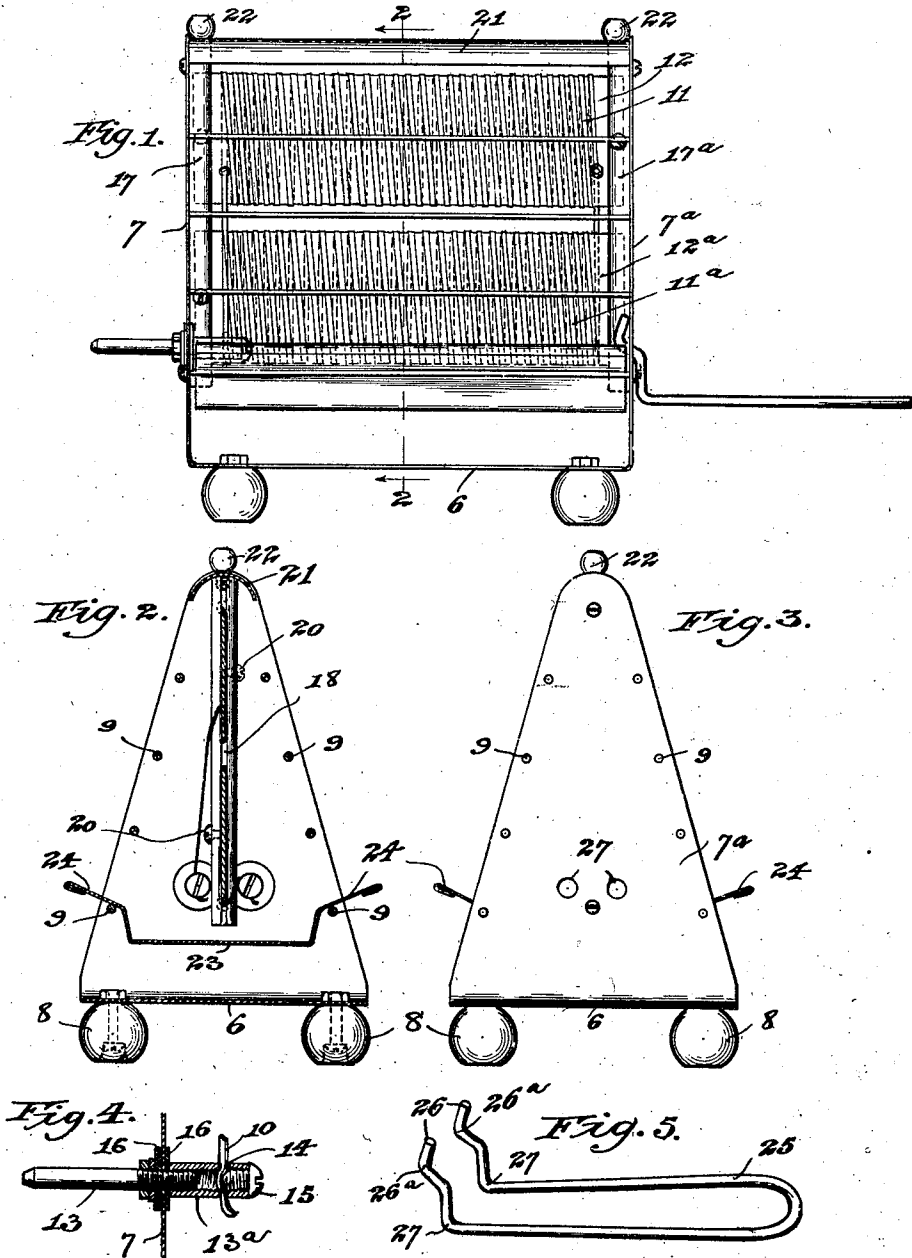


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ELECTRIC HEATER.
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Patented July 30, 1912.



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UNITED STATES PATENT OFFICE.

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ELECTRIC HEATER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROBERT M. MILLAR, a subject of the King of Great Britain, now residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Electric Heaters, of which the following is a specification.

The invention relates in general to an electric heating device particularly adapted for making toast and has for its objects the provision of an improved utensil with high efficiency for performing the functions which it is intended to perform, and to provide a device which may be produced economically, and the parts of which are simple and easily cleaned or replaced.

More specifically, the device consists of a body portion, the bottom and sides of which are produced from a single piece of material and having a removable pan forming a support for the lower edges of the toast and performing the additional function of catching crumbs. In utensils of this general character there is a liability for the toast to become scorched at its center and insufficiently toasted at its side edges, but I have found that by so winding the resistance wire upon its support with the coils of the wire tapering from the center of the support from large to smaller coils, an even distribution of heat throughout the entire surface of the article to be toasted is hereby procured.

Other objects of the invention will appear more fully throughout the specification.

In the accompanying drawing, Figure 1 is a front elevation of an electric toaster embodying my invention. Fig. 2 is a section on the line 2—2 of Fig. 1. Fig. 3 is an end view of Fig. 1. Fig. 4 is a sectional view of one of the terminals. Fig. 5 is a perspective view of the handle.

Referring now more particularly to the drawings, the body 6 of the device consists of a single piece of metal bent to form the base and end walls 7 and 7^a which are tapered from one end and having the larger ends at the bottom. Secured to the base are four porcelain feet 8. A series of cross bars 9 are horizontally disposed on both sides of the device along the outer edges of the end walls 7 and 7^a to serve as a support for the article to be toasted and prevent it from coming in contact with the heating medium.

The heating medium preferably consists of a single piece of resistance wire 10 formed into two units or sections 11 and 11^a, each unit or section consisting of a series of coils turned about the insulating supports 12 and 12^a which are of some material such as mica, or the like. The coils composing the sections or units 11 and 11^a are gradually spaced from the center toward each end, the space between the coils being the greatest at the center and gradually diminishing from both sides of the center coil, thereby providing a uniform distribution of heat upon the surface to be heated. The two ends of the resistance wire 10 are connected to suitable terminal posts 13, each post consisting of two parts having screw threaded engagement; the part 13^a having a suitable slot 14 formed transversely through it near one end through which the resistance wire is adapted to pass and to be held therein by means of a screw 15 having a threaded engagement with the internally threaded section 13^a of the posts 13. Suitable mica washers 16 are interposed between the two parts of the terminal posts and the ends 7 and 7^a so as to insure the proper insulation between such parts. The insulating supports are held in their proper position by means of two binding posts 17 and 17^a, each having a longitudinal slot 18 in which the insulating supports are slidably mounted and which are normally held in position by means of screws 20. A deflector plate 21 rests on top of the binding posts and is secured thereto by means of suitable screws 22. The deflector plate is curved so as to conform to the contour of the narrow tapered ends of the end walls 7 and 7^a.

To support the article to be toasted I provide a removable tray 23, so bent as to allow it to pass under the lower insulating support 12^a, and resting near its ends upon the two lower cross bars 9; the edges of the tray projecting beyond the side walls of the body portion forming supports 24 for the article to be toasted. The tray is adapted to catch all crumbs falling from the toasted article and as it is easily removable it can be readily cleaned.

It will also be noted that when two slices of bread are placed in the device, one upon either side thereof, with the lower edge of each slice resting upon the supports 24, the

body of the bread resting against the cross bars 9 and against the lower edge of the deflector plate 21, and with the side edges of the bread resting either against or near the edges of the end walls of the device, that a chamber is formed about the heating medium, whereby the heat is retained within the device and the article is toasted much quicker than when the heat is not so confined.

To move the device about I provide a handle 25, which is preferably formed of a single piece of wire having its ends bent forming fingers 26 adapted to enter the apertures 27. The handle is applied by bringing the body of the same into a vertical position and inserting the fingers 26 in the apertures 27 as far as the shoulders 26^a. The handle is then brought down into a horizontal position until the elbows 27 rest against the end of the device, whereupon the device can be lifted by means of the handle. The handle also serves the additional function in that when it is desired to remove the connecting plug (not shown) from the terminal posts 13, the device can be held by means of the handle and the plug readily slipped from the terminal posts.

Having now described the preferred embodiment of my invention, I claim:

1. An electric toaster comprising a base

and end walls formed from a single piece of material, a resistance wire, insulating supports therefor, and binding posts secured to the end walls, each post having a longitudinal slot in which said insulating supports are slidably mounted.

2. An electric toaster comprising a base and end walls formed from a single piece of material, a resistance wire, insulating supports therefor, binding posts carrying said insulating supports, cross bars horizontally disposed between the edges of said side walls and a removable tray adapted to lie under said resistance wire and having its outer edges resting on the lowest opposite cross bars.

3. An electric toaster comprising a base and end walls formed of flat sheet material, a resistance wire, insulating supports therefor, binding posts carrying said insulating supports, a removable tray disposed beneath said resistance wire and having its side edges projecting beyond the edges of the side walls for supporting the article to be toasted, and a curved plate between said side walls and above said resistance wire.

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