Dec. 3, 1929. L. DE VITO 1,738,361

MACHINE FOR MAKING FLAT NOODLES

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Fig. 1.

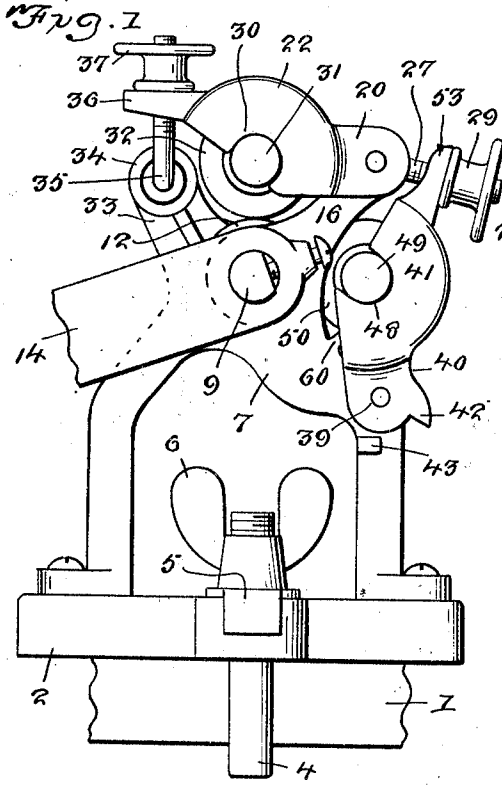


Fig. 2.

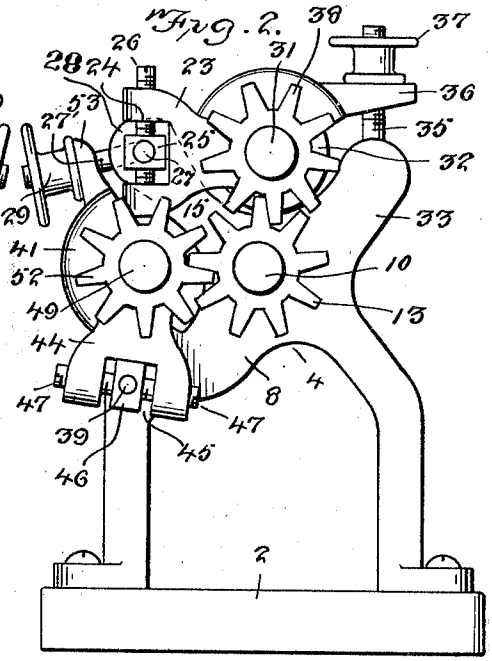
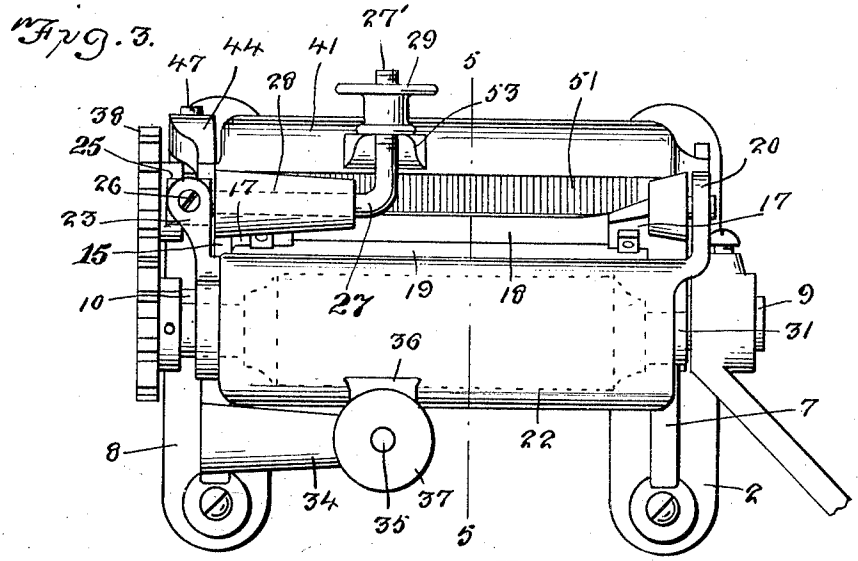


Fig. 3.



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MACHINE FOR MAKING FLAT NOODLES

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FIG. 4.

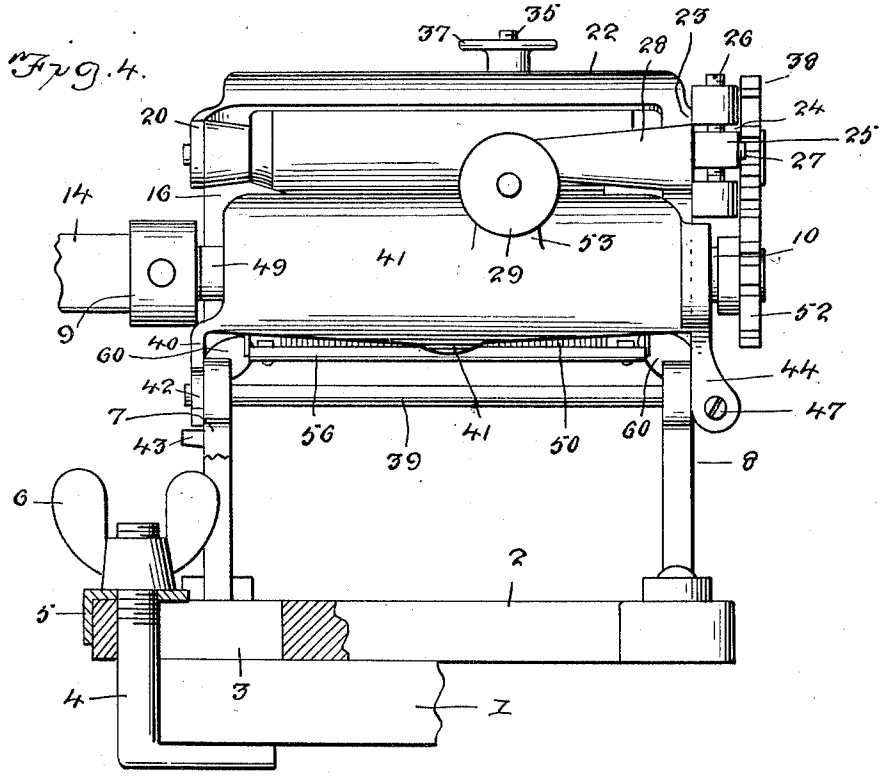

FIG. 5.

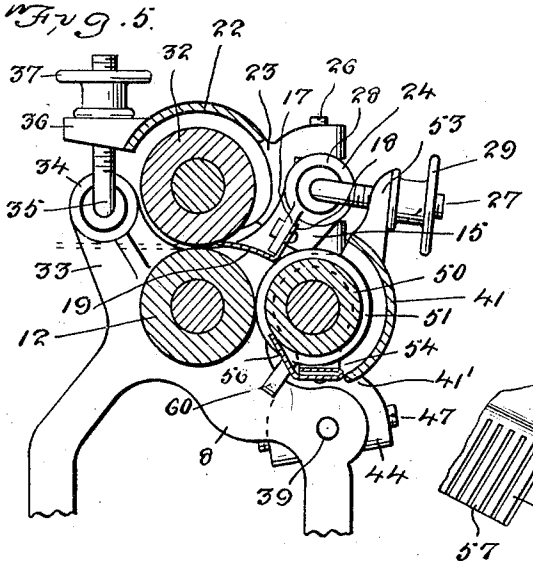

FIG. 6.

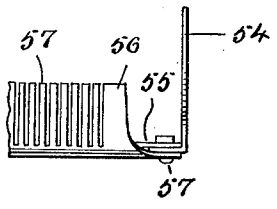

FIG. 7.

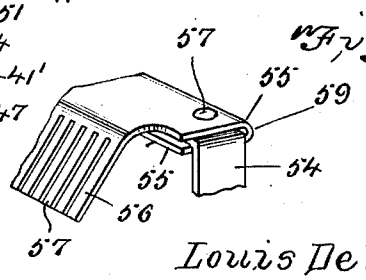

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Fig. 8.

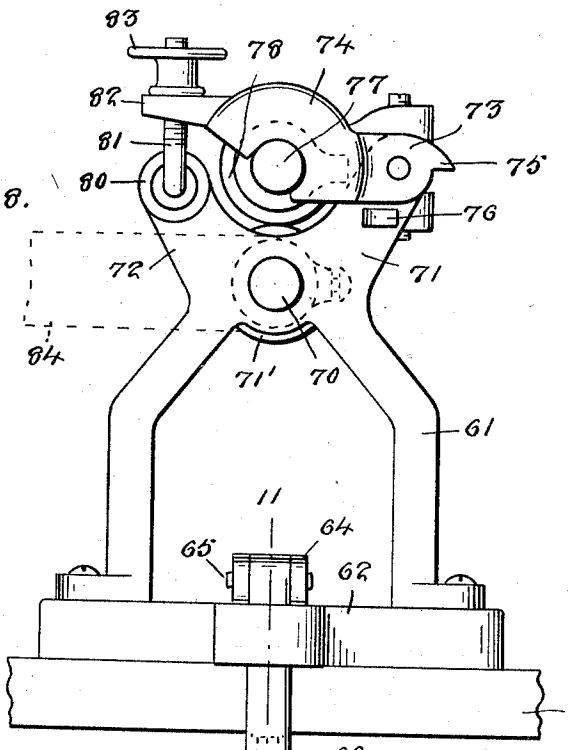


Fig. 9.

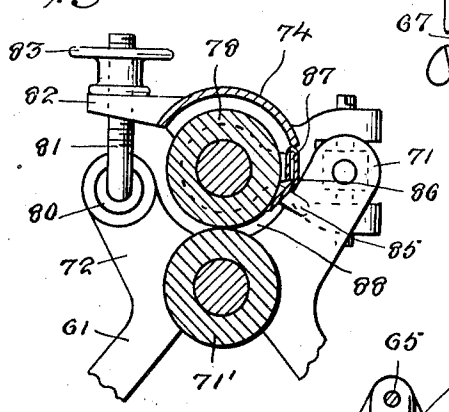


Fig. 10.

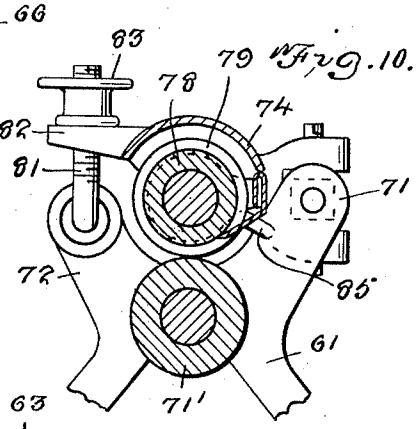
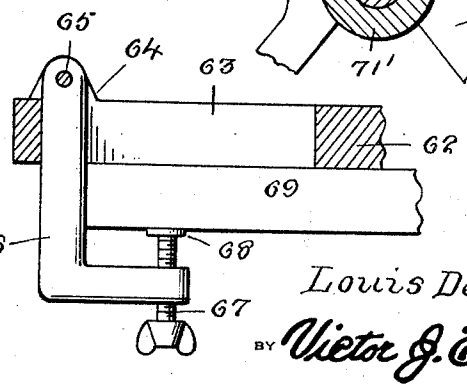


Fig. 11.



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Patented Dec. 3, 1929 1,738,361

UNITED STATES PATENT OFFICE

LOUIS DE VITO, OF CLEVELAND, OHIO

MACHINE FOR MAKING FLAT NOODLES

Application filed January 9, 1928. Serial No. 245,464.

The object of my present invention is the provision of an effective machine for making flat or ribbon-like noodles.

An object is to simplify and improve the machine for making flat macaroni upon which I received U. S. Letters Patent No. 1,332,435, granted March 2, 1920.

To the attainment of the foregoing, the invention consists in the peculiar and advantageous machine and novel combination thereof as herein described and definitely claimed.

In the accompanying drawings, which form part of this application:

Figures 1 and 2 are elevations of the ends of the machine.

Figure 3 is a top plan view thereof.

Figure 4 is a front elevation thereof.

Figure 5 is a transverse section taken in the plane indicated by the line 5—5 of Figure 3.

Figure 6 is a detail plan view of the comb scraper.

Figure 7 is a perspective view thereof.

Figure 8 is an end elevation illustrating a modification.

Figure 9 is a transverse sectional view through the upper portion of the construction disclosed by Figure 8.

Figure 10 is a view similar to Figure 9, but showing the roller or cutter replacing the upper rolling roll.

Figure 11 is a detail section taken in the plane indicated by the line 11—11 of Figure 8.

Similar numerals of reference designate corresponding parts in all of the views of the drawings.

The present embodiment of my invention is designed to rest upon and to be clamped to the top of a table 1. The invention includes a base 2 having adjacent one of its ends an elongated slot 3 through which passes the threaded arm of the substantially L-shaped clamp 4. The vertical arm of the clamp 4 also passes through an opening in a flanged metal plate 5 and the said arm is engaged by a wing nut 6 that is screwed against the angle washer plate for causing the lateral arm of the clamp 4 to grip the under face of the table top 1.

On the base there are secured the offset or foot portions on the legs of the end members 7 and 8 of the frame of the improvement. Journaled through bearing openings in the ends 7 and 8 of the frame, adjacent to the rear of the machine there are the trunnions 9 and 10 of a roll 12, preferably of steel, and on the trunnion 10 there is fixed a spur gear 13, while the trunnion 9 has fixed thereon a crank handle 14.

The end members of the frame are formed with extensions or arms 15 and 16 which extend at an upward and forward angle from beyond the trunnions 9 and 10. Each of the arms has an inwardly directed lug 17, and on each of the lugs there is secured by bolts and nuts the inner or body plate 18 of a preferably arched spring scraper 19 directly toward but out of contact with the roll 12.

Pivotally secured to the end of the arm 16 there is one of the ear ends 20 on a hollow and concaved hood or cover 22. The ear on the opposite end of the hood or cover 22, is indicated for distinction by the numeral 23, and this ear is widened and is centrally notched, as at 24. There is received in this notch a floating block 25, and screwed through threaded openings in the arms of the ear 23, provided by the notch 24, there are headless bolts 26 which contact with the opposite faces of the block 25. There is received through the center of the block 25 a rod 27. The said rod preferably has an enlarged end for contacting with the outer face of the block, and this rod passes through an inwardly directed boss 28 formed on the inner face of the arm 15. The outer end of the rod 27 has an angle extension 27′ which is threaded and on which is screwed a thumb nut 29 for a purpose which will presently be apparent. The ends of the hood or cover 22 have their outer edges bifurcated, as at 30, and received in these bifurcations there are trunnions 31 on the ends of a presser roll 32. This roll has a peripheral contact with the outer end of the spring scraper 19 and by virtue of such contact the roll 32 is forced away from the steel feed roll 12 when the

cover 22 is swung to arrange the said roll 32 directly over the roll 12. The roll 32 is preferably of wood.

The end member 8 of the frame is formed with an extension or arm 33 disposed at an opposite angle with respect to the arm 15, and this arm, on its inner face, is formed with a boss 34. Removably received in the bore of the boss there is one arm of an angle rod 35. The outer and threaded end of the angle arm 35 is designed to pass through an elongated slot in a lug extension 36 on the hood or cover 22, and to be engaged by a nut 37. By adjusting the nut 37 the roll 32 may be brought toward or away from the roll 12, and as stated, the spring scraper 19 influences the roll 32 in its last mentioned direction, and the result is that when dough is fed between the rolls, when the latter are turned (in a manner as will hereinafter be described) the said dough will be positively directed by the scraper off of the presser roll 32 and over the feed roll 12, and the said dough will be compressed or flattened in its passage between these rolls.

On the trunnion at one end of the feed roll 32, there is fixed a spur gear 38 to mesh with the spur gear 13. The intermeshing gears 13 and 38 cause the feed roll and the presser roll to turn in the same direction, and it will be apparent that the intermeshing spur gears will have a tendency to force the roll 32 away from the roll 12, and for this reason I have arranged the latching means for the hood or cover, (constituting the rod or bolt 35), and the lug 36 off of the center and nearest the end of the machine provided with the intermeshing spur gears. Also it is important that the presser roll 32 be sustained in longitudinal alinement with the feed roll 12, and this is accomplished by adjusting the headless bolts 26 on the block 25 to permit of either a longitudinal, lateral or vertical movement of the hood or cover 22 on said block 25. The block 25, as previously stated, is freely mounted or floatingly arranged in the notch 24 of the ear 23 for the hood or cover and, therefore, by the adjustment of the headless bolts 26 may be moved either longitudinally, laterally or vertically and by again screwing the bolts 26 home, or in contact with the opposite faces of the blocks the hood or cover is thus adjusted in either vertical, lateral or longitudinal positions and effectively held so adjusted. These are important features of the invention. It may here be stated that there is no positive connection, except as above stated, between the trunnions of the presser rolls and the hood or cover, but it is to be understood that the presser roll is at all times under the tension of the spring staple 19, so that when the cover is raised such tension will tend to cause the feed roll to move with the cover a sufficient distance to permit of the operator grasping both the feed roll and cover.

The ends 7 and 8, at the front of the machine have passed through the leg portions thereof a rod 39. On one end of this rod there is pivotally secured the lug extension 40 one one end of a hood or cover 41, substantially similar to the hood or cover 22. The lug 40 is formed with a projecting lip 42 that is in the path of contact with the stop lug 43 on one of the legs of the frame, and by virtue of such contact the outward swinging of the hood or cover 41 is limited. The lug or extension 42 on the second end of the hood or cover 41 is indicated for distinction by the numeral 44, and this lug or extension is widened and is centrally notched, as at 45. Fixed on the rod 39 and received in the notch 45 there is a block 46. The arms on the outer end of the lug provided by the notch 45 have screwed therethrough headless bolts 47, and these bolts contact with the opposite faces of the block 46. By adjusting the headless bolts 47 the floating block 46, and the rod 39 carried thereby, may be moved to different positions in the notch 45, and as a result this end of the hood or cover 41 may be adjusted toward or away from the machine. It is to be noted that the adjusting means for the hood or cover are arranged on the side of the machine provided with the intermeshing toothed wheels so that a positive co-engagement of these wheels is thereby insured, as is likewise a smooth turning of all of the rollers employed.

The sides or ends of the hood or cover 41 are bifurcated, as at 48, and journaled in these bifurcations there are trunnions 49 on the ends of a rolling cutter 50. The rolling cutter is provided with spaced cutter discs 51, and by mounting the rolling cutter in the hood or cover 41, as above stated, it will be noted that the same can be readily removed therefrom, and other rolling cutters having discs arranged at a greater or less distance apart, according to the width of the noodles to be cut, may have their trunnions arranged in the bifurcations 48 of the hood.

One of the trunnions 49 has fixed thereon a spur gear 52 to mesh with the spur gear 13 when the cover is swung to closed position. The free or outer edge of the cutter is provided with a bifurcated lug extension 53 designed to receive therethrough the threaded end 28 of the rod or bolt 27. This lug is contacted by the nut member 29 which is screwed on the arm 28. The bifurcated lug 53 is arranged off of the center of the hood or cover 41, being nearest the end thereof, provided with the spur gear 52 to hold the spur gear 52 in positive engagement with the spur gear 13 and thereby avoid any tendency of the hood or cover and the rolling cutter journaled therein moving away from the remainder of the machine. The rolling cutter is sustained

in longitudinal alinement with the feed roll 12 by adjusting the headless bolts 47 on the block 46 to move the hood or cover 41 either longitudinally or laterally with respect to the block.

Hung on the trunnions of the rolling cutter there are angle brackets 54. The inwardly directed lower ends of these brackets are received between the spaced but connected plates 55—55 that constitute the body portion of a comb-like scraper 56. The fingers 57 of the scraper are arranged between the disc cutters of the rolling cutter, and the plates 55—55 are preferably formed by bending the outer edge of the body portion of the comb-like scraper. It is important that the body of the comb-like scraper be strengthened so that the same will not yield or bend and a construction as just described successfully accomplishes this purpose. The angle ends of the brackets 54 are held between the body plates 55—55 of the comb-like scraper 56 by bolts 57 which are engaged by suitable nuts. The rounded edge 59 which connects the plates 55—55, is centrally contacted by a lip or protrusion 41′ at the center and on the lower edge of the housing or cover 41, and the end members of the frame of the machine are formed with inwardly directed lugs 60 which contact with the toothed portions 57 of the comb-like scraper for holding the ends thereof against the rolling cutter and the said teeth 57 between the discs of the rolling cutter. In this manner it will be seen that the comb-like scraper is effectively and positively retained in operative position without impairing the inherent elasticity of the outer ends of the fingers 57.

In the practical operation of my novel machine the dough is fed between the rolls 12 and 32. It should be stated that the dough is flattened by an ordinary hand roller, and if the thickness of the dough is to be materially reduced the hood or cover 41 and the rolling cutter carried thereby is swung outwardly from the machine, and sustained in such position by the contact of the lip 42 with the stop lug 43. This permits the dough being continuously passed between the rolls 12 and 32, and, of course, the thumb nut 37 is adjusted for its passage over the dough between the said rollers. The rolls are, of course, turned by the actuating of the crank handle 14. When the dough is reduced to a desired thickness the housing or cover 41 with the rolling cutter therein, is swung toward and is latched on the frame, and the dough is again fed between the rolls 12 and 32. The spring scraper 19 not only removes any dough from the presser roll 32 but accurately directs the dough between the feed roll 12 and the rolling cutter and the dough is prevented from sticking to the rolling cutter by the fingers 57 of the comb-like scraper 56 so that the strips of noodles are discharged through the throat formed between the comb-like scraper 56 and the feed roll 12.

It will be apparent that either of the hoods or covers and the elements thereby may be swung and latched on the frame or swung therefrom independent of the other, and that the swinging of the hood or cover 22 will not influence the latching means for the hood or cover carrying the rolling cutter.

The above description refers particularly to the construction disclosed by Figures 1 to 7 of the drawings, and in Figures 8, 9, 10 and 11 thereof I have illustrated a slight modification, in which only two rolls are employed. The frame 61 has its legs mounted on a base 62. The base, adjacent to one of its ends has an elongated slot 63 therein, and the base, at the sides of the slot and adjacent to the outer ends of said slot, is formed with a pair of upstanding ears 64. Between these ears there is pivoted, as at 65, an angle clamp 66. The clamp is swingable through the slot or opening 63 and the outer branch of the clamp 66 has threaded therethrough a screw 67 that carries a binding element 68 to contact with the under face of the table 69 upon which the frame 61 is arranged. The frame, at the connecting portion of the legs thereof has aligning openings therethrough that provide bearings for the trunnions 70 on the ends of a roll 71′, similar to the roll 12. The end members of the frame, to the opposite sides of the trunnions 70, are formed with upwardly extending angularly disposed arms 71 and 72, respectively. On the arms 71 there are pivoted the lug or extension ends 73 of a hood or cover 74. One of the lugs 73 is provided with a lip extension 75 to contact with the lug 76 on one end of the frame and by virtue of such contact to hold the hood or cover swung away from the frame. The hood or cover is similar to that previously described, the ends thereof being bifurcated for the reception of trunnions 77 on the ends of a presser roll 78 or the trunnions on the ends of a rolling cutter 79. One of the arms 72 on one end of the frame is formed with an inwardly extending boss 80 in which is received one end of an angle rod 81, the second end of the rod being threaded and being received through an opening through or between the arms of a bifurcated lug 82 in the end but beyond the center of the hood or cover 74. The threaded end of the angle rod or bolt 81 is engaged by a nut 83 which contacts with the lug 82 and thereby forces the hood and consequently the roll carried thereby toward or away from the feed roll 71′. The trunnions for the rollers at one end of the machine have interengaging spur gears, and one of the trunnions 77 for the pressure roll opposite that provided with the spur gear is designed to have arranged thereon a crank handle 84. The hood is adjustable to sustain the roller journaled therein in longitudinal alinement with the feed roll 71′,

in the same manner as has heretofore been described. When the rolling cutter 79 is employed the same is provided with the comb-like scraper heretofore described, and the fingers of the scraper are held in contact between the disc blades of the rolling cutter by the engagement thereof with lugs 85 on the inner faces of the arms 71 of the frame. When the presser roll 78 is employed a spring scraper 86, similar to the spring scraper 19 is contacted by the lugs 85. In this instance, however, the spring scraper 86 has its ends provided with angle arms 87 provided with eyes to receive therethrough the trunnions 77, and the arms 87 are preferably removably connected with the scraper 86. The roll 78 is employed when the dough is to be reduced to a desired thickness, and the rolling cutter 79 is employed when this dough is to be cut into strips. In each instance the dough is delivered through the throat 88 provided between the feed roll 71′ and the presser roll or the rolling cutter.

It will be apparent from the foregoing that notwithstanding its efficiency and the facility with which the machine may be adjusted to bring about the best results, the improvement is compact and simple in construction, is susceptible of being easily operated by unskilled labor and is free of delicate parts such as are likely to get out of order after a short period of years.

Obviously the cranks 14 and 84 may be dispensed with when the device is to be driven by power and when the machine is made large in size.

Having described the invention, I claim:

1. In a machine for the purpose set forth, the combination of a frame, a feed roll journaled therein, a presser roll opposed to the feed roll, a hood pivoted to the frame and in which the presser roll is removably journaled, a scraper providing a dough directing element engaging the perimeter of the presser roll, adjustable latching means between the hood and frame and means for adjusting the hood on the frame to aline the presser roll with respect to the feed roll.

2. The combination of a frame, a feed roll journaled therein, a presser roll opposed to the feed roll, a hood pivoted to the frame and in which the presser roll is removably journaled, a scraper contacting with the perimeter of the presser roll and providing a dough directing element from said roll, adjustable means for latching the hood on the frame, and means for adjusting the hood with respect to its pivot, for the purpose set forth.

3. In a machine for the purpose set forth, a frame, a dough feed roller journaled in the frame, a hood pivotally supported in the frame, a dough presser roll journaled in the hood designed to be opposed to the presser roll, means for adjustably latching the hood on the frame, and means for laterally, vertically or longitudinally adjusting the hood with respect to its pivot, for the purpose set forth.

4. The combination of a frame, a feed roll journaled therein, and carrying a spur gear on one end thereof and its second end designed to have a handle attached thereto, a hood pivotally supported on the frame, a presser roll carried by the hood and designed to be arranged over the feed roll, a spur gear on one end of the presser roll to mesh with the first named spur gear, one of the pivots of the hood comprising a notched lug integrally formed on the hood, a pivotally supported block carried by the frame, adjusting elements passing through the arms of the notched lug and contacting with the opposed faces of the block, means in close proximity to the spur gears for adjustably latching the hood on the frame, and a combined dough scraper and director contacting the perimeter of the presser roll.

5. The combination of a frame, a dough feed roll having trunnions journaled through the ends of the frame, a spur gear on one of the trunnions and operating means on the second trunnion for revolving the roll, inwardly directed bosses on the corners at one end of the frame, a rod journaled through one of said bosses, a hood pivotally secured to the frame, a presser roll having trunnions on the ends thereof journaled through the ends of the hood, a spur gear on one of the trunnions to mesh with the first named spur gear, the pivot for the end of the hood next to the spur gears comprising a notched lug integrally formed with the hood, a block revolubly mounted on the rod, threaded elements passing through the notched lug and contacting with the opposed faces of the block, an angle rod received in the second boss of the frame, and having its outer end threaded, a lug on the hood through which the threaded end of the rod passes, a nut screwed on said rod and contacting the lug, and a combined scraper and dough director contacting the perimeter of the presser roll.

6. The combination of a frame, adjustable means for clamping the frame on a support, a feed roll journaled in the frame, a presser roll disposed over the feed roll, a rolling cutter adapted to be disposed against one side of the feed roll, pivotally supported hoods for the feed roll and the rolling cutter, intermeshing spur gears carried by the ends of the feed roll, the presser roll and the rolling cutter, means for vertically, laterally and longitudinally adjusting the ends of the hoods, next to the spur gears on their pivots, adjustable latching means disposed in close proximity to the gear end of the frame, for latching the hoods on the frame, a spring scraper engaging the periphery of the presser roll and exerting a pressure thereagainst, and a comb-like scraper engaging the perime-

ter and the sides of the cutters of the rolling cutter.

7. The combination of a frame, having a dough feed roll journaled through the ends thereof, a presser roll opposed to the dough feed roll and a rotary disc cutter opposed to the dough feed roll, and brackets hung from the ends of the rolling cutter, a comb-like scraper having its body portion rolled to receive the flanged ends of the brackets therein, means removably securing the body to the brackets, and the teeth of the comb-like scraper designed to be received between the discs of the rolling cutter and to contact with the perimeter of the cutter, and means for holding the teeth in such engagement, in combination with means for adjustably sustaining the presser roll and the rolling cutter with respect to the feed roll, and for alining said presser roll and rolling cutter with respect to the feed roll.

8. In a dough rolling and cutting machine, the combination, of a frame having a feed roll, a presser roll disposed over the feed roll, and a rotary disc cutter for cooperation with the feed roll, a pivotally supported hood in which the cutter is journaled, a comb-scraper for the disc cutter, hung from the ends thereof, and having a reinforced body portion whose ends are contacted by the hood, lugs contacting with the end teeth of the comb-like scraper, and a lip depending from the center of the hood for contacting the body portion of the comb scraper, in combination with means for adjusting the hood with respect to the feed roll, the presser roll with respect to the feed roll and means for simultaneously revolving the rollers and the cutter.

In testimony whereof I affix my signature.

LOUIS DE VITO.