

Oct. 4, 1938.

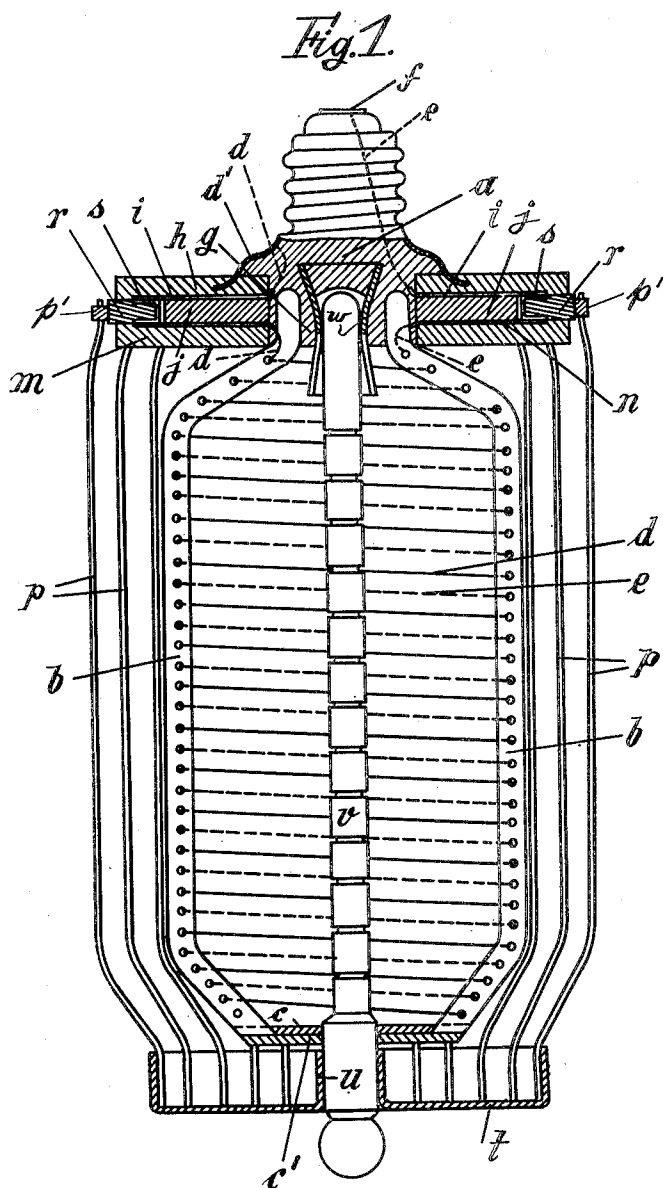
H. KRIWAT ET AL

2,132,371

INSECT CATCHER WITH CATCHING GRID UNDER ELECTRIC TENSION

Filed June 23, 1936

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 2.

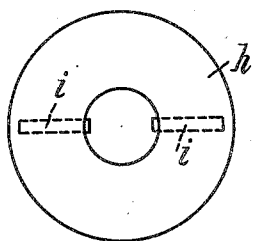


Fig. 3.

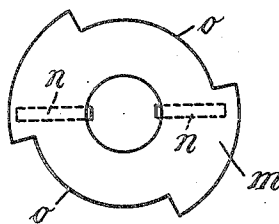


Fig. 4.

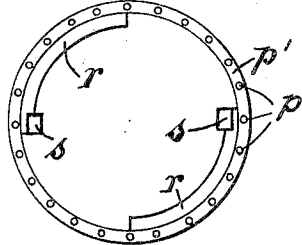


Fig. 5.

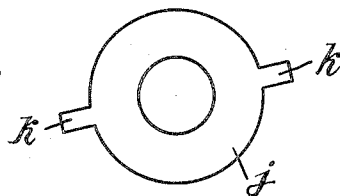
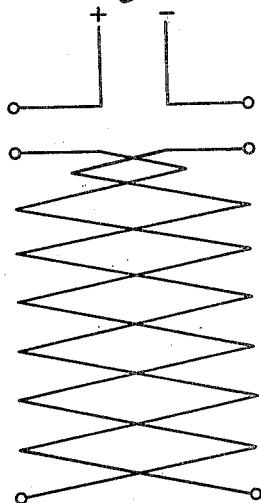


Fig. 6.



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UNITED STATES PATENT OFFICE

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INSECT CATCHER WITH CATCHING GRID
UNDER ELECTRIC TENSIONHans Kriwat, Brunswick-Gliesmarode, and Wil-
helm Klages, Hanover, GermanyApplication June 23, 1936, Serial No. 86,858
In Germany June 26, 1935

2 Claims. (Cl. 43—112)

This invention relates to a device for catching insects fitted with a catching grid under electric tension. Insect catchers of this type and of known construction have the defect that they are very dangerous as when removing the protecting cage, which normally covers the catching grid, only one single current conducting wire is interrupted so that sometimes deadly accidents occur owing to the high voltage of the catching device. Catching devices with electric catching grid are further very complicated and expensive so that they are not suited for general use.

In the insect catcher according to the invention the contact device is so constructed that both current conducting wires are interrupted when the protecting cage is removed from the device. The means employed for the formation of the double contact are very simple as, after the protecting cage has been hung into the contact device, the protecting cage need to be turned only till it encounters resistance whereby both contacts are closed.

It is not necessary, as in other catching devices, to employ incandescent lamps which are to be screwed into lamp holders, as for attracting the insects a rod serves which is inserted into the catching device and securely held by the base of the device.

An embodiment of the invention is illustrated by way of example in the accompanying drawings, in which:

Fig. 1 shows the insect catcher in longitudinal section.

Figs. 2 and 3 show each in top plan view one of the two contact discs.

Fig. 4 shows in top plan view a contact device mounted on the protecting cage.

Fig. 5 shows in top plan view an intermediate disc designed to separate the contact discs.

Fig. 6 shows the wiring diagram of the catching grid.

The insect catcher comprises a threaded plug adapted to be screwed into any existing lamp holder. In the plug *a* four or a greater number of radially arranged perforated strips *b* of insulating material and of suitable shape are cast which at the lower end engage into incisions in a disc *c*, also made of insulating material. The ends of the strips *b* are covered by a disc *c'* placed from below against the disc *c*. Two wires *d* and *e* are threaded through the holes of strips and stretched, the wire *e* which leads to a contact plate *f* in the plug as well as the wire *d* which leads to the holder *d'*, are interrupted in the plug of the catching device. The plug *a* has a cylin-

dric extension *g* on which a disc *h* is mounted. Two opposite contact plates *i* are fixed on this disc *h* (Fig. 2). An intermediate disc *j* of shorter diameter than the disc *h* and having two opposite extension arms *k* (Fig. 5) is also placed on the plug and then a disc *m* (Fig. 3) on which two contact plates *n* are fixed and which has two recesses *o* at opposite points of its circumference. All three discs *h*, *j*, *m* are of insulating material and they are rigidly connected the one with the other and with the plug *a* and the extension *g* of the same. The wires *d*, *e* are connected with the four contact plates *i*, *n* (Fig. 1) which are lying in pairs accurately the one over the other, whereas the arms *k* of disc *j* are displaced at an angle to the contact plates *i*, *n* (Fig. 5).

The protecting cage *p* comprising wires or rods anchored at their upper ends in a ring *p'* is fitted at its upper end with two insulating strips *r* forming each a quarter of a ring, and at one end of each strip *r* a U-shaped contact piece *s* is fixed (Fig. 4). If the protecting cage has to be fixed on the catching device, the two strips *r* are pushed through the recesses *o* in the edge of disc *m*, whereupon the protecting cage can be turned with the strips *r* so that these strips are shifted between the discs *h* and *m* so that the contact pieces *s* butt against the arms *k* of disc *j*. In this position the contact pieces *s* engage between the contact plates *i* and *n* and the interrupted wires *d* and *e* make contact with the plug *d'* and with the contact plate *f* respectively. The insect catcher is ready for operation.

If the protecting cage is turned back a little, the conducting connection between the wires *d* and *e* is interrupted so that, when the protecting cage is removed, injury to a person who handles the catching grid cannot occur.

The protecting cage *p* has a cup *t* at its lower end designed to collect the ashes of burnt insects. The cup *t* has at the centre a hub *u* through which a rod *v* is inserted which is painted with a substance attracting insects. The upper end of rod *v* is securely held in a clamping sleeve *w* cast in the cylindrical extension *g* of the plug. The rod *v* has circular grooves (Fig. 1) for retaining the coating. The rod *v* can be easily removed from the catching device to be recoated. The insects attracted by the odour of the coating of rod *v* are killed as soon as they touch the grid *d*, *e*. The wires of the protecting cage *p* are spaced sufficiently to let the insects pass through but not wide enough that a finger

of the hand could be inserted between the wires.

We claim:—

1. An insect catcher, comprising in combination a plug adapted to be screwed into any lamp holder, a downwardly directed cylindrical extension of said plug, perforated strips of insulating material cast at one end in said plug, two electricity conducting wires threaded through the perforations of said strips and stretched across the space between said strips and forming with said strips a catching grid, one of said wires terminating in the outer surface of said plug, both wires being interrupted in said plug, a disc of insulating material mounted on said cylindrical extension, two opposite contact plates on the under surface of said disc, a second disc of insulating material under said first mentioned disc having two recesses at opposite points of the rim, two contact plates on said second mentioned disc lying directly under said contact plates of the upper disc, said pairs of contact plates contacting with the ends of the corresponding wires at the interruption, an intermediate plate of insulating material and of shorter diameter than and between said two discs, two radial oppositely directed arms projecting from opposite points of

the circumference of said intermediate disc, a protecting cage of wire enclosing said catching grid, two insulating strips in the shape of a quarter ring in the upper end of said protecting cage and adapted to be inserted between said first and second discs into the space left by the corresponding intermediate disc, and a contact piece at one end of each of said insulating strips adapted to bear against the corresponding arm of said intermediate disc to close the circuit between said interrupted wires.

2. An insect catcher as specified in claim 1, comprising in combination with the cylindrical extension of the plug and with the catching grid, a bottom plate of insulating material in said grid and having a central hole, a clamping sleeve in said cylindrical extension, a cup on the lower end of said cage and having a central hole, and a rod having grooves in its outer surface inserted through the holes of said cup and said bottom plate and into said clamping sleeve and adapted to be coated with a substance attracting insects.

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