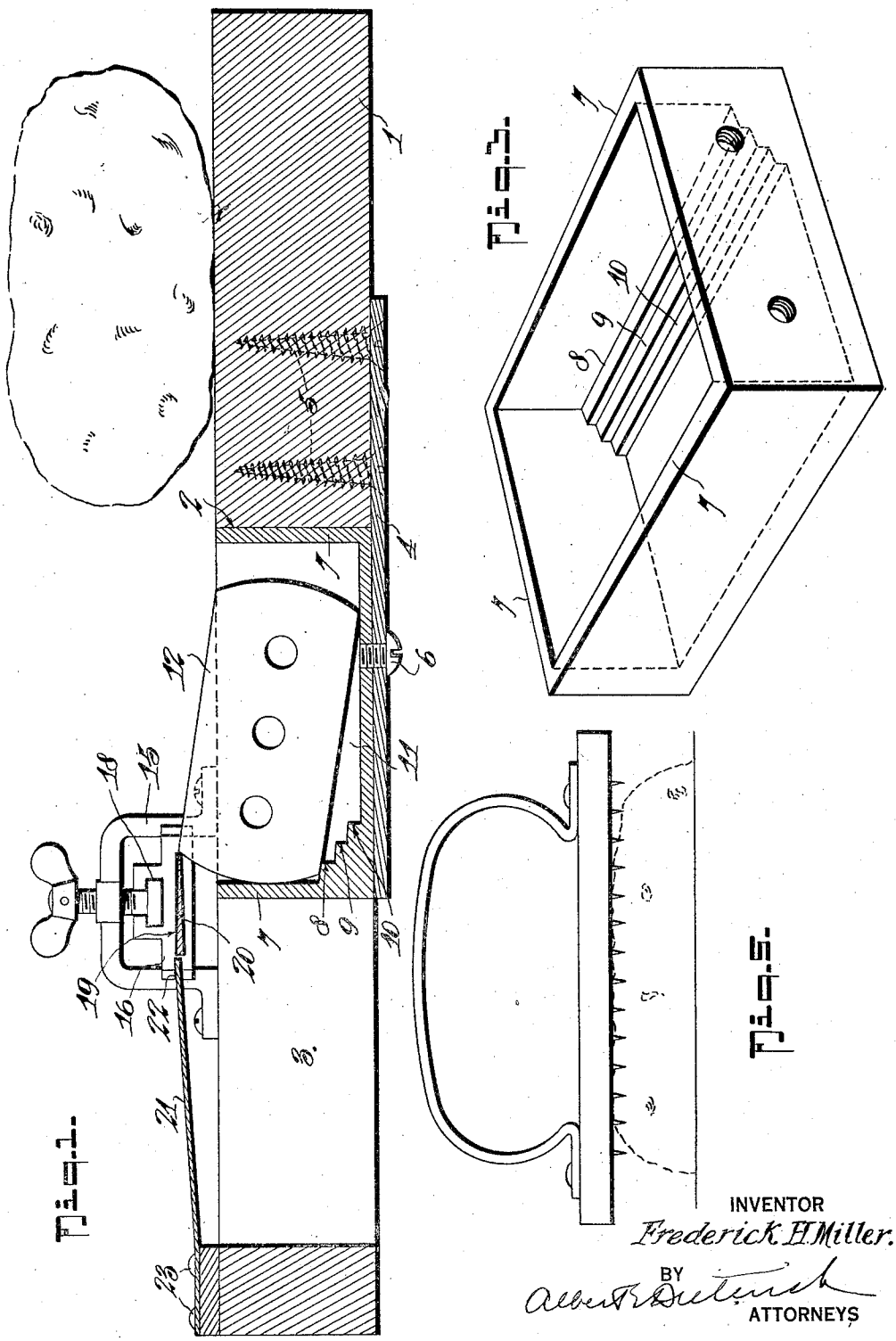
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POTATO SLICER

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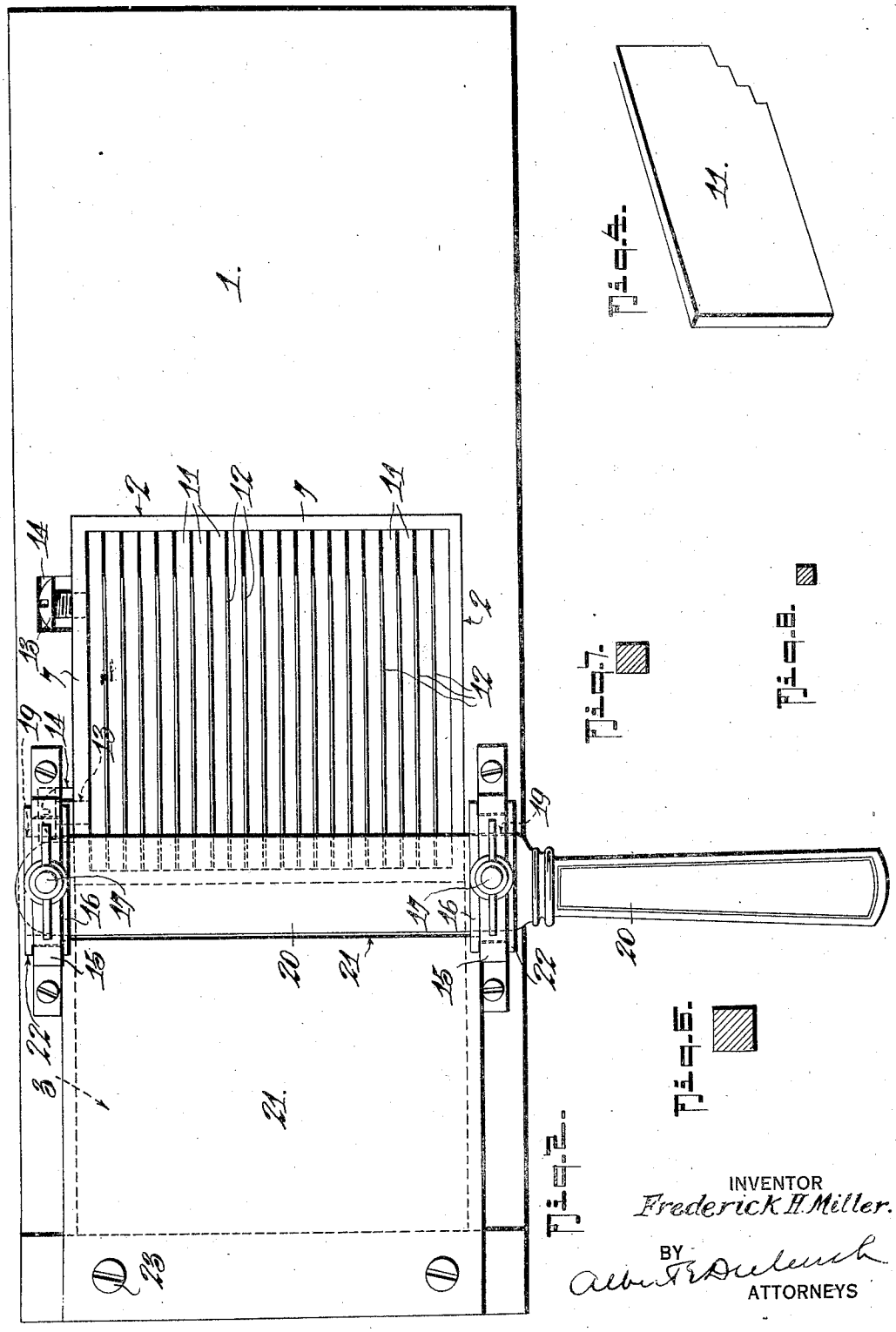


Fig. 4.

Fig. 7.

Fig. 8.

Fig. 6.

Fig. 2.

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UNITED STATES PATENT OFFICE.

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POTATO SLICER.

Application filed February 26, 1926. Serial No. 90,825.

This invention relates to potato slicers designed for quickly and efficiently slicing potatoes for use in the well-known French fried, julienne and shoe string styles and has particular reference to that type of such devices as comprise stationary vertical and horizontal cutters over which the potatoes are moved to be sliced as desired.

My invention primarily has for its object to provide a potato slicer of the type stated which is of a particularly simple and compact construction that may be economically manufactured and which in spite of its simplicity of construction is efficiently operable for the purpose for which it is designed.

With the above and other objects in view, the invention still further resides in the novel details of construction, combination and arrangement of parts, all of which will be first fully described and then be particularly pointed out in the appended claims, reference being had to the accompanying drawings, in which:

Figure 1 is a vertical longitudinal section illustrating the invention.

Figure 2 is a plan view of the parts illustrated in Figure 1.

Figure 3 is a detail perspective view of the vertical knives holder.

Figure 4 is a detail perspective view of one of the knife clamping and spacing plates.

Figure 5 is a somewhat diagrammatic side elevation illustrating a safety device for reciprocating the potatoes.

Figures 6, 7 and 8 are sectional views illustrating samples of potato slicings of the French fried, julienne and shoe string types, respectively.

In the drawings, in which like numerals of reference indicate like parts in all of the figures, 1 indicates the base board of my invention which is provided with a cut-out portion 2 to provide a socket for receiving the knife housing unit and also for providing the potato slice discharging throatway 3.

A plate 4 is secured to the bottom of the board 1, as at 5, so as to project over a part of the cut-out portion 2, the said extended part serving as a means for securing, as at 6, the knife carrying housing 7. The housing 7 is in the nature of an open rectangular metal box having a series of stepped shoulders 8, 9 and 10 in one end thereof, see Figures 1 and 3.

The housing 7 is adapted to carry a plurality of spacer plates 11 and a plurality of vertically positioned blades 12, one thereof being positioned and clamped between each pair of adjacent spacer plates, the clamping action being provided for by a pair of set screws 13 directed through tapped holes in one side wall of the said housing. These blades 12 are clamped in vertical position and are equi-distantly spaced by the spacer plates.

I find it very convenient and practical to use discarded safety razor blades because of the fineness of their cutting edge and durability. The steps or shoulders 8, 9, 10 provide for mounting the blades 12 on an incline with the advance ends thereof flush with the top of the housing 7 and board 1, but with the other end thereof elevated or projected above the said board and housing top surfaces so as to provide an inclined cutting surface, as shown in Figure 1 of the drawings. By providing the shoulders the high point of the cutting edge may be varied to three different heights, it being understood that when the blades are adjusted upon the shoulder 8 the device will be set for slicing potatoes for French fries; when at 9, for juliennes, and when at 10, for the shoe string variety.

It may be understood, of course, that the housing with the knife blades clamped in and carried thereby forms a vertical cutting unit readily removable and replaceable and which may be readily knocked down for the purpose of thorough cleansing.

When it is desired to prepare the varied sizes of potato slices mentioned, the blades of the housing may be individually adjusted but it will probably be more convenient to have three of the units assembled so that the desired unit may be readily fitted to position and secured by the screw 6. In other words, three separate units may be provided, one adjusted for cutting potatoes for French fries, one adjusted for juliennes and one for the shoe string variety. Obviously in either of the uses of the unit the provision of the three shoulders makes it possible to construct all housings uniformly regardless of use effecting great saving in manufacture.

The board 1 may be provided with suitable recesses 14 at one side of the cut out portion 2 to readily receive the set screws 13 when the housing 7 is inserted to position in the said cut out and upon the extended end of the plate 4.

In practice, the potato is to be moved forwardly over the vertical blades 12 for effecting the vertical equi-distantly spaced cuts therein and into engagement with a cross knife positioned at a suitable elevation for severing the vertically sliced portions so as to provide the long square cuts for either of the three varied sizes of potatoes mentioned. If the device is set for cutting potatoes for French fries the blades 12 will be adjusted upon the shoulder 8 and the spacer plates 11 will be of a thickness corresponding to the height of projection of the blades 12. This is true in each of the other cases. The width of the spacer plates is equal to the amount of projection of the blades above the top surfaces of the housing 7 and board 1.

Thus, for efficiently cooperating with the blades 12 projected at varied heights for the particular purpose the cross knife must be mounted in a manner whereby it may be adjusted to position upon a level corresponding to the size of slices to be made. In other words, the height of the cross knife above the board 1, the height to which the blades 12 are projected above the top surface of that board, and the width of the spacer plates between the blades, i. e. the space between the blades 12, are coincident.

To provide for this adjustable mounting of the cross knife I provide a pair of opposed guide standards 15 which form vertical slide guides for the guide blocks 16 and have suitable bearings for the adjuster screws 17, one of which is swivelly connected, as at 18, to each of the blocks 16. Each block 16 is provided with a cross slit 19 for receiving the cross knife 20 projected therethrough from side to side across the board 1, see Figures 1 and 2.

In order to suitably support the main body of the potato from which the slicings are cut as the said potato body is moved rearwardly over the cross knife 20, I provide a supporting plate 21 loosely connected to, to move with, the guide block 16, as at 22, and rigidly secured to the board 1, as at 23, at a point beyond the slicings discharge throatway 3. The loose connection at 22 may be provided for by notching the guide blocks 16 and loosely projecting the fore corners of the said plate into the said notches in the manner indicated in Figures 1 and 2 of the drawings.

As the potato is moved rearwardly over the vertically projected blades 12 equi-distantly spaced vertical kerfs will be cut in the under surface thereof and as the potato is forced rearwardly beyond the blades 12 it will come into contact with the forwardly projected cutting edge of the horizontal cross knife 20, and the vertically cut portions of the potato will be horizontally severed to provide long square slices suitable for use in the particular variety of fries for which the device has been set, either French, julienne or shoe string, the slices being forced downwardly beneath the knife 20 and through the throatway 3 into any suitable receiving receptacle and the body of the potato passing rearwardly over the knife to be temporarily supported by the plate 21 until by reciprocatory action the operation is repeated.

The structure I have disclosed is particularly simple and economical to manufacture and so very compact as to render the same readily portable and convenient to use.

As a potato, by reason of continued slicing, wears down to a dangerously thin condition, or before that time, any suitable hand-pusher, such as is indicated in Figure 5 of the drawings, may be used to protect the hand against possible injury in cutting. In the figure referred to, I have shown a pusher plate with suitable handle and small sharp brads projected from its lower surface to bite into and facilitate reciprocation of the potato over the board and cutting devices. It is also possible to use a short bristle wire brush for this purpose, if desired.

From the foregoing description, taken in connection with the accompanying drawings, it is thought the novel details of construction, the manner of operation and the advantages of my invention will be readily apparent to those skilled in the art to which it relates.

What I claim is:

1. A device of the class described comprising a base board having a recess therein, a slicer unit removably mounted in the recess and having vertical slicing blades projecting above the top surface of the board, and a cross knife mounted upon the board in cooperative relation with the projected blades for traversing the slices made thereby.

2. A device of the class described comprising a base board having a recess therein, a slicer unit removably mounted in the recess and having vertical slicing blades projecting above the top surface of the board, a cross knife, and means for mounting the cross knife upon the board in vertically adjustable cooperative relation with the projected blades for traversing the slices made thereby.

3. A device of the class described comprising a base board having a recess therein, a slicer unit removably mounted in the recess and having blades projecting above the top surface of the board, a cross knife mounted upon the board in cooperative relation with the projected blades, and a supporting plate extending rearwardly from and on substantially the same plane with the cross knife.

4. A device of the class described comprising a base board having a recess therein, a slicer unit removably mounted in the recess and having blades projecting above the top

surface of the board, a cross-knife, means for mounting the cross knife upon the board in vertically adjustable cooperative relation with the projected blades, and a supporting plate rigidly secured to the board at one end and connected at its other end to move with the vertically adjustable knife mounting means.

5. A device of the class described comprising a base board having a recess therein, a slicer unit removably mounted in the recess and having blades projecting above the top surface of the board, a cross knife, means for mounting the cross knife upon the board in vertically adjustable cooperative relation with the projected blades, said means comprising vertical guides mounted on the board, blocks vertically slidable on the guides and having slits to receive the knife, and adjusting screws carried by the guides and swivel-connected to the blocks substantially as and for the purpose described.

6. A device of the class described comprising a base board having a recess therein, a slicer unit removably mounted in the recess and having blades projecting above the top surface of the board, a cross knife, means for mounting the cross knife upon the board in vertically adjustable cooperative relation with the projected blades, said means comprising vertical guides mounted on the board, blocks vertically slidable on the guides and having slits to receive the knife, adjusting screws carried by the guides and swivel-connected to the blocks and a supporting plate rigidly secured to the board at one end, and said blocks having notches for loosely receiving the other end of the plate to cause the same to move vertically with the said blocks substantially as and for the purposes described.

7. A device of the class described comprising a base board having a recess therein, a slicer unit removably mounted in the recess, and a cross knife mounted upon the board in cooperative relation with the slicer unit, said slicer unit comprising a housing and a plurality of vertical blades equidistantly spaced therein and projecting thereabove in inclined relation to the board.

8. A device of the class described comprising a base board having a recess therein, a slicer unit removably mounted in the recess, a cross knife mounted upon the board in cooperative relation with the slicer unit, said slicer unit comprising a housing and a plurality of vertical blades equi-distantly spaced therein and projecting thereabove in inclined relation to the board, and a plurality of cross shoulders in one end of the housing upon selected ones of which one end of the blades may be rested to fix the degree of inclined projection thereof above the base board.

9. A device of the class described comprising a base board having a recess therein, a slicer unit removably mounted in the recess, a cross knife mounted upon the board in cooperative relation with the slicer unit, said slicer unit comprising a housing and a plurality of vertical blades equi-distantly spaced therein and projecting thereabove in inclined relation to the board, a plurality of cross shoulders in one end of the housing upon selected ones of which one end of the blades may be rested to fix the degree of inclined projection thereof above the base board, and means for mounting the cross knife upon the board in vertically adjustable cooperation with the projected blades.

10. A device of the class described comprising a base board having a recess therein, a slicer unit removably mounted in the recess, said recess being of a size to receive the unit in the fore end thereof and to provide a slicings discharge throatway beyond the said unit, a plate secured to the bottom face of the board and projecting over the fore end of the recess to provide a support for the unit, means for removably securing the unit to the projected end of the plate, and a cross knife mounted upon the board in cooperative relation with the slicer unit, said slicer unit comprising a housing and a plurality of vertical blades equi-distantly spaced therein and projecting thereabove in inclined relation to the board.

11. In a device of the character described, a slicer unit comprising a box-like receptacle, a gang of vertical knife blades mounted in said receptacle, means within the receptacle beneath one edge of said blades at one end to raise that end of the blades above the upper face of the receptacle for the purposes described.

12. In a device of the class described wherein is provided a base having a recess adapted to receive a slicer unit; a slicer unit comprising a box-like body adapted to fit said recess, a gang of thin flexible slicer blades mounted edgewise in said body, spacers between said adjacent blades, said body being of a depth substantially the depth of the blades, and means within said body beneath the blades at one end to raise that end whereby to project one end of the blades above the level of the box-like body thereby to present an inclined cutting edge projecting above the face of the body, and clamp screws for securing said blades and spacers in the body.

13. A device of the class described comprising a base-board, a plurality of thin flexible cutting blades mounted within the base-board, means for securing said blades in spaced relation in the base-board with one end flush with the upper face of the base-board and the other end elevated above the face of the base-board whereby to pro-

vide inclined cutting edges for the purposes described.

14. A device of the class described comprising a flat base, a plurality of thin flexible razor blades of substantially rectangular form mounted within the base, means for securing said blades in spaced relation in the base with one corner flush with the upper face of the base and another corner elevated above the face of the base whereby to provide an inclined cutting edge for the purposes described.

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