No. 894,461. PATENTED JULY 28, 1908.

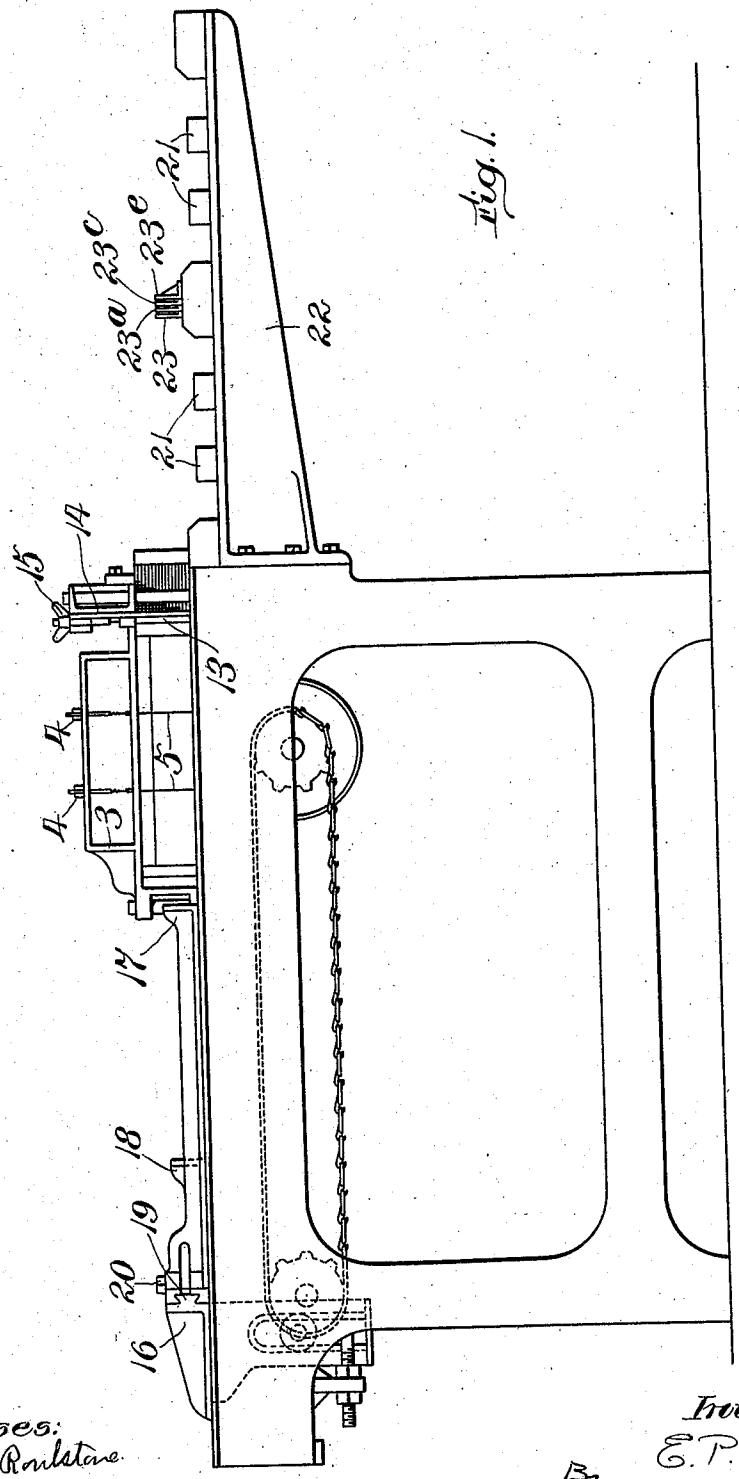
E. P. PULLEN.

SOAP PARTITIONING TABLE.

APPLICATION FILED SEPT. 14, 1907.

3 SHEETS—SHEET 1.

Fig. 1.



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No. 894,461. PATENTED JULY 28, 1908.

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SOAP PARTITIONING TABLE.

APPLICATION FILED SEPT. 14, 1907. 3 SHEETS—SHEET 2.

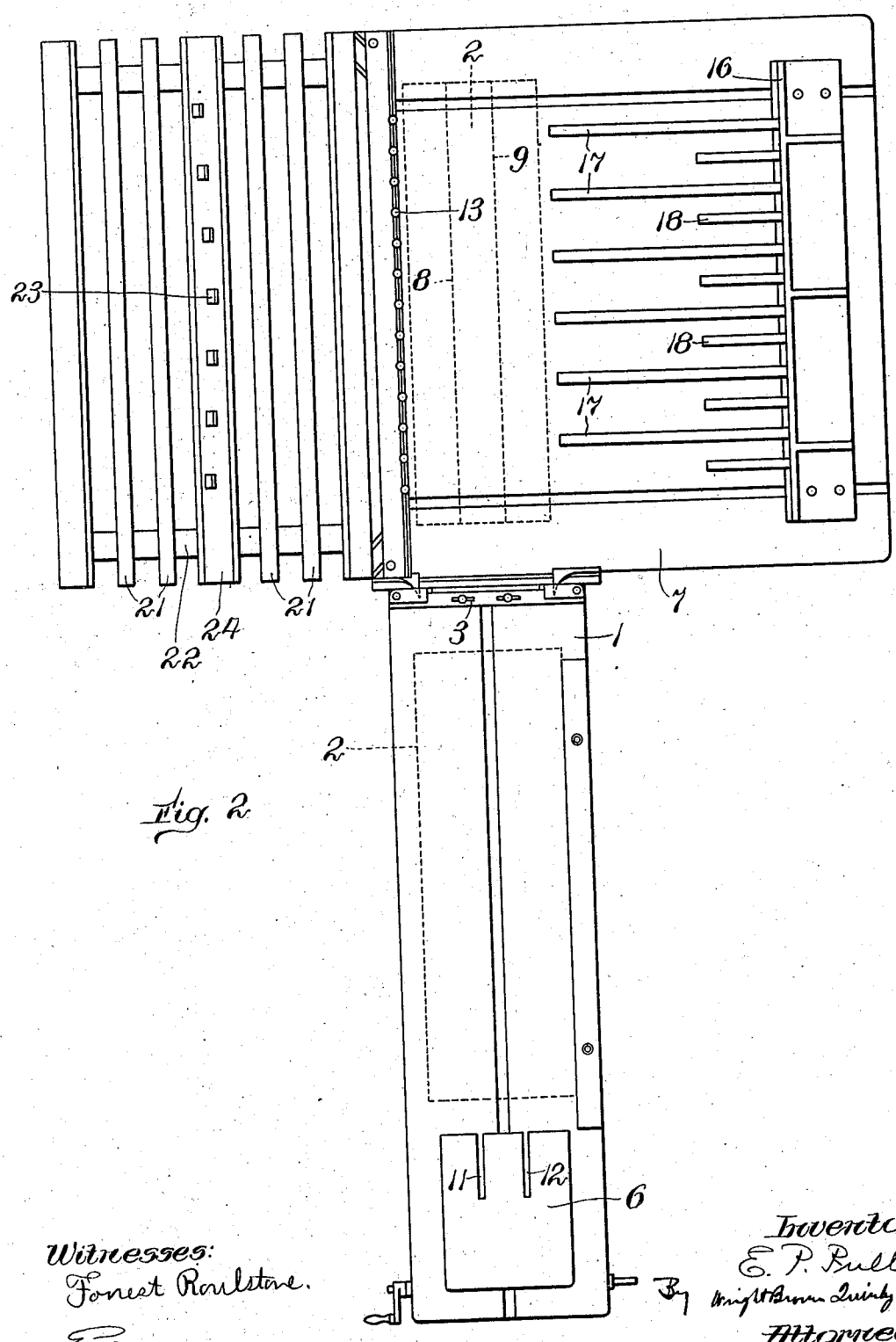


Fig. 2.

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SOAP PARTITIONING TABLE.

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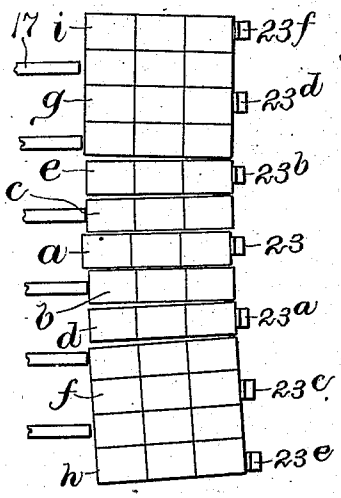


Fig. 4.

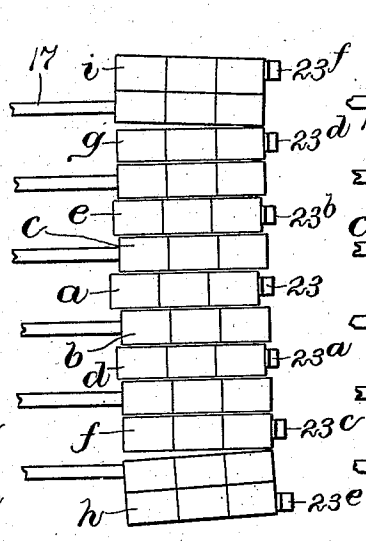


Fig. 5.

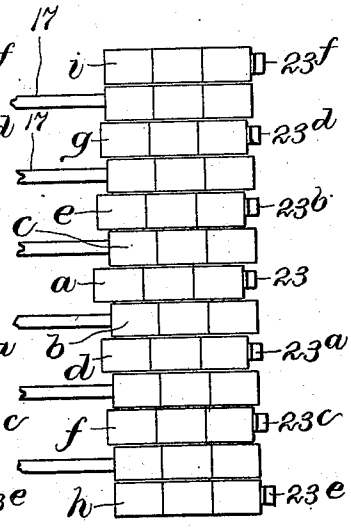


Fig. 6.

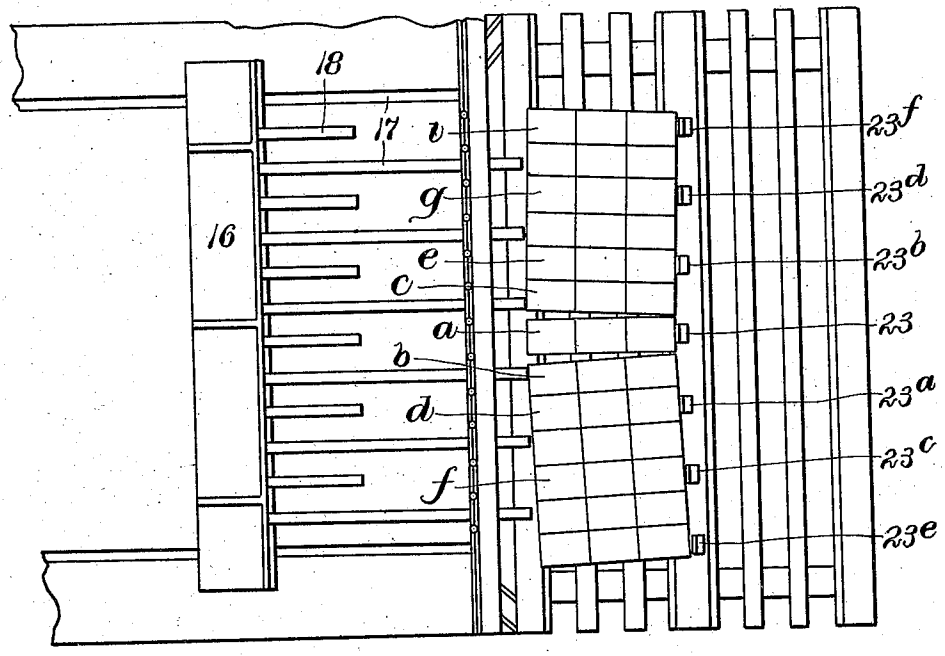


Fig. 3.

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UNITED STATES PATENT OFFICE.

EDWARD P. PULLEN, OF HACKENSACK, NEW JERSEY, ASSIGNOR TO CHARLES W. AIKEN, OF WEST NEW BRIGHTON, NEW YORK.

SOAP-PARTITIONING TABLE.

No. 894,461. Specification of Letters Patent. Patented July 28, 1908.

Application filed September 14, 1907. Serial No. 392,879.

To all whom it may concern:

Be it known that I, EDWARD P. PULLEN, of Hackensack, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Soap-Partitioning Tables, of which the following is a specification.

This invention relates to tables on which wide slabs of soap previously cut from the original block are placed to be divided into cakes.

The object of the present invention is to enable the cakes to be more readily separated from each other after they have been cut, and more particularly to effect the separation of the divided sections of soft and sticky soaps without crushing them.

The invention therefore consists in a series of stops located in the path which is taken by a soap slab in passing by the cutters, which stops are arranged so as to be engaged by the divided sections of the slab, not simultaneously, but in succession, so that the slab may be arrested locally and the instrumentalities used for moving it thereby caused to spread the rear ends of the divided sections apart, thereby separating them laterally in the direction in which adhesion opposes the least resistance.

Of the accompanying drawings,—Figure 1 represents an elevation of a soap-cutting table equipped with the devices constituting my invention: Fig. 2 represents a plan view of the same. Fig. 3 represents a partial plan view showing the action of the stops and slab pushers in bending the cut slab and spreading the sections apart. Figs. 4, 5 and 6 represent views showing the manner in which the stops act successively to separate all the sections from one another.

The same reference characters indicate the same parts in all the figures.

The device forming the subject of this invention may be applied to any known form of cutting table. In the present application it is mounted upon a table having a long and narrow lateral support 1 on which an undivided slab, shown at 2 by dotted lines, is placed. That end of the lateral support which joins the main body of the table has mounted upon it a frame 3 in which are contained the adjusting devices 4 for holding and tensioning cutting wires 5 of which the lower ends are embedded in the support. A pusher 6 is mounted on the outer end of the support 1 and is movable so as to bear upon the end of the slab and push it past the cutting wires onto the main table 7. Thereby longitudinal cuts, represented by the dotted lines 8 and 9, are made in the slab. Slots 11 and 12 are left in the pusher 6 so that the latter may pass somewhat beyond the cutting wires and insure the complete dividing of the slab and the location of the latter in the proper position so that it may be transversely divided.

At the end of the main table close beside the slab when left by the pusher 6, are cutters 13 which also are in the form of wires stretched between the table and a girder 14 and adjusted in tension by screws 15. These cutting wires are equally spaced apart and serve to divide the slab into transverse sections, which, having been previously divided by the cutters 5, constitute rows of cakes.

At the right-hand end of the table 7 is a cross-head 16 reciprocated by suitable mechanism, which forms no part of the present invention and need not be described. This cross-head carries pushers 17 and 18, of which the former are of much greater length than the latter, the disparity in length being somewhat greater than the width of the soap slab. All the pushers are adjustable on the cross-head, being mounted on a dove-tail guide 19 and clamped in any desired position by bolts 20, and are spaced so that the pushers 17 will pass through only the alternate openings between the wires 13, while the pushers 18 will enter the others. That is, the spacing of the pushers 17 is twice as great as that of the wires. Accordingly these pushers instead of being in contact with each of the divided sections after the slab has passed the cutters, bear against only every other of these sections.

After passing through the space in which the cutting wires are strung, the divided slab is forced by the pushers off the table and upon a rack consisting of the bars 21 laid across brackets 22. As the cutters are very thin, they do not remove any appreciable quantity of the soap but simply sever the slab, leaving the sections still in contact. In the case of soft and sticky soaps, the adhesion between the contacting sections is very great, and some means for separating them so as to partition the slab prior to distribution of cakes must be provided. This partitioning means consists of the stops 23 used in conjunction with the pushers 17. These

stops are located upon a transverse bar 24 in the path of the soap slab. They are spaced so as not to lie in the path of each of the sections, but only of those sections which are not engaged by the pushers 17, that is, the sections intermediate those that are so engaged. If the stops were all at the same distance from the cutters so that the various sections of the slab engaged them all at once, the separation of the sections or rows of cakes would not be always effected in the case of sticky soaps without liability of injury to some of the cakes. This is the case for the reason that the adhesion between the divided sections of soaps of this character is in many cases greater than the rigidity of the soap, so that either those cakes arrested by the stops or those engaged by the pushers, or both, are crushed or distorted. Avoidance of the danger of thus injuring the cakes and insuring their separation is the specific object of my invention. In carrying out the same, I mount the stops 23 at varying distances from the cutters so that they will not be engaged simultaneously by the sections of the slab, but on the contrary will arrest selected sections in succession. The preferred form is that illustrated in the drawings, wherein the middle stop is at the least distance from the cutters and the others at successively increasing distances, falling back from the central stop on lines which are slightly inclined to the forward face of the slab. That is, the stops at each side of the central one are at a slightly greater distance from the cutters, the stops next beyond these at a still greater distance, and so on. The effect produced by this arrangement is illustrated in Figs. 3 to 6. As the middle stop is in advance of the others, it alone engages the soap slab, arresting the motion of the central section *a* thereof. The next adjacent sections *b* and *c* are, however, acted upon by the central bar of pushers 17 and are pushed further forward. The reaction of the stop 23 between the pushers 17 produces a bending tendency in the slab, which causes the rear ends of the sections to separate and spread apart until the stops 23^a and 23^b next to the central stop are engaged by the sections *d* and *e*. The result which then takes place is illustrated in Fig. 4. A bending action is set up between the innermost pushers and the next adjacent outer ones, which causes the sections *b* and *c* to separate from *d* and *e*, and the latter to be drawn apart from the outer portions of the slab. A similar result takes place when the soap sections *f* and *g* strike the stops 23^c and 23^d, and finally when the outermost sections *h* and *i* are arrested by the outermost stops 23^e and 23^f. It will thus be seen that owing to the arrangement of stops described, the sections of the slab are drawn laterally apart from each other when first meeting the resistance interposed by the stops, so that they are out of contact before the pushers have advanced far enough to move the ones which they engage bodily past the ones arrested by the stops, and consequently the resistance to the forward motion of the alternate cakes due to adhesion is altogether eliminated.

I claim:—

1. Separating the parts of a subdivided soap slab by pressing against non-contiguous sections of the slab and opposing such pressure at a single point between two of the sections acted on by the pressers, whereby a bending tendency is produced.

2. A method of separating a slab of soap into cakes, consisting in forcing the slab past cutters, so as to divide it into sections, by pressers which are separated so as to bear against non-contiguous sections, and separately arresting sections intermediate the pressers, whereby a bending tendency is created and the sections are drawn apart.

3. The method of partitioning a slab of soap, consisting in pressing against opposite sides of the slab on opposite sides of cuts and thereby bending the slab after it has been subdivided into adhering sections, so as to pull the sections laterally apart.

4. The method of partitioning a slab of soap, consisting in pushing the slab past cutters of slight thickness, which divide the slab into sections, leaving the sections in adhesive contact, and arresting successive divisions of the slab intermediate the points at which the pushing pressure is applied, whereby bending of the slab and separation laterally of the sections thereof are caused.

5. The method of partitioning a slab of soap, consisting in pushing the slab, by means of pressers spaced further apart than the width of the sections into which the slab is to be divided, past cutters of such thinness that they leave the sections in adhesive contact, arresting the section located between the middle pair of pushers, whereby the slab is bent and the parts on each side of the said section are pulled apart therefrom, and subsequently and separately arresting the sections between each adjacent pair of pushers on both sides of the middle pair.

6. The partitioning of soap slabs by cutting the slabs into sections, moving the slabs by pressure against alternate sections, and successively arresting the sections not acted on by the pressing means, whereby the rearward ends of the sections are spread apart.

7. The partitioning of soap slabs by cutting the slabs into sections, moving the slabs by pressure against alternate sections, arresting first the middle section of the slab, whereby the continuing movement of the adjacent sections causes the rear ends of the latter to be laterally separated from the middle section, and successively arresting alternate sections on each side of the middle section.

8. The partitioning of soap slabs by cutting the slabs into sections, moving the slabs in the direction of the cuts by pressure against alternate sections, and opposing a single stop in the path of a section intermediate the ends of the slab and between two of those acted on by the pressing means, so as to arrest only the section specified and cause the adjacent sections to spread away therefrom.

9. A soap-partitioning machine comprising a support for a soap slab, separated cutters, pushers arranged to force the slab past the cutters to divide the slab into sections and spaced so as to pass through alternate spaces between the cutters, and stops located in the path of the slab and arranged to be engaged successively by portions of the slab between the sections acted on by the pushers.

10. A soap-partitioning machine comprising a support for a soap slab, separated cutters, pushers arranged to force the slab past the cutters to divide the slab into sections and spaced so as to pass through alternate spaces between the cutters, and stops located in the path of the slab and arranged with certain stops in advance of others and intermediate the pushers, whereby the sections between the pushers are arrested in succession.

11. A soap-partitioning machine comprising a support for a soap-slab, separated cutters, pushers arranged to force the slab past the cutters to divide the slab into sections and spaced so as to pass through alternate spaces between the cutters, and stops located in the path of the slab and arranged in lines inclined to the forward edge of the advancing slab and intermediate the pushers, whereby the sections engaged by the pushers are enabled to continue their motion while the intermediate sections are successively stopped, causing the rear ends of the sections to be forced laterally apart.

12. A soap-partitioning machine comprising a support for a soap slab, separated cutters, pushers arranged to force the slab past the cutters to divide the slab into sections and spaced so as to pass through alternate spaces between the cutters, and stops located in the path of the slab and arranged with one of the intermediate stops nearer than the others to the cutters, and the stops at each side thereof at successively greater distances from the cutters.

13. A soap-partitioning machine comprising a support for a soap slab, separated cutters, pushers arranged to force the slab past the cutters to divide the slab into sections and spaced so as to pass through alternate spaces between the cutters, and stops located in the path of the slab and arranged at unequal distances from the cutters and between the paths of the pushers, so as to arrest successively sections of the slab intermediate those acted on by the pushers.

14. A soap-cutting table having a series of cutters, pushers for pressing the slab past the cutters so as to divide it into sections and spaced to engage only alternate sections, and stops in the paths of those sections intermediate the ones pressed upon by the pushers, the central stop being at the least distance from the cutters, and those at each side thereof at successively greater distances from the cutters.

In testimony whereof I have affixed my signature, in presence of two witnesses.

EDWARD P. PULLEN.

Witnesses:

GEO. A. HORNE,

JOHN H. TWADDLE