

Title (en)

Multi-stage prestretch wrapping apparatus and method.

Title (de)

Umwickelvorrichtung und -verfahren mit Vorstreckung der Folie in verschiedenen Schritten.

Title (fr)

Appareil et procédé d'enveloppement à préétirage en plusieurs étapes.

Publication

**EP 0246659 A1 19871125 (EN)**

Application

**EP 87107489 A 19870522**

Priority

US 86734286 A 19860523

Abstract (en)

The invention relates to a method for wrapping one or a plurality of components (20) to form a wrapped unitary package by positioning the components on support means (18), positioning a roll (24) of stretchable material adjacent to a roller assembly (26) comprising at least three stretch rollers, prestretching the stretchable material to a predetermined value above its yield point in multiple stages, at least two of which occur through the roller assembly, and wrapping the prestretched material (22) around the components (20) and support means (18). The method may include automatically threading the stretchable material (22) through the stretch rollers. The invention also relates to various apparatus for carrying out these method steps, including a stretch wrapping apparatus, a roller assembly, and an automatic threading mechanism.

IPC 1-7

**B65B 11/04**

IPC 8 full level

**B65B 11/04** (2006.01)

CPC (source: EP)

**B65B 11/045** (2013.01)

Citation (search report)

- [A] EP 0096635 A2 19831221 - PROCTER & GAMBLE EUROP [BE], et al
- [A] EP 0144266 A2 19850612 - EMCO INT [FR]

Cited by

FR2631922A1; US5311725A; US5875616A; US10822126B2; US2012174533A1; US9187193B2; EP2463202A3; EP2463203A3; US6070393A; US5490642A; US5352320A; FR3092831A1; EP0676332A1; FR2718414A1; US5634321A; US2012124944A1; US8276346B2; US2017101205A1; US10384822B2; WO2008007189A3; WO9324373A1; WO0038990A1; US9908648B2; US11472580B2; US11479378B2; US10899485B2; US11401063B2; US10005581B2; US111111046B2; US11174056B2; WO2008007189A2; US8079201B2; EP2463202A2; EP2463203A2; US8250838B2; US8448412B2; US9725195B2; US9932137B2; US11208225B2; US10227152B2; US11597544B2; US11597554B2; US11667416B2; US11685567B2; US9776748B2; US9944417B2; US10220970B2; US10239645B2; US10654598B2; US10717554B2; US11407538B2; US11518558B2; US11912445B2; US6170772B1; US6170776B1; US10005580B2; US10053253B2; US10435191B2; US10926906B2; US10934034B2; US11034470B2; US11104464B2; US111111045B2; US11505343B2; US11518557B2; US11731793B2

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

**EP 0246659 A1 19871125**; JP S6322317 A 19880129

DOCDB simple family (application)

**EP 87107489 A 19870522**; JP 12686087 A 19870522