

(51) International Patent Classification:
E21B 43/01 (2006.01)(21) International Application Number:
PCT/US2012/036909(22) International Filing Date:
8 May 2012 (08.05.2012)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/498,269 17 June 2011 (17.06.2011) US
61/500,679 24 June 2011 (24.06.2011) US(71) Applicant (for all designated States except US): **BP CORPORATION NORTH AMERICA INC.** [US/US]; 501 Westlake Park Boulevard, Houston, TX 77079 (US).

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

(54) Title: AIR-FREIGHTABLE CONTAINMENT CAP FOR CONTAINING A SUBSEA WELL

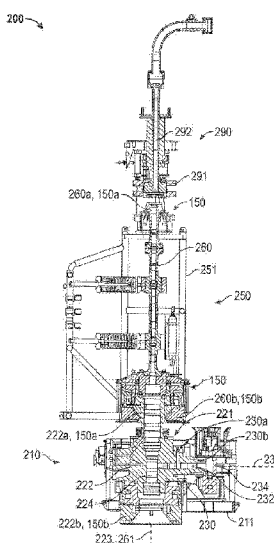


FIG. 6

(57) Abstract: A modular containment cap for containing a subsea wellbore discharging hydrocarbons comprises a lower assembly including a spool body having an upper end, a lower end opposite the upper end, and a first throughbore extending from the upper end to the lower end. In addition the containment cap comprises an upper assembly including a spool piece having an upper end, a lower end opposite the upper end, a throughbore extending from the upper end to the lower end, and a first spool piece valve disposed in the throughbore. The first spool piece valve is configured to control the flow of fluids through the throughbore of the spool piece. The upper end of the spool body is releasably connected to the lower end of the spool piece, and the first throughbore of the spool body is coaxially aligned with and in fluid communication with the throughbore of the spool piece.

**Published:****(88) Date of publication of the international search report:**

16 May 2013

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2012/036909

A. CLASSIFICATION OF SUBJECT MATTER
INV. E21B43/01
ADD.

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)
E21B

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 practicable, search terms used)

EP0-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Bob Kiel: "BP gulf oil spill dual valve adapter for broken BOP riser flange", Youtube 14 June 2010 (2010-06-14), XP007921015, Retrieved from the Internet: URL: http://www.youtube.com/watch?feature=player_detailpage&v=ZZECVVd1sQ0 [retrieved on 2012-09-11]	1-4,6, 9-12,15
Y	the whole document	16-29
X	BP: "Kent Wells Technical Update Sealing Cap Installation", 20100710, 10 July 2010 (2010-07-10), pages 1-8, XP007921003,	1,15
Y	the whole document	16-29
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Further documents are listed in the continuation of Box C.



See patent family 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 application or patent 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

22 March 2013

Date of mailing of the international search report

05/04/2013

Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2012/036909

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	BP: "Deepwater Horizon Containment and Response: Harnessing Capabilities and Lessons Learned", 20100901, 1 September 2010 (2010-09-01), pages 1-84, XP007921001, pages 20-25; figures 2.1,6.1,6.7 air transport; page 38, paragraph 2 page 37, paragraph 9 figure 6.3	1-29
A	----- OGP: "Capping & Containment", Global Industry Response Group Recommendations, vol. 464 1 May 2011 (2011-05-01), pages -1-+42, XP007921010, Retrieved from the Internet: URL:www.ogp.org.uk/pubs/464.pdf [retrieved on 2012-09-11] pages 37,38; figures 2.1,6 the whole document	15
X	----- GB 2 346 630 A (FMC CORP [US]) 16 August 2000 (2000-08-16) figures 1,2,12,14 the whole document	30,31
A	----- GB 2 341 879 A (FMC CORP [US]) 29 March 2000 (2000-03-29) figures 7,8 the whole document -----	30

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/036909

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of Item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-29

Modular containment cap

2. claims: 30-40

Slidingly disposed valve assembly

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2012/036909

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 2346630	A	16-08-2000	NONE	

GB 2341879	A	29-03-2000	BR 0000360 A	03-10-2000
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			IT MI20000234 A1	13-08-2001
			NO 20000680 A	14-08-2000
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			US 6345668 B1	12-02-2002
