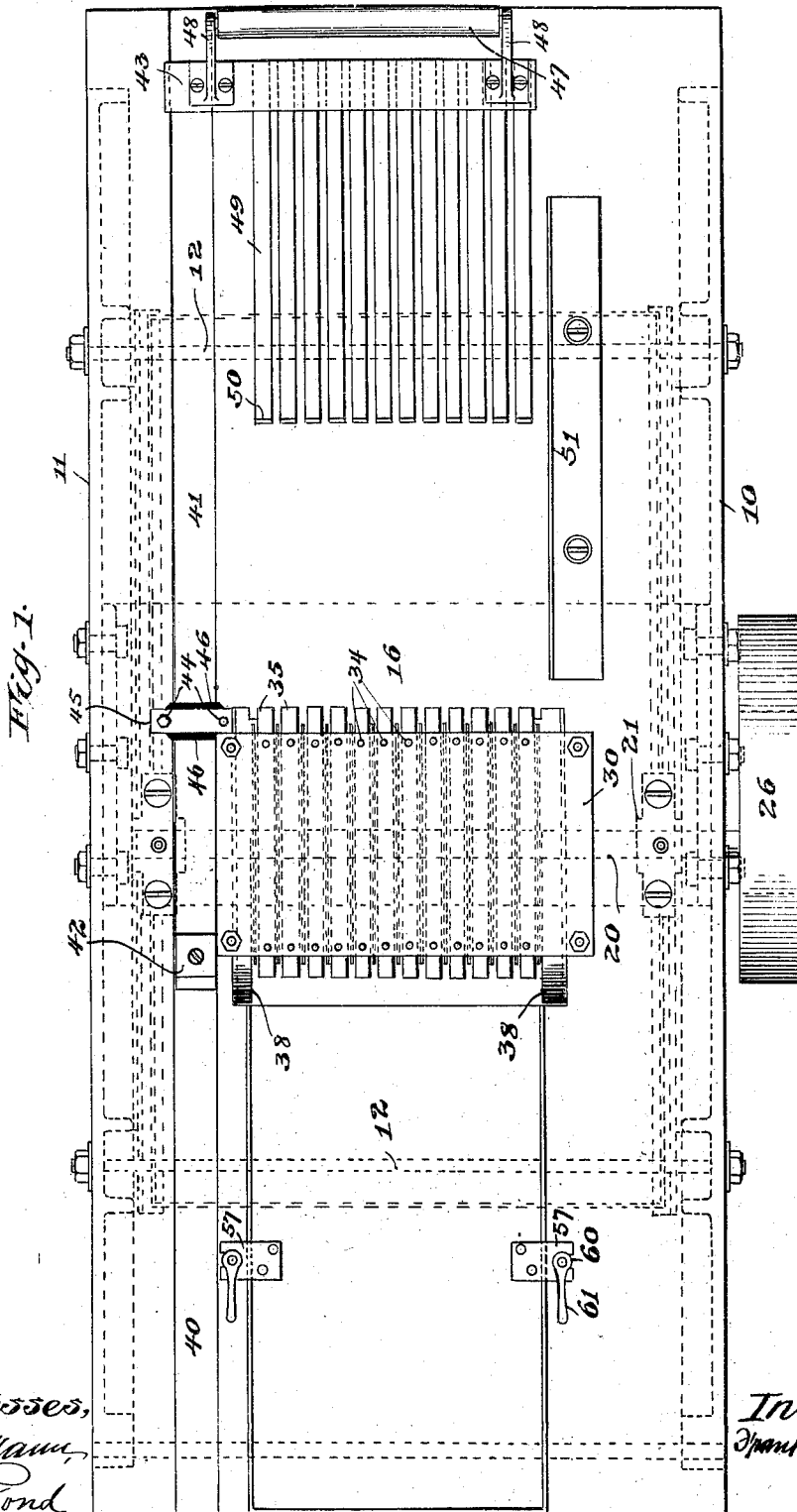


F. M. PETERS.
 WAFER CUTTING MACHINE.
 APPLICATION FILED NOV. 25, 1905.

1,016,439.

Patented Feb. 6, 1912.

4 SHEETS—SHEET 1.



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Fig. 2.

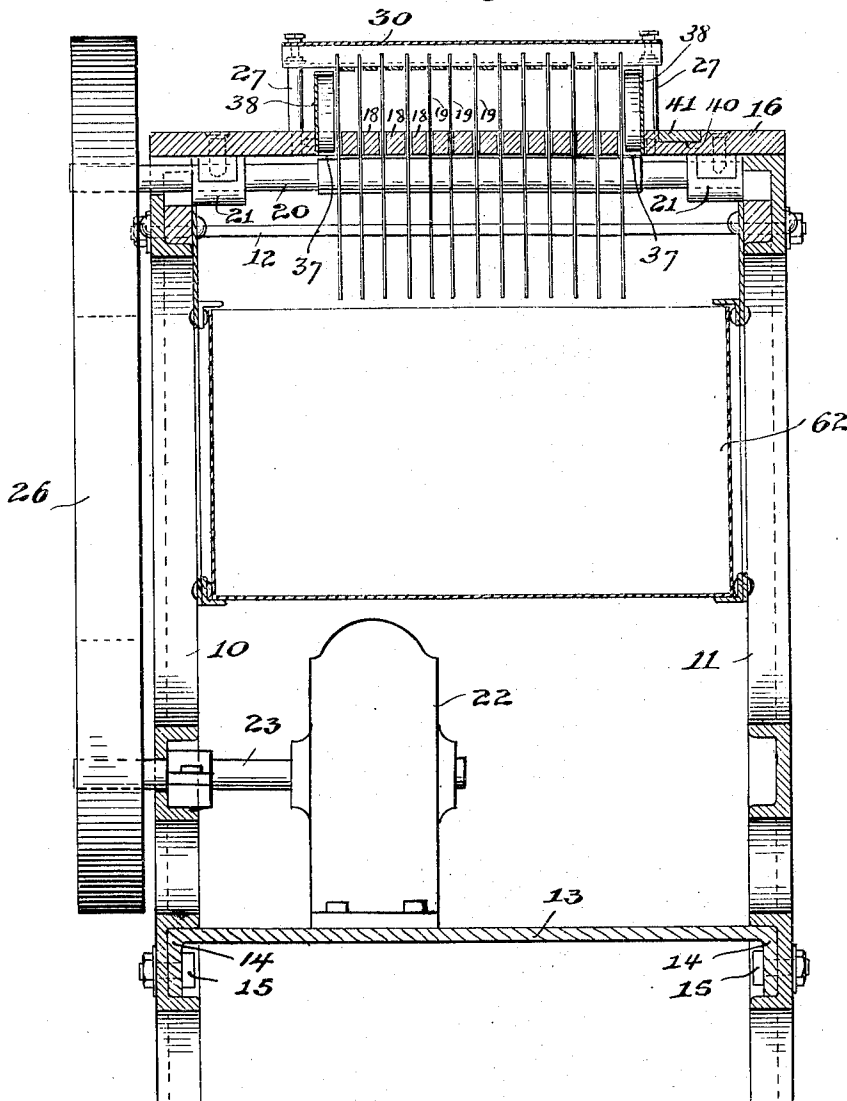
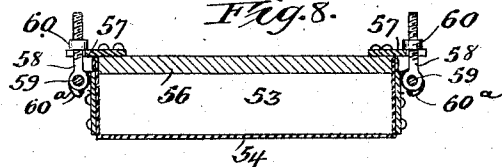


Fig. 8.



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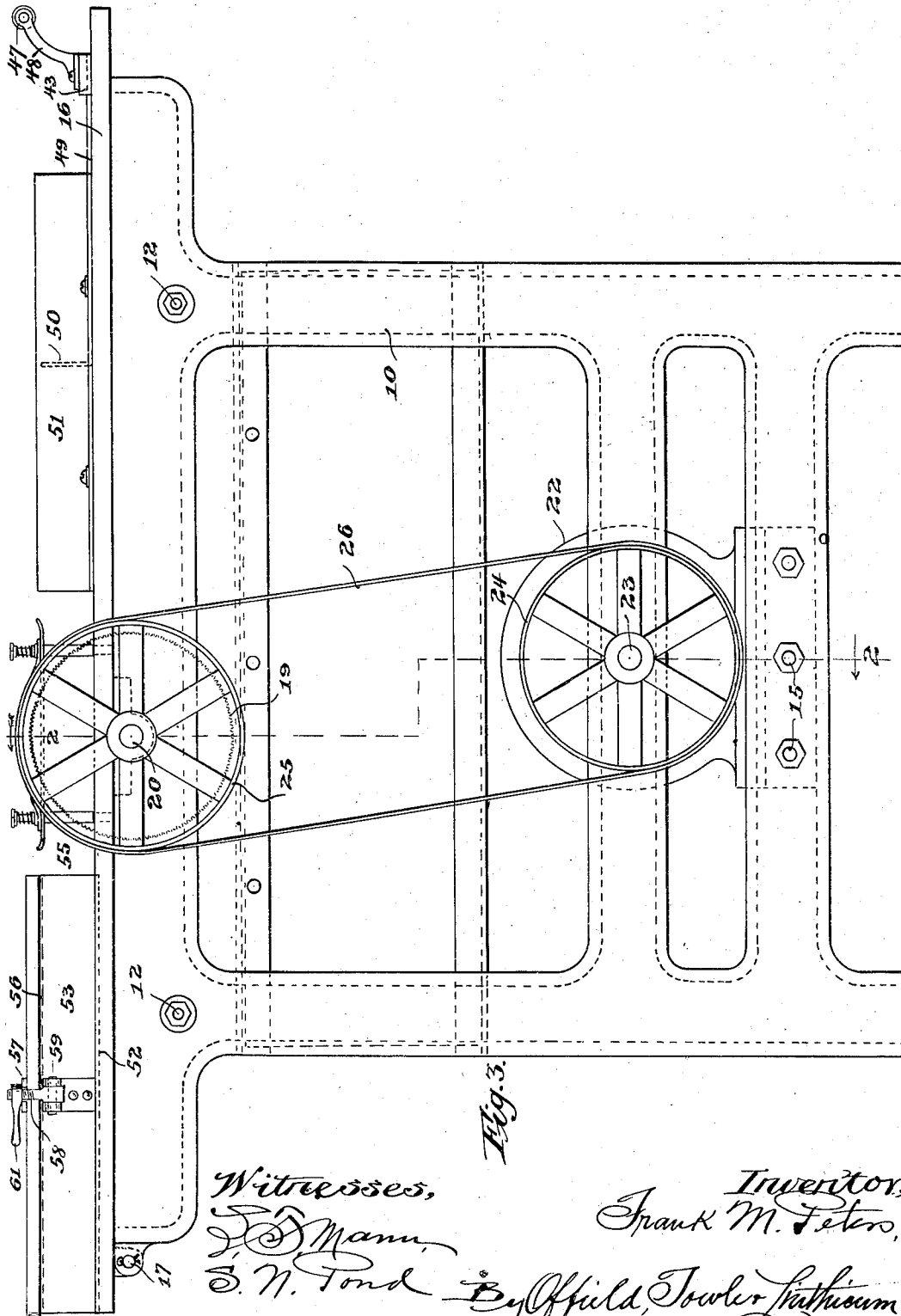
By Offield, Towler & Lenthicum
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Witnesses,
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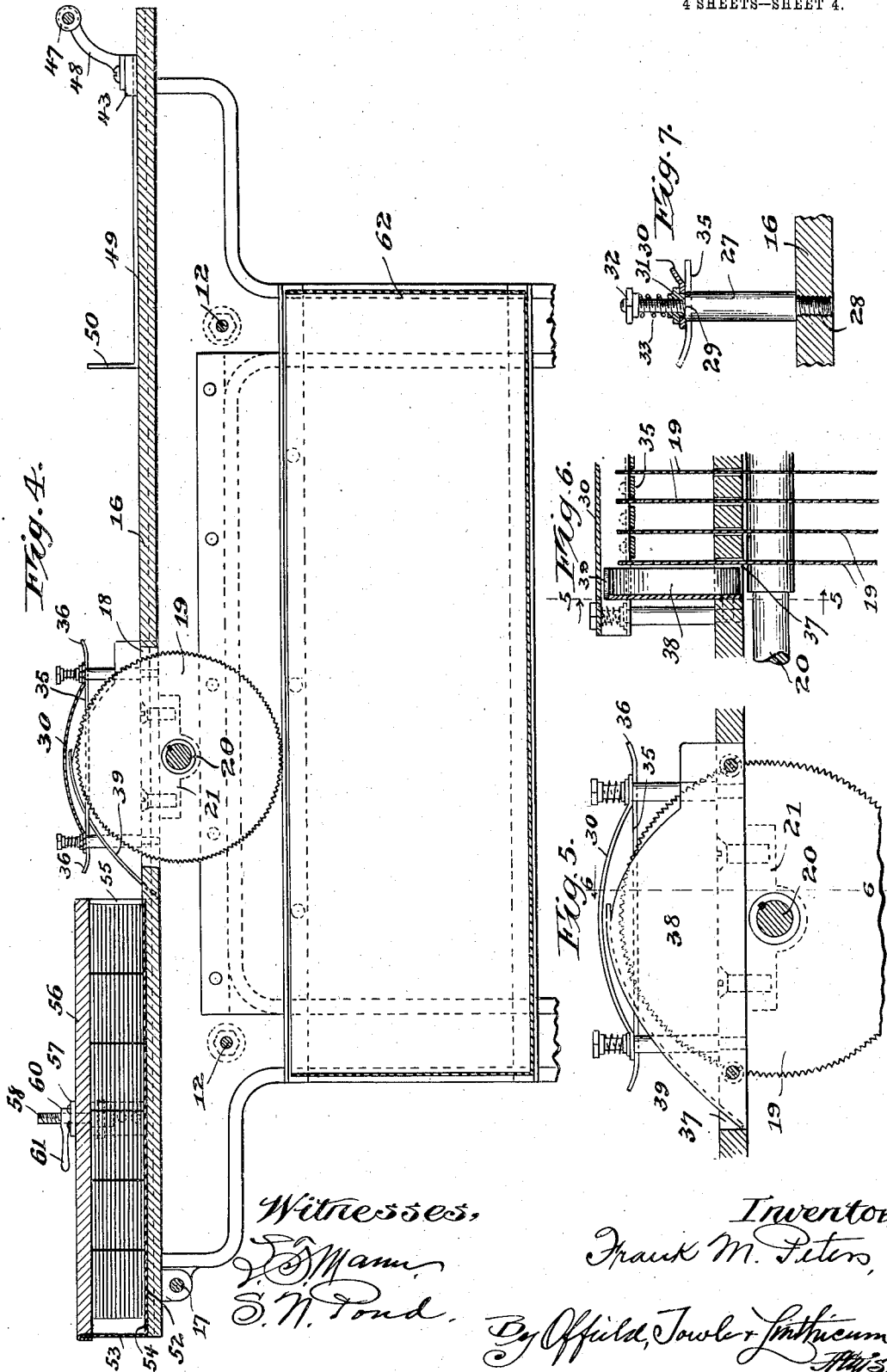
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4 SHEETS—SHEET 4.



Witnesses,

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UNITED STATES PATENT OFFICE.

FRANK M. PETERS, OF CHICAGO, ILLINOIS.

WAFER-CUTTING MACHINE.

1,016,439.

Specification of Letters Patent.

Patented Feb. 6, 1912.

Application filed November 25, 1905. Serial No. 239,121.

To all whom it may concern:

Be it known that I, FRANK M. PETERS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Wafer-Cutting Machines, of which the following is a specification.

My present invention pertains to improvements in machines for severing large sheets of bakery products, and especially those delicate and brittle sheets which comprise two or more thin cakes secured together by intermediate layers of icing, into a number of wafers of the proper size for packing and use. Such wafers are generally made in large sheets and then subdivided by longitudinal and transverse cuts into wafers of convenient size.

My invention relates to these cutting machines and includes, among other specific features recited in the claims, a table, a series of rapidly revolving saws or cutters, a number of feeding fingers reciprocating on the table and between the cutters to feed the large sheets between the cutters or saws, and means to hold the sheets in place while being operated upon by the cutters.

An improved form of receptacle to receive the separated wafers and to hold the same in place to prevent warping or the parting of the baked crackers or sheets from the adhesive icing also forms a part of my invention.

Although not limited to such use, my present invention is of special value in subdividing longitudinally large sheets of crackers or wafers piled or stacked upon one another after they have been cut transversely into strips.

I have illustrated the preferred embodiment of my invention in the accompanying drawings, wherein—

Figure 1 is a plan view of the cutting machine; Fig. 2 is a substantially central vertical transverse section of the same; Fig. 3 is a side elevation of the same; Fig. 4 is a partial longitudinal vertical central section of the machine; Fig. 5 is a fragmentary section on the line 5—5 of Fig. 6; Fig. 6 is a fragmentary cross-section on the line 6—6 of Fig. 5 with the saws and shaft in elevation; Fig. 7 is a detail view of one of the posts which support the shield over the saws or cutters; and Fig. 8 is a transverse section

of the receptacle for receiving the severed wafers.

The cutting machine comprises two slide frame members 10 and 11 which are spaced apart at their upper portions by the transverse bolts 12, and at their lower portions by the plate member 13 whose downwardly extended ends 14 are secured to the side frames by bolts 15. A flat table top 16 is pivoted at 17 to one end of the supporting frame so that by lifting the table top ready access may be had to the cutters and other parts of the device described hereinafter.

A series of spaced longitudinal slots 18 (Fig. 2) are provided in the table top near its central portion and through these slots or kerfs project a plurality of circular saws or cutters 19 which are mounted below the table top on a transverse shaft 20 rotatable in bearings 21. An electric motor 22 supported on the transverse platform 13 rotates shaft 20 and its saws 21 by means of shaft 23, pulleys 24 and 25, and the connecting belt 26.

Mounted outside of the endmost saws 19 are a plurality of upstanding posts 27 the lower end of each of which is screw-threaded at 28 (Fig. 7) to engage a threaded aperture in the table top. Each post is shouldered near its upper end at 29 and supported on these shoulders is a curved metallic shield 30 covering the saws to protect the operator from injury therefrom. Shield 30 has a shouldered bushing 31 (Fig. 7) fitted over each post 27, and between the nut 32 on the threaded upper end of each post 27 and the bushing 31 is interposed a small spiral spring 33 which tends to hold the shield against the shoulders 29. Secured to the opposite edges of shield 30 by means of screws 34 (Fig. 1) are a plurality of metal strips 35 (Figs. 5 and 6) which extend substantially parallel to the face of the table top between the series of spaced saws 19. The strips at their outer ends are turned upwardly slightly at 36 as shown most clearly in Figs. 3, 4 and 5.

Within each of a pair of slots 37 in the table top at the outer side of the endmost saws 19 is mounted a metal shield and guide 38 curved at the upper edge as shown in Fig. 5 and having along the back portion of its upper edge a curved guiding flange 39. These shields prevent the entrance of anything sidewise into the field of operation of

the saws, acting in conjunction with the top shield to form an almost complete closure for the saws except at the front and back.

Extending longitudinally of the table top and on its upper surface is a groove 40 within which neatly fits and reciprocates a bar 41 supplied near one end with a stop 42 and at its other end with a transverse bar 43 as shown in Fig. 1. Attached to the table top by means of screws or bolts 44 and extending over bar 41 is a fixed stop 45 having a rubber cushion 46 on each of its opposite sides, the movable stop 42 and transverse bar 43 cooperating therewith to limit the forward and backward movement of the feeding mechanism of which the bar 43 forms a part. An operating handle 47 is mounted on the bar 43 by means of curved brackets 48. Projecting forwardly of the bar 43 and secured in recesses on its under surface are a plurality of pushers 49 which are spaced apart and are of such a width as to pass between the gang saws 19. Each pusher 49 at its front end is supplied with an upstanding finger 50 of a height substantially equal to the distance between the face of the table and the under surface of strips 35. An angle guide and stop 51 is mounted on the table top adjacent to these reciprocating pusher fingers on the front part of the machine as shown in Figs. 1 and 3. Back of the saws the table top is slightly recessed as at 52 (Fig. 4) so as to receive a metal receptacle 53 in such a manner that the upper surface of its bottom 54 will be substantially in the same plane as the top surface of the table. The receptacle 53 has an open end 55 which faces the saws and for a cover it has a removable board 56 equipped with two oppositely disposed and laterally projecting slotted metal ears 57. On each side of receptacle 53 below the ears 57 is a bolt 58 pivoted at 59 and supplied with a nut 60 having a handle 61. Each bolt 58 has a stop 60^a (Fig. 8) adapted to strike against the side of the receptacle and limit the downward turning of the bolt thereby preventing interference between the same and the reciprocating stop 42 on bar 41.

The operation of the device is as follows:—Assuming that motor 22 is rapidly rotating the saws or cutters 19, a bank or stack of wafers which may have previously been cut transversely into strips is pushed laterally onto the table top against the stop or guide 51, fingers 50 having been previously drawn backward to the limit of their movement so as to allow space for this introduction of material to be cut. The handle 47 with the attached pusher fingers 50 is then pushed forwardly by hand, being guided in this movement by bar 41 sliding in groove 40. The strips or wafers are subdivided by means of the saws and pushed into receptacle 53, as shown in

Fig. 4, pushers 49 with their upturned ends or fingers 50 traveling between the saws and up to or perhaps partially within the open end of receptacle 53. Strips 35 prevent the wafers from riding upon one another or otherwise becoming displaced. The extreme side strip of the wafers abuts against guide 51 and both this strip and the corresponding strip on the other side, after they have been severed by the outermost saws are guided downwardly by means of the curved inclined flanges 39 of shields 38 so as to drop into a receptacle or box 62 mounted beneath the table top, which box also receives the crumbs created by the sawing or cutting. After the wafers have been introduced into the receptacle 53 in this manner the cover 56 is placed on top of them and held in position by means of nuts 60 on bolts 58 which are readily turned by their handles 61. The filled receptacle 53 is then removed from the table top and its contents are allowed to dry, the cover preventing the warping of the wafers or the separation of their parts. A new receptacle is then placed in the recess 52 and the same is filled by the same operation which has been described above. In this manner a series of receptacles are quickly filled with wafers which are of the same size and which all have clean and neatly cut edges.

I claim:

1. In a device of the character described, the combination of a table having a series of spaced longitudinal slots in its top, a plurality of spaced disk cutters mounted beneath said table top and projecting through said slots, means for driving said cutters, a longitudinal guiding groove extending substantially the full length of the table top, a bar adapted to reciprocate in said groove, a fixed stop extending over said guiding groove, a cooperating stop attached to said bar, a transverse bar attached to said guiding bar extending transversely of the table top and also adapted to cooperate with said fixed stop, a handle attached to said transverse bar, a plurality of forwardly extending feeding fingers attached to said transverse bar, a plurality of shouldered posts projecting from said table top, a shield over said cutters normally resting on said shoulders, springs pressing said shield against said shoulders and a series of strips attached to said shield disposed between said cutters and adapted to rest upon the upper surface of the material operated upon to prevent displacement thereof, substantially as described.

2. In a device of the character described, the combination of a longitudinally slotted table having its upper surface depressed at its delivery end, a series of spaced disk cutters mounted to revolve through the slots of said table, means for driving said cutters,

a series of reciprocating feed fingers slidably mounted on said table and adapted to push the material operated upon against and between said cutters, and a removable receptacle seated in said depressed end portion of said table and having an open end toward said cutters, the inner surface of the bottom wall of said receptacle being flush with the upper surface of said table and said fingers serving to push the strips of cut material without obstruction into the open end of said receptacle, substantially as described.

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