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(54) SANDWICH TOASTING APPARATUS

(71) We, HEAPCO LTD., a company incorporated under the laws of Hong Kong, of 396 Kwun Tong Road, Kowloon, Hong Kong, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention relates to improvements in sandwich toasting apparatus, the invention being capable of providing sandwich toasting apparatus of increased effectiveness in that it produces a product that is more convenient to handle and eat.

It is known to toast the sandwiches by means of a mould usually of aluminium made in two halves that are hingedly connected at one side and that between them define a cavity adapted to receive two pieces of bread one on top of the other with a filling of meat or other foodstuffs between the slices of bread. The edges of the moulds are constructed to come together closely when the halves of the mould are closed so that the edges of the two pieces of bread are pressed tightly together. The mould halves are held together and then heated either electrically or by means to toast the pieces of bread and heat the filling. The removal of the pieces of bread is usually facilitated by buttering the outer surfaces so that the exterior of the sandwich is to some extent fried as well as toasted.

Such known devices have generally speaking been constructed to have a cavity of such a size as to receive one standard sized rectangular piece of bread. In some cases the mould is made slightly smaller than the bread so that the crusts of the bread protrude beyond the edges of the mould halves and are severed or partially severed during the toasting operation.

According to the present invention there is provided sandwich toasting apparatus consisting of two mould halves constructed and arranged to be brought together into a closed position to form between them at least one cavity shaped to receive and compress the peripheral edges of a sandwich

consisting of two slices of bread having a filling between them placed in one of said mould halves; heating means associated with said mould halves to heat said sandwich and toast the exterior thereof and means to retain said mould halves in the closed position; characterised in that each mould half is provided with at least one rib extending across and into the mould cavity, the ribs being constructed and arranged so that as the mould halves are brought together, the ribs of said two halves co-operate in the manner of the blades of a pair of scissors to sever progressively a sandwich in said toasting apparatus and to seal the severed edges.

In order that the nature of the invention may be better understood a preferred form of the invention is hereinafter described by way of example with reference to the accompanying drawings of which:—

Figure 1 is a perspective view of a sandwich toaster according to the invention, in a closed position,

Figure 2 is a view of the toaster of Figure 1 in a fully open position, portions of the handles being omitted and

Figure 3 is a section of the toaster on the line 3—3 of Figure 1.

In the preferred form of the invention shown in the accompanying drawing two mould halves 10 and 11 are joined by hinges indicated at 12 and 13. This form of the invention is intended for toasting simultaneously two sandwiches each consisting of two standard square slices of bread. Each mould half defines, in respect of each sandwich to be toasted, what are in effect two separate mould half cavities indicated as 14 and 15 and 14a and 15a. Each half cavity has a scalloped shape the purpose of which is to provide a finished article having an attractive appearance. The two half cavities 14 and 15 in mould half 11 are divided by a rib 16 which is such that when the mould halves 10 and 11 are closed it will be brought progressively alongside the corresponding rib 17 in mould half 10 and between them they will act to sever the sand-

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with in the maner of the blades of a pair of scissors and seal the severed adges. The ribs 16a and 17a of the half cavities 14a and 15a act in a similar manner.

5 The relationship between the ribs 16 and 17 and 16a and 17a is best seen in Figure 3. From this it can be seen that the ribs are of narrow section and of a depth such, that
10 their free edges come very close to a flat face such as 18 in mould half cavity 15 of mould half 10 when the toaster is closed. While it is desirable that the free edge of each rib 16, 16a, 17 and 17a shall come as
15 close as possible to the other mould half when the toaster is closed some tolerance has to be allowed to take account of inevitable inaccuracies in production.

The ribs 16 and 17 and 16a and 17a are arranged so that their adjacent faces are
20 substantially flat and come together with a 'scissors' action as the mould halves are closed and it is found that this provides a superior severing action to divide the toasted sandwich into two substantially
25 equal parts even when the sandwich filling consists of a slice or slices of meat. The fact that the ribs have some lateral thickness and meet a flat face of the other mould half assists in sealing the cut edges of the sandwich halves—more particularly, the cut edge
30 of the sandwich is pressed down by the edge face of the rib onto the flat face of the mould half, the combination of heat and pressure assisting in sealing the edges of the sandwich together.
35

The remaining structure of the toaster is shown clearly in the drawings and as it is largely of a conventional nature will not be specifically described. It is to be noted that
40 in the particular form of the invention shown in the drawings the ribs 16 and 16a are arranged on the outer sides of the ribs 17 and 17a, the purpose of this being to balance any lateral forces produced during the closing
45 of the mould. It has been found that if this is not done there is a slight tendency for one mould half to be displaced laterally in relation to the other.

In use a sandwich (not shown) consisting
50 of two standard sized square pieces of bread with a filling between them, the outer surfaces of the bread being buttered, are placed into each part of the mould half 11. The mould half 10 is then folded over on
55 top of the mould half 11 and the two clamped together by means of the handles 19 and 20 and clip 21. Toasting is then effected by means of a thermostatically controlled electric heater 22 and 22a which has
60 preferably been switched on for some time before the sandwich is placed in the toaster to allow the mould halves to reach working temperature. The mould halves are held together for a predetermined time that is
65 readily found by experience and on releas-

ing the pressure and opening the mould halves it is found that what are, in effect, four toasted sandwiches, are left in the
70 mould half 11, the two halves of each sandwich being either completely separated or readily separable. Each triangular half sandwich is sealed around its edges thus completely enclosing the filling. It has been
75 found that the half sandwiches produced are much more convenient to eat than a whole sandwich and have a more attractive appearance.

While in the embodiment illustrated the ribs 16 and 17 extend diagonally they may
80 extend transversely and if so desired they may be curved in shape.

The embodiment of the invention described above is given by way of example
85 only. Toasters may, for example, be constructed with a substantial number of double cavities for use in commercial establishments.

WHAT WE CLAIM IS:—

1. Sandwich toasting apparatus consisting
90 of two mould halves constructed and arranged to be brought together into a closed position to form between them at least one cavity shaped to receive and compress the peripheral edges of a sandwich
95 consisting of two slices of bread having a filling between them placed in one of said mould halves; heating means associated with said mould halves to heat said sandwich and
100 toast the exterior thereof and means to retain said mould halves in the closed position; characterised in that each mould half is provided with at least one rib extending
105 across and into the mould cavity, the ribs being constructed and arranged so that as the mould halves are brought together, the ribs of said two halves co-operate in the
manner of the blades of a pair of scissors to sever progressively a sandwich in said
110 toasting apparatus and to seal the severed edges.

2. Sandwich toasting apparatus as claimed
115 in claim 1 wherein each said rib is of narrow section and of such a depth as to approach closely to a face of the other mould half when the mould halves are in a closed position.

3. Sandwich toasting apparatus as claimed
120 in either of the preceding claims wherein the or each cavity is rectangular in form to accommodate a standard rectangular slice of bread and each rib is arranged to extend diagonally across the cavity whereby the or each sandwich is bisected into two
125 triangular portions.

4. Sandwich toasting apparatus as claimed
130 in any one of the preceding claims wherein there are a plurality of mould cavities and the said ribs are arranged in relation to each other in such a manner that any forces

wich in the maner of the blades of a pair of scissors and seal the severed adges. The ribs 16a and 17a of the half cavities 14a and 15a act in a similar manner.

5 The relationship between the ribs 16 and 17 and 16a and 17a is best seen in Figure 3. From this it can be seen that the ribs are of narrow section and of a depth such that their free edges come very close to a flat
10 face such as 18 in mould half cavity 15 of mould half 10 when the toaster is closed. While it is desirable that the free edge of each rib 16, 16a, 17 and 17a shall come as close as possible to the other mould half
15 when the toaster is closed some tolerance has to be allowed to take account of inevitable inaccuracies in production.

The ribs 16 and 17 and 16a and 17a are arranged so that their adjacent faces are substantially flat and come together with a 'scissors' action as the mould halves are closed and it is found that this provides a superior severing action to divide the
20 toasted sandwich into two substantially equal parts even when the sandwich filling consists of a slice or slices of meat. The fact that the ribs have some lateral thickness and meet a flat face of the other mould half assists in sealing the cut edges of the sandwich halves—more particularly, the cut edge
30 of the sandwich is pressed down by the edge face of the rib onto the flat face of the mould half, the combination of heat and pressure assisting in sealing the edges of the sandwich together.

35 The remaining structure of the toaster is shown clearly in the drawings and as it is largely of a conventional nature will not be specifically described. It is to be noted that in the particular form of the invention shown in the drawings the ribs 16 and 16a are
40 arranged on the outer sides of the ribs 17 and 17a, the purpose of this being to balance any lateral forces produced during the closing of the mould. It has been found that if this is not done there is a slight tendency for one mould half to be displaced laterally in relation to the other.

50 In use a sandwich (not shown) consisting of two standard sized square pieces of bread with a filling between them, the outer surfaces of the bread being buttered, are placed into each part of the mould half 11. The mould half 10 is then folded over on
55 top of the mould half 11 and the two clamped together by means of the handles 19 and 20 and clip 21. Toasting is then effected by means of a thermostatically controlled electric heater 22 and 22a which has preferably been switched on for some time
60 before the sandwich is placed in the toaster to allow the mould halves to reach working temperature. The mould halves are held together for a predetermined time that is
65 readily found by experience and on releas-

ing the pressure and opening the mould halves it is found that what are, in effect, four toasted sandwiches, are left in the
70 mould half 11, the two halves of each sandwich being either completely separated or readily separable. Each triangular half sandwich is sealed around its edges thus completely enclosing the filling. It has been
75 found that the half sandwiches produced are much more convenient to eat than a whole sandwich and have a more attractive appearance.

While in the embodiment illustrated the ribs 16 and 17 extend diagonally they may extend transversely and if so desired they
80 may be curved in shape.

The embodiment of the invention described above is given by way of example only. Toasters may, for example, be constructed with a substantial number of double
85 cavities for use in commercial establishments.

WHAT WE CLAIM IS:—

1. Sandwich toasting apparatus consisting of two mould halves constructed and arranged to be brought together into a closed position to form between them at least one cavity shaped to receive and compress the peripheral edges of a sandwich consisting of two slices of bread having a filling between them placed in one of said mould halves; heating means associated with said mould halves to heat said sandwich and toast the exterior thereof and means to retain said mould halves in the closed position; characterised in that each mould half is provided with at least one rib extending across and into the mould cavity, the ribs being constructed and arranged so that as the mould halves are brought together, the ribs of said two halves co-operate in the manner of the blades of a pair of scissors to sever progressively a sandwich in said toasting apparatus and to seal the severed edges.

2. Sandwich toasting apparatus as claimed in claim 1 wherein each said rib is of narrow section and of such a depth as to approach closely to a face of the other mould half when the mould halves are in a closed position.

3. Sandwich toasting apparatus as claimed in either of the preceding claims wherein the or each cavity is rectangular in form to accommodate a standard rectangular slice of bread and each rib is arranged to extend diagonally across the cavity whereby the or each sandwich is bisected into two triangular portions.

4. Sandwich toasting apparatus as claimed in any one of the preceding claims wherein there are a plurality of mould cavities and the said ribs are arranged in relation to each other in such a manner that any forces



tending to produce relative lateral movement of the mould halves during closing of the apparatus are balanced out.

5. Sandwich toasting apparatus substantially as described with reference to and as shown in the accompanying drawings.

MEWBURN ELLIS & CO.,
Chartered Patent Agents,
70 & 72, Chancery Lane,
London, WC2A 1AD.
Agents for the Applicants.

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