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WAFFLE CUTTING MACHINE

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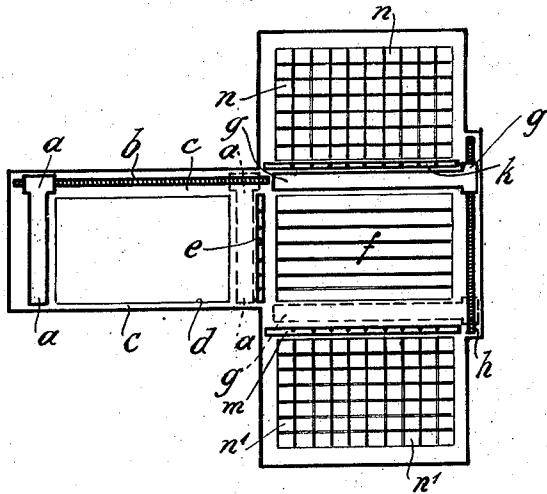


Fig. 1.

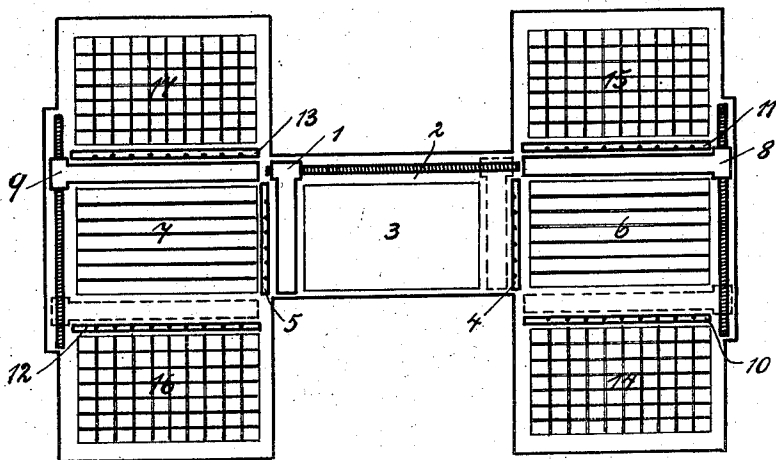


Fig. 2.

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WAFFLE CUTTING MACHINE

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2 Claims. (Cl. 146—78)

This invention relates to a cutting table arrangement for cutting machines for waffles and the like. In waffle cutting machines of known kind the arrangement is such that the pile of waffle sheets is moved successively in paths at right angles to one another by reciprocable feeding devices, and during this movement is cut up by cutting frames standing at right angles to these paths, the sheets first being cut into strips and then the strips into pieces of the desired size.

Before the next pile of waffle sheets can be cut up the two feeding appliances must be brought back again into their initial position. Consequently special idle strokes must be interposed.

The object of this invention is to obviate, partially or completely, these idle strokes upon the feeding paths, to save the time occupied by these idle strokes and to increase the output or efficiency of the machines. For this purpose a cutting table is arranged either at each end of the stroke of one of the feeding appliances, for instance of the feeding appliance serving for moving the sheets that have been cut up into strips, or else at each end of the stroke of each of the feeding appliances.

The simpler form of construction, in which one cutting set is provided at each end of the stroke of one of the feeding appliances only, for instance the second one, which serves to move the sheets that have been cut into strips, is illustrated in plan in Figure 1 of the accompanying drawing.

The form of construction in which one cutting set is arranged at each end of the stroke of each feeding appliance is illustrated, likewise in plan, in Figure 2.

The feeding appliance itself, the type of construction of the cutting frame, and the other parts of the cutting machine form no part of the present invention, protection being exclusively claimed for the arrangement of the cutting tables, by which the idle strokes that take place in the known cutting machines are partially or wholly eliminated and replaced by working strokes, in consequence of the arrangement of cutting sets at both ends of the stroke of one or both of the feeding appliances.

In the form of construction shown in Figure 1, a strip-shaped feeding appliance or slat *a*, is moved by a pulling or pushing spindle *b*, and serves for feeding a pile of waffle sheets *d* along a table *c* towards a set of cutters *e*, here constructed as a wire-cutting frame. The pile of sheets is thus cut into strips while traversing this first path and brought on to a central supporting

plate *f*. The feeding appliance or slat *a* returns to its initial position. From the central supporting plate *f* the material passes to one of the removal tables *n* or *n*¹, according to the position of a feeding device *g* which is moved by a spindle *h*, and in traversing this second path, the strips are cut into pieces of the desired size by a set of cutters *k*, when fed on to the table *n*, and by a set of cutters *m* when fed on to the table *n*¹. According to the drawing the removal tables *n* and *n*¹ must now be cleared to enable them to receive the next pile of strips fed from the central supporting plate and cut up into square by cutters *k* or *m*.

In the form of construction illustrated in Figure 2, the same appliance, which is only arranged on one side of the supporting plate *c* in the constructional form of Figure 1, is now arranged on both sides. At each movement of the feeding appliance or slat *l* from one end of the stroke to the other a pile *3* located upon the supporting plate *2* is cut into strips by a set of cutters *4* or *5*, and is brought on to a central plate *6* or *7*, from which, by the movement of a feeding appliance or slat *8* on one side and slat *9* on the other side of the supporting plate *2*, the cutting of the strips into pieces is effected in one direction or the other by one of the sets of cutters *10*, *11*, *12*, *13*. From the removal tables *14*, *15*, *16* or *17* the pile of cut pieces is then taken away at the proper time, so that the removal tables will be free for the next pile.

Sheets of soap, or piles of soap sheets or other material in similar form admit of being cut into pieces in the same manner as piles of waffle sheets by using the arrangement of cutting tables hereinbefore described.

It is not essential that the feed paths should be at right angles to one another, and should serve for cutting rectangular sheets, as illustrated in the drawing, but they can also be extended obliquely in relation to one another and cut up sheets of other forms.

What I claim is:—

1. A double cutting machine for thin slabs comprising a central supporting plate, a side table attached thereto, spaced vertical cutters along the border line between the side table and said plate and means for feeding a thin slab from the side table onto said central plate through said cutters; a receiving table along opposite edges of said plate, spaced vertical cutters along the respective border lines between said central table and the receiving tables and other means for feeding a thin slab from said central table alter-

nately to one of said receiving tables; whereby a slab is first cut into narrow strips when passing said first cutter from said side table to said plate and the strips subsequently cut across into short pieces when passing another cutter from said plate to one of said receiving tables.

5 2. A double cutting machine for waffles in thin slabs in accordance with claim 1 in which said

feeding means each consists of a narrow slat reaching across the side table and the central plate respectively and a screw engaging said slat in such a manner as to reciprocate the slat back and forth along the side table and the central plate respectively. 5

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