

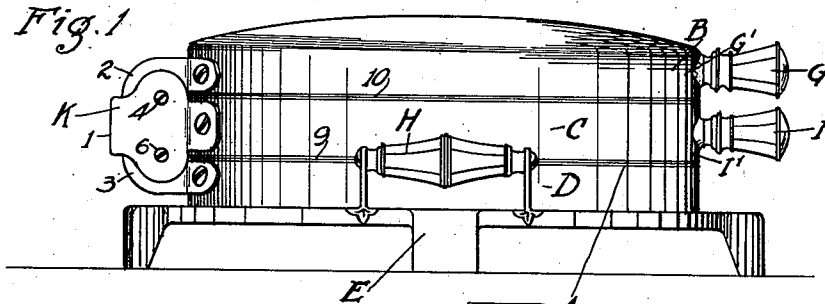
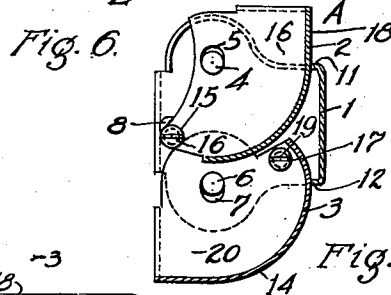
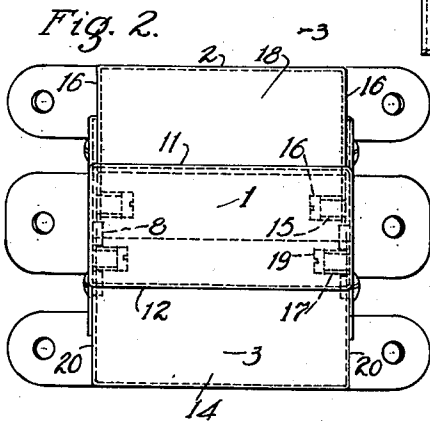
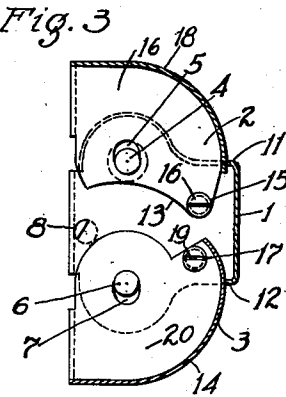
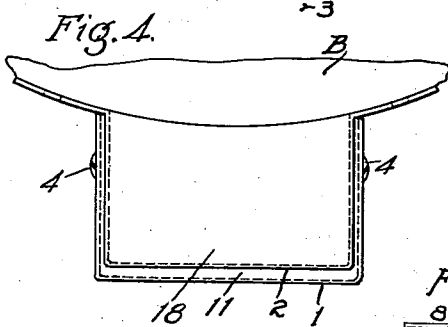
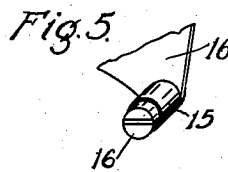
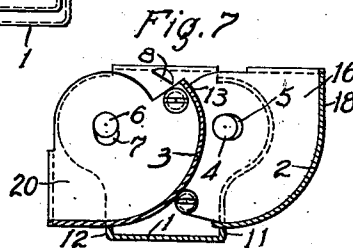
Nov. 3, 1942.

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2,300,644

ELECTRIC WAFFLE IRON

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ELECTRIC WAFFLE IRON

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5 Claims. (Cl. 53—10)

My invention relates to electric waffle irons and the object is to provide a simple inexpensive and highly efficient device of this kind which enables an operator to bake superposed articles of food.

While my invention relates to waffle irons it relates more particularly to a hinge of a class applicable to triple connections such as is employed in baking double stacked articles of food wherein the heated units simultaneously bake two superposed batches of batter from below and above.

In some of its general objects my invention aims to provide a triple action hinge for a duplex baking appliance presenting the following advantageous features applicable to hinges and appliances comprising three superposed and relatively movable sections.

Firstly, a three action hinge wherein the top section may be separately erected for the removal of the bake or the placement of the batter within the upper baking unit.

Secondly, a three action hinge wherein the top section may be separately erected while the locking element within the hinge permanently secures the two lower sections in locked position.

Thirdly, a three action hinge wherein the top two sections may be unitedly erected and permanently locked so that these erected sections can open while in a perpendicular position.

Fourthly, a three action hinge wherein the several sections are permitted to travel away from each other while in the superposed state of baking allowing for the expansion of the bake to raise section by section in their stacked position.

In referring to the drawing:

Figure 1 represents a side elevation of an electric waffle iron equipped with this new hinge arrangement.

Figure 2 is an end elevation of the hinge removed from the waffle iron.

Figure 3 is a cross section of the hinge taken on the line 3—3 of Figure 2.

Figure 4 is a top view of the hinge.

Figure 5 is a perspective view of the locking rollers attached to both the upper and lower members of the triple action hinge, illustrating the top locking rollers X.

Figure 6 is a sectional view similar to Figure 3 in which the upper hinge portion is swung into a vertical position locking the lower two sections into an unopenable state.

Figure 7 is a sectional view similar to Figure 3 in which the upper and central hinge portions are swung into a vertical position locking the

lower section and at the same time locking the upper to the central hinge section into an unopenable state.

In referring to the drawing A represents a waffle iron which is provided with three sections B, C, and D, the D section being provided with a base E which is further provided with side carrying handles H. To one side of the section B there is provided a section lifting handle G while the center unit C is provided with its handle I. To the opposite side of the section lifting handles G and I there is provided the hinge K.

The hinge K is provided with a central member 1, a top hinge member 2 and a base hinge member 3. The central hinge member 1 is provided with top member locking pin 4 permitting the member 2 to travel upwards guided by an elongated slot 5 while the bottom hinge member 3 is rockingly secured to the hinge member 1 through the rocking pin 6 permitting the member 1 to travel upwards guided by the elongated slot 7. The central hinge member 1 is further provided to its sides with a pair of lock pins 8 whose functions will be more fully described later.

The waffle iron is of the usual superposed type. Each section has a heating element for the baking of the batter. The expansion of the batter during the baking process will cause the section C to move away from the section D breaking along the line 9; while the section D will move away from the section C along the line 10. The expansion due to the baking of the batter in the lower oven will raise the section C and its hinge section 1 and likewise raise the section of the iron B and its hinge section 2 to the position illustrated in Figure 3.

The central hinge member 1 is further provided with a series of outside top closure lip 11 and bottom closure lip 12 contacting the arched surfaces of the hinge members 2 and 3 respectively and thereby closing the assembly as a sealed hinge.

Should it be desired to place a batch of batter in the baking section above C and below the top section B in the oven along the line 10, and assuming that the waffle iron was in closed position as shown in Figure 1, the lifting of the iron section B will actuate its joined hinged section 2 and rotate the same upon the pin 4 so that the lip 13 of the sides 16 of the hinge member 2 would contact the periphery of the position locking pin 8 and thereby hold the iron section B in an opened position. The hinge section 2 swinging about its rocking pin 4 will cause the

outer surface 18 of the arched wall of the upper hinge section to contact the roller 17. The roller 17 is secured through roller pins 19 to the side walls 20 of the hinge section 3. Upon closing the waffle iron section B upon the waffle iron section C and the baking proceeding, the hinge part 2 would slowly rise with the iron section B and because of the expansion of the baking of the batter would move the units into a position as illustrated in Figure 3.

Now, should it be desired, that during the baking of the waffle in the upper compartment, to bake a waffle in the lower compartment; the central iron section C would be lifted by the handle I which of necessity would rotate the joined hinge section 1 about the pin 6. This would lock the hinge section 2 and the hinge unit 1 into a rigid locked position. The locking being accomplished by the peripheral edge 13 traveling along the outer edge 14 of member 3 and permitting the roller 15 secured by the locking member 16 to form a rolling contact upon the outer face 14. As will be noted, the surface of the outer face 14 of the hinge section 3 is formed in a cycloidal curve to such a degree that as the roller 16 travels along the surface 14, the members B and C become more closely locked or squeezed at their handle G and I ends.

Upon the closure of the several waffle iron sections, and having batter placed atop the section D; and as the baking proceeds; and as the bake expands; it tends to raise the sections B and its superposed section C away from the sections D as best illustrated in the hinge section shown in Figure 3. As will be noted in the drawing, the roller 15 is of a trifle greater diameter than the roller locking means 16.

I claim:

1. A waffle iron comprising three superposed mold sections, the intermediate section having upper and lower mold surfaces, hinge means con-

necting the top and middle section and connecting the middle and lower sections arranged to limit upward swinging movement of the upper section to an angle of about 90 degrees with respect to the lower and middle sections and hinge contained locking means to hold the top and middle sections together when both top and middle sections are swung upward away from the bottom section.

2. A waffle iron comprising three superposed mold sections, hinge means connecting said sections, lock means actuated through the swinging of the upper section to hold the middle section locked to the lower section during the time the upper section is held swung away from the middle section.

3. A waffle iron comprising a plurality of hingedly connected superposed mold sections, locking means actuated through the swinging of the upper to hold the next two lower sections locked together and locking means actuated through a joint swinging of the upper two sections to hold said sections locked together.

4. A baking appliance of the class described comprising three superposed baking sections, hinge means connecting the different sections and interconnecting lock means operative through swinging movement of the upper section to hold the center section locked to the bottom section when the upper section is swung upwardly from the center section.

5. A waffle iron as described comprising three superposed hingedly connected sections, hinge associated means limiting swinging movement of the upper section to a predetermined angle with reference to the base section, hinge associated means operative to hold the two top sections locked together when swung to the predetermined angle with reference to the base section.

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