
Candidate's Answer

CLAIMS

- 1) Device for opening an egg, comprising:
 - a cutting edge (51) extending around an axis to define an opening capable of receiving an end portion of the egg to be opened;
 - impulse imparting means (40; 57; 67) for imparting an impulse to the egg via the cutting edge (51) in order to break the edge shell along a cut line; characterised in that the impulse imparting means (40; 57; 67) are movable towards the egg along guide means (43; 53; 63) in an impact direction substantially parallel to said axis to impact the impulse to the egg along the impact direction.
- 2) Device according to claim 1, wherein the cutting edge (51) has a substantially circular shape.
- 3) Device according to claim 1 or 2, wherein the cutting edge (51) lies on a plane substantially perpendicular to said axis.
- 4) Device according to any one of the preceding claims, wherein the cutting edge (51) is substantially continuous.
- 5) Device according to any one of the preceding claims, wherein the cutting edge (51) is integrally formed on the impulse imparting means (40; 57; 67).
- 6) Device according to any one of claims 1 to 4, wherein the cutting edge (51) is provided on a cutting member (50; 60) distinct from the impulse imparting means (40; 57; 67), the impulse imparting means (40; 57; 67) acting on the cutting member (50; 60).
- 7) Device according to claim 6, wherein the impulse imparting means (40; 57; 67) comprise a ball (57) movable along the guide means (43; 53; 63) to hit the cutting member (50; 60).
- 8) Device according to claim 6, wherein the impulse imparting means (40; 57; 67) comprise an elongated element (66) having a free end (67) so configured as to hit on impact surface (62) of the cutting member (50; 60).

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- 9) Device according to claim 9, wherein the elongated element (66) is fixed to a sliding member (64) movable along the guide means (43; 53; 63).
 - 10) Device according to any one of the preceding claims, and further comprising stop means (45; 55; 65) arranged to stop the movement of the impulse imparting means (40; 57; 67) in a position remote from the egg to ensure that a minimum impulse is applied to the egg.
 - 11) Device according to claim 10, and further comprising resilient means (69) interposed between the stop means (45; 55; 65) and the impulse imparting means (40; 57; 67) to push the impulse imparting means (40; 57; 67) towards the egg.
 - 12) Device according to claim 11, wherein the resilient means comprise a helical spring.
 - 13) Device according to any one of the preceding claims, wherein the guide means (43; 53; 63) comprise a shaft (43; 53) and the impulse imparting means (40; 57; 67) have a hole in which the shaft (43; 53) is inserted.
 - 14) Device according to claim 9, wherein the guide means (43; 53; 63) comprise a pair of rails (63) along which the sliding member (64) is movable.
 - 15) Device according to any one of the preceding claims, wherein the guide means (43; 53; 63) are provided with a tipped end to be poked into the egg.
 - 16) Device according to any one of the preceding claims, and further comprising grip means (68) associated to the impulse imparting means (40; 57; 67) for gripping them by hand and moving them away from the egg along the guide means (43; 53; 63).

DEVICE FOR OPENING AN EGG

The invention relates to a device for opening an egg, particularly a boiled egg, by cutting an end portion of the egg along a cut line. Mini-guillotines are known, which comprise a substantially rectangular frame defining an opening into which an end portion of the egg to be broken can be introduced. A cutting blade is provided, defining an upper edge of the opening. The cutting blade is movable along guide means provided on the rectangular frame. The guide means guide the blade along an impact direction which lies in the plane of the opening. In other words, the rectangular frame and the blade which defines the perimeter of the opening extends around an axis perpendicular to the impact direction. A disadvantage of this mini-guillotine is that when the blade impacts on the egg, it cuts the end portion away from the egg. In other words, the end portion is separated from the egg. Therefore, the end portion can fall on the floor and the yolk can run out. To overcome this disadvantage, a different solution has been proposed. According to this different solution, the egg is broken by means of a punch having a cutting circular edge extending around an axis to define an opening capable of receiving an end portion of the egg to be broken. The device further comprises an impulse imparting means in the form of a light hammer. The cutting edge may be either substantially continuous or separated.

To break an egg, the latter is placed in an egg holder and the punch is held on top of this egg with one hand. In the other hand, the user holds the light hammer. By hitting a flat upper surface of the punch in the right manner, the impulse applied by the hammer to the punch is transmitted to the egg, thus obtaining a really clean circular break of the egg along the contact line with the punch. Even if in this solution the end portion of the egg remains on the egg and does not roll away, it is difficult to apply a correct impulse to the hammer. Prolonged training is required to ensure that the egg is broken along a clean cut line. In fact, the choice of the right direction and of the right force is completely left to the user's ability.

An object of the invention is to provide a device for opening an egg which allows the egg to be opened along a clean cut line even by an unexperienced and clumsy user, without leaving end egg portions rolling on the floor. This object is achieved by a device for opening an egg according to claim 1.

Owing to the guide means guiding the impulse imparting means along the impact direction substantially parallel to the axis of the opening, the same impact direction can be consistently maintained. Furthermore, by proper selecting the length of the guide means, also the impulse applied to the egg can be consistently repeated. This allows a clean cut to be obtained even by an unexperienced user. Further advantageous features of the invention are disclosed in the dependent claims.

NOTES TO THE EXAMINER

- I don't think a circular cutting edge is an essential feature. I think other shapes are possible, e.g. a star shape.
- Maybe the invention could be used to break shells of other brittle objects different from egg. I have limited my claims to a device for breaking an egg as this seems the major interest of the client. However, I would discuss with him.