PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7 :
A61B 19/04, A41D 19/00

A1

(11) International Publication Number: **WO 00/41641**

(43) International Publication Date: 20 July 2000 (20.07.00)

(21) International Application Number: PCT/GB00/00097

(22) International Filing Date: 14 January 2000 (14.01.00)

(30) Priority Data:
9900782.5 14 January 1999 (14.01.99) GB

(71) Applicant: ROWE, Geoffrey [–/GB]; 156 Fishpool Street, St. Albans, Hertfordshire AL3 4RZ (GB).

(74) Agent: AUSTIN, Hedley, William; Urquhart–Dykes & Lord, Alexandra House, Alexandra Road, Swansea SA1 5ED (GB).

(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published
With international search report.

(54) Title: GLOVE PACK

(57) Abstract

The glove pack comprises a rolled pair of integral three–dimensional gloves of polymeric material. Each glove has a wrist receiving portion and a plurality of digit–receiving portions remote from the respective wrist–receiving portion. A palm receiving portion is intermediate between each wrist–receiving portion and the respective digit–receiving portions. The pair of gloves overlap each other such that at least some of the digit–receiving portions of the first glove overlap the digit–receiving portions of the second glove of the pair. One of the pair of overlapping gloves has been rolled about the other of the pair to form a roll. The rolled pair of gloves are held in compression by an outer retaining member.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	**ES**	Spain	**LS**	Lesotho	**SI**	Slovenia
AM	Armenia	**FI**	Finland	**LT**	Lithuania	**SK**	Slovakia
AT	Austria	**FR**	France	**LU**	Luxembourg	**SN**	Senegal
AU	Australia	**GA**	Gabon	**LV**	Latvia	**SZ**	Swaziland
AZ	Azerbaijan	**GB**	United Kingdom	**MC**	Monaco	**TD**	Chad
BA	Bosnia and Herzegovina	**GE**	Georgia	**MD**	Republic of Moldova	**TG**	Togo
BB	Barbados	**GH**	Ghana	**MG**	Madagascar	**TJ**	Tajikistan
BE	Belgium	**GN**	Guinea	**MK**	The former Yugoslav Republic of Macedonia	**TM**	Turkmenistan
BF	Burkina Faso	**GR**	Greece			**TR**	Turkey
BG	Bulgaria	**HU**	Hungary	**ML**	Mali	**TT**	Trinidad and Tobago
BJ	Benin	**IE**	Ireland	**MN**	Mongolia	**UA**	Ukraine
BR	Brazil	**IL**	Israel	**MR**	Mauritania	**UG**	Uganda
BY	Belarus	**IS**	Iceland	**MW**	Malawi	**US**	United States of America
CA	Canada	**IT**	Italy	**MX**	Mexico	**UZ**	Uzbekistan
CF	Central African Republic	**JP**	Japan	**NE**	Niger	**VN**	Viet Nam
CG	Congo	**KE**	Kenya	**NL**	Netherlands	**YU**	Yugoslavia
CH	Switzerland	**KG**	Kyrgyzstan	**NO**	Norway	**ZW**	Zimbabwe
CI	Côte d'Ivoire	**KP**	Democratic People's Republic of Korea	**NZ**	New Zealand		
CM	Cameroon			**PL**	Poland		
CN	China	**KR**	Republic of Korea	**PT**	Portugal		
CU	Cuba	**KZ**	Kazakstan	**RO**	Romania		
CZ	Czech Republic	**LC**	Saint Lucia	**RU**	Russian Federation		
DE	Germany	**LI**	Liechtenstein	**SD**	Sudan		
DK	Denmark	**LK**	Sri Lanka	**SE**	Sweden		
EE	Estonia	**LR**	Liberia	**SG**	Singapore		

Glove Pack

The present invention is concerned with glove packs, and, in particular, packs of so-called three-dimensional gloves.

There are in general two types of formed plastics gloves, namely gloves of plastics film, which are formed by heat-sealing a pair of plastics films together around a hand-shaped periphery (these being so-called two-dimensional gloves), and gloves integrally formed on a former (the latter being known as three-dimensional gloves). Examples of such three-dimensional gloves are vinyl gloves (of PVC or the like) and latex gloves (which are generally formed by dipping).

Such three-dimensional gloves have many uses, including, for example, as surgeons' gloves, medical inspection gloves, industrial gloves and household gloves. Amongst the non-medical gloves are ones for use in hairdressing (for professional or home use), when it is desired to protect the user's hands during application of liquid chemicals to the hair. Examples of such chemicals include dyes, permanent waving solutions and the like.

Gloves for use by hairdressers or the like are often provided on a carrier sheet member, typically of paper or the like, which generally requires the gloves to be laid flat or folded on the carrier. I have found that a more space-efficient pack, either for hairdressing use or for medical use or the like, can be made if the gloves are compressed.

According to a first aspect of the present invention, therefore, there is provided a glove pack, which comprises:

(a) a rolled pair of integral three-dimensional gloves of polymeric material, the gloves each having a wrist-receiving portion and a plurality of (or set of) digit-receiving portions remote from the respective wrist-receiving portion, with a palm-receiving portion intermediate between each wrist-receiving portion and the respective digit-receiving portions, the pair of gloves being in overlapping relationship such that at least some of the digit-receiving portions of a first glove of the pair overlap corresponding digit-receiving portions of a second glove of the pair, the pair of gloves further being rolled about one another while in the overlapping relationship; and

(b) an outer retaining member which holds the rolled pair in compression.

The pair of gloves preferably remains flexible after rolling, so that the rolled pair can be further folded or compressed into an even smaller space.

The pair of gloves has preferably been rolled together in such a manner that air is excluded from the resultant rolled pair gloves, so as to preclude inadvertent "inflation" of closed ends of the digit-receiving portions; air may even (in some embodiments) be expelled in the rolling operation (for example, when the rolling is from tips of the digit-receiving portions towards the respective wrist-receiving portion).

However, it is particularly preferred that the pair of gloves is rolled together by successive turns about a series of longitudinal axes which extend along the length of the respective gloves from the wrist-receiving portion to the respective digit-receiving portions; the rolling operation in this preferred embodiment is therefore transverse to the longitudinal direction. Preferably the rolled pair of gloves is then folded about a median fold line intermediate between the respective digit-receiving portions and wrist-receiving portion.

It is preferred that the pair of gloves is rolled such that the digit-receiving portions of a first glove of the pair overlap corresponding digit-receiving portions of a second glove of the pair.

There are preferably five digit-receiving portions on each glove, one being arranged to receive a thumb of a user and the other four being arranged to receive respective fingers of the user.

The three-dimensional gloves are preferably of dipped elastomeric material (so-called latex gloves); alternatively, they may be of polyurethane, vinyl plastics or the like.

The outer retaining member may be a clip, band, tie or the like adapted to retain the pair of gloves in rolled configuration. Alternatively, the outer retaining member may be in the nature of a sheath, substantially surrounding the entire rolled pair of gloves. When a sheath is used, it may be formed from a thin flexible sheet, typically of thermoformed plastics, metal foil, paper or the like. In some embodiments, it is preferred that the sheath substantiallly surrounding the rolled pair of gloves should be substantially air-impermeable.

The sheath may comprise a tubular member (which may in some embodiments be shrunk around the rolled pair of gloves), or it may be a substantially rigid preformed tube, or a longitudinally hinged tubular member, which may in this embodiment be hinged together to hold the rolled pair of gloves in compression. Any of the above embodiments of sheath may be formed from one or more component parts; for example, there may be two nesting open-ended canister members, which nest together in the manner of pharmaceutical capsules or the like. In such embodiments, the tubular member may be of translucent or transparent plastics material; typically the material may be moulded by injection moulding or the like

Alternatively, the sheath may comprise a sheet which is tightly wrapped around the rolled pair of gloves. When such a sheet is tightly wrapped around the pair of gloves, marginal edges and/or ends of the sheet may be sealed together to form a closed pack.

When the gloves are for use as medical inspection gloves, surgeons gloves or the like, it is preferred that they and the sheath should be impermeable and/or sterilisable (typically by ionising radiation or the like.

The glove pack according to the invention (including a sheath such as that described above, when present) may itself be provided in an outer pack (such as a box, carton, envelope, sachet or the like). The pack may further be provided with one or more further pairs of gloves, a printed set of instructions (particularly when the pack is for hairdressing use), a skin sensitivity testing patch or the like.

CLAIMS

1. A glove pack which comprises:

(a) a pair of integral three-dimensional gloves of polymeric material, said gloves each having a wrist receiving portion, a plurality of digit-receiving portions remote from the respective wrist-receiving portion, with a palm-receiving portion intermediate between each wrist-receiving portion and the respective digit-receiving portions, said pair of gloves being in overlapping relationship such that at least some of said digit-receiving portions of a first glove of said pair overlap corresponding digit-receiving portions of a second glove of said pair, said pair of gloves being in the form of a roll in which one of said pair has been rolled about the other of said pair while said pair of gloves is in said overlapping relationship; and

(b) an outer retaining member which holds said rolled pair of gloves in compression.

2. A glove pack according to claim 1, wherein each of said gloves remains flexible after rolling.

3. A glove pack according to claim 1 or 2, wherein said rolled pair of gloves is substantially free of air between said gloves.

4. A glove pack according to claim 3, wherein air is excluded when said pair of gloves is rolled.

5. A glove pack according to any preceding claim, wherein said pair of gloves has been rolled transverse to the longitudinal direction.

6. A glove pack according to claim 5, wherein said pair of gloves has been rolled together by successive turns about a series of longitudinal axes which extend along the

length of said respective gloves from said wrist-receiving portion to said respective digit-receiving portions.

7. A glove pack according to any preceding claim, wherein said rolled pair of gloves has a fold about a median fold line intermediate between said respective digit-receiving portions and said wrist-receiving portion.

8. A glove pack according to any preceding claim, wherein said pair of gloves has been rolled such that said digit-receiving portions of a first glove of said pair overlap corresponding digit-receiving portions of a second glove of said pair.

9. A glove pack according to any preceding claim, wherein each glove of said pair of gloves is provided with five digit-receiving portions, one said digit-receiving portion being arranged to receive a thumb of a user's hand and the other four said digit-receiving portions being arranged to receive respective fingers of the user's hand.

10. A glove pack according to any preceding claim, wherein said three-dimensional gloves are each of dipped elastomeric material.

11. A glove pack according to any preceding claim, wherein said outer member is an air-impermeable sheath.

INTERNATIONAL SEARCH REPORT

Inte onal Application No
PCT/GB 00/00097

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61B19/04 A41D19/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61B B65D A41D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 175 977 A (GUHL T ANDREW ET AL) 5 January 1993 (1993-01-05) column 3, line 6 - line 13 column 3, line 21 column 3, line 27 column 3, line 32 column 3, line 42 column 4, line 47 - line 48 column 5, line 3 column 5, line 43; figures 1-4 ---	1-5,8-11
A	US 4 094 120 A (GONCALVES ANTONIN) 13 June 1978 (1978-06-13) column 4, line 61 -column 5, line 6 column 5, line 24 - line 25; figures 2-5 --- -/--	1,2,8,9

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
18 April 2000	28/04/2000

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Monné, E

1

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

Inte ional Application No
PCT/GB 00/00097

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
A	GB 2 289 616 A (ROWE GEOFFREY) 29 November 1995 (1995-11-29) page 1 -page 2	1
A	US 2 454 864 A (DEXTER) 30 November 1948 (1948-11-30) column 2, line 22 - line 29; figures 3,4	1

1

INTERNATIONAL SEARCH REPORT

information on patent family members

Int. .ional Application No
PCT/GB 00/00097

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5175977 A	05-01-1993	US 5044493 A	03-09-1991
		US 5117981 A	02-06-1992
US 4094120 A	13-06-1978	FR 2338127 A	12-08-1977
		BE 848033 A	05-05-1977
		CA 1040163 A	10-10-1978
		CH 601008 A	30-06-1978
		DE 2651519 A	21-07-1977
		GB 1519106 A	26-07-1978
		IT 1069876 B	25-03-1985
GB 2289616 A	29-11-1995	FR 2719830 A	17-11-1995
US 2454864 A	30-11-1948	NONE	