

Design & Fabrication of Sugar Globules Making Machine

Prof. N. H. Chahande¹, Amit H. Pall², Pranjali P. Zade³, Akshay V. Nimje⁴, Tushar K. Kharwade⁵

^{1, 2, 3, 4, 5} Dept of Mechanical Engineering

^{1, 2, 3, 4, 5} GW CET, Nagpur, Maharashtra

Abstract- The use of Homeopathic medicine is increasing day by day due to no side effect of homeopathic medicine and expensive treatment of allopath. Homeopathic globules are commonly used in clinical practice. so we decide to make a compact sugar globules forming machine.

Keywords- Sugar Globules making machine, Pills Making Machine, Boilie making Machine.

I. INTRODUCTION

The project proposes to manufacture Sugar Globules which is an adjunctant for taking Homeopathic medicines. It is based on the principle that “like cures like”. In simple words, it means that any substance, which can produce symptoms in a healthy person, can cure similar symptoms in a person who is sick.

II. OBJECTIVE

1. The main objective of this project is to Design and fabrication of manually operate sugar globules making machine which can be apply at small industries, laboratories.
2. Proposed design will produce less noise, vibrations and to reduce time consumption for manufacturing Sugar Globules.
3. To avail the opportunity to produce globules in small scale industries
4. To make process simple, effective & Less Costly.
5. To avail the benefits of homeopathic treatment to rugged terrain.

III. REVIEW ON LITRATURE

[1] 378,231. Rolling and cutting dough. ENERGEN FOODS CO., Ltd., Emergent Works, Bridge Road, Willesden, London, and POULTNEY, S. V., Pen-y-bryn, West Drive, Harrow Weald, Middlesex. Sept. 14, 1931

In a machine for moulding lumps of dough into cylindrical shape and cutting the cylinders into slices, a

revolving drum co-operates with stationary transversely convex moulding members.

[2] Applicant: MAR DESIGN S.R.L. [IT/IT]; Via Aldo Moro, 9/C, 1-41012 Carpi (MO) (IT). Inventor: OLIVA, Marco c/o Mar Design S.r.L, Via Aldo Moro, 9/C, 1-41012 Carpi (MO) (IT). Agent: BRUNACCI, Marco; Brunacci & Partners S.R.L, Via Scaglia Est, 19-31, 1-41 126 Modena (IT). International Patent Classification: A21C 7/02 (2006.01) A01K 97/04 (2006.01)

Description of the Work - The main aim of the present invention is to provide a machine for the manufacture of Boilie for sport fishing, particularly carp-fishing, which is practical, easy and functional to use, also allows working very hard and compact meal mixes, is able to achieve a high degree of spherical shape of the Boilie, and, at the same time, has a particularly low production cost and sales price.

[3] Name and address of the owner: Benz, Helmut A., Dipl.-Ing., 85135 Tatting, The following information is taken from the documents submitted by the applicant(54) Designation: Boilie machine / dough ball machine / dough sausage machine(57) Main claim: Machine for producing dough sausages / spherical or pillow-shaped pasta / Boilie, characterized in that several rollers (preferably 4 pieces) with the same or different Diameters on two or more axes are connected to each other in such a way that dough sausages as well as pillow-shaped and spherical products can be produced

[4] Inventor: Abecassis, Jacky 8 rue du Prieure F-69130Ecully (FR) © Inventor: Baume, Bernard Pare de Vieux Logis Route du Mont Verdun F-69760 Limonest (FR) © Inventor: Favier, Andre Marcel Rue des Gabettes Dagneux F-01120Montiuel (FR) © Agent: Maisonnier, Jean 28 Servient Street F-69003 Lyon (FR)

Description of Work: The invention relates to the bulk production of balls of sugar or the like. Sugar balls are forming inside the rotating bowl (18). The mobile cart (24) on its way to bearing (25) carries a ramp (27) where juxtaposed magnetrons (8) emitting heating microwaves. We thus reduce the drying time of the sugar balls, and we improve their

porosity for future impregnation. Application: granules or sugar globules for homeopathic medicines, sweets, draggers, confectionery

[5] ROLLER BOARD INSERT PAR, Applicant: Jennifer Cucci, Surprise, AZ (US) Inventor: Jennifer Cucci, Surprise, AZ (US). Patent No.:US D691431 SClaim: The roller board insert pair shown in the non-claimed environment of a roller board assembly, each of the two roller board inserts that make up the pair being identical to one another.

Modified work

1. Dough Gun- standard Dough gun is used with long base offers convenience to expensive set up with modification in the Nozzle having hole diameter of 5mm in which dough is pressed.
2. we have made operation from manual to semi manual by replacing roller board with machine having two nylon roller in which the vermicelli is cut by u grooves and at the same time it also pressed to Spherical shape as well.

[6] Inventor: Abecassis, Jacky 8 rue du Prieure F-69130Ecully (FR) © Inventor: Baume, Bernard Pare de Vieux Logis Route du Mont Verdun F-69760 Limonest (FR) © Inventor: Favier, Andre Marcel Rue des Gabettes Dagneux F-01120Montiuel (FR) © Agent: Maisonnier, Jean 28 Servient Street F-69003 Lyon (FR)

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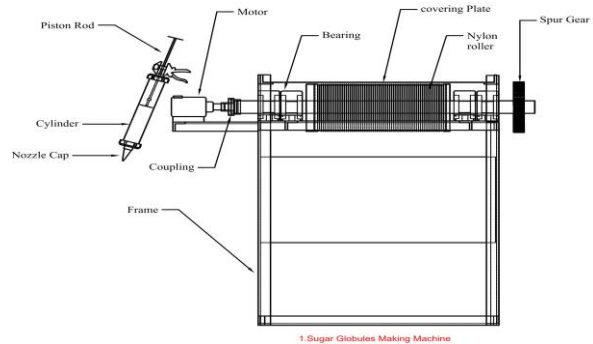
Modified work

1. The New Fabrication includes, compact sugar globules machine in which we make a grooves with 3 mm on both roller that is 0.15 mm half circle on fist roller and half circle on second roller. Machine is driven by electric motor to accelerate the speed of producing Globules and reduce human effort.
2. We reduce the nozzle cap Diameter to 5 mm from which the vermicelli having dimension 5 mm will extrude from dough Gun.

IV. FIGURES & TABLES

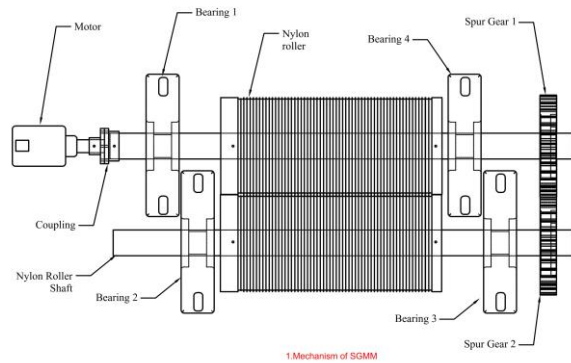
Figure shows complete set up of sugar Globules Making Machine. Complete set up consist of two equipment

- [1] Boilie Making Machine
- [2] Dough Gun



Component of Sugar Globules Making Machine

Table no. 3 Component of sugar Globules Making Machine				
Sr. No.	Factor	Unit	Symbol	Value
A Dough Gun				
1	Dough gun cylinder length	mm	L_n	230
2	Outer Diameter	mm	D_o	56
3	Inner Diameter	mm	D_i	50
4	Handle Length	mm	h_1	30
5	Trigger Length	mm	L	100
6	Plunger Rod Length	mm	d	300
7	Plunger Plate Diameter	mm	d	50
8	Nozzle Cap width	mm	w	20
9	Nozzle diameter	mm	d_i, d_o	60, 65
10	Ladder thickness	mm	t	3
B Sugar Globules Forming Machine				
1	Nylon Roller (Length, Outer Diameter, Inner Diameter)	mm	L, D_o, D_i	457.2, 58.42, 20
2	Shaft	mm	d	20
3	Pedestal Bearing	cm	d_i, d_o	20, 29
4	Spur Gear (teeth, width, diameter)	rpm,		
5	Muff Coupling (Diameter of Hub)	mm	D_1, D_2	21, 30
6	D.C. Motor (rpm, Torque)	rpm, N-mm		30



V. WORKING

1. Plug the adaptor and ensure the motor and ON-OFF switch working properly.
2. Assemble the all the part of dough gun with nozzle, piston, piston rod. Make sure the spring mechanism functions correctly.
3. With 5 mm nozzle insert into the aluminium dough gun end cap, firmly screw the end cap on the filled dough gun.
4. Start forming the vermicelli manually applying pressing the trigger mechanism.
5. Ensure bait catching tray is properly placed at the roller out flow.
6. Start Boilie machine feed the vermicelli in to the Boilie machine over the rollers.
7. As the Boilie falls into the catching tray, remove crushed material and small globules material at the end of the roller. Collect this material for re-extruding in the final dough gun of the lot.

VI. RESULT & DISCUSSION

Mini machine for making Sugar Globules by extruding Nylon Roller has been designed and developed to reduce the total costing of Large set up. Machine is suited for small clinics & pharmacy collage, small pharmacy as well.

VII. CONCLUSION

The mini machine for making Sugar Globules from Vermicelli has been designed and fabricated.

VIII. FUTURE SCOPE

1. In Future this Set up is to fully Automatic Work with automatic Dough Gun,
2. Vermicelli Will Automatically Pushed in between Roller by Belt Conveyor.

3. Multiple Rollers will be used with different size of grooves cut on it (10 mm, 5mm, 3mm and 1mm).
4. Multiple Size of sugar Globules can be obtained from Single Set up.
5. Ayurvedic Pills of Pillow Shape Can also be produces By Boilie machine by Adjusting Distance between Rollers.
6. For Fine Surface Globules Another Rotating Drum Can Imply To Roller Shaft.

IX. ACKNOWLEDGMENTS

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REFERENCES

- [1] Lesley Crawford (2005). The Fishing Companion: Amazing Angling, Curious Catches & Pescetarian Passions. Robson. ISBN 1-86105-919-1.
- [2] How to make your own boilies Archived January 26, 2013, at the Wayback Machine Pop-up baits Archived June 7, 2010, at the Wayback Machine
- [3] Chaplin MF. The memory of water: an overview. Homeopathy. 2007; 96:143–150.
- [4] Sukul NC, De A, Dutta R, Sukul A, Sinhababu SP. Nux vomica 30 prepared with and without succession shows antialcoholic effect on toads and distinctive molecular association. Br Homeopath J. 2001;90:79–85.
- [5] Rey L. Thermoluminescence of ultra-high dilutions of lithium chloride and sodium chloride. Phys A. 2003; 323:67–74. Demangeat JL. Nanosized solvent superstructures in ultramolecular aqueous dilutions: twenty years' research using water proton NMR relaxation. Homeopathy. 2013; 102:87–105.
- [6] Roy R, Tiller WA, Bell I, Hoover MR. The structure of liquid water; novel insights from materials research; potential relevance to homeopathy. Mater Res Innov. 2005; 9:577–608.
- [7] Ludwig W. Physikalische Grundlagenforschung in Bezug auf Informations speicherung in lebenden Systemen und homöopathischen Medikamenten. Erfahrungsheilkunde. 1991; 4:293–295.
- [8] Korenbaum VI, Chernysheva TN, Apukhtina TP, Sovetnikova LN. Absorption spectra of electronic-homoeopathic copies of homoeopathic nosodes and placebo have essential differences. Forsch Komplementmed. 2006; 13:294–297.