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R. G. BRIDGES
ELECTRIC HEATING ELEMENT
Filed March 27, 1922

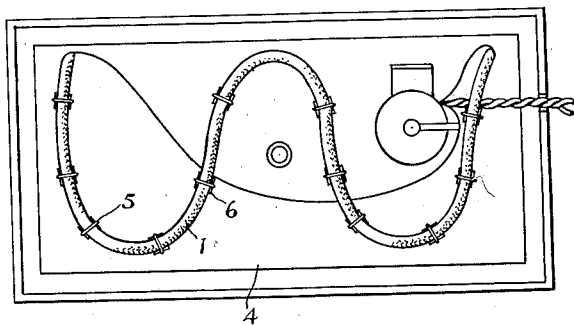


Fig. 1.

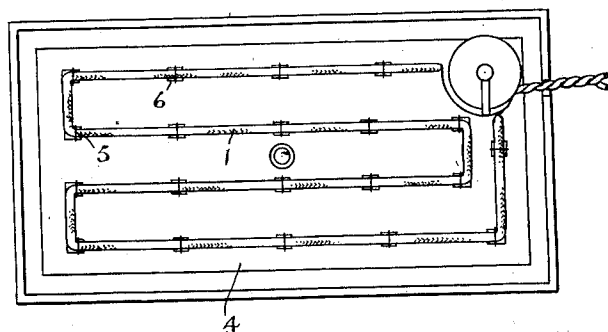


Fig. 2.

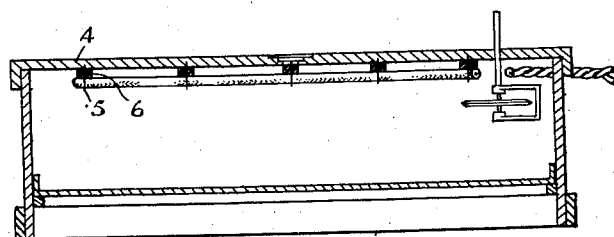


Fig. 3.

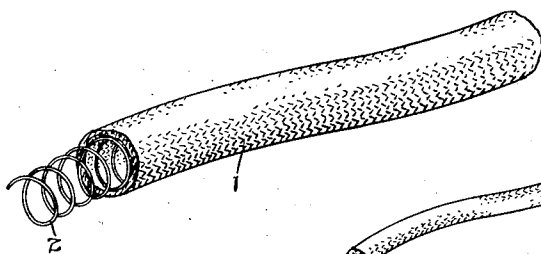


Fig. 4.

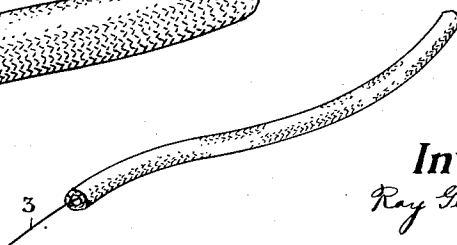


Fig. 5.

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UNITED STATES PATENT OFFICE.

RAY GEORGE BRIDGES, OF TORONTO, ONTARIO, CANADA

ELECTRIC HEATING ELEMENT.

Application filed March 27, 1922. Serial No. 547,308.

To all whom it may concern:

Be it known that I, RAY GEORGE BRIDGES, a subject of the King of Great Britain, and resident of the city of Toronto, county of York, Province of Ontario, in the Dominion of Canada, have invented certain new and useful Improvements in an Electric Heating Element, described in the following specification and illustrated in the accompanying drawings, that form part of the same.

The objects of this invention are, to improve the construction of electric heating elements particularly of the flexible kind and to devise a form of element which will be very advantageous in connection with the operation of incubators.

The principal features of the invention consist in the arrangement of a flexible resistance wire within a flexible tubular structure of non-inflammable electrical insulation, such as a tube of fabric woven from asbestos cord.

In the drawings, Figure 1 is an underside plan view of the cover of an incubator showing one application of my invention.

Figure 2 is an underside plan view of the cover of an incubator showing a modified arrangement of my invention.

Figure 3 is a sectional view of a portion of an incubator showing the arrangement of the element.

Figure 4 is an enlarged perspective detail of the form of element shown in Figure 1.

Figure 5 is an enlarged perspective detail of the form of element shown in Figure 2.

The particular element of this invention comprises the arrangement of a resistance wire within a tube of non-inflammable material so constructed as to radiate the heat from the wire element. The form of tube is preferably woven asbestos fabric. This is of such a nature that the heat generated by the nichrome wire resistance member finds exit between the strands and through the fibres of the fabric itself.

Such an element is of course very flexible and can be utilized for many purposes such as heating beds, etc., but it is here shown applied to an incubator for the purpose of distributing the heat in a modified form uniformly over the entire area of the incubator casing.

In the form illustrated in Figures 1 and 4 the woven asbestos tube 1 is sufficiently large in diameter to contain a spirally wound heating wire 2 but in the form shown in Figures 2 and 5 a straight wire 3 is enclosed in the woven tube.

A heating element thus constructed may be made any desirable length and worked into the structure where the heat is required in a very simple way without the necessity of specially formed channels and holders and without danger of short circuiting.

As illustrated in Figures 1 and 2 the tube containing the heating wire is secured to the underside of the cover structure 4 by means of staples 5. Small fibre blocks 6 are placed between the legs of the staples and the element is held thereagainst. These staples may be placed at desirable distances apart according to the arrangement of the element.

The element as illustrated in Figures 1 and 2 radiates its heat over the entire area of the casing to which it is applied. Such construction is very desirable in incubators so that a uniform temperature will be maintained over the entire area of the egg tray.

It will be readily understood that a heating element such as described may be applied to almost any form of heating appliance where mild heats are desirable.

What I claim as my invention is:—

A heating element, comprising a tube of woven asbestos fibre, and a spirally coiled resistance wire arranged within and enclosed by said tube.

RAY GEORGE BRIDGES.