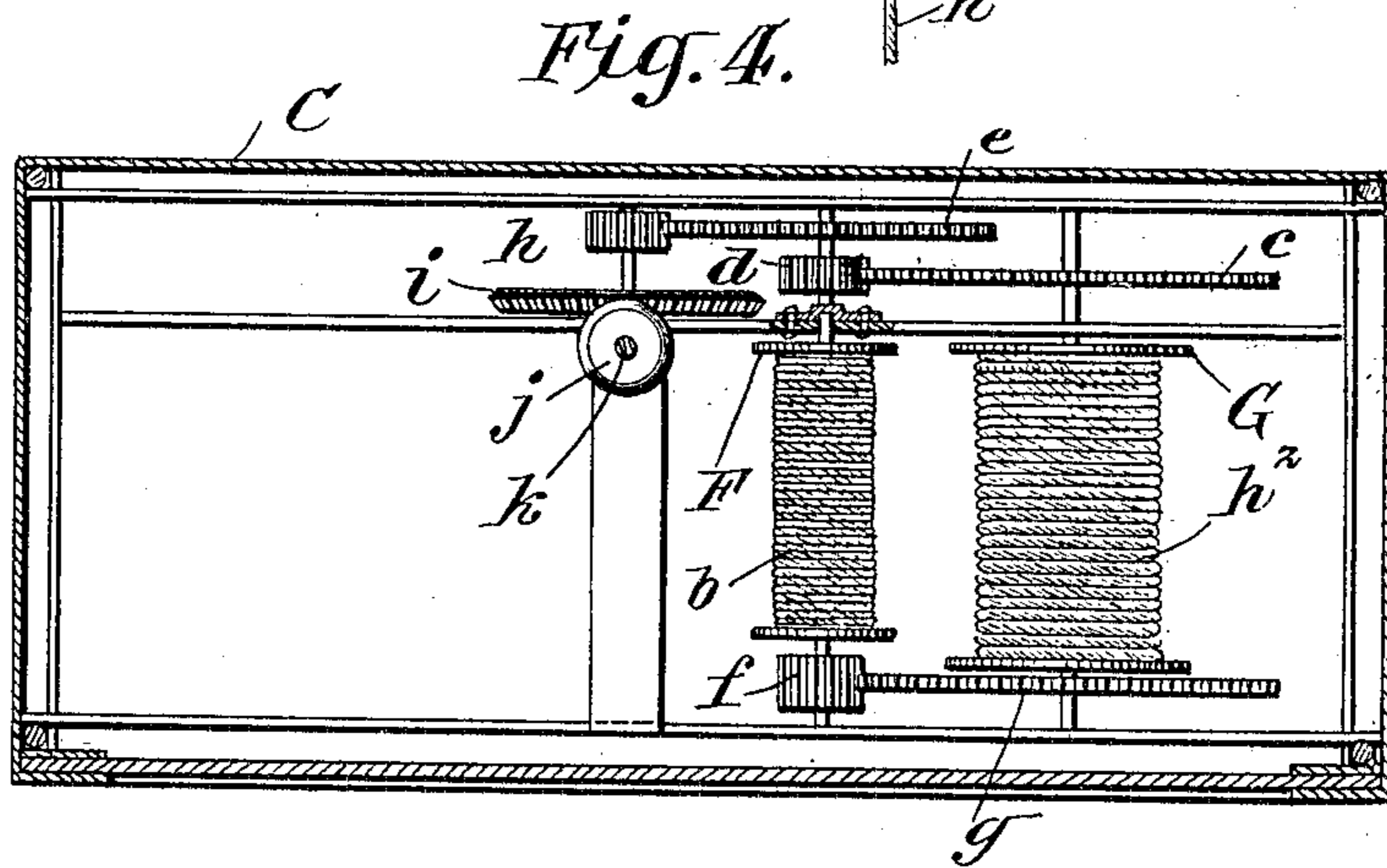
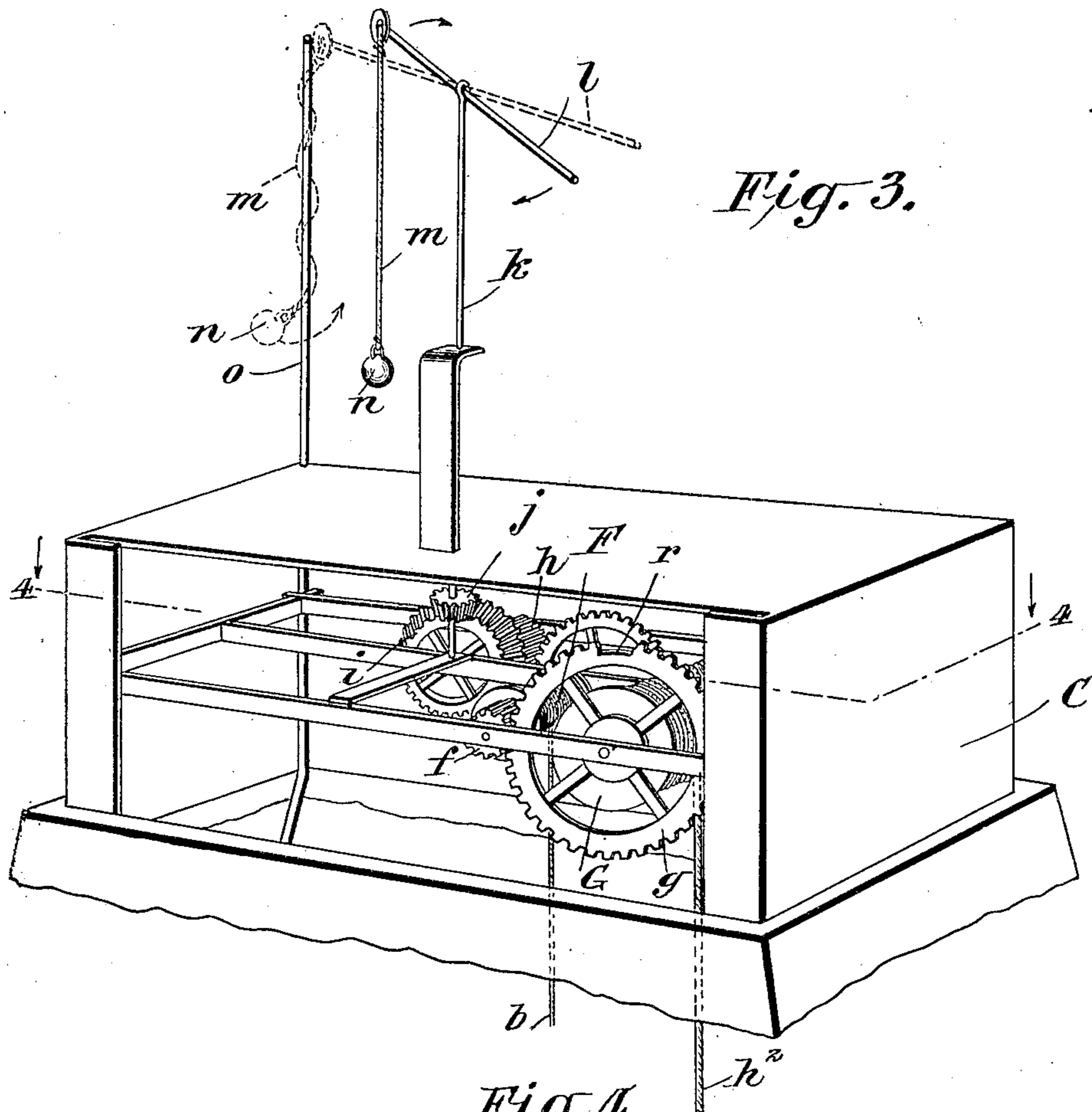
ATTORNEYS

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UNITED STATES PATENT OFFICE.

JAMES O. WINDUST, OF WALKER, WASHINGTON.

FLY-TRAP.

No. 840,278.

Specification of Letters Patent.

Patented Jan. 1, 1907.

Application filed October 12, 1906. Serial No. 338,588.

To all whom it may concern:

Be it known that I, JAMES O. WINDUST, a citizen of the United States, residing at Walker, in the county of Wallawalla and State of Washington, have invented a new and useful Improvement in Fly-Traps, of which the following is a specification.

My invention is in the nature of a new automatic fly-trap of the form in which the parts are actuated by the mechanical power of a weight or spring to set into action certain other moving parts for trapping the flies.

Its fundamental principle of construction is embodied in a hood or petticoat which by a clock mechanism is intermittently raised and dropped over a board or table baited with sugar or molasses, the flies being thereby caught in a temporarily-darkened chamber, whence they emerge through a lighted opening into a receiving-cage, as hereinafter fully described with reference to the drawings, in which—

Figure 1 is a side elevation, partly in section, of my trap with the hood dropped down. Fig. 2 is a side elevation with the hood raised. Fig. 3 is an enlarged perspective view of the motor mechanism and its escapement, and Fig. 4 is a horizontal section on line 4 4 of Fig. 3.

In the drawings, A represents a circular base-ring from which rise four or more legs B, supporting at the top a motor mechanism C. The legs B converge toward the top and connect with the four corners of the rectangular frame of the motor mechanism C. To the lower edge of the frame is attached the top edge of a conical hood or petticoat D, which diverges toward the lower end and is attached at said lower end to a more or less heavy circular metal band E. This circular band and the hood are outside of and envelop the legs B, and the circular marginal band E is arranged to drop to a close fit upon the top of the board or table surface S, upon which the fly-trap is supported.

The hood D is formed of a flexible cloth of light texture and of black color, or at least so opaque that it makes when lowered a dark chamber within it. This hood is arranged to be raised and dropped at short intervals, and the board or table surface beneath it being suitably baited with sugar, molasses, or sweetened water and the fly-trap set over the same the flies, drawn by the bait, will accumulate beneath the hood, and when the latter is suddenly dropped it imprisons the flies in a

dark chamber, and the flies, rising to the lighted exit-point above, find themselves trapped in a cage, as more fully described hereinafter.

I will first describe the means for raising and dropping the hood at predetermined and regular intervals.

The circular marginal band at the bottom of the flexible hood is connected at two or more points by a sling *a*, Fig. 1, to a cord *b*, which at its upper end is wound upon a slip-windlass F. This windlass has at one end a small gear-wheel *f*, Fig. 4, which engages with a larger gear-wheel *g* on a drum G. This drum is actuated either by a spring or weight. As shown, a heavy weight H is employed, which is connected to a cable *h*², wound upon the drum. The rotary movement of this drum is regulated through an escapement consisting of toothed wheels *c d e h i j*. The wheels *i j* are bevel-gears, and *j* is rigidly fixed to the lower end of a rotating staff *k*, bearing a cross-bar *l* on its upper end, from one end of which is suspended a cord *m* and ball *n*. Erected at one end of the motor-frame is a small stationary rod *o*, which is just a little distance outside the end of the cross-bar *l*, so that when the staff *k* and arm *l* rotate centrifugal action throws the ball *n* out far enough to cause its cord to wrap a number of times around the stationary rod *o*, as seen in dotted lines in Fig. 3, and arrest further movement of the staff until the ball and its cord unwind themselves from rod *o*, which they do slowly. This forms a slow and noiseless escapement for the motor-gears, which prevents the weight or spring from rapidly running down. As the main drum slowly turns under the influence of its weight or spring the gear-wheel *g* turns the gear-wheel *f* of the slip-windlass and raises the hood, and as soon as the hood is raised (which raising may occupy from five to fifteen minutes) the hood is suddenly dropped. This is conveniently effected by simply cutting out of the larger gear-wheel *g* several teeth at one or more points in its circumference, as seen at *r*. The gear-wheel *g* turns the slip-windlass wheel *f* until the toothless space *r* comes opposite the gear-wheel *f*, and then the windlass from the weight of the hood and marginal ring slips backward and allows the hood and ring to fall quickly. In a short while, however, the escapement allows the continuous rotation of drive-wheel *g* to again engage the wheel *f* of the slip-windlass, which again raises the hood.

In the interval of time while the hood is down the flies transfer and trap themselves as follows: In the upper part of the hood there is a wire-screen outlet I of a spout-like shape which leads into a supplemental and detachable cage J. This cage may be made of wire-netting of suitable size to receive the requisite number of flies, and it is hung upon hooks s s on the motor-frame.

When the flies are trapped by the falling of the hood, they find themselves in a dark chamber, lighted only from the discharge-spout at the top, which is made of wire-netting or other substance that allows the light to pass through. The flies seek this light, and in crawling through the spout into the cage J are effectually imprisoned. The detachable cage J may then be removed and the flies scalded or drowned.

I claim—

1. A fly-trap consisting of a hood of flexible fabric having at its lower end a stiff marginal frame, stationary means for suspending the top of the hood and means for raising and dropping the marginal frame at intervals.

2. A fly-trap consisting of a hood of flexible fabric impervious to light but having a lighted exit at the top, a receiving-cage communicating with this exit, means for suspending the top of the hood, a marginal frame attached to the lower end of the hood, and means for raising and dropping the marginal frame at intervals.

3. A fly-trap consisting of a hood of flexible fabric, a stationary supporting-frame for suspending the top of the same, a stiff marginal frame for the bottom and means for raising and dropping the marginal frame at intervals.

4. A fly-trap consisting of a main frame, a motor mechanism mounted on top of the main frame centrally above the same, a hood of flexible fabric concentrically inclosing

said frame and attached at its upper end to the top of the same and having a stiff marginal frame at the bottom surrounding the main frame, a suspending-sling for the marginal frame extending centrally up to the motor mechanism and means for raising and dropping the marginal frame.

5. A fly-trap consisting of upright legs converging toward the top, a motor mechanism mounted on top of said legs, a flexible hood embracing said legs and connected to the motor mechanism to be raised thereby and tripping devices for dropping the hood.

6. A fly-trap consisting of upright legs converging toward the top, a motor mechanism mounted on top of said legs, a flexible hood secured at its upper end and having a marginal weighted ring at the bottom, a cord connected to the said ring for raising it, a windlass connected to the cord and operated by the motor mechanism and tripping devices for the windlass for dropping the hood.

7. The combination with a fly-trap having a rising and falling hood; of a slip-windlass having a cord connected to the hood and a gear-wheel, and a driving gear-wheel meshing with the windlass-gear and having on its periphery blank spaces of omitted teeth to allow the windlass to slip back automatically at intervals.

8. The combination with a fly-trap having a rising and falling hood; of a motor mechanism for the same having an escapement consisting of a rotating shaft bearing an arm with a cord and ball at its outer end, and a stationary post arranged outside of the sweep of the arm but within range of engagement of the ball and cord when under the influence of centrifugal action.

JAMES O. WINDUST.

Witnesses:

W. F. SPEER,
S. E. KING.