

1/11 © EPODOC / EPO

PN - [US2021077308](#) A1 20210318
PR - CH20180000426 20180329; WO2019IB52261 20190320
AP - US201917042318 20190320
DT - **
CCI - [A61F13/2082](#)
CI - A61F13/2082 (EP, CH, IL)
- A61F13/2085 (KR)
- A61F13/2088 (KR, US)
- A61F13/2094 (KR)
PA - RUGGLI PROJECTS AG [CH]
TI - DEVICE FOR SHAPING **TAMPONS**
AB - The present invention relates to an apparatus for forming **tampons**, which comprises a plurality of processing drums 2, 4, 5.1, 5.2 for forming a tampon from band-form material. It also comprises at least one transfer station 7 for continuously transferring a preform from a first processing **drum** 2, 4, 5.1, 5.2 to a second processing **drum** 4, 5.1, 5.2. The invention also relates to a method for forming a tampon from band-form material, wherein transfer from a first processing **drum** to a second processing **drum** takes place by means of a continuously rotating transfer wheel.

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PN - [CN112055577](#) A 20201208
PR - CH20180000426 20180329; WO2019IB52261 20190320
AP - CN20198029033 20190320
DT - I
CT - || STSE (A)
[EP0369974](#) A1 19900523 [A] (MOELNLYCKE AB [SE])
[A] 1-18
* 全文 *;
[CN1364069](#) A 20020814 [A] (JOHNSON & JOHNSON GMBH [DE])
[A] 1-18
* 全文 *;
[CN1535128](#) A 20041006 [A] (JOHNSON & JOHNSON GMBH [DE])
[A] 1-18
* 全文 *;
[CN1572658](#) A 20050202 [Y] (GD SPA [IT])
[Y] 6-8
* 说明书第2-4页及附图1-7 *;
[TW201110947](#) A 20110401 [A] (UNI CHARM CORP [JP])
[A] 1-18
* 全文 *;
[CN102438569](#) A 20120502 [YX] (UNI CHARM CORP)
[Y] 6-8
* 说明书第[0030]-[0151]段及附图1-12 * [X] 1-5,9-11
CCI - [A61F13/2082](#)

CI - A61F13/2082 (EP, CH, IL)
 - A61F13/2085 (KR)
 - A61F13/2088 (KR, US)
 - A61F13/2094 (KR)

PA - RUGGLI PROJECTS AG

TI - DEVICE FOR SHAPING **TAMPONS**

AB - The invention relates to a device for shaping **tampons**, comprising a plurality of machining drums 2, 4, 5.1, 5.2 for shaping a tampon made of web-like material. The device additionally comprises at least one transfer wheel 7 for continually transferring a preform from a first machining **drum** 2, 4, 5.1, 5.2 to a second machining **drum** 4, 5.1, 5.2. The invention also relates to a method for shaping a tampon made of web-like material, wherein a transfer from a first machining **drum** to a second machining **drum** is carried out by means of a continuously rotating transfer wheel.

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PN - [CA3094587](#) A1 20191003

PR - CH20180000426 20180329; WO2019IB52261 20190320

AP - CA20193094587 20190320

DT - I

CCI - [A61F13/2082](#)

CI - A61F13/2082 (EP, CH, IL)
 - A61F13/2085 (KR)
 - A61F13/2088 (KR, US)
 - A61F13/2094 (KR)

PA - RUGGLI PROJECTS AG [CH]

TI - APPARATUS FOR FORMING **TAMPONS**

AB - The invention relates to a device for shaping **tampons**, comprising a plurality of machining drums 2, 4, 5.1, 5.2 for shaping a tampon made of web-like material. The device additionally comprises at least one transfer wheel 7 for continually transferring a preform from a first machining **drum** 2, 4, 5.1, 5.2 to a second machining **drum** 4, 5.1, 5.2. The invention also relates to a method for shaping a tampon made of web-like material, wherein a transfer from a first machining **drum** to a second machining **drum** is carried out by means of a continuously rotating transfer wheel.

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PN - [AU2019244571](#) A1 20201022

PNFP - AU2019244571B B2 20220210

PR - CH20180000426 20180329; WO2019IB52261 20190320

AP - AU20190244571 20190320

DT - I

CT - || STSE (B2)
[EP2412351](#) A1 20120201 [] (UNI CHARM CORP [JP])

CCI - [A61F13/2082](#)

CI - A61F13/2082 (EP, CH, IL)
 - A61F13/2085 (KR)
 - A61F13/2088 (KR, US)
 - A61F13/2094 (KR)

PA - (A1 B2)
 RUGGLI PROJECTS AG [CH]

TI - (A1)
 Device for shaping **tampons**
 - (B2)
 Apparatus for forming **tampons**

AB - (A1 B2)
 The invention relates to a device for shaping **tampons**, comprising a plurality of machining drums 2, 4, 5.1, 5.2 for shaping a tampon made of web-like material. The device additionally comprises at least one transfer wheel 7 for continually transferring a preform from a first machining **drum** 2, 4, 5.1, 5.2 to a second machining **drum** 4, 5.1, 5.2. The invention also relates to a method for shaping a tampon made of web-like material, wherein a transfer from a first machining **drum** to a second machining **drum** is carried out by means of a continuously rotating transfer wheel.

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PN - [TW201941752](#) A 20191101

PR - CH20180000426 20180329

AP - TW20190111318 20190329

DT - I

CCI - [A61F13/2082](#)

CI - A61F13/2082 (EP, CH, IL)
 - A61F13/2085 (KR)
 - A61F13/2088 (KR, US)
 - A61F13/2094 (KR)

PA - RUGGLI PROJECTS AG [CH]

TI - Apparatus for forming **tampons**

AB - The present invention relates to an apparatus for forming **tampons**, which comprises a plurality of processing drums 2, 4, 5.1, 5.2 for forming a tampon from band-form material. It also comprises at least one transfer station 7 for continuously transferring a preform from a first processing **drum** 2, 4, 5.1, 5.2 to a second processing **drum** 4, 5.1, 5.2. The invention also relates to a method for forming a tampon from band-form material, wherein transfer from a first processing **drum** to a second processing **drum** takes place by means of a continuously rotating transfer wheel.

6/11 © EPODOC / EPO

PN - [WO2019186325](#) A1 20191003
 PR - CH20180000426 20180329
 AP - WO2019IB52261 20190320
 DT - *; Rep
 CT - |EP| ISR (A1)
 [US2566190](#) A 19510828
 [X] (GREINER CHARLES J, et al)
 [X] 1-18* column 3, line 72 -
 column 13, line 27; figure - *;
 [EP2412351](#) A1 20120201
 [X] (UNI CHARM CORP [JP])
 [X] 1-18
 * paragraphs [0050] - [0091];
 figure - *

CCI - [A61F13/2082](#)
 CI - A61F13/2082 (EP, CH, IL)
 A61F13/2085 (KR)
 A61F13/2088 (KR, US)
 A61F13/2094 (KR)

PA - RUGGLI PROJECTS AG [CH]
 TI - DEVICE FOR SHAPING **TAMPONS**
 AB - The invention relates to a device
 for shaping **tampons**, comprising
 a plurality of machining drums
 2, 4, 5.1, 5.2 for shaping a
 tampon made of web-like
 material. The device additionally
 comprises at least one transfer
 wheel 7 for continually
 transferring a preform from a
 first machining **drum** 2, 4, 5.1,
 5.2 to a second machining **drum**
 4, 5.1, 5.2. The invention also
 relates to a method for shaping a
 tampon made of web-like
 material, wherein a transfer
 from a first machining **drum** to a
 second machining **drum** is
 carried out by means of a
 continuously rotating transfer
 wheel.

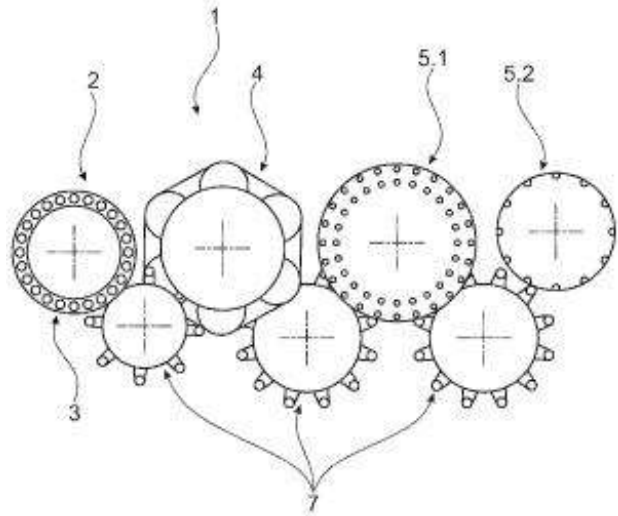


Fig. 1

PN - [GB1435830](#) A 19760519
 PR - DE19722253180
 19721030; NL19720015282
 19721110
 AP - GB19730049138 19731022
 DT - **
 CCI - [A61F13/2085](#)
 CI - A61F13/2085 (EP, US)
 PA - HAHN CARL DR GMBH
 TI - METHOD AND APPARATUS FOR
 USE IN MAKING A TAMPOON
 ANT **TAMPONS** MADE THEREBY
 AB - 1435830 **Tampons** DR CARL HAHN
 GmbH 22 Oct 1973 [30 Oct 1972]
 49138/73 Heading A5R A
 machine for making **tampons**
 comprises a winding station A
 Figure 1, a withdrawal string
 applying station B and a transfer
 station C, the tampon being
 initially formed at station A on a
 rotatable forked mandrel 11,
 Figure 2, having a longitudinal
 bore 14 connected to a source of
 suction 15 which moves the
 string end 6 away 'from a strip 7
 of tampon fabric during winding,
 the string at station B being
 applied to 'the end 9, Figure 3, of
 the tampon roll 10. The mandrel
 is rotatable by a motor 31, a V-
 belt 29, a step-by-step
 transmission 26, a gear 24 and a
 pinion 23, the latter being
 wedged on to the mandrel. The
 mandrel is reciprocable between
 a withdrawn position and a
 position in which its fork tines
 12, 13 engage respective sides of
 strip 7, by a pivoted lever
 engaged with a cam **drum** on the
 shaft of transmission 26 and a U-
 section member 38 engaging the
 ends of pinion 23. A suction
 opening 17 is formed in the
 mandrel. The tampon roll is
 transported from station A to

Fig. 1

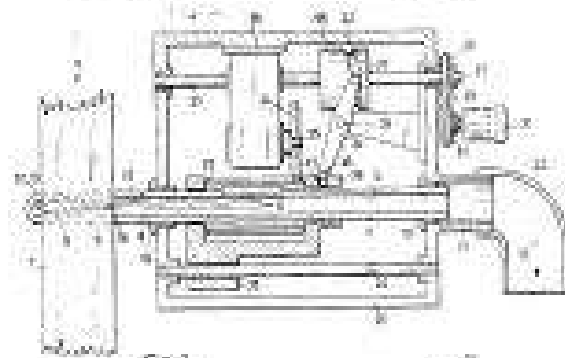
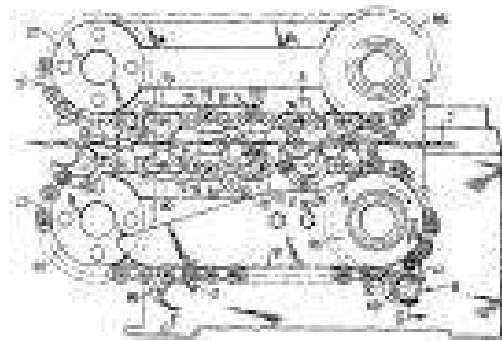
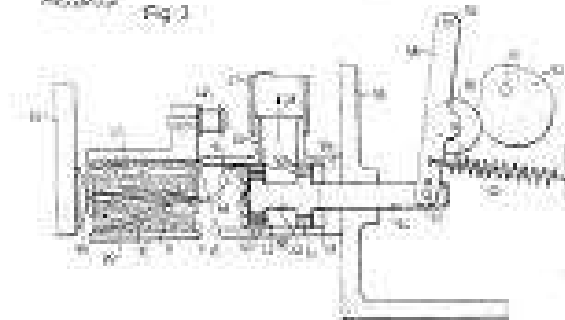
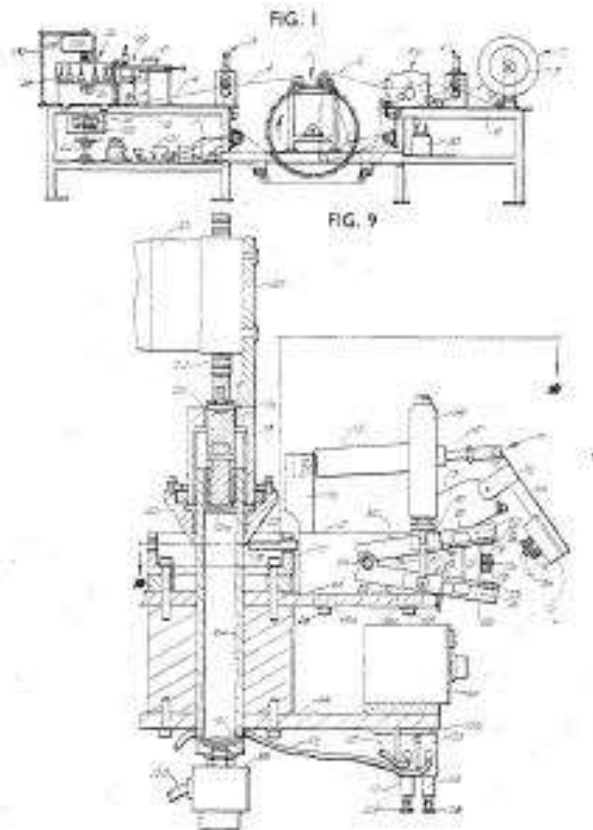


Fig. 3



station B in a shell 41 which at station B stops coaxially with a cylinder 43, a source of suction 48 acting through bores 52 in a piston 50 of sleeve valve 49 to withdraw the string into the space between the adjacent ends of the shell and cylinder. The valve is then moved within the cylinder by an arm 54 acted on by cam 62, roller 60 and pivoted arm 58 to force the string against the end 9 of the roll to which it naturally adheres, the piston 50 entering shell 41 at the fully extended position of the arm 54. The strip 7, which may be a fleece of cotton wool, is transported to station A between pairs of clamping and tensioning jaws 68-75, the jaws 72-75 having wheels 78 engagable with surfaces 79 and 80 to provide an extra clamping force and between which the fabric is parted by a member 81 actuated by engagement of its surface 82 with roller 83. The jaws and member 81 move with chains 42, 67 rotatable in opposite directions in the same plane. To retain the tampon rolls in shells 41, during transfer from station A to station C, levers 89 are provided pivoted to their in-use position by engagement of rollers 90 with a control cam 91.

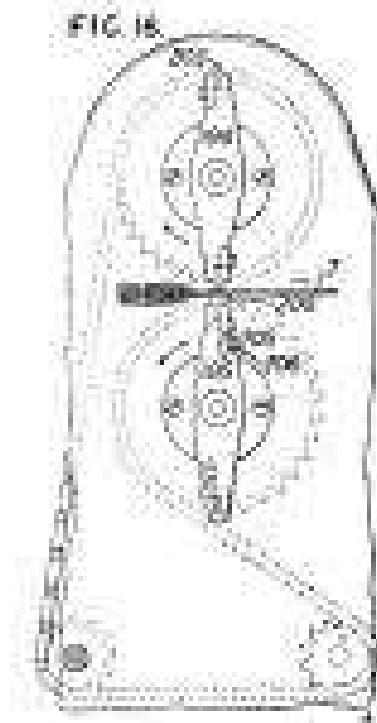
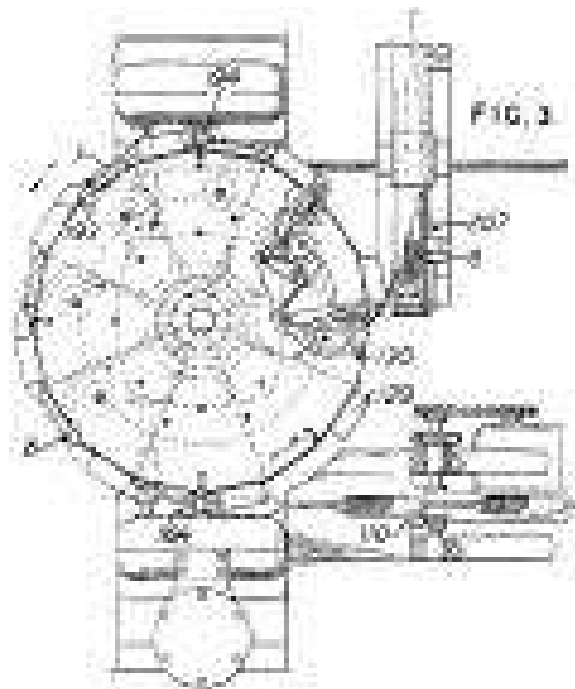
PN - [GB1506036](#) A 19780405
 PR - US19740484813 19740701
 AP - GB19750026391 19750620
 DT - **
 CCI - [B65B9/2028](#) ; [B65B9/207](#) ;
 [B65B51/02](#) ; [B65B51/30](#) ;
 [B65B51/32](#)
 CI - B65B9/2028 (EP, US)
 B65B9/207 (EP, US)
 B65B51/02 (EP, US)
 B65B51/30 (EP, US)
 B65B51/32 (EP, US)
 PA - PROCTER & GAMBLE [US]
 TI - APPARATUS AND METHOD FOR
 CONTINUOUSLY FORMING
 PACKAGES PARTICULARLY
 TAMPON SACKS
 AB - 1506036 Tampon - making
 machines PROCTER & GAMBLE
 CO 20 June 1975 [1 July 1974]
 26391/75 Heading A5R [Also in
 Divisions B5, B8 and D1]
 Apparatus for the production
 of **tampons** in the form of a
 tubular sack containing an
 absorptive aggregate includes a
 rotatable turret 22 and a drive
 11 for rotating it, the turret
 having a number of pleating and
 sealing stations 23 located at
 substantially equally - spaced
 intervals about its periphery,
 each station (Fig. 9) including
 pleating heads 70, 71 movable
 between an open and a closed
 position, and sealing jaws 82 83
 also movable between an open
 and a closed position, and
 opening and closing means for
 sequentially closing and opening
 the pleating heads and the
 sealing jaws during each cycle of
 rotation of the turret, whereby a
 continuous length of flexible
 tubing may be fed to the turret
 for engagement at spaced
 intervals by successive pleating



and sealing stations and the tube pleated and sealed at predetermined spaced intervals to form individual sacks to act as **tampons**. The apparatus includes means for introducing contents in the form of an absorptive aggregate into the sacks as they are formed. The turret 22 comprises a hollow rotating shaft 64 fixed to an upper platform 65 which supports the pleating and sealing stations 23 and to a lower platform 66. Pleating head 71 is fixed to one of a series of radially-disposed mounting blocks 67 bolted to a platform 65 and is fixed relative to the shaft 64. Head 70 is pivoted on an arm 73 extending from block 67. The sealing jaws 82, 83 are mounted alongside the pleating heads and have heating elements 90, 91 adjacent their sealing surfaces 92, 93 for sealing the tubular material after its passage through the pleating heads. The action of both the pleating heads and the sealing jaws are effected by piston-cylinder arrangements driven by air coming from shaft 64 via valves 103, 106 to one or the other end of cylinders 74, 95, thus driving the pistons. The continuous length of flexible tubing coated with stripes of adhesive at positions intended for sealing is produced from a web 14, (Fig. 1) of material supplied from a roll 13. Web 14 is drawn through a pair of driven pull rolls on roll stand 15 to an adhesive printer 16 which applies transverse stripes of adhesive to the undersurface of the web, and then passes around a drying **drum** 17, through a set

of driven rolls on roll stand 18 around a guide roll 19 to a hollow mandrel assembly where it is tubed. The means for introducing absorptive aggregate into the sacks being formed comprises a hopper 21 for introducing charges of the aggregate into the interior of the mandrel and an air-jet at the end of the mandrel distant from the turret 22 to move the charge into the sack after the first seal has been made. The web 14 passes around the outside of the mandrel and is sealed along its longitudinal edge by means of further adhesive and pressure rolls.

PN - [GB645048](#) A 19501025
 PR - GB19480024432 19480917
 AP - GB19480024432 19480917
 DT - *; Rep
 CCI - [A61F13/2051](#) ; [A61F13/2085](#)
 CI - A61F13/2051 (EP)
 - A61F13/2085 (EP)
 PA - INT CELLUCOTTON PRODUCTS
 TI - Improvements in an apparatus
 and method for making **tampons**
 AB - 645,048. Cutting-apparatus.
 BOULY, H. G. (International
 Cellucotton Products Co.). Sept.
 17, 1948, No. 24432. [Class 31
 (i)] [Also in Groups VI and XVII]
 Wrapped articles 6, Fig. 3,
 initially joined by a neck 7 of
 wrapping material, are fed into
 clips 129 on a rotating **drum**
 130, glue is applied to the
 wrapper neck at the point 164
 and is dried by a stream of air
 through a tube 193 and the
 fabric wrapper is cut at the point
 194, the hardened glue
 preventing unravelling of the
 fabric. The cutting device is
 shown in Fig. 16 and comprises
 two rotating arms 194, 195, one
 carrying cutting blades 203 and
 the other carrying co-operating
 anvils 204. The arms are so
 geared that the cutters are
 travelling at the same speed as
 the wrapper 7 at the time of
 cutting. Engagement of the anvil
 with the cutter is adjusted by
 means of a wedge 205, the
 position of which is set by a
 screw 206.



PN - [GB594580](#) A 19471114

AP - GB19440015657 19440816

DT - *; Rep

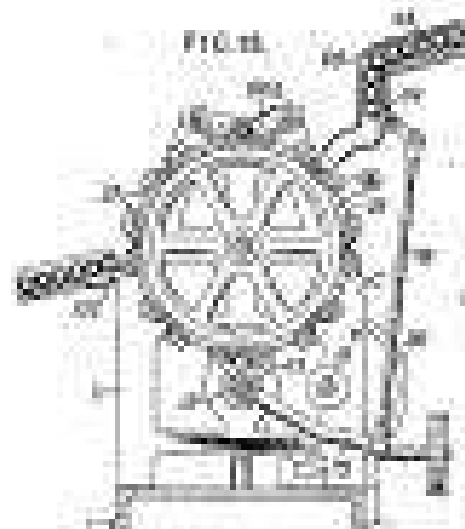
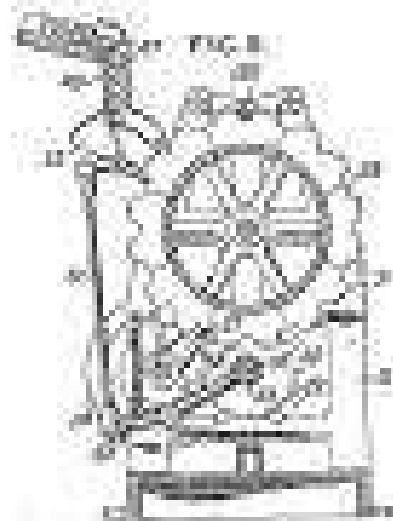
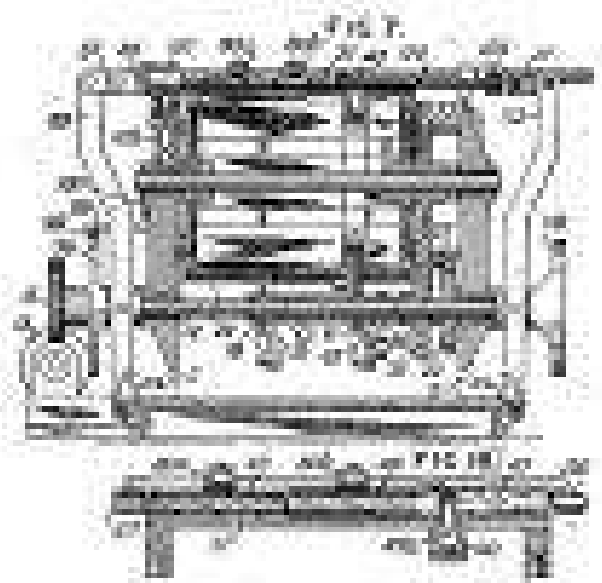
CCI - [A61F13/2085](#)

CI - A61F13/2085 (EP)

PA - TAMPAX INC

TI - Method of and apparatus for assembling plugs in applicators of catamenial **tampons**

AB - 594,580. Assembling catamenial **tampons**. FAIRWEATHER, H. G. C. (Tampax, Inc.). Aug. 16, 1994, No. 15657. [Class 81 (ii)] An apparatus for assembling plugs in applicators of catamenial **tampons** comprises feeding the members along parallel paths for assembly, a rotatable **drum** provided with sets of axially aligned seats to receive the members in spaced relation, each set of seats being parallel to the other sets on the surface of the **drum**, opposing plungers movable in the seats to telescope the plugs into the applicators, and means for actuating the plungers in timed relation. As shown, the apparatus comprises a frame having side members C, D in which is mounted a shaft 16 driven by worm gearing 13, 15 and intermittently rotating a **drum** 29 through a Geneva movement 22, 27 and gearing 32, 33. The **drum** is formed with a number of segments 37, Fig. 19, suitably channelled to form seats for the tampon applicator tubes 43, 44 and tampon 47. These are contained in supply chutes 49, 69 and are intermittently fed to the channels in the **drum** by pivoted members 53, 74 and linkwork 61, 62 and 78, 79. The arms 62, 79 are



rigidly connected to a sleeve 63 mounted on shaft 19, the intermittent movement being communicated to the arm 62 by a cam 66 on the driving shaft 16. The tubes are held in the channels of the segments 37 by springs 80a, 80b, and the tampon string 47a falls into a trough 40. Mounted on each end of the shaft 19 are cam-disks 96, 118 acting through spring urged levers 89, 113 links 87, 111, and slides 85, 109 intermittently to press inwards plungers 107, 120 whereby the applicator tubes and tampon are suitably telescoped, the end of the tampon remote from the string being then approximately level with one end of tube 44, and the tube 43 abutting the other end of the tampon. Plunger 107 is hollow and contains an air nozzle having the orifice disposed outwardly, whereby the suction produced by the air blast draws the string 47a from the trough 40 to position it along the applicator tubes. Air is supplied to the nozzle via pipe 102 and valve 100, the latter being intermittently opened by the actuation of its spindle 99 by a hump 98 on the cam disc 96. The telescoped tampon and applicator tubes are taken off the **drum** on further forward movement by strippers 122, Fig. 15.

11/11 © EPODOC / EPO

PN - [ES227678](#) A1 19560516

PR - CHX227678 19550623

AP - ES19560227678 19560403

DT - I

PA - HYTAKOS A G [CH]

TI - Machine for cutting and rolling a cotton veil for the manufacture of **tampons**. (Machine-

translation by Google Translate, not legally binding)

- AB
- Machine for cutting and winding a cotton veil for the manufacture of **tampons** and the like, characterized in that on a base plate with a fixed camshaft there is a tool plate rotatable about a vertical axis, with several clamping devices and cutting and rolling tools that are maneuvered by means of said cam **drum** when turning the machine.
(Machine-translation by Google Translate, not legally binding)