July 23, 1946. G. BOWSER 2,404,687

INSECT ELECTROCUTOR

Filed Feb. 26, 1945 2 Sheets-Sheet 1

Fig. 1

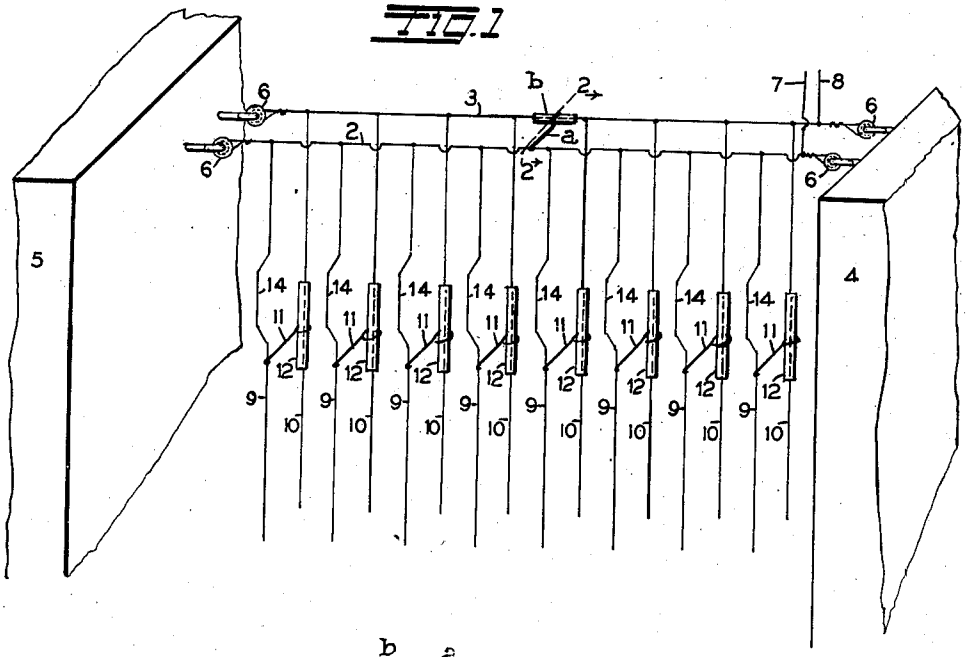
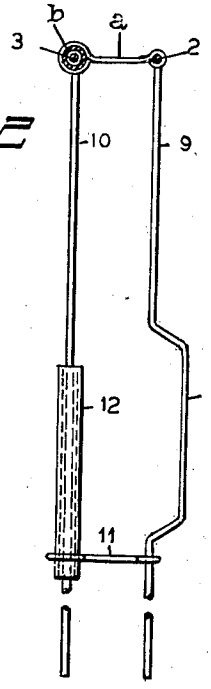


Fig. 2



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Filed Feb. 26, 1945 2 Sheets-Sheet 2

Fig. 3

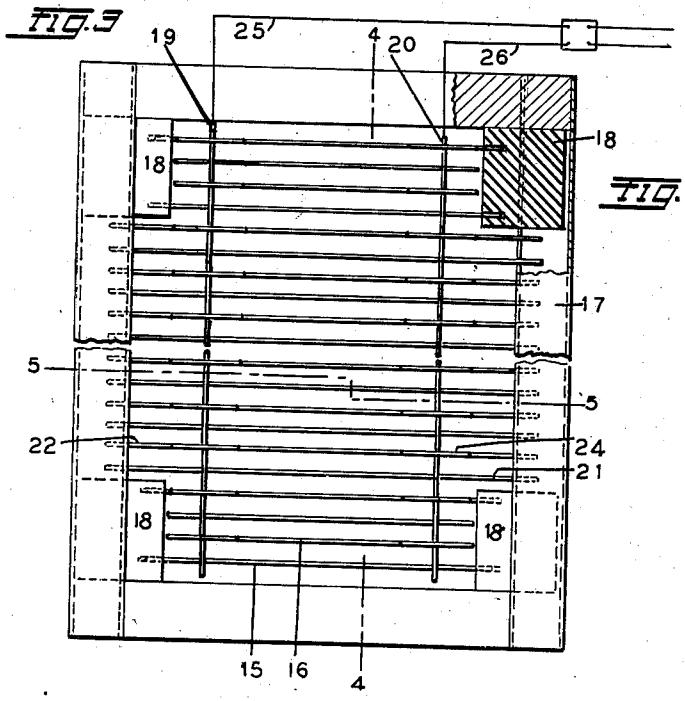


Fig. 4

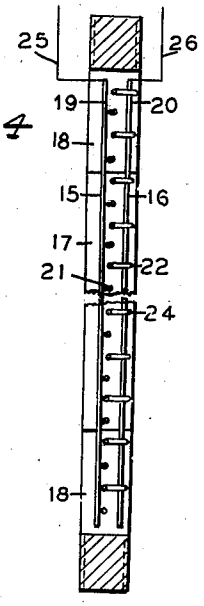


Fig. 5

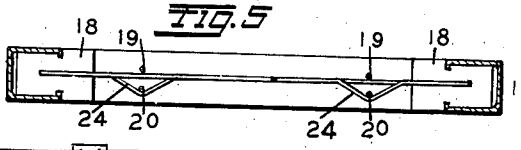


Fig. 6

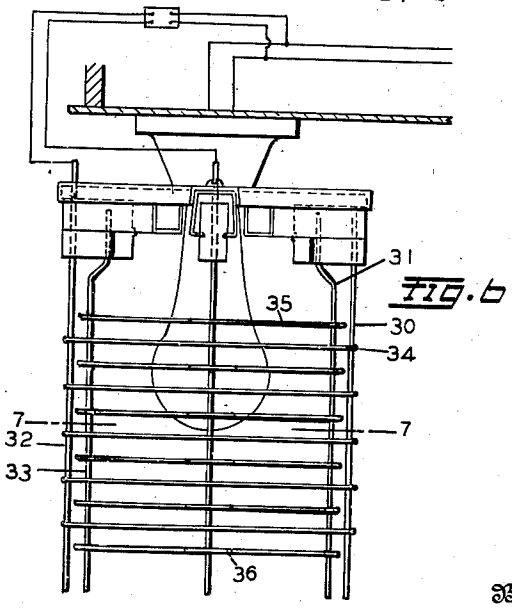
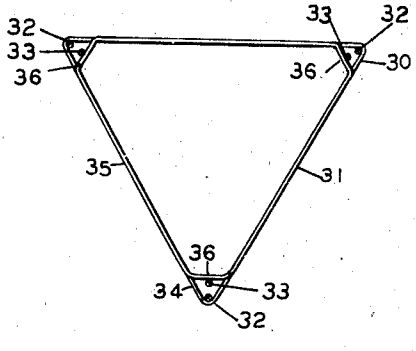


Fig. 7



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INSECT ELECTROCUTOR

Guy Bowser, Pinellas Park, Fla.

Application February 26, 1945, Serial No. 579,750

3 Claims. (Cl. 160—18)

1

This invention is concerned with improvement in insect electrocutors, which comprise electric conductors arranged between supporting members or within a frame.

Broadly it is an object of this invention to provide an insect electrocutor of such shape, design and construction that the carcasses of insects, which come in close proximity to or contact with the electrically charged elements, by which they are electrocuted, will fall clear of the elements or electrodes and not clog or obstruct the space between the electrodes and possible causing of a short circuit.

A further object of this invention is the provision of a device in accordance with the invention which can be readily assembled, and economically manufactured.

This invention resides substantially in the combination, construction, arrangement, and relative location of parts, all in accordance with the disclosure herein.

In the accompanying drawings,

Figure 1 is a perspective view of an embodiment of this invention.

Figure 2 is an enlarged sectional view on the line 2—2 Figure 1.

Figure 3 is an elevation of a modified embodiment of this invention.

Figure 4 is a section on the line 4—4 Figure 3.

Figure 5 is a section on the line 5—5 Figure 3.

Figure 6 is another modified embodiment of this invention.

Figure 7 is a section on the line 7—7 Figure 6.

The true nature and manner of use of a device in accordance with this invention will be best understood by a detailed description of the form thereof shown in the drawings in an illustrative sense.

A preferred form in accordance with this invention includes parallel main electrodes 2 and 3 longitudinally extended between opposite members 4 and 5; spaced by one or more spacing means comprising a wire member *b* one end of which is in fixed engagement with main electrode 2 the opposite end being wrapped around the outer periphery of the insulating member *c* thru which main electrode 3 passes; insulated therefrom by suitable insulating members 6 and being in contact with a source of electric current thru conductors 7 and 8 either directly or thru a transformer depending upon the desired voltage.

Suspended from said main longitudinal electrodes 2 and 3 are a series of vertical tap electrodes 9 and 10 which may be hooked to the

2

main electrodes and pressed into contact therewith, secured therewith by end turns, joined by means of solder, or in any other suitable or conventional manner.

Observation of Figures 1 and 2 teaches that said tap electrodes 9 and 10 are in fixed predetermined space as to each other by means of wire spacing members 11 which is in fixed engagement with the electrode 9 in a manner such as above described for the engagement of the tap electrodes with the main electrodes, the opposite end thereof circumscribing the outer periphery of the insulating member 12, thru which the electrode 10 passes, and while in the drawing only a single spacing means is shown for each pair of electrodes, it is obvious that, if the length of the tap electrodes should demand additional spacers same could be supplied without impairing the spirit of the invention.

As herein pointed out an object of this invention is to provide a device of the character here described whereby the carcass of the insect will fall clear of the electrodes and especially is this true in the structure above described, wherein the path between any pair of electrodes is normally so close that the additional thickness of the insulator 12 would tend toward causing a clogging around the top rim of the insulator 12 thereby obstructing the path between the electrodes, and possible shorting of the circuit, therefore to overcome this possible condition the electrode 9 is indented at 14 from above the top of said insulator 12 thus permitting any carcass to pass same and fall clear of the elements.

Now referring to Figures 3, 4, and 5, which illustrate a modified form of structure it will be observed that in the main the structure is composed of two gratings 15 and 16 which are embodied within a frame 17, in insulated fixed engagement therewith at the four corners thereof thru insulating members 18. Each of these gratings comprise an assembly of grids in the form of parallel vertical electrodes 19 and 20 which may be termed main electrodes, and a series of parallel horizontal tap electrodes 21 and 22 which are respectively connected in unitary circuit assembly by solder connection, splicing, or other conventional connecting means, however, observation of Figure 4 will teach that if both vertical electrodes were run in contact with their respective horizontal electrodes in their normal plane, said vertical electrodes would be so close that the insect carcasses would readily clog and obstruct any passage therebetween, therefore to assure a clear passage the horizontal electrodes

22 are indented at 24 and the vertical electrode 20 run within the space thus provided.

In this structure it is thought best to make contact with a source of electricity thru the vertical electrodes, and as indicated thru represented conductors 25 and 26.

Figures 6 and 7 illustrate a further modified form of structure wherein there is a double set of triangular gratings 30 and 31 in the form of vertical grids or electrodes 32 and 33 in circuit contact with parallel horizontal electrodes 34 and 35 respectively.

Similar to other forms of structure herein described, it is necessary that the structure be so formed that the passage between opposite vertical electrodes be kept clear, to this end the apex terminals of the grating 31 is receded in a manner as shown at 36 and the vertical electrode 33 run within the space thus provided.

As previously pointed out, it is desired, although not compulsory in any form of structure, that electrical contact shall be made thru vertical electrodes.

In this modified structure there is shown an electric lighting means, however this is a well known means for attracting insects and no claim is made to this individual item, same being shown to illustrate one manner of using this particular structure.

From the above description it will be apparent to those skilled in the art that the details of construction illustrated herein may readily be varied without departure from the novel subject matter herein disclosed. I do not therefore, desire to be strictly limited by the disclosure but rather by the claims granted me.

What is claimed is:

1. A device of the kind described, comprising a normally open electrical charging circuit, and including independent groups of fretwork-like contacts spaced from each other for clearances between such groups and the contacts thereof, closing of said circuit being effected by engagement of an insect with contacts of both groups thereof.

2. A device of the kind described, comprising a normally open electrical charging circuit, including independent groups of fretwork-like contacts spaced from each other for clearances between such groups and the contacts thereof, the closing of said circuit being effected by engagement of an insect with the contacts of both groups thereof, and insulating means holding the groups of contacts in their spaced relation to each other for minimizing insect clogging of the clearances.

3. A device of the kind described, comprising a normally open electrical charging circuit, including independent groups of bar-like contacts spaced from each other for clearances between such groups and the contacts thereof, the closing of said circuit being effected by engagement of an insect with the contacts of both groups thereof, insulating means holding the groups of contacts in their spaced relation to each other for minimizing insect clogging of the clearances, and means for supporting said groups of contacts and the insulating means assembled.

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