Aug. 4, 1925. 1,548,505

O. W. BECKER

DEVICE FOR PRODUCING SEAMLESS ARTIFICIAL SAUSAGE SKINS

Filed June 8, 1925

Fig. 3.

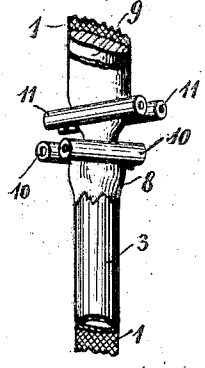


Fig. 1.

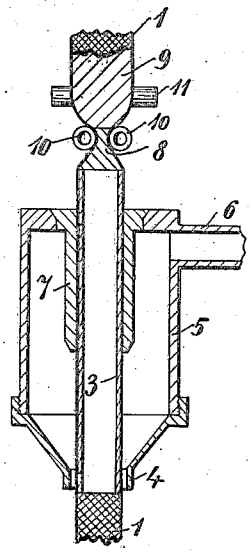


Fig. 2.

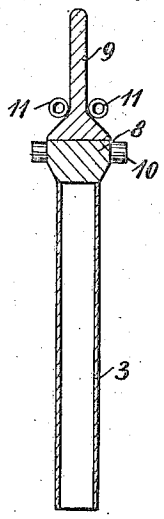


Fig. 4.

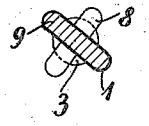


Fig. 5.

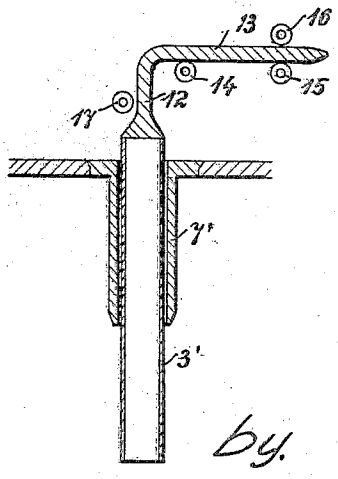
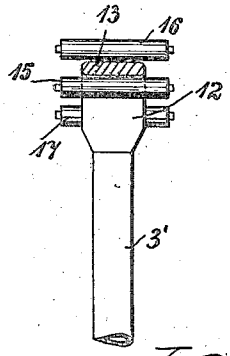


Fig. 6.



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UNITED STATES PATENT OFFICE.

OSKAR WALTER BECKER, OF STUTTGART, GERMANY.

DEVICE FOR PRODUCING SEAMLESS ARTIFICIAL SAUSAGE SKINS.

Application filed June 8, 1925. Serial No. 35,830.

To all whom it may concern:

Be it known that I, OSKAR WALTER BECKER, citizen of Germany, residing at Stuttgart, Germany, have invented certain new and useful Improvements in Devices for Producing Seamless Artificial Sausage Skins (for which I have filed an application in Germany on 4th February 1924), of which the following is a specification.

The present invention refers to a device for manufacturing seamless artificial sausage skins by applying a convenient coagulating or hardening substance, such as animal or vegetable albumin, on a seamless tubular fabric (or hose) in a thin film which, after the said substance is sufficiently dried, is removed therefrom. My copending U S. application, Serial No. 35,829 filed June 8, 1925 describes and claims the process which this apparatus is adapted to carry out. The new device comprises an annular nozzle, consisting of a core preferably of circular cross section and of a ring surrounding said core with a certain amount of clearance. By the aid of this nozzle the said substance is applied preferably under pressure, the inner part or core of which nozzle serving as a support or guide for the tubular fabric which is pulled through the nozzle while the said substance is applied. The said core may be cylindrical but at one or more places is given an irregular shape, that is a shape differing from the cylindrical which places serve as a bearing for supporting members, rollers or the like, to which the forces or the strains of the said core are transmitted. The variations in the shape of the core are such that the peripheral lengths of all cross sections are essentially equal to that of the tubular fabric section so that folds of the latter are avoided. By these means the core will be held floatingly in the same position without the supporting members hindering the longitudinal movement of the tubular fabric. Consequently hoses or tubes of any desired length can be used. This would not be possible, if the core was supported from inside of the hose since the length of the hose would be limited by that of the holding members.

In the drawing Fig. 1 is a vertical section of the device forming the invention.

Fig. 2 is a vertical section of the floating core taken at right angles to that of Fig. 1.

Fig. 3 is a perspective view of the core, and

Fig. 4 is a sectional plan of the core.

Fig. 5 is a vertical section of a second form of construction, and

Fig. 6 a sectional side view of Figure 5.

The hose or tubular fabric 1, to which the mass of animal or vegetable albumin is applied by pressure, runs over a core 3 which is preferably formed by a hollow cylinder projecting concentrically into a ring formed by the outlet opening 4 of a vessel 5. By the pipe 6 this vessel 5 is filled with albumin by means of pressure, the albumin passing out through the annular space between the fabric surrounding the core 3 and the outlet opening 4, these parts thus forming an annular nozzle. When the tubular fabric 1 is pulled along it is coated with a film of albumin. The core 3 together with the tubular fabric is held by a tubular guide 7 of sufficient size to allow the fabric to pass through the space between the guide 7 and the core 3. To take up the weight of the core and the strain, which it has to undergo by the hose or tubular fabric being pulled along the core there is provided above or outside the vessel 5 some irregularities or variations in cross section of the core while maintaining the peripheral lengths of all cross sections substantially constant. In the construction shown in Figs. 1 to 5 this variation in shape is provided by two flat parts 8 and 9 arranged at 90° to one another. Two pairs of rollers 10 and 11 are arranged to bear against the flat parts and thus constitute supporting members to take up all forces or strains exerted by the operation on the floatingly held core. The flattened parts 8 and 9, as has been explained above are so dimensioned that, though differing in shape, the peripheral lengths of all cross sections are constant, and are equal to the peripheral length of a cross section of the fabric. When care is taken, that all changes in shape of the core answer more or less this condition, the warrant is given, that the tubular fabric 1, in running over the core, will not be folded but will pass the guide rollers 10 and 11 smoothly. These rollers support the core merely from outside preventing any longitudinal movement thereof. The hose or tubular fabric may be given any desired length without necessitating any prolongation of the core 3.

A similar construction is shown in Figs. 5 and 6. In this case the core is provided with only one flattened part 12 which, how-

ever, is so bent, that one portion 13 being preferably horizontal, acts like a hook. This flattened part 12 can easily be supported by rollers 14, 15, 16 and 17 in such a manner that all forces or strains of the core are transmitted to these rollers. Also in this case the circumference of the flattened part 13 is of such size, that the tubular fabric will pass thereon without folding.

The proper positioning of the core aside from the means just described will also be assisted by the tubular guide 7, and the mass filled into the vessel 5 being under pressure is compelled to completely surround that part of the core intermediate the opening 4 and the guide 7.

I claim:

1. A device for producing seamless artificial sausage skins, comprising, an annular nozzle formed of an elongated core and a ring surrounding the core, the core being of uniform peripheral dimension throughout its length and of non-uniform cross section, and supporting members bearing against the core at irregularities of section of the core.

2. A device for producing seamless artificial sausage skins, comprising, an annular nozzle formed of an elongated core and a ring surrounding the core, the core being of uniform peripheral dimension throughout its length and of non-uniform cross section, and supporting members bearing against the core at irregularities of section of the core, a vessel to be filled with liquid material, the ring forming the outlet of the vessel, the core projecting through, and outside of, the vessel, the supporting members floatingly holding the core in position in the vessel.

3. A device for producing seamless artificial sausage skins, comprising, an annular nozzle formed of an elongated core and a ring surrounding the core, the core being of uniform peripheral dimension throughout its length and of non-uniform cross section, and supporting members bearing against the core at irregularities of section of the core, the supporting members being rotatable rollers whereby to allow a tubular fabric drawn over the core to freely pass between the core and rollers.

4. A device for producing seamless artificial sausage skins, comprising, an annular nozzle formed of an elongated core and a ring surrounding the core, the core being of uniform peripheral dimension throughout its length and of non-uniform cross section, and supporting members bearing against the core at irregularities of section of the core, a vessel to be filled with liquid material, the ring forming the outlet of the vessel, the core projecting through, and outside of, the vessel, the supporting members floatingly holding the core in position in the vessel, that portion of the floating core which is within the vessel being circular in cross section, the irregularities in the cross section of the core being flattened generally rectangular shaped sections.

5. A device for producing seamless artificial sausage skins, comprising, an annular nozzle formed of an elongated core and a ring surrounding the core, the core being of uniform peripheral dimension throughout its length and of non-uniform cross section, and supporting members bearing against the core at irregularities of section of the core, a vessel to be filled with liquid material, the ring forming the outlet of the vessel, the core projecting through, and outside of, the vessel, the supporting members floatingly holding the core in position in the vessel, a tubular guide at the upper part of the vessel, the floating core projecting through the guide with sufficient clearance to allow a tubular fabric to pass between the core and the guide.

In testimony whereof I have signed my name to this specification.

OSKAR WALTER BECKER.