Dec. 21, 1948. M. A. FEINSTEIN 2,456,823

HEATING UNIT FASTENER

Filed Nov. 6, 1946

FIG. 1

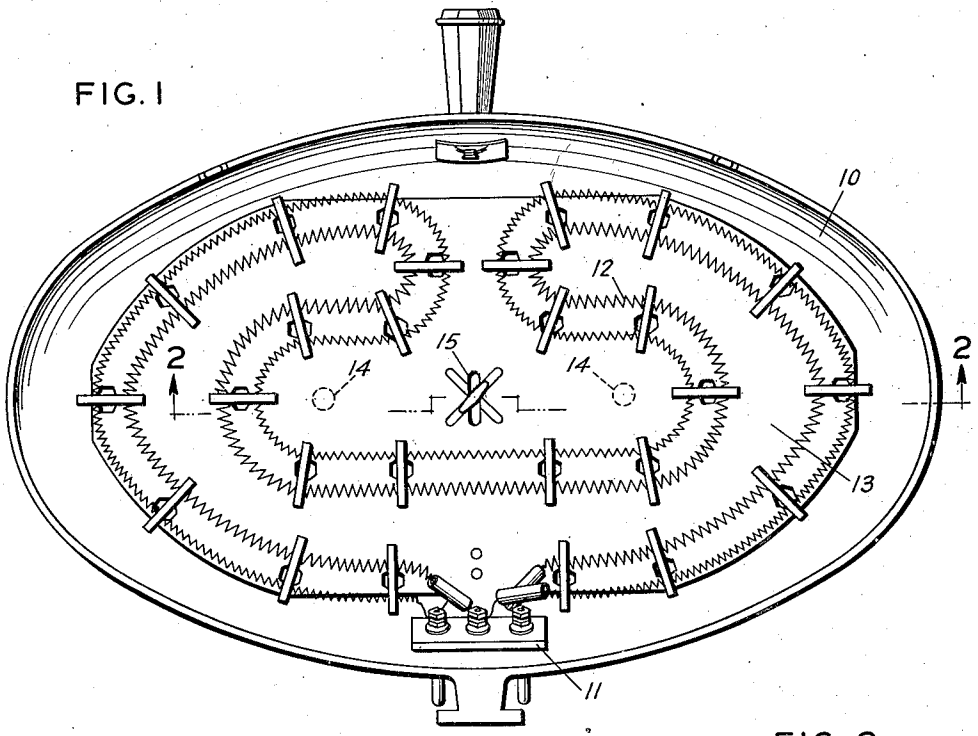


FIG. 3

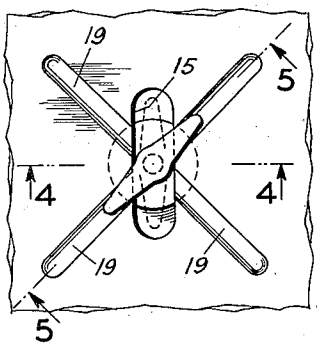
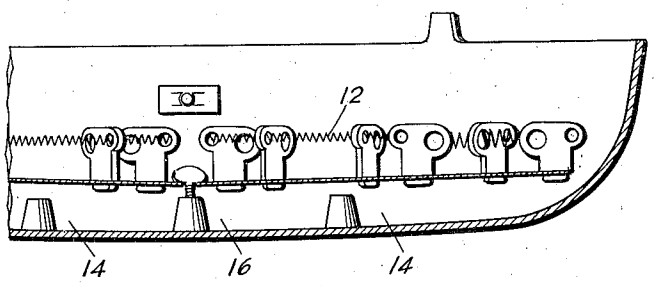


FIG. 2



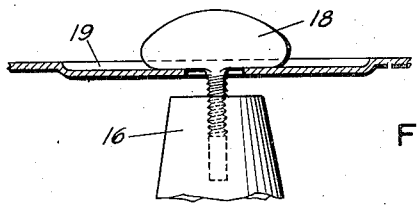


FIG. 5

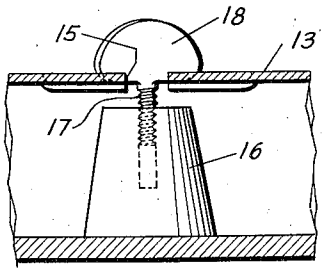


FIG. 4

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HEATING UNIT FASTENER

Morris A. Feinstein, Chicago, Ill.

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4 Claims. (Cl. 24—221)

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My invention relates to electric broilers, and more particularly to the heating units in the top thereof, and one object is to provide a unit of the above character which contains means for quickly and securely fastening it to the broiler top.

Another object is to provide an installation wherein the heating unit is removably attachable, whereby to save time in installing or removing the same.

A still further object is to provide a handy control in the center of the broiler for securing the said unit in place.

An important object is to design the invention along lines of economy and simplicity.

With the above objects in view, and any others which may suggest themselves from the description to follow, a better understanding of the invention may be had by reference to the accompanying drawing, in which:

Fig. 1 is an inverted view of the broiler top, showing the installation of the improved heating unit;

Fig. 2 is a section on the line 2—2 of Fig. 1;

Fig. 3 is an enlargement of the central portion of Fig. 1; and

Figs. 4 and 5 are, respectively, sections on the lines 4—4 and 5—5 of Fig. 3.

In accordance with the foregoing, specific reference to the drawing indicates the typical domed top of the broiler at 10, and the terminal plate for the electric current connections thereto at 11. The array of heat elements 12 for the top 10 is carried by a base plate 13 which is disposed inside the top 10. The latter is of cast metal and is formed with a set of posts 14 on the inside constituting extreme limits for the insertion of the plate 13.

While the terminal plate 11 suffices to anchor the plate 13 to the top 10 at one side, an additional support must be provided for the latter plate. Thus, the same is formed with an elongated slot 15 at the center, which allows access to a central post 16. The latter is tapped for the insertion of the threaded shank 17 of a thumbscrew 18 directed from the outside of the plate 13.

Ordinarily, the thumbscrew forms a stop against the falling of the plate 13 away from the top 10 when the head 18 of the thumbscrew is turned away from the course of the slot 15, as shown in Figs. 3 and 4. However, I have found that the sheet metal material of the plate 13 yields to the pressure of the thumbscrew head after some time, so that the plate becomes loose

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in relation to the thumbscrew and the top 10. I have therefore devised a means to correct this situation.

It is noted in Figs. 3 to 5 that the plate 13 is formed with a cluster of radial indentations 19 in the region of the slot 15. These are designed to form pockets for the head 18 of the thumbscrew, pairs of the indentations being aligned for this purpose. Thus, after the indentations at any point have begun to yield to the pressure of the thumbscrew head after some time, it is an easy matter to give the thumbscrew a partial turn in a clockwise or advancing direction, as seen in Fig. 3, until the said head seats in the next pair of indentations. The threaded relation procures the advance of the head 18 in respect to the plate 13 with a progressive grip on the same. It may be mentioned here that the plate 13 ordinarily seats in the curving sides of the top 10 with all or parts of its edge, but in the event that the top is only a partial support for the plate, the latter eventually meets some or all of the posts 14 and 16 to secure a firm support in several places.

It will be evident that the plate 13 disposed in the manner described above may be quickly set into the broiler top 10 by merely turning the thumbscrew head 18 to the transverse position indicated by finely-dotted lines in Fig. 3. Thus, when the plate has been set in place, a partial turn of the thumbscrew to the position shown by full lines firmly secures the plate in position. Conversely, a backturn of the thumbscrew to the original position enables the plate 13 to swing clear of the top 10 or to be removed from the same by the disconnection of the terminal plate 11. An installation is thus had which not only facilitates the faster production of the broiler, but enables repairs to the same to be made quickly because of the easily removable feature of the heating unit. Finally, it is apparent that the improvement does not complicate the broiler to any extent but is of a simple construction and neat form.

I claim:

1. A structure for securing a plate in the hollow of a vessel comprising a support directed from the bottom of the vessel toward the plate, the latter having an elongated slot opposite the support, and means for retaining the plate to the support comprising a thumbscrew directed through the slot to thread into said support, the head of the thumbscrew engaging the plate from the outer side when turned away from the slot, and means to lock said head from rotation.

2. A structure for securing a plate in the hollow of a vessel comprising a support directed from the bottom of the vessel toward the plate, the latter having an elongated slot opposite the support, and means for retaining the plate to the support comprising a thumbscrew directed through the slot to thread into said support, the head of the thumbscrew engaging the plate from the outer side when turned away from the slot, and means to lock said head at intervals in its rotation.

3. A structure for securing a plate in the hollow of a vessel comprising a support directed from the bottom of the vessel toward the plate, the latter having an elongated slot opposite the support, and means for retaining the plate to the support comprising a thumbscrew directed through the slot to thread into said support, the head of the thumbscrew engaging the plate from the outer side when turned away from the slot, and formations in the plate to lock said head from rotation, said formations being a series of indentations in the plate radially directed around said screw to frictionally seat said head.

4. A structure for securing a plate in the hollow

of a vessel comprising a support directed from the bottom of the vessel toward the plate, the latter having an elongated slot opposite the support, and means for retaining the plate to the support comprising a thumbscrew directed through the slot to thread into said support, the head of the thumbscrew engaging the plate from the outer side when turned away from the slot, and formations in the plate to lock said head from rotation, said formations being a series of indentations in the plate radially directed in diametrically-alined pairs around said screw to frictionally seat said head.

MORRIS A. FEINSTEIN.

REFERENCES CITED

The following references are of record in the file of this patent:

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