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54 Auto-cleaning device for slicing onions and the like vegetables.

57 The device comprises cooperating first and second levers (2,3), articulated to one another, and, on the first lever (2) and open seat (6), having a bottom substantially defined by knife members (7).

On the second lever (3) a punch (9) is provided at such a position that it may be inserted into the open seat (6), the punch having a substantially mating shape with respect to the shape of the open seat (6).

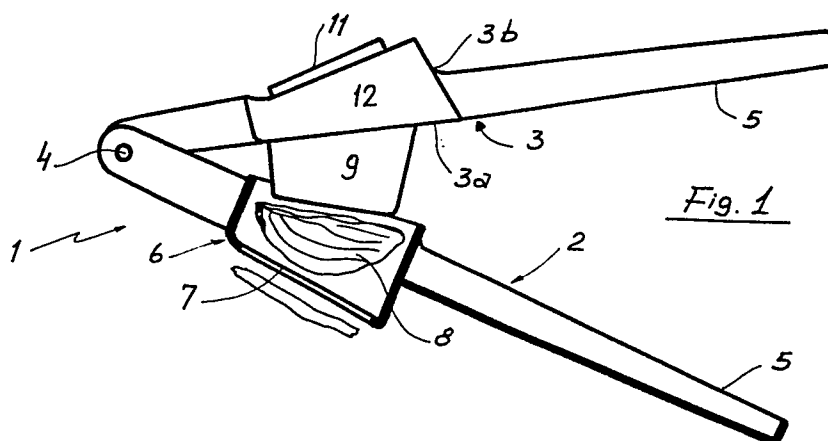


Fig. 1

The present invention relates to an auto-cleaning device, particularly designed for quickly slicing onions, while being effective to slice vegetables and food products in general.

As it is well-known, one of the operations to be carried out during the handling of food products, consists of the slicing of onions.

These vegetables are particularly important and, in some cases they are indispensable to give taste to salads and the like.

Due to that reasons, onions are broadly used in slice form.

In fact, it has been found that the maximum yield, from the taste standpoint, is obtained by reducing onions to small size, without squeezing them.

On the other hand, it is also known that the cutting into small pieces of vegetables in general and of onions in particular, is a rather cumbersome operation, as well as a slow one, since, due to the rather small size of said vegetables and because of the uneven shape thereof, the mentioned operation is to be carried out by means of ineffective means, such as a simple knife.

Moreover, the slicing is a rather uneven one, and the hygienic conditions associated to the onion slicing operation are not completely satisfactory.

In the specific case of cutting onions into small pieces, the latter give off an irritating exhalation, in particular for the operator eyes.

This situation is a particularly negative one in the case therein onions are handled on a reduced scale, for example in home kitchens.

In fact, under those conditions, it is impossible to use, from an economical standpoint, washing or slicing machines for vegetables, which, on the contrary, may be used in restaurants and the like.

Accordingly the technical problem is presently felt of overcoming the mentioned drawbacks in onion slicing operations, in particular in domestic kitchens and the like.

Accordingly, the task of the present invention is to provide an auto-cleaning device for quickly slicing onions and the like, which is effective to substantially obviate the thereinabove mentioned drawbacks.

Within that task, a main object of the present invention is to provide such a slicing device which is structurally very simple, of reduced size, of low cost and effective to operate in a reliable manner.

Yet another object of the invention is to provide such a slicing device effective to assure greatly hygienic conditions and effective to be used in a quick manner.

According to one aspect of the present invention, the thereinabove mentioned task and objects, as well as yet other objects which will become more apparent thereafter are achieved by a device for quickly slicing onions and the like, including a first and second lever, pivoted to one another and effective to mutually interact, characterized in that it comprises, on said first lever, an open seat, the bottom thereof is substantially defined by knife members, adjoining to one another with a given spacing thereamong and, on the second lever, a punch arranged on a first face of said second lever in such a position suitable for the insertion into said open seat, said punch being substantially shaped as to correspond to the shape of said open seat.

Further characteristics and advantages will become more apparent from the following detailed description of a preferred, though not exclusive, embodiment of the invention, being illustrated by way of an indicative example in the accompanying drawings, where:

Figure 1 illustrates, partially by a side view and partially by a cross-section view, the slicing device according to the invention, in the working condition thereof;

Figure 2 is a perspective view illustrating the device in that same position of figure 1;

Figure 3 is a side view of the slicing device according to the invention, similar to that of figure 1, but with the slicing device in a different working condition;

Figure 4 is a top view of a portion of the slicing device according to the invention; and

Figure 5 is a cross-section view of the slicing device as taken along the line V-V of figure 4.

With reference to the mentioned figures, the slicing device according to the invention is

overally indicated by the reference number 1.

It comprises, essentially, first and second levers, respectively indicated at 2 and 3, pivoted to one another at one end thereof, by means of a pivot pin 4.

The end portions of the levers, opposite to said pivot pin 4, substantially consist of handles 5.

Between said handles 5 and pivot pin 4 there are arranged the operative members of the device 1.

More specifically, said operative members comprise, on the first lever 2, an open seat 6, of substantially cup shape and provided with a bottom, opposite to the open side thereof which is defined by knife elements 7, adjoining one another and spaced from one another, as it is shown in a more detailed way in figures 4 and 5.

Said open seat 6 is of a comparatively large size, in such a way as to be able of containing at least a substantial portion of an onion 8.

On the other hand, on said second lever 3, there is provided, at the face 3a of said second lever facing the open side of said open seat 6, a punch member 9, so sized and located as to be effec-

tive to be inserted into said seat. The punch member 9 is substantially shaped in a mating manner with respect to the open seat 6 and is effective to be located, with its operative end portion, in an abutting relationship with respect to the knife members 7.

In the illustrated embodiment, the knife members 7 are provided with a substantially triangular cross-section and are located in an adjoining relation to one another in such a way as to define eyelet gaps 10 therebetween, as it is shown in a more detailed way in figure 4.

In order to clean the mentioned gaps or passages 10, the second lever 3 is provided, on the second face 3b thereof, opposite to the first one, with ribs 11 having complementary shapes with respect to the shapes of the gaps 10 and so arranged as to be effective to be inserted into said gaps, as the second lever 3 is completely upset with respect to the first lever, as it is shown in a more detailed way in figure 3.

Figures 1 and 2, in particular, show that the portion of said second lever 3 therefrom said ribs 11 extend is of substantially cap shape 12, facing the open seat 6 and oversized with re-

spect to the latter, in such a way as to substantially cover said seat.

The auto-cleaning slicing device according to the invention operates as follows.

The onion to be cut or sliced is inserted into the open seat 6, while the levers 2 and 3 are angularly spaced from one another.

Then, the second lever 3 is moved nearer to the first lever 1, in such a way as to cause the punch member 9 to be inserted into the open seat 6, as it is clearly shown in figure 1.

By applying a small manual force, the punch 9 may be fully inserted and, accordingly, the onion 8 or the like vegetable will be subjected to a slicing operation by the knife members 7.

More specifically, the onion 8, or the like vegetable, is compelled to pass through the gaps or passages 10, thereby more portion of said onion 8 is susceptible to project from the open side of the cup, also due to the provision of the cap 12 closing said cup, thereby preventing any exhalations from escaping therefrom.

The thus carried out slicing is particularly quick and precise; however it may occur that, at said gaps or passages 10, wastes of the sliced

vegetable are held.

In this case, the cleaning of the device 1 may be carried out, as it is shown in figure 3, by simply tilting the second lever 3, in such a way as to bring the ribs 11 at the gaps or passages 10, from the outside of the open seat or cup 6.

Thus the waste material is fully expelled.

From the above disclosure it should be noted that the invention fully achieves the intended task and objects.

In fact, the provided device affords the possibility of overcoming the thereinabove mentioned drawbacks, since it affords the possibility of slicing in a vary quick and reliable manner small sized vegetables. In particular, the mentioned vegetables may be of any types, provided that they are effective to be housed in the inside of the cup 6, which is a comparatively wide one.

If onions are handled, the device according to the invention, due to the provision of the cap 12, is also effective to protect against exhalations.

Moreover, the overall device is substantially made of two pieces, articulated to one ano-

other, and accordingly it is very advantageous with respect to the size, operation and cost thereof.

In practicing the invention, the used materials, as well as the shapes and size may be any according to requirements.

CLAIMS

1. An auto-cleaning device for quickly slicing onions and the like including a first and second lever, pivoted to one another and effective to mutually interact, characterized in that it comprises, on said first lever (2), an open seat (6) the bottom thereof is substantially defined by a knife members (7), adjoining to one another with a given spacing thereamong and, on the second lever (3) a punch (9) arranged on a first face (3a) of said second lever (3) in such a position suitable for the insertion into said open seat (6), said punch (9) being substantially shaped as to correspond to the shape of said open seat (6).

2. A device, according to Claim 1, characterized in that said levers (2, 3) are articulated to one another at one end thereof in such a way that they may be mutually rotated through substantially 360°.

3. A device, according to Claim 1, characterized in that said second lever (3) is provided, on its second face (3b), at the opposite side with respect to said punch (9), with a plurality of ribs (11), said ribs having substantially mating shapes with respect to the shapes of the gaps (10) as form-

ed between said knife members (7).

4. A device, according to Claim 1, characterized in that said punch (9) projects from a cap extension (12) of the second lever (3) and in that said cap (12) is so shaped as to substantially cover said open seat (6).

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