

20 Documents

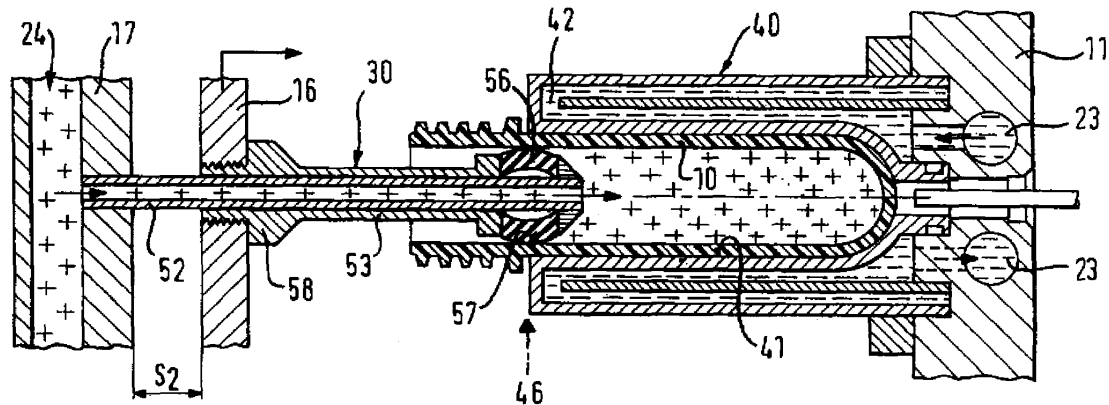
Publication numbers	Title	Current assignees
EP2038102 A1	Auxiliary device, and method for finishing preforms	NETSTAL MASCHINEN
EP1558434 A1	Method and device for the secondary treatment and the cooling of preforms	NETSTAL MASCHINEN
EP2125327 A1	Aftercooling device and method for aftercooling preforms	NETSTAL MASCHINEN
EP2826716 A1	Preform sterilization method and device	DAI NIPPON PRINTING
EP1725390 A1	Moulding of plastic articles	CONSTANTINOS SIDERIS
EP-800446 A1	Method of cooling multilayer preforms	GRAHAM PACKAGING, ...
EP1676689 A1	A preform injection moulding apparatus	MOLMASA APLICACIONES TECN
EP1123189 A1	Injection molding machine and method for producing sleeve-shaped injection molded parts, especially preforms	NETSTAL MASCHINEN
EP1671776 A1	Apparatus and method for making barrier-coated polyester	CONCENTRATE MANUFACTURING
EP3411206 A1	Preform extended finish for processing light weight ecologically beneficial bottles	NIAGARA BOTTLING
EP2444234 A2	Heating device for tempering pre-forms	KRONES
EP1799419 A2	Method and mould for compression moulding container preforms made of polymeric material	SACMI
EP1180069 A1	Thermal processing oven in a blow-forming facility for thermoplastic receptacles	SIDEL
EP1885543 A1	Low iv pet based copolymer preform with enhanced mechanical properties and cycle time, container made therewith and methods	COCA COLA
WO201326144 A1	Post-mold cooling injection molded articles	ATHENA AUTOMATION
EP-153120 A2	Laminated preform with internal barrier layer	GRAHAM PACKAGING PET TECHNOLOGIES
EP1880825 A1	Individual support device for a container equipped with a neck and installation equipped with transport devices having such a support device	SIDEL PARTICIPATIONS
EP2059464 A2	Device for discharging elongate, coarse bulk products	SIDEL PARTICIPATIONS
US6264050 B1	Container with improved neck portion and method for making the same	PLASTIPAK HOLDINGS, ...
EP2826717 A1	Preform sterilizing method and content filling system	DAI NIPPON PRINTING

Title

(EP2038102)

Auxiliary device, and method for finishing preforms

Images



Publication data including kind & date

EP2463075	B1	2016-11-16	EP2463075
EP2468474	B1	2015-03-18	EP2468474
CN101479091	B	2014-12-17	CN101479091B
CA2653892	C	2014-08-05	CA2653892
JP5377300	B2	2013-10-04	JP5377300
US8309011	B2	2012-11-13	US8309011
DE202007019425	U1	2012-08-02	DE202007019425
EP2468474	A1	2012-06-27	EP2468474
EP2463075	A1	2012-06-13	EP2463075
US20110089615	A1	2011-04-21	US20110089615
US7887320	B2	2011-02-15	US7887320
US20100001439	A1	2010-01-07	US20100001439
JP2009541096	A	2009-11-26	JP2009541096
CN101479091	A	2009-07-08	CN101479091
EP2038102	A1	2009-03-25	EP2038102
WO2008/000108	A1	2008-01-03	WO200800108
CA2653892	A1	2008-01-03	CA2653892
DE202007008217	U1	2007-09-13	DE202007008217



Abstract

(EP2038102)

The invention relates to an auxiliary device and a method for finishing and calibrating **preforms** (10) that are removed from a multiple tool in an unstable shape, the calibration process being performed with the aid of compressed air immediately after removing and withdrawing the **preforms** (10) from the multiple tool. Nipples that can be inserted into the **preforms** (30) are provided with expandable pressing rings or sealing rings (56) in order to seal the interior of the blow-molded part of the **preforms** (10). The compressed air is introduced via the nipples (30), the sealing process being performed by radially expanding the pressing rings or sealing rings (56) in analogy to the closing process of thermoses, thus protecting the **preforms** (10) from adverse forces. The sealing point can be randomly selected in the transition zone from the threaded part to the blow-molded part of the **preforms** (10). The invention allows the interior of the blow-molded part (43) to be

optimally sealed without affecting the form stability and dimensional stability of the **preforms** (10). In special types of **preforms**, the areas that are not supported in the cooling sleeves can be preconsolidated on the outside by means of cool air from the moment the **preforms** are transferred to the removing sleeves or cooling sleeves.

Inventors

BOCK STEFAN

Latest standardized assignees - inventors removed

NETSTAL MASCHINEN

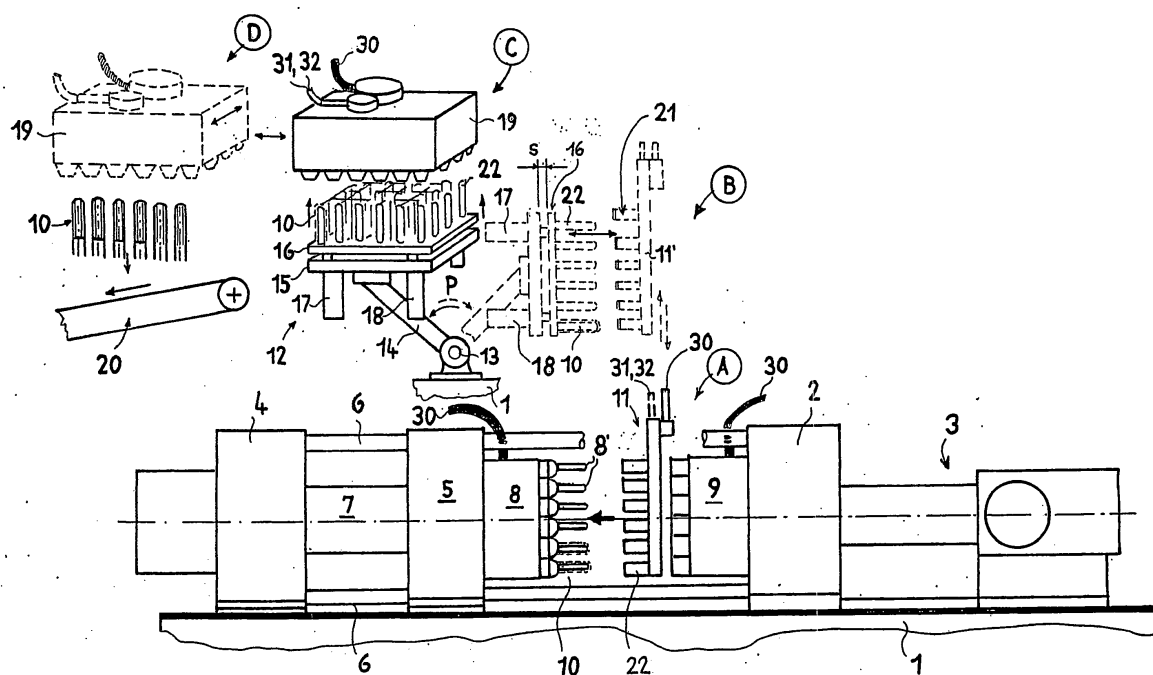
Family 2/20 - FAMPAT - ©Questel

Title

(EP1558434)

Method and device for the secondary treatment and the cooling of **preforms**

Images



Publication data including kind & date

EP1558434	B2	2017-11-22	EP1558434
EP1558434	B1	2012-11-21	EP1558434
CA2505201	C	2011-02-08	CA2505201
CN100436101	C	2008-11-26	CN100436101C
US20060138696	A1	2006-06-29	US20060138696
CN1729088	A	2006-02-01	CN1729088
EP1558434	A1	2005-08-03	EP1558434
AU2003205489	A1	2004-06-07	AU2003205489
WO2004/041510	A1	2004-05-21	WO200441510
CA2505201	A1	2004-05-21	CA2505201



Abstract

(EP1558434)

The invention relates to a method and a device for the secondary treatment and the cooling of **preforms** (10) once they have been removed from the open mould halves (18, 9) of an injection moulding machine. The **preforms** are removed from the open moulds (18, 9) while still hot, by means of water-cooled cooling sleeves (21) of a removal device (11), and are subjected to intensive cooling during the duration of an injection moulding cycle. Both the entire **inner** side and the entire outer side of the blow-moulded part (10) are subjected to intensive cooling. Secondary cooling is then carried out, the duration thereof being equal to a multiple of the duration of an injection moulding cycle. After being removed from the

casting moulds, the **preforms** are dynamically introduced into the cooling sleeves (21) until they fully touch the walls thereof. The **inner** cooling is carried out in a time-delayed manner.

Inventors

WEINMANN ROBERT

Latest standardized assignees - inventors removed

NETSTAL MASCHINEN

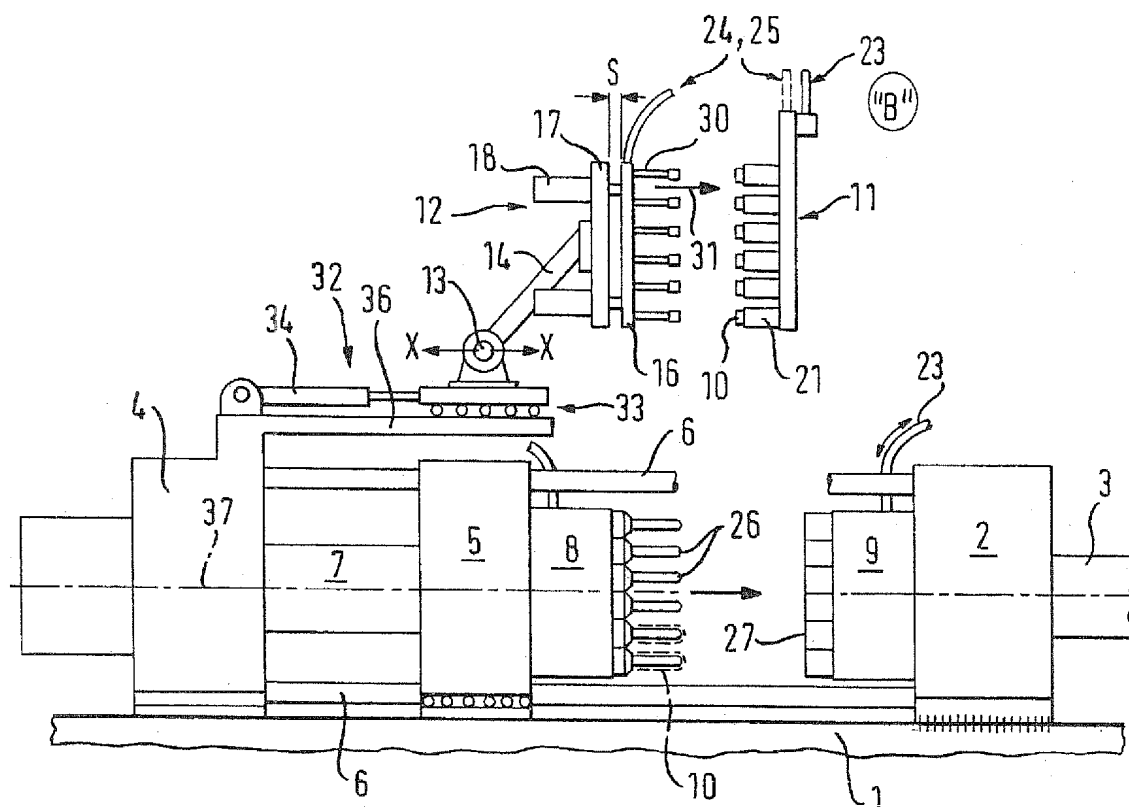
Family 3/20 - FAMPAT - ©Questel

Title

(EP2125327)

Aftercooling device and method for aftercooling preforms

Images



Publication data including kind & date

CA2676615	C	2014-10-14	CA2676615
CN101588910	B	2014-07-30	CN101588910B
BRPI0807856	A2	2014-06-17	BR200807856
JP2010516507	A	2010-05-20	JP2010516507
US20100013125	A1	2010-01-21	US20100013125
EP2125327	A1	2009-12-02	EP2125327
MX2009006790	A	2009-12-02	MX2009006790
CN101588910	A	2009-11-25	CN101588910
WO2008/090207	A1	2008-07-31	WO200890207
CA2676615	A1	2008-07-31	CA2676615



Abstract

(EP2125327)

The invention relates to a device and a method for finishing and calibrating **preforms** (10) which are removed from a multiple injection tool in an unstable shape, and proposes an air cooler integrated into the water cooled cooling jackets (21) for the outer side of the open end face of the preform (10). Particularly in the case of special preform varieties, the areas

which are unsupported in the cooling jackets (21) can be prestrengthened on the outside, from the beginning of the transfer from the open molds (8, 9) to the removing and/or cooling jackets, by means of a cooling which uses cooling air or deep cooled air. With the novel solution, the highest quality can be assured, in particular with respect to dimensional stability and the absence of pressure points under load, by means of a calibration in the cooling jackets (32) and the treatment in the area of the aftercooling.

Inventors

BOCK STEFAN

Latest standardized assignees - inventors removed

NETSTAL MASCHINEN

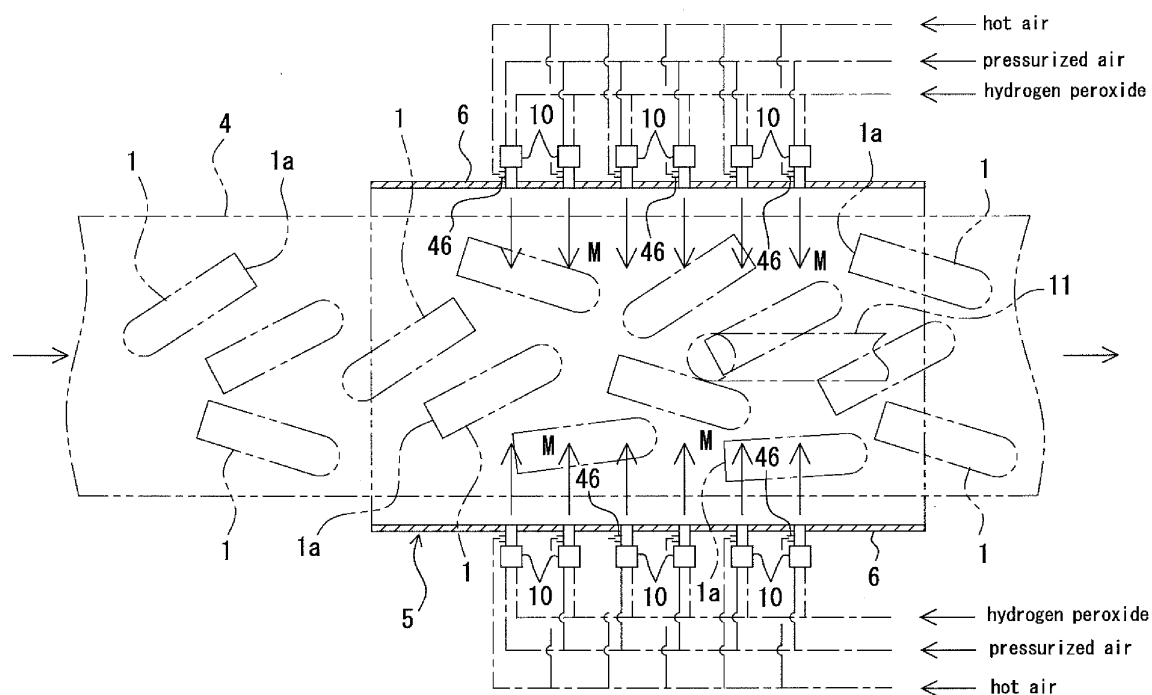
Family 4/20 - FAMPAT - ©Questel

Title

(EP2826716)

Preform sterilization method and device

Images



Publication data including kind & date

JP5987567	B2	2016-08-19	JP5987567				
JP5987568	B2	2016-08-19	JP5987568				
CN104169175	B	2016-05-11	CN104169175B				
JP5919912	B2	2016-04-22	JP5919912				
JP5919913	B2	2016-04-22	JP5919913				
EP2826716	A4	2016-02-17	EP2826716				
US20150037205	A1	2015-02-05	US20150037205				
EP2826716	A1	2015-01-21	EP2826716				
CN104169175	A	2014-11-26	CN104169175				
JP2014050986	A	2014-03-20	JP2014050986				
JP2014050987	A	2014-03-20	JP2014050987				
JP2013189233	A	2013-09-26	JP2013189233				
JP2013189235	A	2013-09-26	JP2013189235				
WO2013/137321	A1	2013-09-19	WO2013137321				

Abstract

(EP2826716)

A preform is easily and speedily sterilized. A number of **preforms** (1), each having a bottomed tubular shape, are laid on a conveyer (4) in a scraggly overturned manner, these **preforms** passes inside a chamber (5) together with the conveyer, and hydrogen peroxide water mist is sprayed from both sides of the conveyer in a direction crossing the conveyer in the chamber, thereby adhering the sprayed hydrogen peroxide water to **inner** and outer surfaces of the **preforms** (1) on the conveyer (4).

Inventors

MIYAHARA YOSHIHIRO

TSUCHIYA HIROTAKE

NISHIDA YOSHIO

Latest standardized assignees - inventors removed

DAI NIPPON PRINTING

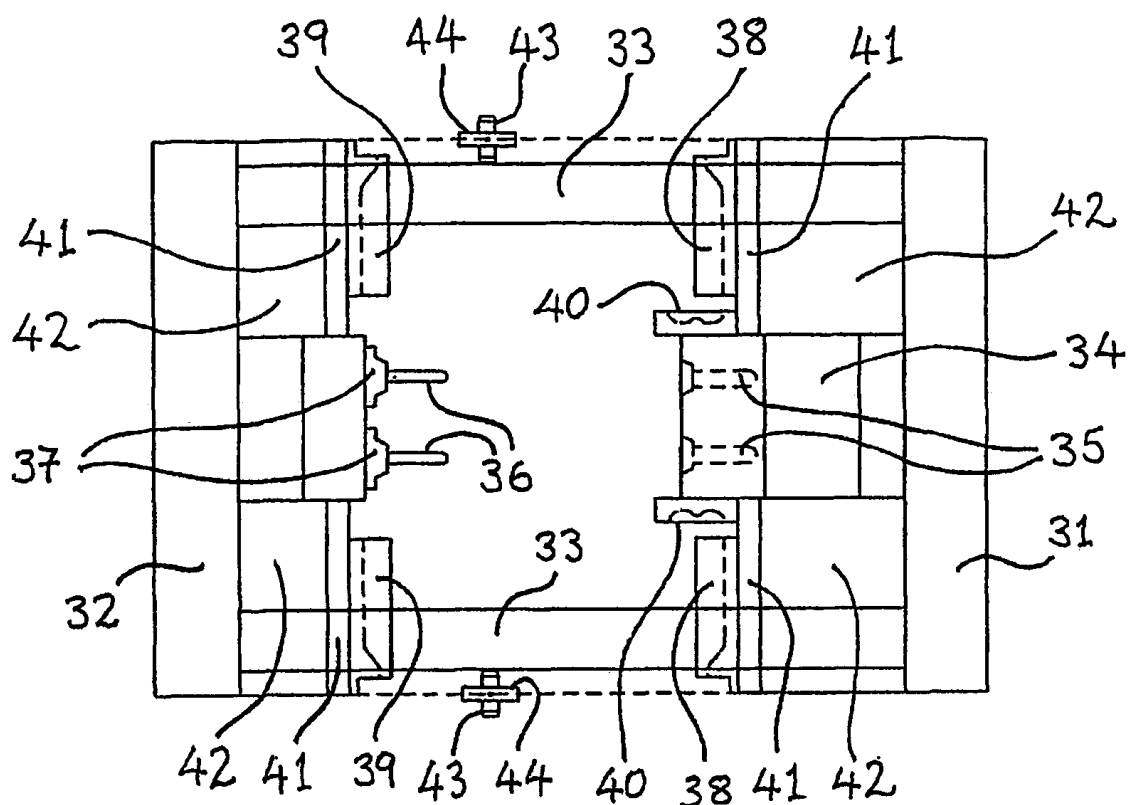
Family 5/20 - FAMPAT - ©Questel

Title

(EP1725390)

Moulding of plastic articles

Images



Publication data including kind & date

IN270518	B	2016-01-01	IN-270518
BRPI0508126	B1	2015-06-16	BR200508126
BRPI0508126	A2	2014-10-14	BR200508126
KR101210160	B1	2012-12-07	KR101210160
JP4969438	B2	2012-04-13	JP4969438
TWI346610	B	2011-08-11	TWI346610
ES2352665	T3	2011-02-22	ES2352665
DE602005024930	D1	2011-01-05	DE602005024930
AT489217	T	2010-12-15	ATE489217



CA2555046	C	2010-12-07	CA2555046				
IL177786	B	2010-11-30	IL-177786				
EP1725390	B1	2010-11-24	EP1725390				
US7611658	B2	2009-11-03	US7611658				
RU2367572	C2	2009-09-20	RU2367572				
CN100537191	C	2009-09-09	CN100537191C				
RU2006129648	A	2008-04-10	RU2006129648				
JP2007526153	A	2007-09-13	JP2007526153				
IN4529/DELNP/2006	A	2007-08-24	IN2006DN04529				
BRPI0508126	A	2007-07-17	BR200508126				
BRPI0508126	A1	2007-07-17	BRPI0508126				
CN1925975	A	2007-03-07	CN1925975				
KR20070004663	A	2007-01-09	KR20070004663				
IL177786	A	2006-12-31	IL-177786				
US20060290034	A1	2006-12-28	US20060290034				
EP1725390	A1	2006-11-29	EP1725390				
GB2415936	B	2006-08-23	GB2415936				
GB2422571	A	2006-08-02	GB2422571				
GB2415936	A8	2006-07-14	GB2415936				
GB2415936	A	2006-01-11	GB2415936				
TW200540008	A	2005-12-16	TW200540008				
GB0517837	D0	2005-10-12	GB200517837				
WO2005/084920	A1	2005-09-15	WO200584920				
CA2555046	A1	2005-09-15	CA2555046				
GB0404689	D0	2004-04-07	GB200404689				

Abstract

(EP1725390)

A composite mould set for use on a conventional type of injection-moulding machine is made up of composite mould halves (10) which are mounted one on each platen (12) of the injection moulding machine. Each mould half (10) carries an array of injection moulding cavities (16) for moulding **preforms**, and an array of blow moulding cavities (18) for stretch blow moulding of the **preforms** into a blow moulded product. The respective cavities (16) and (18) are arranged so that they open in a common mould separation direction.

Inventors

SIDERIS CONSTANTINOS

Latest standardized assignees - inventors removed

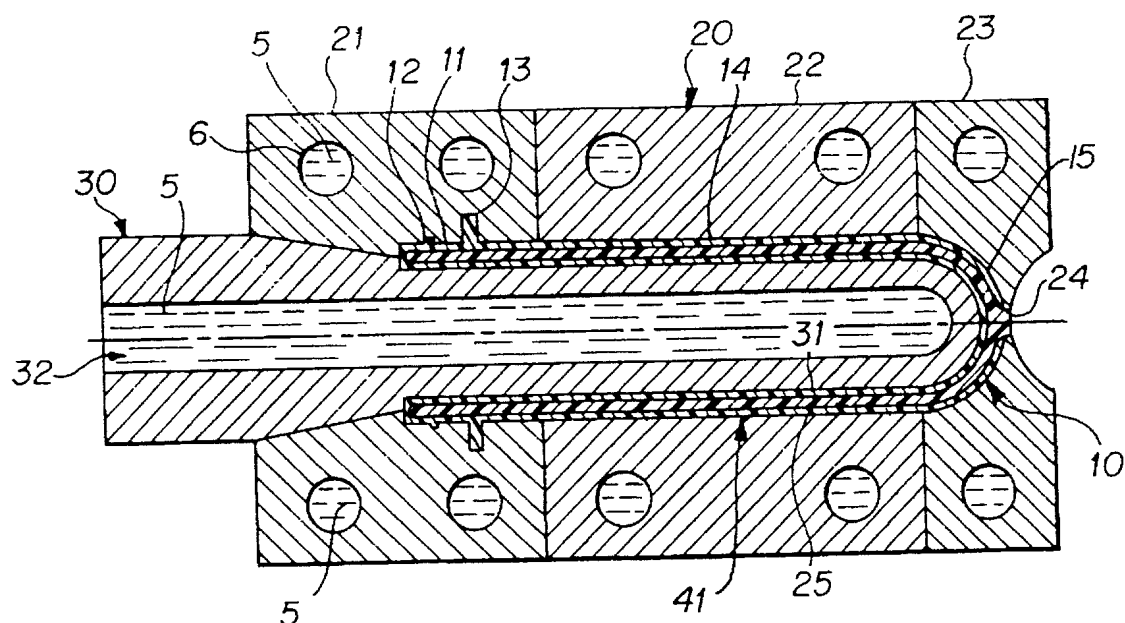
CONSTANTINOS SIDERIS

Family 6/20 - FAMPAT - ©Questel

Title

(EP-800446)

Method of cooling multilayer **preforms****Images**



Publication data including kind & date

JP4135163	B2	2008-06-13	JP4135163
CA2208867	C	2007-05-08	CA2208867
BRPI9510225	B1	2003-04-29	BR9510225
CN1067936	C	2001-07-04	CN1067936C
HU217190	B	1999-12-28	HU-217190
NZ301131	A	1999-10-28	NZ-301131
DE69506283	T2	1999-05-06	DE69506283
ES2126338	T3	1999-03-16	ES2126338
DE69506283	D1	1999-01-07	DE69506283
AT173668	T	1998-12-15	ATE173668
EP0800446	B1	1998-11-25	EP-800446
JPH10511617	A	1998-11-10	JP10511617
AU690419	B2	1998-04-23	AU-690419
CN1171755	A	1998-01-28	CN1171755
HUT76986	A	1998-01-28	HU-T76986
BR9510225	A	1997-11-04	BR9510225
BRPI9510225	A1	1997-11-04	BRPI9510225
MX9704821	A	1997-10-31	MX9704821
EP0800446	A1	1997-10-15	EP-800446
US5582788	A	1996-12-10	US5582788
AU4647896	A	1996-07-19	AU9646478
WO96/20074	A1	1996-07-04	WO9620074
CA2208867	A1	1996-07-04	CA2208867



Abstract

(EP0800446)

Method of making multilayer **preforms** which resist delamination and in a reduced cycle time. A first array of **preforms** are molded onto a first array of cores in an associated array of mold cavities, the cores and **preforms** are removed from the mold cavities as soon as possible without significant physical preform deformation, and the **preforms** are then cooled on the cores while a second array of cores is positioned in the mold cavities. Cooling on the cores prevents delamination of the preform layers and reduces the in-mold cooling time. Providing multiple sets of cores on a rotating turret further reduces the cycle time compared to the prior art use of robotic cooling tubes.

Inventors

COLLETTE WAYNE N

NAHILL THOMAS E

KRISHNAKUMAR SUPPAYAN M

Latest standardized assignees - inventors removed

GRAHAM PACKAGING

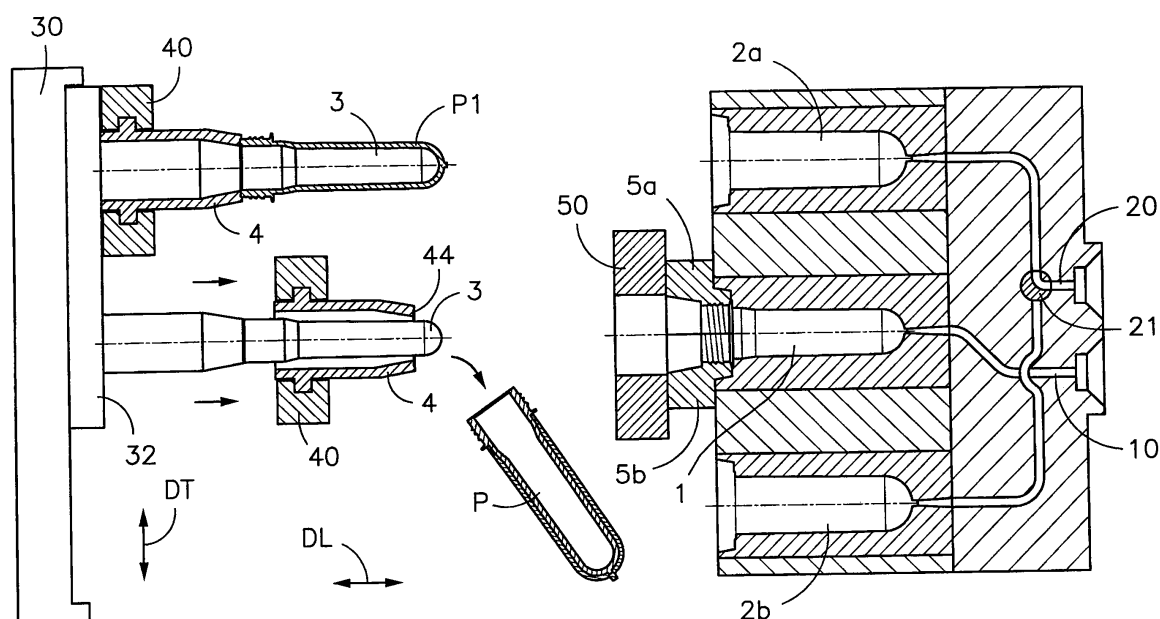
GRAHAM PACKAGING PET TECHNOLOGIES

Family 7/20 - FAMPAT - ©Questel

Title

(EP1676689)

A preform injection moulding apparatus

Images**Publication data including kind & date**

EP1987936	A4	2013-01-16	EP1987936
CA2641369	C	2012-05-01	CA2641369
CN101400496	B	2012-03-14	CN101400496B
EP1834751	A4	2011-04-27	EP1834751
RU2407636	C2	2010-12-27	RU2407636
RU2008135691	A	2010-03-10	RU2008135691
CN101400496	A	2009-04-01	CN101400496
US20090032996	A1	2009-02-05	US20090032996
EP1987936	A1	2008-11-05	EP1987936
IN6719/DELNP/2008	A	2008-10-24	IN2008DN06719
WO2007/090904	A8	2008-03-06	WO200790904
EP1834751	A1	2007-09-19	EP1834751
WO2007/090904	A1	2007-08-16	WO200790904
CA2641369	A1	2007-08-16	CA2641369
WO2006/072646	A1	2006-07-13	WO200672646
EP1676689	A1	2006-07-05	EP1676689

**Abstract**

(EP1676689)

This apparatus comprises an injection hot channel (1); a cavity block (2) containing at least one injection cavity (10) being

in connection with said hot channel (1); **neck** injection moulding female die halves (9a, 9b) being fitted onto a **neck** injection moulding female die carrier plate (3); at least one male die (7) being associated to a base plate (6) being actuated to be shifted in a first direction (D1) between a closed position wherein said male die (7) has been inserted into said injection cavity (10) and an open position wherein the male die (7) has been withdrawn from said injection cavity (10). A stripper member (8) is associated to the male die (7) and is configured to define one portion of the preform mould, said stripper member being connected to a stripper plate (4) being actuated to shift the stripper member (8) in a reciprocating motion in said first direction (D1) in order to strip the preform (P) from the male die (7).

Inventors

ATANCE ORDEN ANGEL

Latest standardized assignees - inventors removed

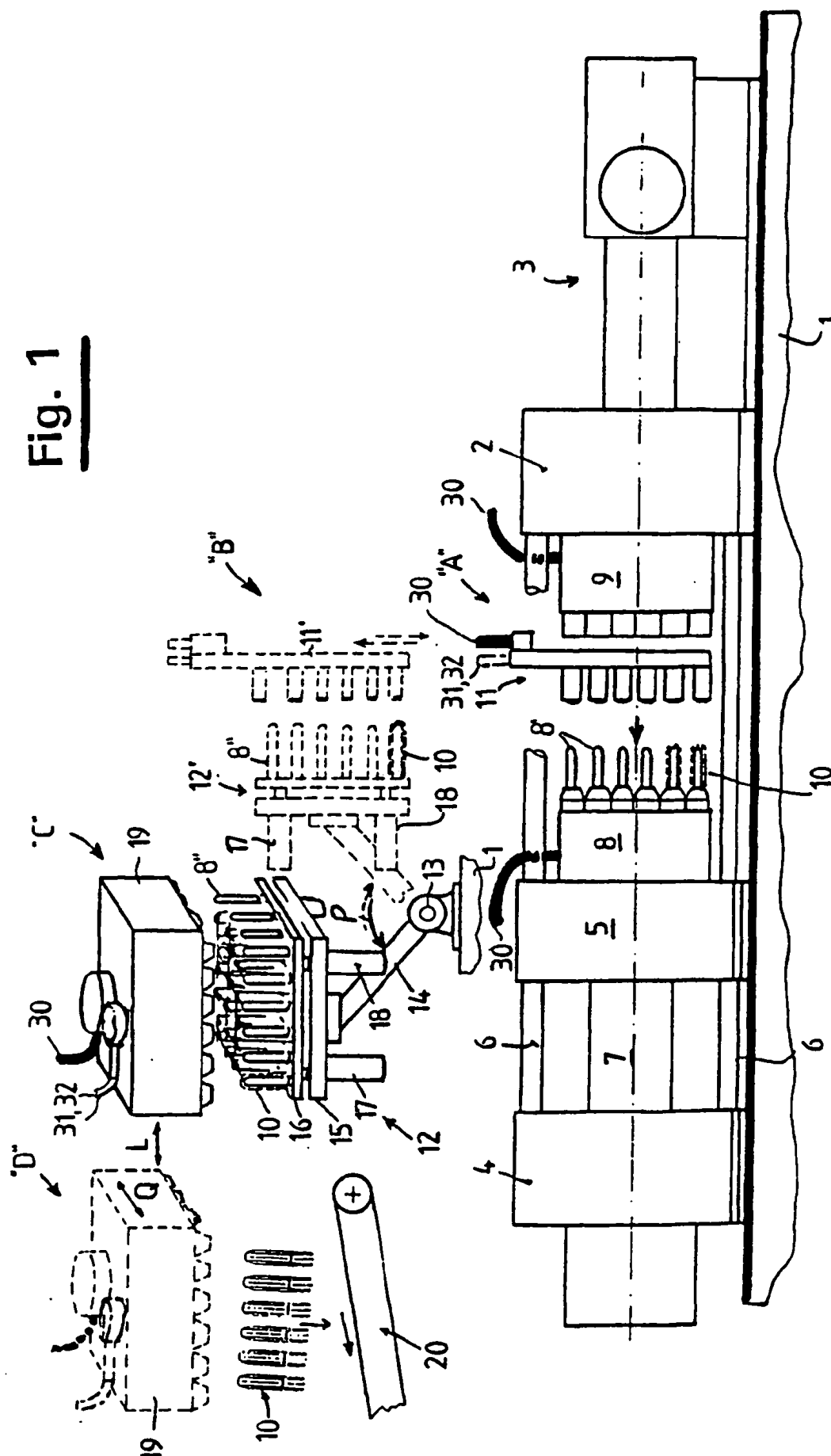
MOLMASA APLICACIONES TECN

Family 8/20 - FAMPAT - ©Questel

Title

(EP1123189)

Injection molding machine and method for producing sleeve-shaped injection molded parts, especially **preforms****Images**

Fig. 1

Publication data including kind & date

EP1123189

B2 2012-02-08

EP1123189

IN208213

B 2007-07-20

IN-208213

DE59913085

D1 2006-04-13

DE59913085



AT316856	T	2006-02-15	ATE316856				
IN0442/KOLNP/2001	A	2006-02-10	IN2001KN00442				
EP1215031	B1	2006-02-01	EP1215031				
DE19848837	B4	2005-03-10	DE19848837				
CN1106259	C	2003-04-23	CN1106259C				
DE59904190	D1	2003-03-06	DE59904190				
AT231782	T	2003-02-15	ATE231782				
EP1123189	B1	2003-01-29	EP1123189				
JP2002528293	A	2002-09-03	JP2002528293				
EP1215031	A1	2002-06-19	EP1215031				
CN1324293	A	2001-11-28	CN1324293				
EP1123189	A1	2001-08-16	EP1123189				
BR9915538	A	2001-08-14	BR9915538				
BRPI9915538	A1	2001-08-14	BR9915538				
AU6185299	A	2000-05-15	AU9961852				
WO00/24562	A1	2000-05-04	WO200024562				
DE19848837	A1	2000-04-27	DE19848837				

Abstract

(EP1123189)

The aim of the invention is to improve the cooling or subsequent cooling range during the production of pre-shaped bodies for PET bottles, so-called **preforms**. Water cooling is primarily used for initial cooling and also during subsequent cooling. The air action, however, is improved by assigning mechanically displaceable elements to the air side action. As a result, the security with regard to malfunctions during handling as well as the cooling action can be improved. When combined, two especially advantageous embodiments yield an optimal solution. A valve-like element is provided for ejecting and an air nozzle is provided for the interior of the **preforms**, said nozzle assisting in the handling and cooling.

Inventors

WEINMANN ROBERT

VIRON ALAN

EGGER CASPAR

MEIER ERNST

Latest standardized assignees - inventors removed

NETSTAL MASCHINEN

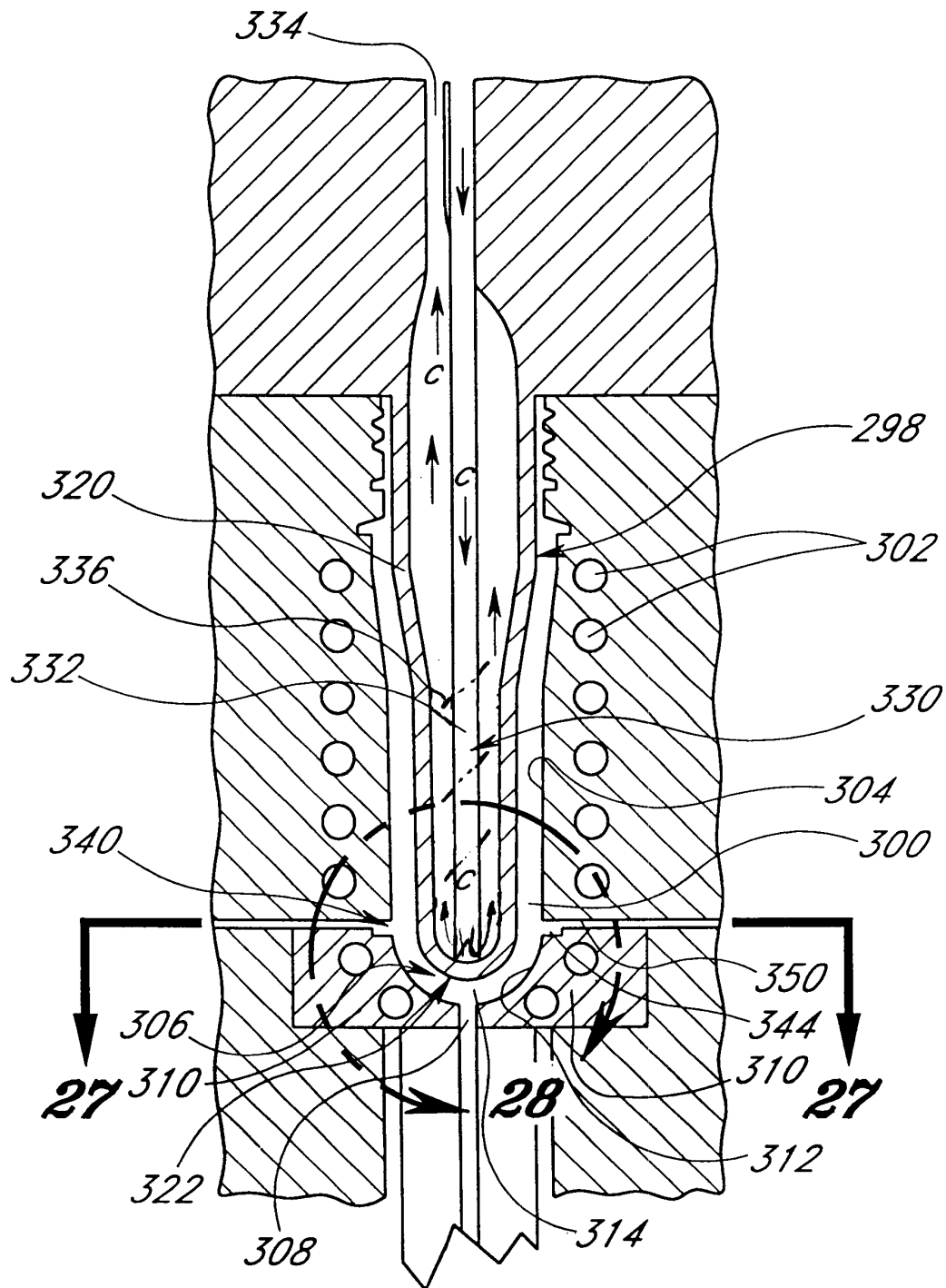
Family 9/20 - FAMPAT - ©Questel

Title

(EP1671776)

Apparatus and method for making barrier-coated polyester

Images



Publication data including kind & date

US8017063	B2	2011-09-13	US8017063
CN1613643	B	2010-06-16	CN1613643B
US20100109206	A1	2010-05-06	US20100109206
IN239539	B	2010-03-26	IN-239539
BRPI0009896	A2	2010-02-17	BR200009896
US7645135	B2	2010-01-12	US7645135
CA2367430	C	2008-10-07	CA2367430
US20080029929	A1	2008-02-07	US20080029929
RU2312798	C2	2007-12-20	RU2312798
AU2004231238	B2	2007-09-06	AU2004231238
US7261551	B2	2007-08-28	US7261551
CN1880044	A	2006-12-20	CN1880044



SA1337	B1	2006-10-02	SA---1337				
DE60023883	T2	2006-08-03	DE60023883				
EP1671776	A1	2006-06-21	EP1671776				
RU2004137265	A	2006-06-20	RU2004137265				
ES2253218	T3	2006-06-01	ES2253218				
DE60023883	D1	2005-12-15	DE60023883				
AT309076	T	2005-11-15	ATE309076				
EP1185407	B1	2005-11-09	EP1185407				
US6939591	B2	2005-09-06	US6939591				
HK1049467	A1	2005-07-29	HK1049467				
CN1613643	A	2005-05-11	CN1613643				
RU2251484	C2	2005-05-10	RU2251484				
US20040247735	A1	2004-12-09	US20040247735				
AU2004231238	A1	2004-12-09	AU2004231238				
CN1174847	C	2004-11-10	CN1174847C				
AU776200	B2	2004-09-02	AU-776200				
MXPA01010561	A	2003-09-04	MX2001PA010561				
US20030012904	A1	2003-01-16	US20030012904				
IN1158/KOLNP/2001	A	2003-01-11	IN2001KN01158				
JP2002542068	A	2002-12-10	JP2002542068				
CN1367731	A	2002-09-04	CN1367731				
BR0009896	A	2002-05-28	BR200009896				
BRPI0009896	A1	2002-05-28	BRPI0009896				
EP1185407	A2	2002-03-13	EP1185407				
US6352426	B1	2002-03-05	US6352426				
TW474865	B	2002-02-01	TW-474865				
WO00/62998	A3	2001-02-15	WO200062998				
AU4226100	A	2000-11-02	AU200042261				
WO00/62998	A2	2000-10-26	WO200062998				
CA2367430	A1	2000-10-26	CA2367430				

Abstract

(EP1671776)

This invention relates to methods and apparatus for making articles made of polyester, preferably polyethylene terephthalate (PET), having coated directly to at least one of the surfaces thereof one or more layers of thermoplastic material with good gas-barrier characteristics. In one preferred method and apparatus, **preforms** are injection molded, barrier-coated immediately thereafter, and remain on a mold portion for a time to speed cooling of the completed preform. Preferably the barrier-coated articles take the form of **preforms** coated by at least one layer of barrier material and the containers are blow-molded therefrom. Such barrier-coated containers are preferably of the type to hold beverages such as soft drinks, beer or juice. The preferred barrier materials have a lower permeability to oxygen and carbon dioxide than PET as well as key physical properties similar to PET. The materials and methods provide that the barrier layers have good adherence to PET, even during and after the blow molding process to form containers from **preforms**. Preferred barrier coating materials include poly(hydroxyamino ethers).

Inventors

HUTCHINSON GERALD A

LEE ROBERT A

Latest standardized assignees - inventors removed

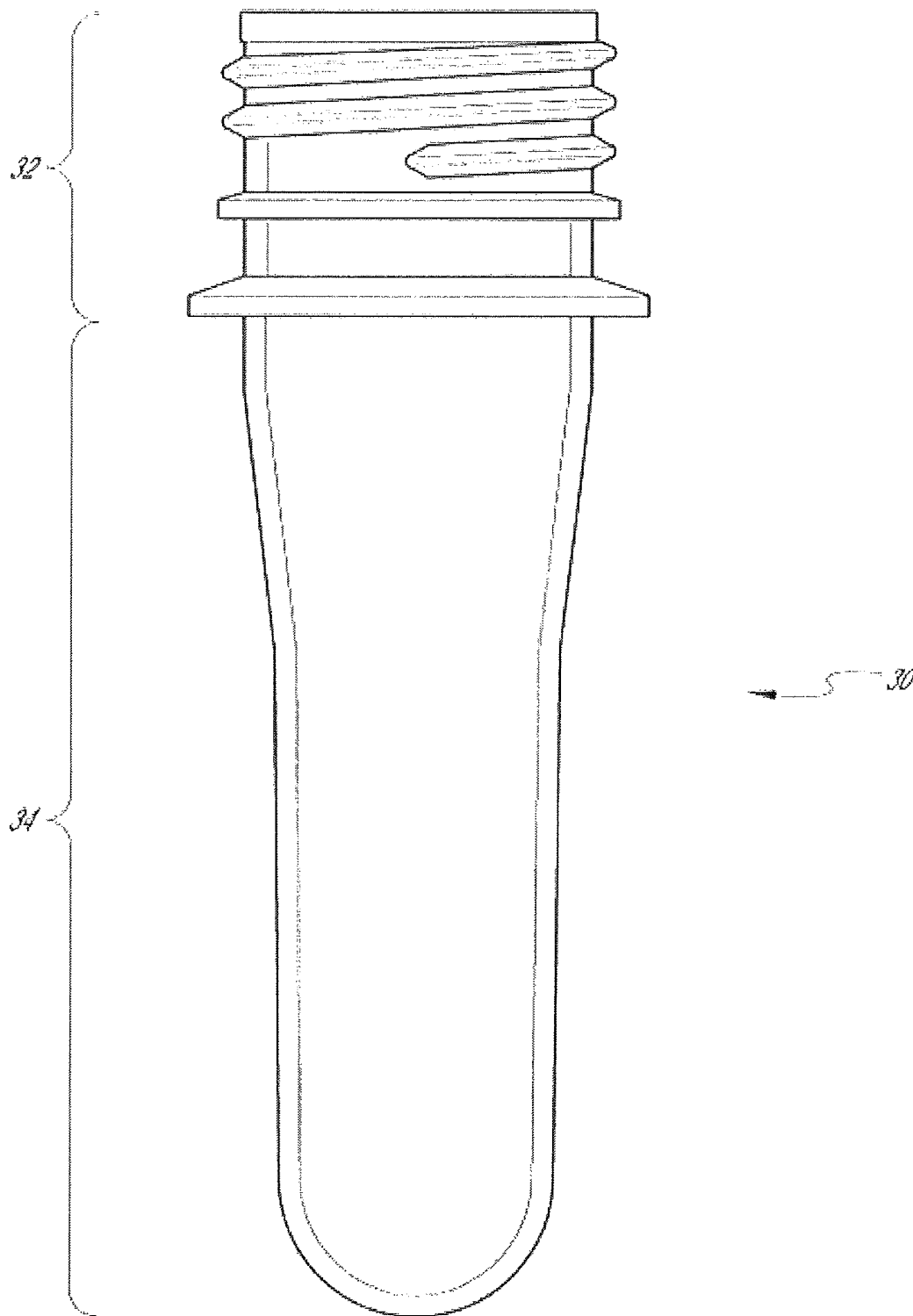
CONCENTRATE MANUFACTURING

Family 10/20 - FAMPAT - ©Questel

Title

(EP3411206)

Preform extended finish for processing light weight ecologically beneficial bottles

Images**Publication data including kind & date**

[ZA201805844](#)

B

2019-06-26

ZA201805844

[US10329043](#)

B2

2019-06-25

US10329043



EP3492232	A1	2019-06-05	EP3492232				
PH12018501626	A1	2019-06-03	PH12018501626				
CA2817555	C	2019-05-28	CA2817555				
JP6494676	B2	2019-04-03	JP6494676				
JP2019034566	A	2019-03-07	JP2019034566				
CN109414840	A	2019-03-01	CN109414840				
JP2019504788	A	2019-02-21	JP2019504788				
CN109262888	A	2019-01-25	CN109262888				
BR112018015730	A2	2019-01-08	BR112018015730				
IN201817032206	A	2019-01-04	IN201817032206				
ES2695301	T3	2019-01-03	ES2695301				
EP3411206	A1	2018-12-12	EP3411206				
US20180327131	A1	2018-11-15	US20180327131				
US20180327132	A1	2018-11-15	US20180327132				
US10118724	B2	2018-11-06	US10118724				
EP2637831	B1	2018-09-05	EP2637831				
CO2018008193	A2	2018-08-21	CO2018008193				
AU2017213829	A1	2018-08-16	AU2017213829				
BR112018015730	A1	2018-08-14	BR112018015730				
WO2017/136584	A1	2017-08-10	WO2017136584				
CA3013214	A1	2017-08-10	CA3013214				
CN106882441	A	2017-06-23	CN106882441				
JP2017100461	A	2017-06-08	JP2017100461				
AU2017200045	A1	2017-02-02	AU2017200045				
AU2011325891	B9	2016-11-24	AU2011325891				
AU2011325891	B2	2016-10-20	AU2011325891				
BR112013010969	A2	2016-08-30	BR112013010969				
US20160176566	A1	2016-06-23	US20160176566				
IN4395/DELNP/2013	A	2016-05-20	IN2013DN04395				
ZA201303077	B	2015-09-30	ZA201303077				
US20150122766	A1	2015-05-07	US20150122766				
US8956707	B2	2015-02-17	US8956707				
RU2013123905	A	2014-12-20	RU2013123905				
TH136307	A	2014-08-29	TH-136307				
BR112013010969	A1	2014-01-07	BR112013010969				
JP2013543805	A	2013-12-09	JP2013543805				
EP2637831	A1	2013-09-18	EP2637831				
MX2013005214	A	2013-08-15	MX2013005214				
CN103237638	A	2013-08-07	CN103237638				
CO6700882	A2	2013-06-28	CO6700882				
AU2011325891	A2	2013-06-06	AU2011325891				
AU2011325891	A1	2013-05-23	AU2011325891				
US20120263902	A1	2012-10-18	US20120263902				
WO2012/065162	A1	2012-05-18	WO201265162				
CA3037311	A1	2012-05-18	CA3037311				
CA3037324	A1	2012-05-18	CA3037324				
CA2817555	A1	2012-05-18	CA2817555				

(EP3411206)

Disclosed are **preforms** which incorporate improvements in the region of the **neck** and upper segment of the body to allow the production of lightweight containers, such as bottles suitable for containing water or other beverages. In accordance with certain embodiments, the improvements include a thinner **neck** finish area than conventional bottles, where the thinner area is extended into the upper segment of the body portion below the support ring. Reducing the thickness in these areas of the bottle allows for less resin to be used in forming the preform and bottle.

Inventors

HANAN JAY CLARKE

Latest standardized assignees - inventors removed

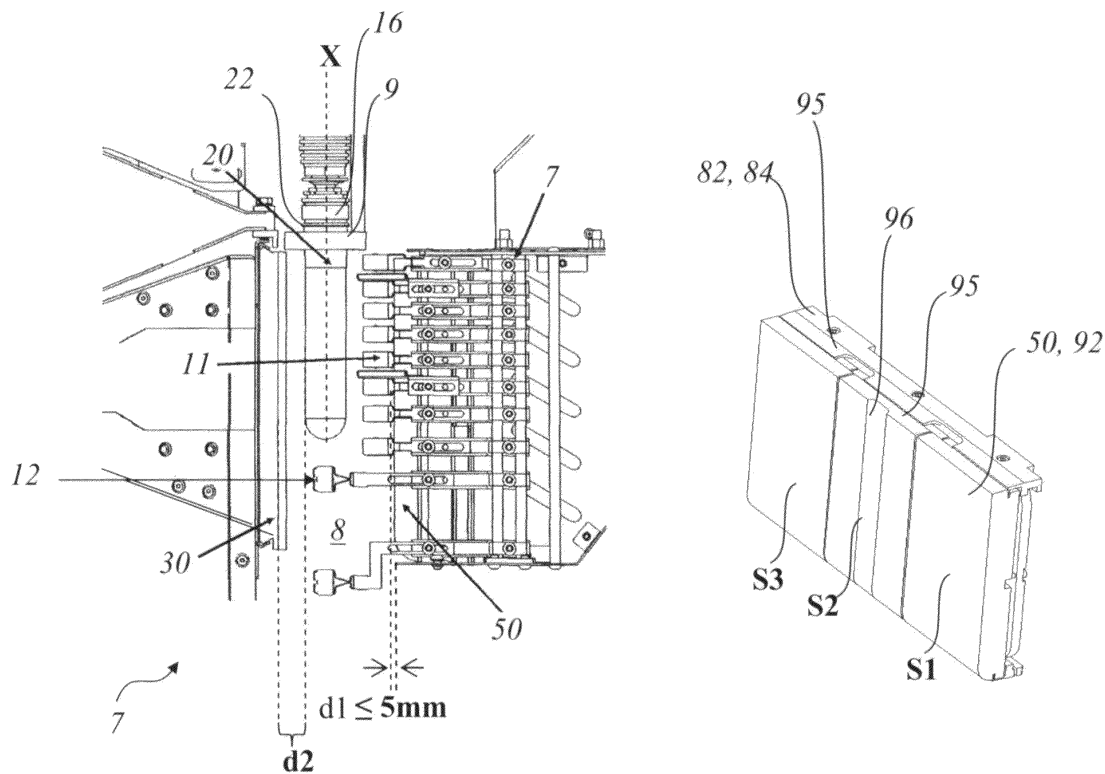
NIAGARA BOTTLING

Family 11/20 - FAMPAT - ©Questel

Title

(EP2444234)

Heating device for tempering pre-forms

Images**Publication data including kind & date**

EP2444234	B1	2017-09-13	EP2444234
US9084293	B2	2015-07-14	US9084293
CN102452168	B	2014-12-03	CN102452168B
EP2444234	A3	2014-10-01	EP2444234
US20140270733	A1	2014-09-18	US20140270733
US8774611	B2	2014-07-08	US8774611
IN2836/MUM/2011	A	2012-12-21	IN2011MU02836
CN102452168	A	2012-05-16	CN102452168
US20120099846	A1	2012-04-26	US20120099846
DE102010049136	A1	2012-04-26	DE102010049136
EP2444234	A2	2012-04-25	EP2444234

**Abstract**

(EP2444234)

The heater has a mouth area (22) and a longitudinal axis (X). A heating gas (8) is provided with transport unit for moving **preforms** (20) along a transport path, before processing in a stretch-blasting device. The multiple Infrared (IR) radiations (11) are arranged in the heating gas, where the IR radiators are arranged at a back reflector (50) or a filter. The back reflector or filters are formed in a segmented manner.

(From EP2444234 A2)

Inventors

SCHÖNBERGER WOLFGANG

FISCHER SIMON

WUTZ ANDREAS

HIRDINA JOCHEN

HOLZER CHRISTIAN

Latest standardized assignees - inventors removed

KRONES

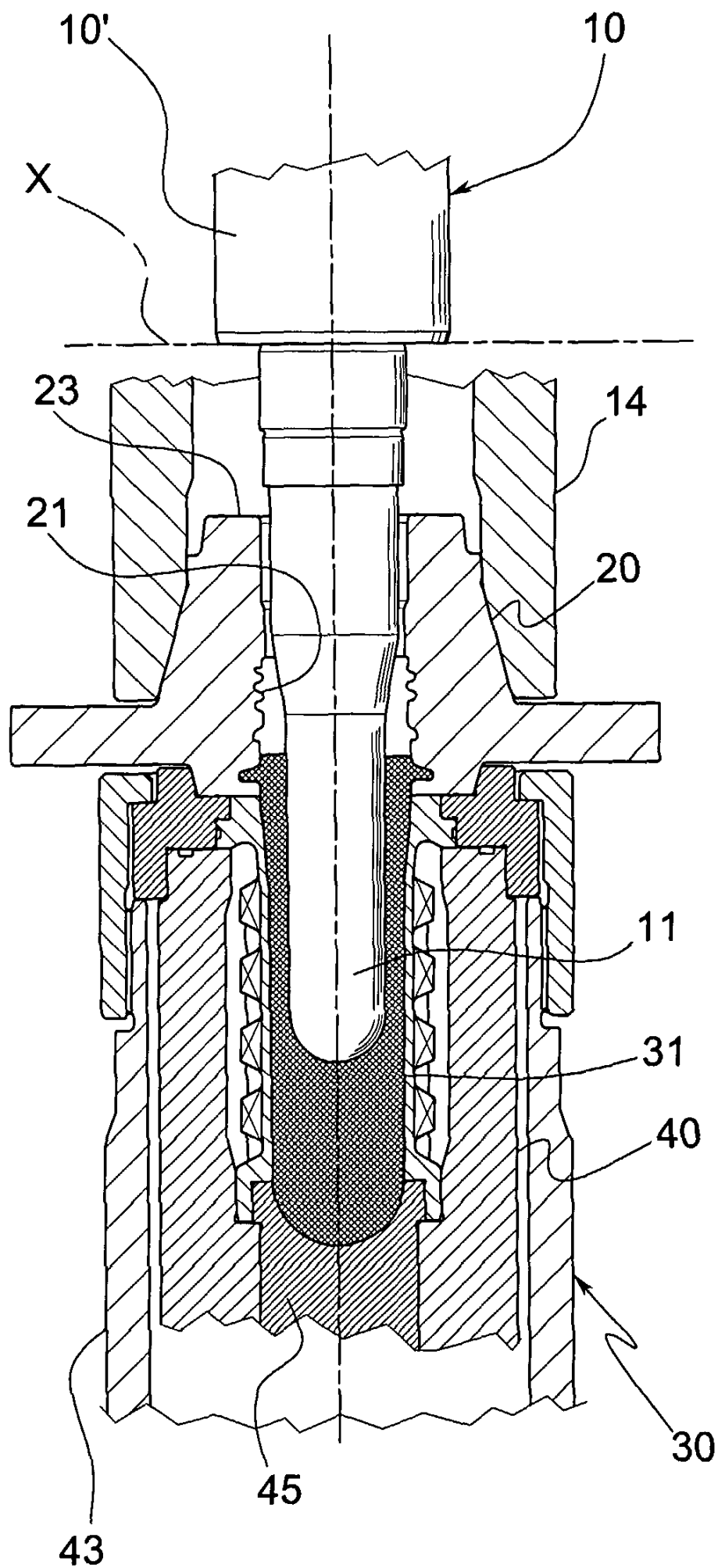
Family 12/20 - FAMPAT - ©Questel

Title

(EP1799419)

Method and mould for compression moulding container **preforms** made of polymeric material

Images



Publication data including kind & date

BRPI0516251	A2	2014-04-29	BR200516251				
IN253518	B	2012-07-27	IN-253518				
EP1799419	B1	2012-07-25	EP1799419				
JP4990149	B2	2012-05-11	JP4990149				
US7939009	B2	2011-05-10	US7939009				
CN100584568	C	2010-01-27	CN100584568C				
BRPI0516251	A	2008-08-26	BR200516251				
BRPI0516251	A1	2008-08-26	BRPI0516251				
JP2008515662	A	2008-05-15	JP2008515662				
US20080026239	A1	2008-01-31	US20080026239				
CN101035657	A	2007-09-12	CN101035657				
IN1095/KOLNP/2007	A	2007-07-13	IN2007KN01095				
EP1799419	A2	2007-06-27	EP1799419				
MX2007004292	A	2007-06-18	MX2007004292				
WO2006/040631	A3	2006-06-08	WO200640631				
WO2006/040631	A2	2006-04-20	WO200640631				
ITRE20040127	A1	2005-01-12	IT2004RE0127				

Abstract

(EP1799419)

The preform is formed by an upper **neck** which maintains unchanged its form in the final object and a hollow body, joined to the **neck**. The method foresees the insertion, within a matrix cavity, of a metered body of polymeric material whose mass is metered according to a reference value, and the subsequent pressure insertion of a punch within the matrix cavity until it closes the mold's molding chamber, the punch conferring the shape to the **inner** surface of the preform and the matrix having an **inner** surface which confers the shape to the outer surface of the preform. According to the invention, in the molding of the preform, the error of the mass of the metered body with respect to the reference value is distributed in the hollow body, which undergoes a subsequent hot deformation until it achieves the final shape. In the mold, the matrix comprises at least one deformable wall (31) whose **inner** surface defines at least part of the **inner** surface of the matrix part intended to give form to the hollow body of the preform, said deformable wall (31) having, at least in part, a relatively thin thickness which permits it to be elastically deformed under the pressure of the polymeric material in the final preform molding step, thereby varying the thickness of the hollow body.

Inventors

BALBONI ALESSANDRO

PARRINELLO FIORENZO

ZUFFA ZENO

Latest standardized assignees - inventors removed

SACMI

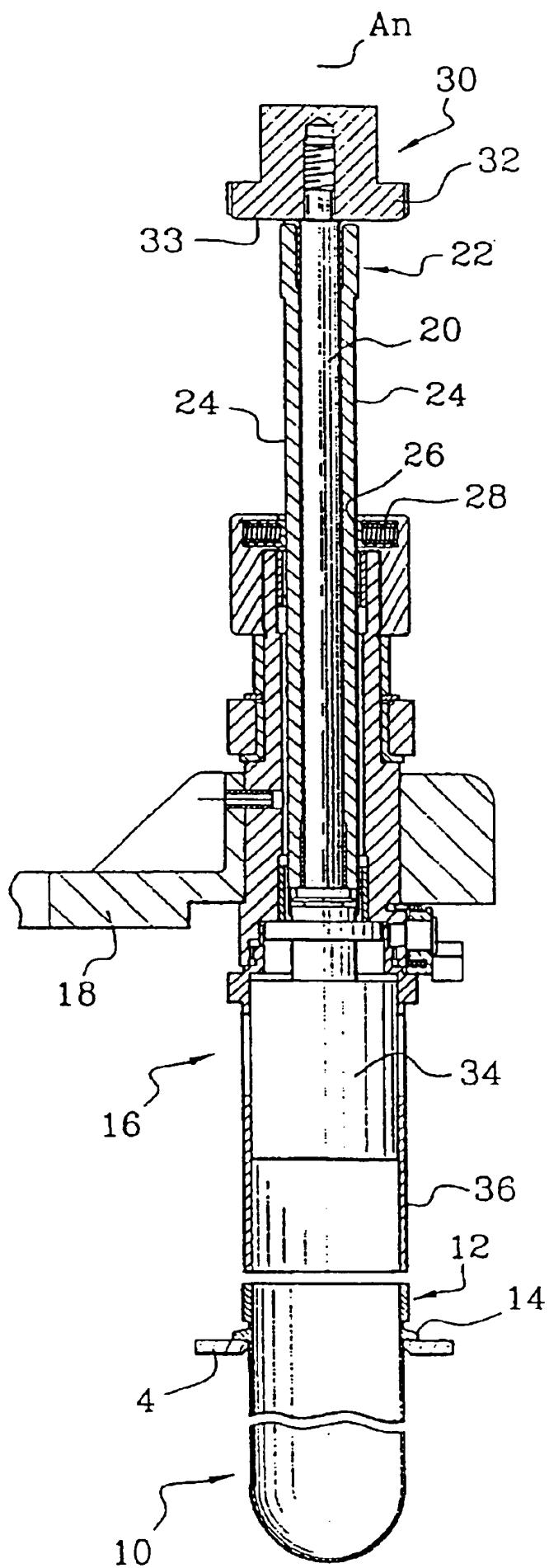
Family 13/20 - FAMPAT - ©Questel

Title

(EP1180069)

Thermal processing oven in a blow-forming facility for thermoplastic receptacles

Images



Publication data including kind & date

BR0010023	B1	2009-08-11	BR200010023				
BRPI0010023	A2	2009-05-12	BR200010023				
CA2371256	C	2007-06-19	CA2371256				
JP3737032	B2	2005-11-04	JP3737032				
US6811389	B1	2004-11-02	US6811389				
DE60003813	T2	2004-06-03	DE60003813				
KR100430833	B1	2004-05-10	KR100430833				
AU772777	B2	2004-05-06	AU-772777				
ES2203440	T3	2004-04-16	ES2203440				
PT1180069	E	2003-11-28	PT1180069				
CN1121311	C	2003-09-17	CN1121311C				
DE60003813	D1	2003-08-14	DE60003813				
AT244631	T	2003-07-15	ATE244631				
EP1180069	B1	2003-07-09	EP1180069				
JP2002542083	A	2002-12-10	JP2002542083				
MXPA01010741	A	2002-06-04	MX2001PA010741				
CN1349455	A	2002-05-15	CN1349455				
KR20020016774	A	2002-03-06	KR20020016774				
EP1180069	A1	2002-02-20	EP1180069				
BR0010023	A	2002-01-15	BR200010023				
BRPI0010023	A1	2002-01-15	BRPI0010023				
FR2792569	B1	2001-08-03	FR2792569				
AU3665000	A	2000-11-10	AU200036650				
WO00/64658	A1	2000-11-02	WO200064658				
CA2371256	A1	2000-11-02	CA2371256				
FR2792569	A1	2000-10-27	FR2792569				

Abstract

(EP1180069)

The invention relates to an oven in a production facility for thermoplastic receptacles, comprising a conveyor chain which is provided with gripping devices (16), whereby each gripping device engages axially with the **neck** of a receptacle blank in order to transport it into the oven. The invention is characterized in that the gripping devices are displaced axially by means of a mechanism which is provided with an arm (44) which can move along a path that is substantially parallel to the axial direction (An) in which gripping takes place and which bears an interface element (40) which is designed to come into contact with the gripping device (30). The invention is further characterized in that the interface element (40) is moveably mounted on the arm (44) to enable slip-free contact with the gripping device while it is immobilized in relation to the arm according to the axial direction in which gripping occurs.

Inventors

GUIFFANT ALAIN

MOUCHELET MARC

Latest standardized assignees - inventors removed

SIDEL

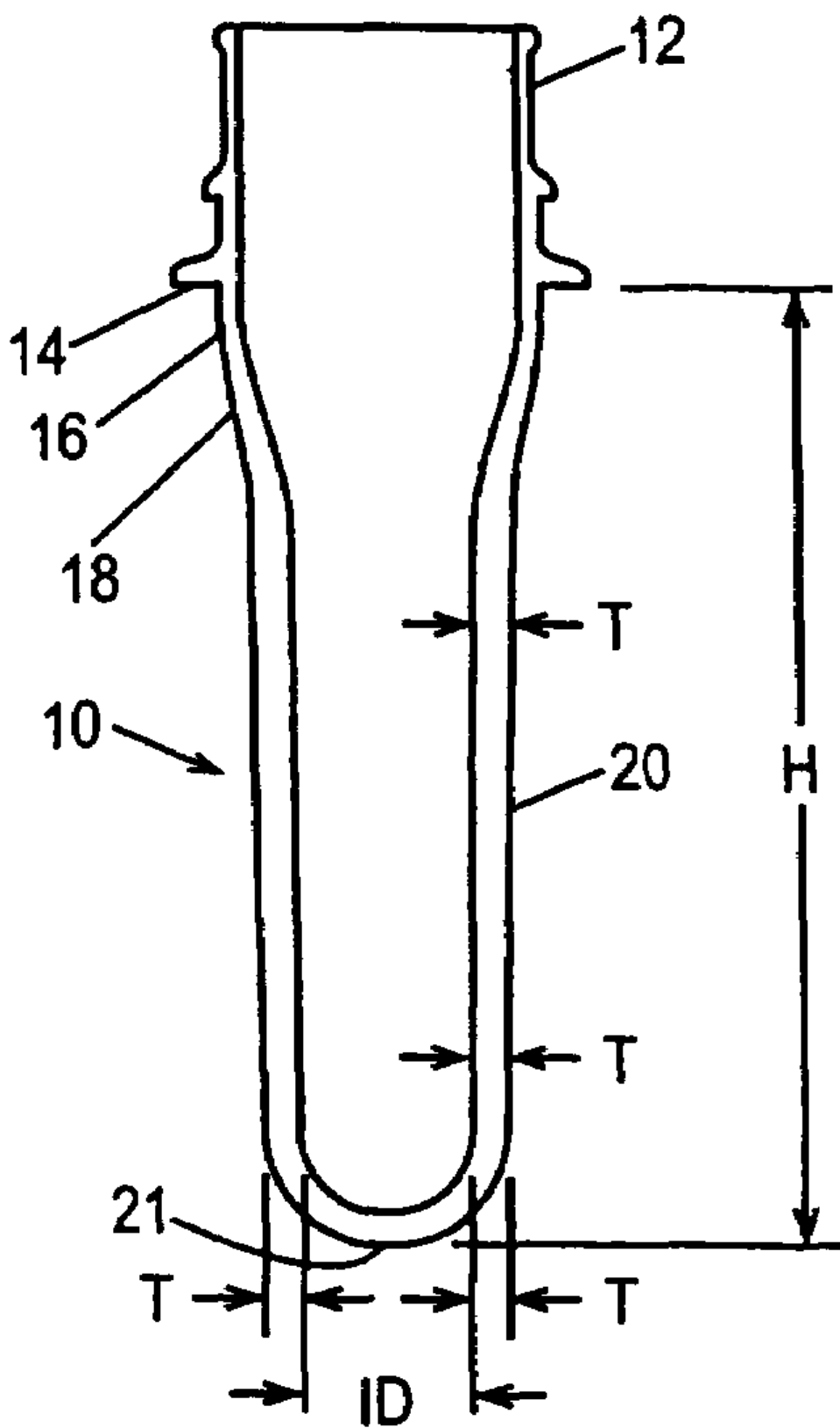
Family 14/20 - FAMPAT - ©Questel

Title

(EP1885543)

Low iv pet based copolymer preform with enhanced mechanical properties and cycle time, container made therewith and methods

Images



BRPI0609387	B1	2018-11-21	BR200609387				
TH62080	B	2018-04-20	TH--62080B				
IN291613	B	2018-01-12	IN-291613				
IN291228	B	2018-01-05	IN-291228				
CA2607504	C	2014-03-11	CA2607504				
BRPI0315844	A8	2013-08-27	BR200315844				
JP5175717	B2	2013-01-11	JP5175717				
CA2501953	C	2012-10-02	CA2501953				
US8247049	B2	2012-08-21	US8247049				
KR101086473	B1	2011-11-25	KR101086473				
AU2006248005	B2	2011-04-28	AU2006248005				
EP1885602	B9	2011-03-30	EP1885602				
ES2354718	T3	2011-03-17	ES2354718				
CN101203431	B	2011-01-19	CN101203431B				
DE602006017691	D1	2010-12-02	DE602006017691				
AT485222	T	2010-11-15	ATE485222				
US7820257	B2	2010-10-26	US7820257				
EP1885602	B1	2010-10-20	EP1885602				
BRPI0609387	A2	2010-07-13	BR200609387				
RU2390482	C2	2010-05-27	RU2390482				
US20100098894	A1	2010-04-22	US20100098894				
BRPI0315844	A2	2010-03-30	BR200315844				
US7572493	B2	2009-08-11	US7572493				
RU2007145082	A	2009-06-20	RU2007145082				
IN233088	B	2009-03-27	IN-233088				
VN0007465	B	2009-02-25	VN---7465B				
ZA200709637	B	2008-11-26	ZA200709637				
ZA200709638	B	2008-11-26	ZA200709638				
JP2008540186	A	2008-11-20	JP2008540186				
JP2008540187	A	2008-11-20	JP2008540187				
JP2008540185	A	2008-11-20	JP2008540185				
ZA200709639	B	2008-10-29	ZA200709639				
ES2304536	T3	2008-10-16	ES2304536				
JP4190498	B2	2008-09-26	JP4190498				
CN100418721	C	2008-09-17	CN100418721C				
AU2003287393	B2	2008-07-31	AU2003287393				
DE60321591	D1	2008-07-24	DE60321591				
AT398008	T	2008-07-15	ATE398008				
IN9074/DELNP/2007	A	2008-06-27	IN2007DN09074				
IN9075/DELNP/2007	A	2008-06-27	IN2007DN09075				
CN101203367	A	2008-06-18	CN101203367				
CN101203368	A	2008-06-18	CN101203368				
CN101203431	A	2008-06-18	CN101203431				
EP1562728	B1	2008-06-11	EP1562728				
EP1907189	A1	2008-04-09	EP1907189				
RU2319649	C2	2008-03-20	RU2319649				
MX2007013956	A	2008-02-22	MX2007013956				
EP1885543	A1	2008-02-13	EP1885543				

EP1885602	A1	2008-02-13	EP1885602				
IN9071/DELNP/2007	A	2008-01-25	IN2007DN09071				
MX2007013957	A	2008-01-17	MX2007013957				
MX2007013958	A	2008-01-11	MX2007013958				
AR055787	A1	2007-09-05	AR--55787				
AR054116	A1	2007-06-06	AR--54116				
AR054117	A1	2007-06-06	AR--54117				
IN1467/DELNP/2005	A	2006-12-29	IN2005DN01467				
TH82026	A	2006-12-21	TH--82026				
ZA200502920	B	2006-11-29	ZA200502920				
WO2006/124199	A1	2006-11-23	WO2006124199				
WO2006/124200	A1	2006-11-23	WO2006124200				
WO2006/124214	A1	2006-11-23	WO2006124214				
AU2006248005	A1	2006-11-23	AU2006248005				
CA2607504	A1	2006-11-23	CA2607504				
US20060257602	A1	2006-11-16	US20060257602				
US20060257603	A1	2006-11-16	US20060257603				
JP2006509687	A	2006-03-23	JP2006509687				
RU2005116686	A	2006-01-20	RU2005116686				
CN1708383	A	2005-12-14	CN1708383				
US20050260371	A1	2005-11-24	US20050260371				
BR0315844	A	2005-09-27	BR200315844				
BRPI0315844	A1	2005-09-27	BRPI0315844				
EP1562728	A1	2005-08-17	EP1562728				
KR20050073598	A	2005-07-14	KR20050073598				
MXPA05003961	A	2005-06-22	MX2005PA003961				
US20050118371	A1	2005-06-02	US20050118371				
AU2003287393	A1	2004-06-07	AU2003287393				
WO2004/041496	A1	2004-05-21	WO200441496				
CA2501953	A1	2004-05-21	CA2501953				
US20040091651	A1	2004-05-13	US20040091651				

Abstract

(EP1885543)

A preform having a low IV and comprising a PET Copolymer comprising a diol component having repeat units from ethylene glycol and diethylene glycol and a diacid component having repeat units from terephthalic acid and naphthalenedicarboxylic acid. The total amount of diethylene glycol and naphthalenedicarboxylic acid is present in the poly(ethylene terephthalate) copolymer in an amount from about 0.1 mole percent to less than 2.8 mole percent. The preform is useful in making containers and corresponding methods are disclosed.

Inventors

SHI YU

Latest standardized assignees - inventors removed

COCA COLA

Family 15/20 - FAMPAT - ©Questel

Title

(WO201326144)

Post-mold cooling injection molded articles

Images

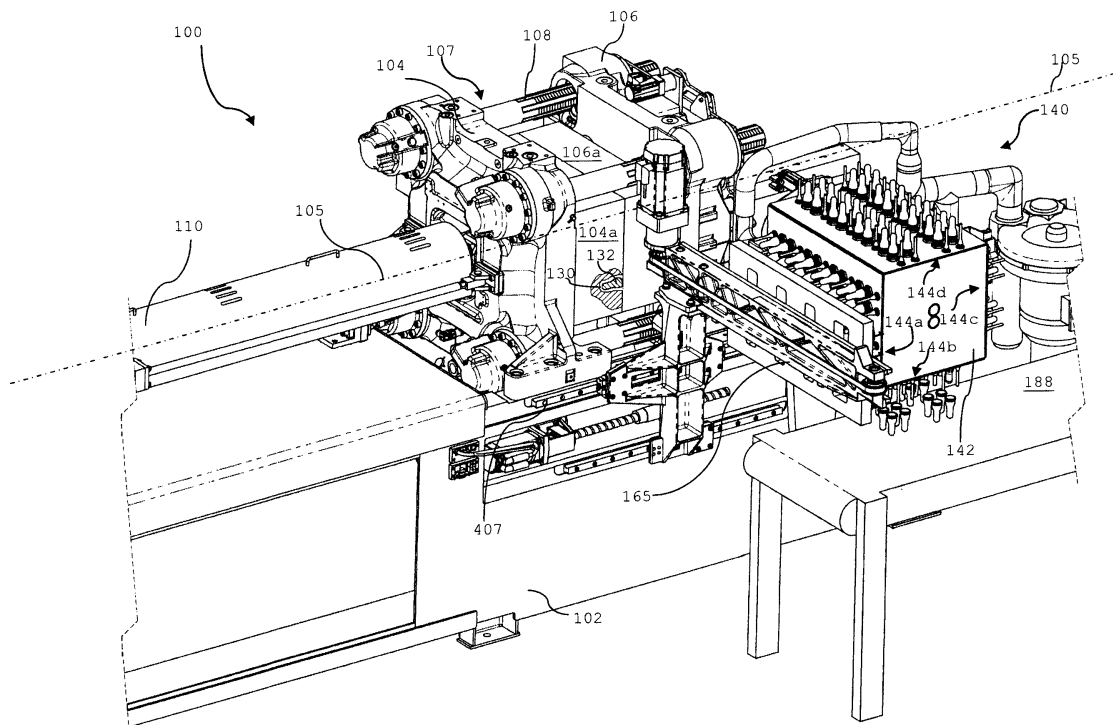


FIG. 1

Publication data including kind & date

WO2013/026144	A1	2013-02-28	WO201326144
WO2013/026145	A1	2013-02-28	WO201326145

**Abstract**

(WO2013/026144)

A part handling apparatus for handling **preforms** molded in an injection molded machine includes a transfer shell having at least one shell side and a plurality of transfer pins mounted to the at least one shell side for insertion into the **preforms**. Each pin includes a base for mounting to a transfer shell side and a tip spaced apart from the base; an interior pin channel extending between the base and the tip; and a base journal having a journal outer surface sized smaller than the **neck** region **inner** surface of the preform to provide a generally annular flow gate between the journal outer surface and the **neck** region **inner** surface. The annular flow gate forms a flow restriction when air is drawn through the preform, maintaining a vacuum force on the preform and convectively cooling the preform.

Inventors

SCHAD ROBERT D

JUNG DANIEL

KAUR TANVEER

Latest standardized assignees - inventors removed

ATHENA AUTOMATION

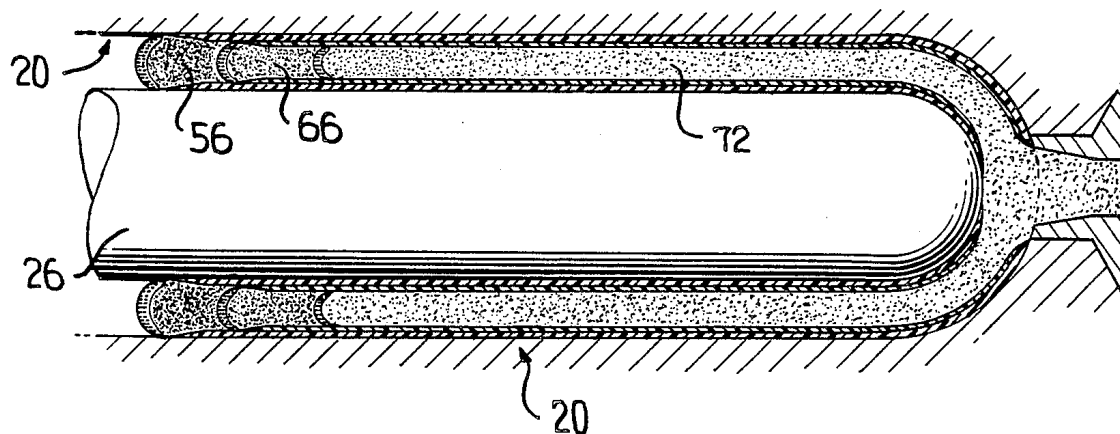
Family 16/20 - FAMPAT - ©Questel

Title

(EP-153120)

Laminated preform with internal barrier layer

Images



Publication data including kind & date

JP7085894	B2	1995-09-20	JP95085894
DE3587947	T2	1995-04-20	DE3587947
JP07009488	A	1995-01-13	JP07009488
DE3587947	D1	1995-01-05	DE3587947
AT114268	T	1994-12-15	ATE114268
EP0392571	B1	1994-11-23	EP-392571
MX169495	B	1993-07-07	MX-169495
JPH0442967	B2	1992-07-15	JP92042967
DE3584898	D1	1992-01-30	DE3584898
AT70490	T	1992-01-15	ATE070490
EP0153120	B1	1991-12-18	EP-153120
EP0392571	A3	1991-01-16	EP-392571
EP0392571	A2	1990-10-17	EP-392571
US4781954	A	1988-11-01	US4781954
AU573661	B2	1988-06-16	AU-573661
CA1232214	A	1988-02-02	CA1232214
US4710118	A	1987-12-01	US4710118
EP0153120	A3	1987-10-07	EP-153120
US4609516	A	1986-09-02	US4609516
JPS60189407	A	1985-09-26	JP60189407
EP0153120	A2	1985-08-28	EP-153120
AU3639984	A	1985-08-22	AU8436399



Abstract

(EP0153120)

This relates to laminated **preforms**, the method of forming such **preforms** and products which may be beneficially formed utilizing such **preforms**. Most particularly, this relates to a preform which has formed as part of the injection molding thereof two layers of barrier material which are disposed within two layers of thermoplastic resin and having received therebetween a solid core of thermoplastic resin. The specific method of forming the preform permits the barrier material layers to be of a greatly reduced thickness as compared to such layer thicknesses permissible in the past, with the result that the barrier material layers in the blow molded articles are of a thickness recognized to be acceptable for the barrier function. The barrier material layers may be selectively terminated along the length of the preform so as to permit portions of the resultant blow molded article to be removed and reused.

Inventors

KRISHANKUMAR, SUPPAYAN M.

NAHILL, THOMAS E.

Latest standardized assignees - inventors removed

GRAHAM PACKAGING PET TECHNOLOGIES

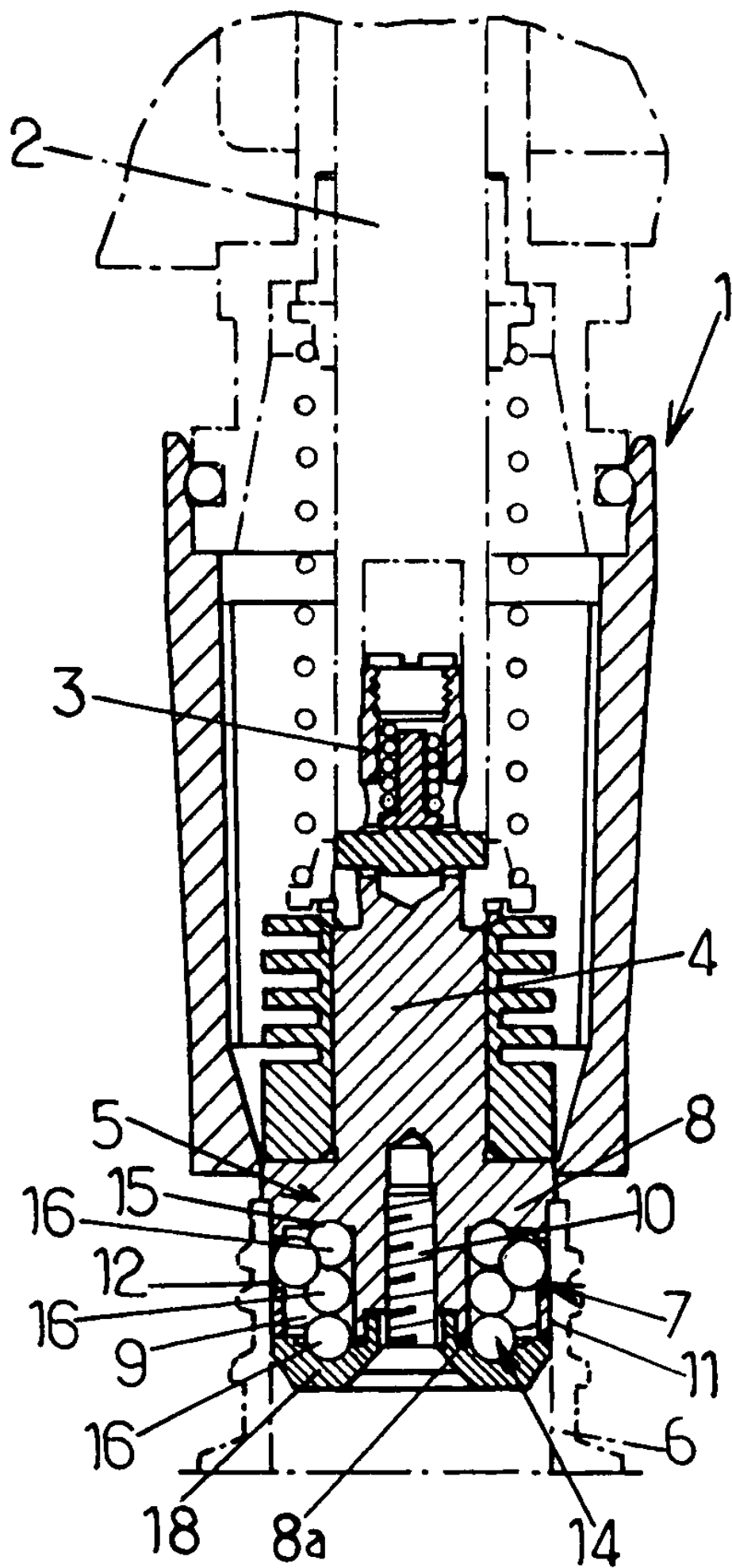
Family 17/20 - FAMPAT - ©Questel

Title

(EP1880825)

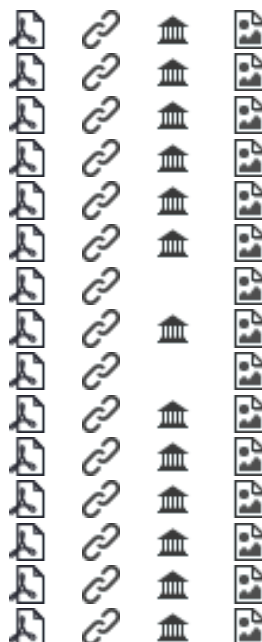
Individual support device for a container equipped with a **neck** and installation equipped with transport devices having such a support device

Images



Publication data including kind & date

CN101108535	B	2011-10-12	CN101108535B
JP4612023	B2	2010-10-22	JP4612023
ES2338817	T3	2010-05-12	ES2338817
PT1880825	E	2010-05-06	PT1880825
US7694802	B2	2010-04-13	US7694802
DE602007004778	D1	2010-04-01	DE602007004778
AT457866	T	2010-03-15	ATE457866
EP1880825	B1	2010-02-17	EP1880825
MX2007008796	A	2009-01-07	MX2007008796
FR2903965	B1	2008-12-05	FR2903965
JP2008023706	A	2008-02-07	JP2008023706
FR2903965	A1	2008-01-25	FR2903965
US20080017779	A1	2008-01-24	US20080017779
EP1880825	A1	2008-01-23	EP1880825
CN101108535	A	2008-01-23	CN101108535

**Abstract**

(EP1880825)

Device for supporting a container by the **neck** (6) comprises a cylindrical base (8) with a peripheral channel (9) between a central core (10) and an outer wall (11) that is pierced with circular holes (12); a set of balls (13) in the channel, one for each hole, the balls having a larger diameter than the holes; and a spring (14) that forces the balls into the holes so that the balls partially project outside the holes to provide radial frictional contact with the inside of the **neck**. An independent claim is also included for an installation for transporting necked containers, comprising a chain of transport devices, each equipped with a support device as above.

Inventors

LAPERT CHRISTOPHE

Latest standardized assignees - inventors removed

SIDEL PARTICIPATIONS

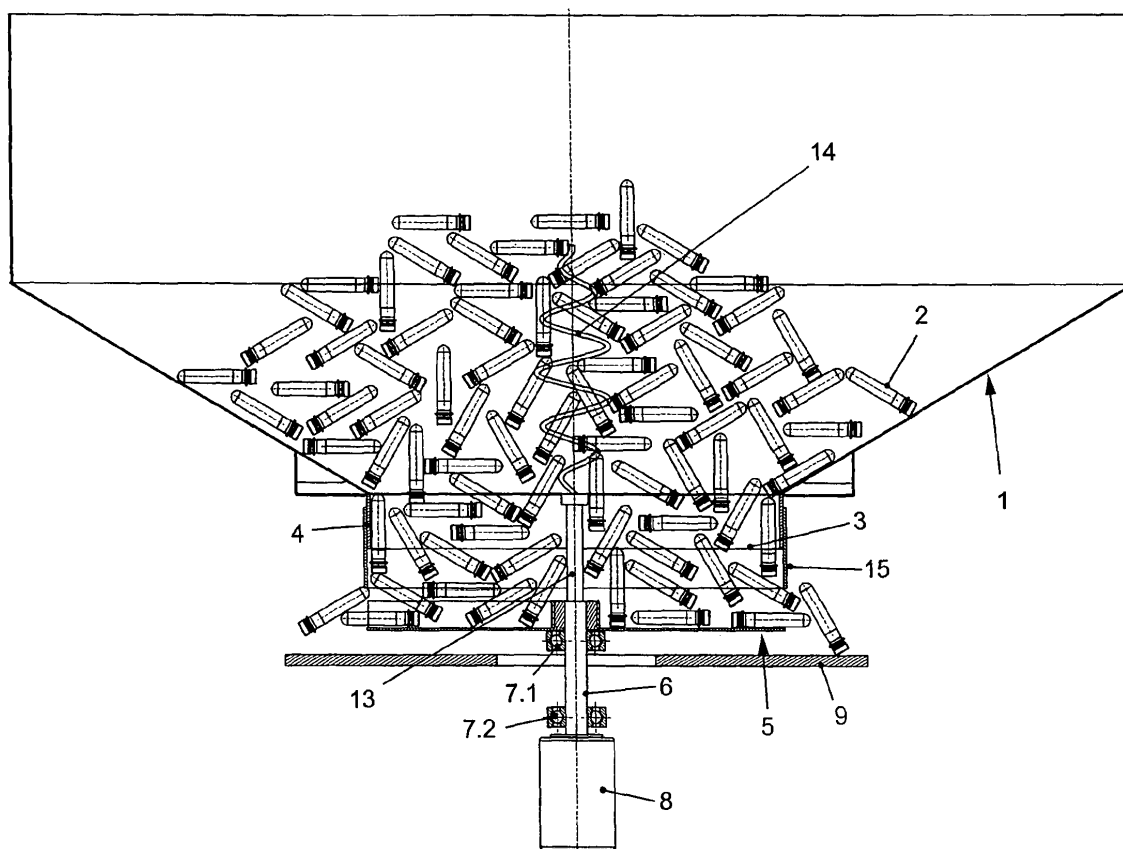
Family 18/20 - FAMPAT - ©Questel

Title

(EP2059464)

Device for discharging elongate, coarse bulk products

Images



Publication data including kind & date

JP5557527	B2	2014-06-13	JP5557527
US8327999	B2	2012-12-11	US8327999
ES2387132	T3	2012-09-14	ES2387132
EP2233413	B1	2012-06-06	EP2233413
EP2059464	B1	2012-05-16	EP2059464
US20120090959	A1	2012-04-19	US20120090959
US8061502	B2	2011-11-22	US8061502
EP2233413	A1	2010-09-29	EP2233413
US20100006588	A1	2010-01-14	US20100006588
JP2010500263	A	2010-01-07	JP2010500263
CN101528569	A	2009-09-09	CN101528569
EP2059464	A2	2009-05-20	EP2059464
WO2008/019836	A3	2008-06-12	WO200819836
WO2008/019836	A2	2008-02-21	WO200819836
DE102006038321	A1	2008-02-21	DE102006038321



Abstract

(EP2059464)

The invention relates to a device for discharging elongate, coarse bulk products (2) from a container (1), especially of PET bottle **preforms** from a bulk hopper having a discharge opening (3). The invention is characterized in that the discharge opening (3) is associated with a rotating disk (5).

Inventors

KLAIBER FRANZ

NOVAK PETER

Latest standardized assignees - inventors removed

SIDEL PARTICIPATIONS

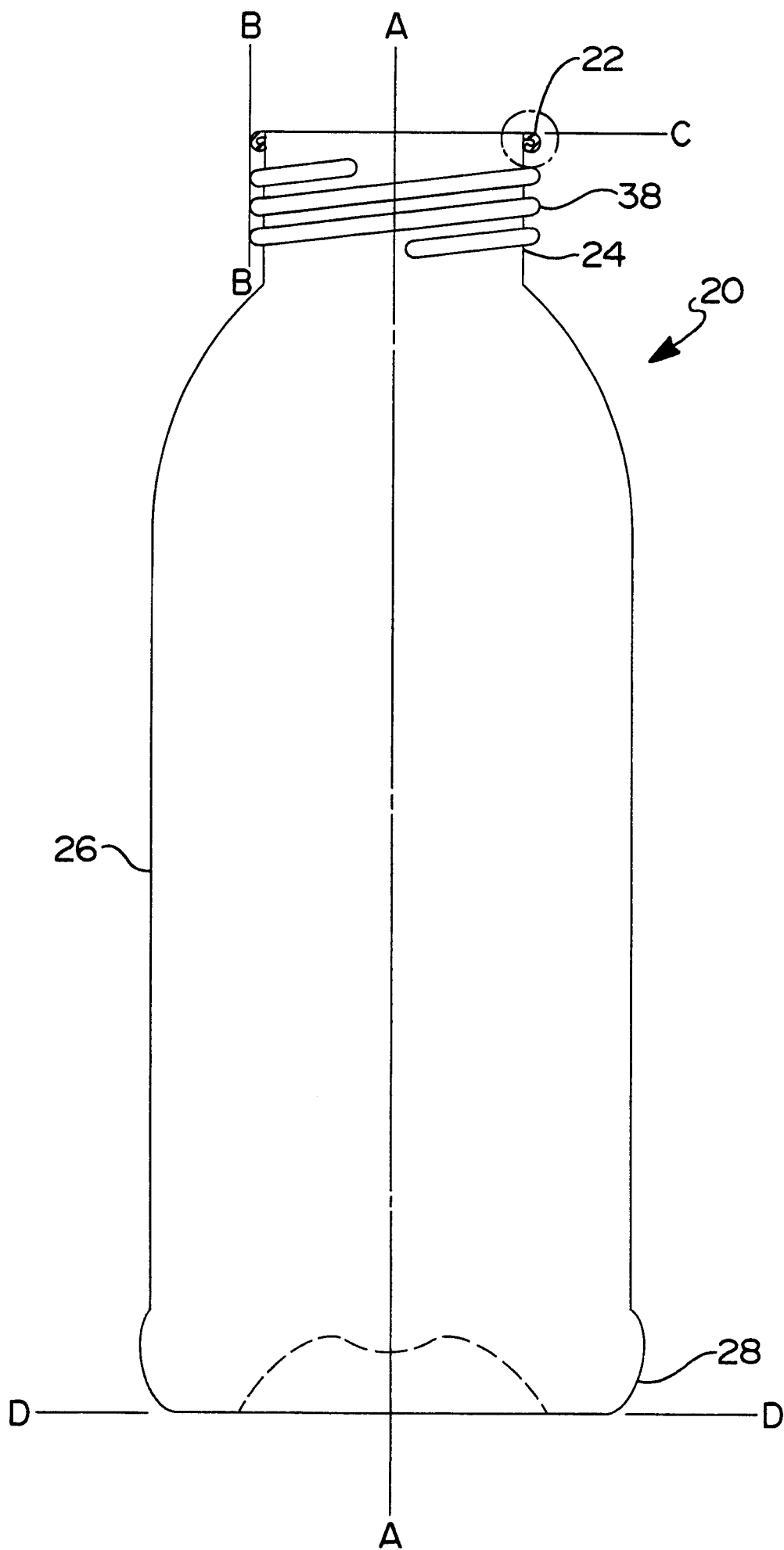
Family 19/20 - FAMPAT - ©Questel

Title

(US6264050)

Container with improved **neck** portion and method for making the same

Images



Publication data including kind & date

US6740284	B2	2004-05-25	US6740284
US20030189056	A1	2003-10-09	US20030189056
US6264050	B1	2001-07-24	US6264050

**Abstract**

(US6264050)

A plastic blow molded container having a central vertical axis constructed in accordance with the present invention includes a cylindrical upper rim, an oriented **neck** portion, a lower body portion, and a closed base portion. The upper rim of the container includes a top surface having a planar **inner** edge and an outer edge. The **inner** edge is generally flat and perpendicular to the vertical axis of the container and the outer edge may be curled or curved to provide additional rigidity. The oriented **neck** portion depends from the upper rim and includes a means to accept a closure, such as a set of integral **threads**. When viewed in vertical cross section, the outer vertical line formed by the outer axial points of said means to accept a closure is substantially parallel to the vertical axis of the container. The lower body portion is generally cylindrical over the majority of its vertical length. The closed base portion supports the container and depends from the lower body portion. For stability, the plane of the **inner** edge of the upper rim of the container is generally parallel to the plane formed by the lowermost points of the closed base portion.

Inventors

DARR RICHARD C

SLAT WILLIAM A

Latest standardized assignees - inventors removed

PLASTIPAK HOLDINGS

TABB REALTY

WHITELINE EXPRESS

CLEAN TECHNOLOGY

PLASTIPAK PACKAGING

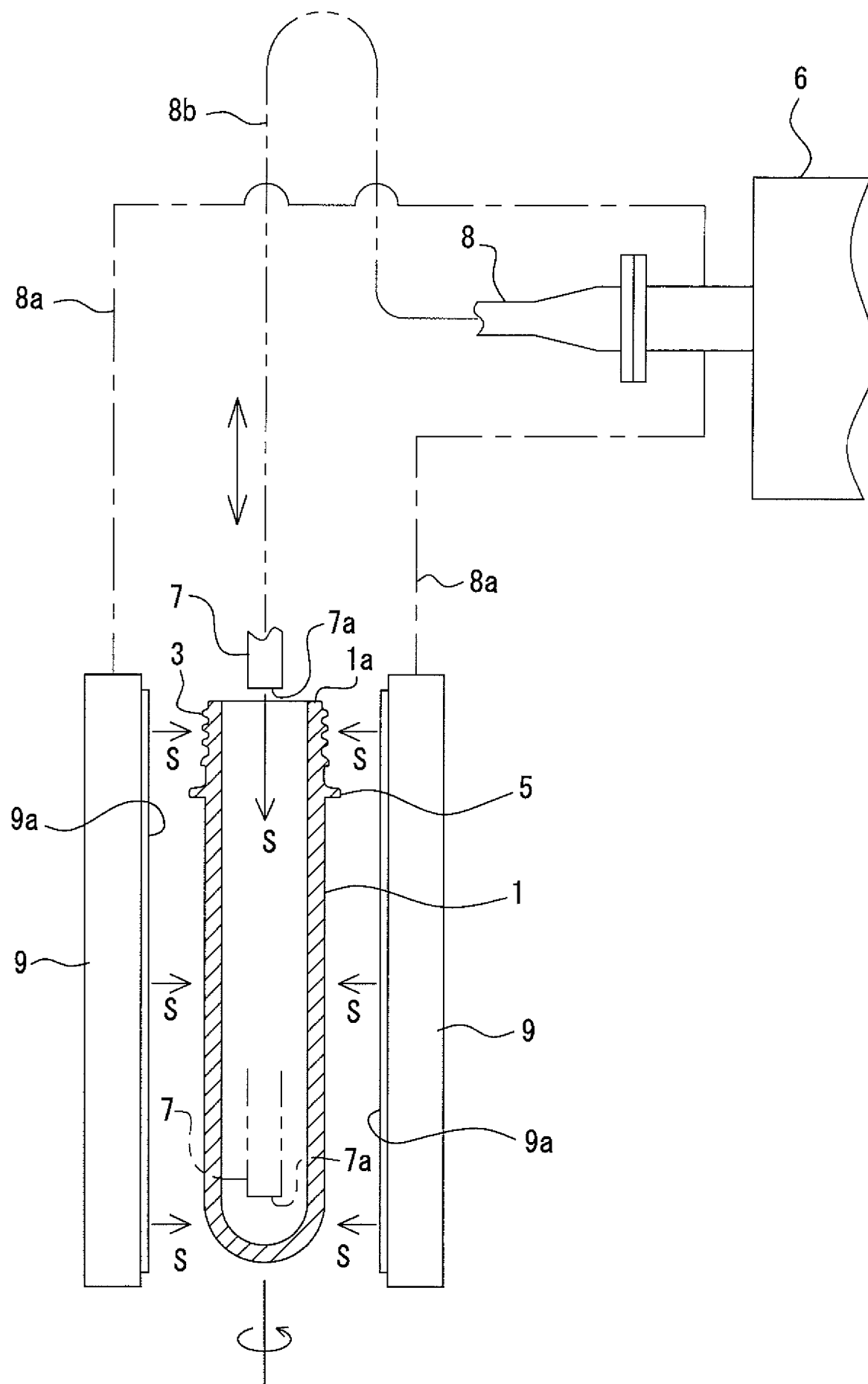
Family 20/20 - FAMPAT - ©Questel

Title

(EP2826717)

Preform sterilizing method and content filling system

Images



Publication data including kind & date

US9950824	B2	2018-04-24	US9950824
EP2826717	B1	2017-12-06	EP2826717
CN104169176	B	2017-04-12	CN104169176B



JP6044088	B2	2016-11-25	JP6044088				
JP6007685	B2	2016-09-23	JP6007685				
JP5962352	B2	2016-07-08	JP5962352				
EP2826717	A4	2015-12-30	EP2826717				
US20150027088	A1	2015-01-29	US20150027088				
EP2826717	A1	2015-01-21	EP2826717				
CN104169176	A	2014-11-26	CN104169176				
JP2014050478	A	2014-03-20	JP2014050478				
JP2014050985	A	2014-03-20	JP2014050985				
JP2013189232	A	2013-09-26	JP2013189232				
WO2013/137325	A1	2013-09-19	WO2013137325				

Abstract

(EP2826717)

A preform is easily and promptly sterilized. Superheated steam (S) generated from water, and having a temperature of 200°C to 500°C and a pressure higher than atmospheric pressure is blasted to entire **inner** and outer surfaces of a preform (1) including a mouth portion (1a) thereof.

Inventors

MIYAHARA YOSHIHIRO

TSUCHIYA HIROTAKA

NISHIDA YOSHIO

Latest standardized assignees - inventors removed

DAI NIPPON PRINTING