

## **SPECIFICATION**

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### **A SMALL NOODLE MAKING MACHINE**

#### **BACKGROUND OF THE INVENTION**

##### **Technical Field**

The utility model relates to the field of noodle making devices, specifically to a small noodle making machine applied to restaurants to complete the whole process from noodle making to noodle cooking.

##### **Description of Related Art**

The source of noodles in the current restaurants comes mainly from the industry. Although the noodles can be produced in a large batch, the current noodle making machines are huge (each machine is about 2m high), and a large number of laborers are needed during the operation, so it is difficult to place those machines in restaurants or shops; besides, the noodles need transportation, so it fails to provide the customers with fresh noodles. Besides, some restaurants employ noodle chefs to make noodles on site, but the yield is undesirable due to limit in the labor shortage, and therefore, ordinary restaurants cannot make a great amount of noodles for customers on site.

#### **BRIEF SUMMARY OF THE INVENTION**

To overcome the defects in the prior art, the utility model aims to provide a small noodle making machine capable of completing the whole process from noodle making to noodle cooking, which is convenient to use in a restaurant to provide fresh noodles for customers.

To fulfill the above objective, the utility model employs the following technical

solution: A small noodle making machine comprises a first machine unit, a flour filter, a mixer and a first noodle pressing unit which are disposed on the first machine unit, and a second noodle pressing unit and a third noodle pressing unit which are disposed at stations in the rear of the first noodle pressing unit in turn, and also comprises a noodle cooking device disposed at a station in the rear of the third noodle pressing unit. The noodle cooking device comprises a second machine unit, two noodle pressing rollers, two roller gears, two adjusting knobs, a flour box, a noodle pressing motor, a noodle pressing gearwheel, a noodle pressing pinion, two conveyor belt rollers, a conveyor belt, a winding drum, two noodle cutting rollers, a gear set located at one end of the noodle cutting roller and a noodle cutting tool which are disposed on the second machine unit, a noodle cooking cabinet located at a station in the rear of the second machine unit, a turntable unit disposed in the noodle cooking cabinet, plural noodle cooking containers placed on the turntable unit, a heater disposed in the noodle cooking cabinet and located below a turntable, a controller disposed on the cabinet. The noodle pressing pinion is disposed at one end of the noodle pressing motor and connected with the noodle pressing gearwheel. One of the conveyor belt rollers is located below the two noodle pressing rollers, and one end of this conveyor belt roller is provided with a driven wheel connected with the noodle pressing gearwheel through a belt. One end of each of the two noodle pressing rollers located on the same side is respectively provided with a roller gear, while the noodle pressing gearwheel is disposed at the other end of one of the noodle pressing rollers, and the two conveyor belt rollers are connected together through conveyor belts. One end of each of the two adjusting knobs contacts one of the noodle pressing rollers to adjust the space between the two noodle pressing rollers. The noodle cutting motor is connected with the gear set through a chain, and at least one noodle cooking container is located below the noodle cutting.

The gear set comprises a driving gear disposed at one end of the noodle cutting motor, a driven gear disposed on the second machine unit and located above the driving gear, a first gear coaxial with the driven gear and located on the inner side of the driven gear, a second gear disposed at one end of one of the noodle cutting roller and engaged with the first gear, a third gear disposed on the second machine unit, located below the second gear and engaged with the second gear, and a cutting gear disposed at one end of the noodle cutting tool and engaged with the third gear; the driving gear is connected with the driven gear through a chain; the ends of the two noodle cutting rollers on the same side are respectively provided with a noodle cutting gear, and one of the noodle cutting gears is coaxial with the second gear and located on its inner side.

The turntable unit comprises a control button, a turntable motor, a turntable gear, a turntable center shaft, a center shaft gear and a turntable; the control button is disposed on the top of the noodle cooking cabinet and electrically connected with the turntable motor; the turntable motor is disposed in the noodle cooking cabinet; the upper end of the turntable center shaft is disposed in the noodle cooking cabinet; the center shaft gear is disposed on the turntable center shaft and connected with the turntable gear through a chain; the turntable is disposed at the lower end of the turntable center shaft and the turntable is provided with plural recesses for placing the noodle cooking containers.

The other conveyor belt roller is disposed on the second machine unit; at a station in the rear of this conveyor belt roller, two brackets are disposed; and said two brackets are disposed on the second machine unit for replacing a transition roller.

The utility model has the following beneficial effects: the flour is put in the flour filter and then passes through the mixer, the first, second and third noodle pressing units to form a noodle fabric; the noodle fabric is pressed by the two noodle pressing

rollers; the space between the two noodle pressing rollers is adjusted through the two adjusting knobs to control the thickness of the noodle fabric; the flour box is located in front of the two noodle pressing rollers; when the noodle fabric pressed for two times moves below the flour box, the flour box automatically spreads the dry flour to avoid the noodle fabric from getting sticky; the conveyor belt on the conveyor belt wheel transmits the noodle fabric to the position of the winding drum; then, the noodle fabric is winded to be cylindrical, or the noodle fabric directly passes through the two noodle cutting roller to be cut into noodles; the cutting time preset in the noodle cutting rollers is used to control the weight of the noodles (for example, 5-s cutting can produce two bowls of noodles), so the noodles with designated weight can be cut off by the noodle cutting tool and then automatically fall into the noodle cooking container; the turntable unit can convey the noodle cooking container with the noodles to the next position and transfer an empty noodle cooking container at the previous position to the position below the noodle cutting tool; and the heater disposed in the cabinet boil the water to cook the noodles, thus completing the whole process from noodle cutting to noodle cooking; the small noodle making machine is convenient to use in a restaurant to provide fresh noodles for customers.

## **BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS**

Figure 1 is a three-dimension view of the mixer, the first and second noodle pressing units of the utility model.

Figure 2 is a three-dimension view of the third noodle pressing unit of the utility model.

Figure 3 is a three-dimension view of the noodle cooking device of the utility model.

Figure 4 is a three-dimension view of the noodle cooking cabinet of the utility model.

Figure 5 is a three-dimension view of the noodle pressing unit on the noodle cooking

device of the utility model.

Figure 6 is a three-dimension view of the gear set on the noodle cooking device of the utility model.

Figure 7 is a three-dimension view of the turntable unit on the noodle cooking device of the utility model.

## **DETAILED DESCRIPTION OF THE INVENTION**

To make those skilled in this field better understand the solution of the utility model, the utility model is further described in detail with reference to the attached drawings and implementation modes.

As shown in figure 1-7, a small noodle making machine comprises a first machine unit 1, a flour filter 2, a mixer 3 and a first noodle pressing unit 4 which are disposed on the first unit machine, a second noodle pressing unit 5 and a third noodle pressing unit 6 which are disposed at stations in the rear of the first noodle pressing unit in turn, and also comprises a noodle cooking device disposed at a station in the rear of the third noodle pressing unit in turn. The noodle cooking device comprises a second frame unit 7, two noodle pressing rollers 8, two roller gears 9, two adjusting knobs 10, a flour box 11, a noodle pressing motor 12, a noodle cutting motor 13, a noodle pressing gearwheel 14, a noodle pressing pinion 15, two conveyor belt rollers 16, a conveyor belt 17, a winding drum 18, two noodle cutting rollers 19, a gear disposed at one end of the noodle cutting roller and a noodle cutting tool 20 which are disposed at stations in the rear of the first noodle pressing unit in turn, a noodle cooking cabinet 21 located at a station in the rear of the second machine unit, a turntable unit 22 disposed in the noodle cooking cabinet 23, plural noodle cooking containers placed on the turntable unit, a heater (not shown in the figure) disposed in the noodle cooking cabinet and located below the turntable, and a controller 24 disposed on the noodle

cooking cabinet; wherein,

the first machine unit 1, the flour filter 2, the mixer 3 and the first noodle pressing unit 4 which are disposed on the first machine unit in turn, and the second noodle pressing unit 5 and the third noodle pressing unit 6 disposed at stations in the rear of the first noodle pressing unit in turn are all identical with the structure of the current small noodle making machine and therefore are not described in detail in this text; the heater for heating water to cook the noodles also employs the prior art, capable of completing the action of cooking noodle after being electrified to generate heat.

The noodle pressing pinion 15 is disposed at one end of the noodle pressing motor 12 and is connected with the noodle pressing gearwheel 14 through a chain 31; one of the conveyor belt rollers 16 is located below the two noodle pressing rollers 8; one end of this conveyor belt roller is provided with a driven wheel 33 connected with the noodle pressing gearwheel 14 through a belt 32; one end of each of the two noodle pressing rollers on the same side is respectively provided with a roller gear 9; the noodle pressing gearwheel 14 is disposed at the other end of one of the noodle pressing rollers; the two conveyor belt rollers 16 are connected together through a conveyor belt 17; the front end of each of the two adjusting knobs 10 contacts one of the noodle pressing rollers 8 to adjust the space between the two noodle pressing rollers; the noodle cutting motor 13 is connected with the gear set through a chain 35; and at last one noodle cooking container 23 is located below the noodle cutting tool 20.

The other conveyor belt roller 16 is disposed on the second machine unit; at a station in the rear of this conveyor belt roller, are disposed two brackets 37; and the two brackets are disposed on the second machine unit for replacing a transition roller.

The gear set comprises a driving gear 25 disposed at one end of the noodle cutting motor 13, a driven gear 26 disposed on the second gear and located above the driving gear, a first gear 27 coaxial with the driven gear and located on the inside of the driven

gear, a second gear 28 disposed at one end of one of the noodle cutting roller 19 and engaged with the first gear, a third gear 29 disposed on the second machine unit 7, located below the second gear and engaged with the second gear, and a cutting gear 30 disposed at one end of the noodle cutting tool 20 and engaged with the third gear; the driving gear 25 is connected with the driven gear 26 through a chain 35; the ends of the two noodle cutting rollers 19 on the same side are respectively provided with a noodle cutting gear 36, and one of the noodle cutting gear is coaxial with the second gear 28 and located on its inner side.

The turntable unit 22 comprises a control button 221, a turntable motor 222, a turntable gear 223, a turntable center shaft 224, a center shaft gear and a turntable 225; the control button 221 is disposed on the top of the noodle cooking cabinet 21 and electrically connected with the turntable motor 222; the turntable motor is disposed in the noodle cooking cabinet 21; the upper end of the turntable center shaft 224 is disposed in the noodle cooking cabinet 21; the center shaft gear is disposed on the turntable center shaft and connected with the turntable gear through a chain 38; the turntable 225 is disposed at the lower end of the turntable center shaft and the turntable is provided with plural recesses 226 for placing the noodle cooking containers 23.

A noodle fabric formed by using the first, second and third noodle pressing units 4, 5, 6 is delivered to the two noodle pressing rollers 8 on the noodle cooking device to be further thinned; the thinned noodle fabric is delivered to the conveyor belt 17 and keeps moving forward. During the delivery, the flour in the flour box 11 above conveyor belt are uniformly sprayed on the noodle fabric to prevent the superimposed parts of the noodle fabric are adhered to each other when the noodle fabric is winded into a cylinder. At this time, the noodle fabric can be winded into a cylinder by the winding drum 18 on the second machine unit 7 to be stored, or the noodle fabric can be delivered to the transition roller placed on the two brackets 37 and fed to the noodle

cutting roller 19 to be cut into noodles. The noodles keep moving downward until reaching the noodle cutting tool 20. The outer surface of the noodle cutting tool 20 is provided with blades as long as the noodle cutting tool. During rotation of the noodle cutting tool, when the blades rotate to the position where the noodle is cut, the blades cut off the noodle coming from the noodle cutting roller 19; the cut noodles fall into the noodle cutting container 23 below the noodle cutting tool 20. On the noodle cutting tool 20, the mass of the noodles to be cut in a certain period of time can be set, for example, 100g, 150g, etc. The noodle cooking container below the noodle cutting tool receives the noodles, and after a designated time, after the button 221 is pressed, the turntable 225 starts to rotate to move the next noodle cooking container to be below the noodle cutting tool and start to receive the noodle. After the noodles are cooked, the noodle cooking container is taken out, and the next noodle cooking container is placed. This process is repeated to provide the customers with fresh noodles.

The present invention is described with through embodiments. Those skilled in this field know that the present invention have many modifications and changes without departing from the spirit of the present invention, and the Claims also include those modifications and changes without departing the spirit of the present invention.

**Claims:**

1. A small noodle making machine, comprising a first machine unit, a flour filter, a mixer and a first noodle pressing unit disposed on the first machine unit, and a second noodle pressing unit and a third noodle pressing unit which are disposed at stations in the rear of the first noodle pressing unit in turn, characterized by also comprising a noodle cooking device disposed at a station in the rear of the third noodle pressing unit; said noodle cooking device comprises a second machine unit, two noodle pressing rollers, two roller gears, two adjusting knobs, a flour box, a noodle pressing motor, a noodle pressing gearwheel, a noodle pressing pinion, two conveyor belt rollers, a conveyor belt, a winding drum, two noodle cutting rollers, a gear set located at one end of the noodle cutting roller, and a noodle cutting tool which disposed on the second machine unit, a noodle cooking cabinet located at a station in the rear of the second machine unit, a turntable unit disposed in the noodle cooking cabinet, plural noodle cooking containers placed on the turntable unit, a heater disposed in the noodle cooking cabinet and located below a turntable, and a controller disposed on the cabinet; said noodle pressing pinion is disposed at one end of the noodle pressing motor and connected with the noodle pressing gearwheel; one of the conveyor belt rollers is located below the two noodle pressing rollers, and one end of this conveyor belt roller is provided with a driven wheel connected with the noodle pressing gearwheel through a belt; one end of each of the two noodle pressing rollers located on the same side is respectively provided with a roller gear, while the noodle pressing gearwheel is disposed at the other end of one of the noodle pressing rollers, and the two conveyor belt rollers are connected together through conveyor belts; one end of each of the two adjusting knobs contacts one of the noodle pressing rollers to adjust the space between the two noodle pressing rollers; the noodle cutting motor is connected with the gear set through a chain, and at least one noodle cooking container is located below the noodle cutting.

2. The small noodle making machine according to Claim 1, characterized in that, said gear set comprises a driving gear disposed at one end of the noodle cutting motor, a driven gear disposed on the second machine unit and located above the driving gear, a first gear coaxial with the driven gear and located on the inner side of the driven gear, a second gear disposed at one end of one of the noodle cutting rollers and engaged with the first gear, a third gear disposed on the second machine unit, located below the second gear and engaged with the second gear, and a cutting gear disposed at one end of the noodle cutting tool and engaged with the third gear; said driving gear is connected with the driven gear through a chain; the ends of the two noodle cutting rollers on the same side are respectively provided with a noodle cutting gear, and one of the noodle cutting gears is coaxial with the second gear and located on its inner side.

3. The small noodle making machine according to Claim 1, characterized in that, the turntable unit comprises a control button, a turntable motor, a turntable gear, a turntable center shaft, a center shaft gear and a turntable; said control button is disposed on the top of the noodle cooking cabinet and electrically connected with said turntable motor; said turntable motor is disposed in the noodle cooking cabinet; the upper end of the turntable center shaft is disposed in the noodle cooking cabinet; the center shaft gear is disposed on the turntable center shaft and connected with the turntable gear through a chain; said turntable is disposed at the lower end of the turntable center shaft and the turntable is provided with plural recesses for placing the noodle cooking containers.

4. The small noodle making machine according to Claim 1, characterized in that, the other conveyor belt roller is disposed on the second machine unit; at a station in the rear of this conveyor belt roller are disposed two brackets; and said two brackets are disposed on the second machine unit for replacing a transition roller.