



(11) **EP 2 754 782 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
21.02.2018 Bulletin 2018/08

(51) Int Cl.:
E04H 9/04 (2006.01) **E04H 9/10 (2006.01)**
F41H 5/24 (2006.01)

(43) Date of publication A2:
16.07.2014 Bulletin 2014/29

(21) Application number: **14151056.0**

(22) Date of filing: **14.01.2014**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME

(72) Inventors:
• **Warner, Harold**
Calgary, Alberta T2C 2G8 (CA)
• **Parks, Steve**
Fredericksburg, VA Virginia 22406 (US)

(30) Priority: **14.01.2013 CA 2802206**
14.01.2013 US 201313740884

(74) Representative: **Maiwald Patentanwalts GmbH Engineering**
Elisenhof
Elisenstrasse 3
80335 München (DE)

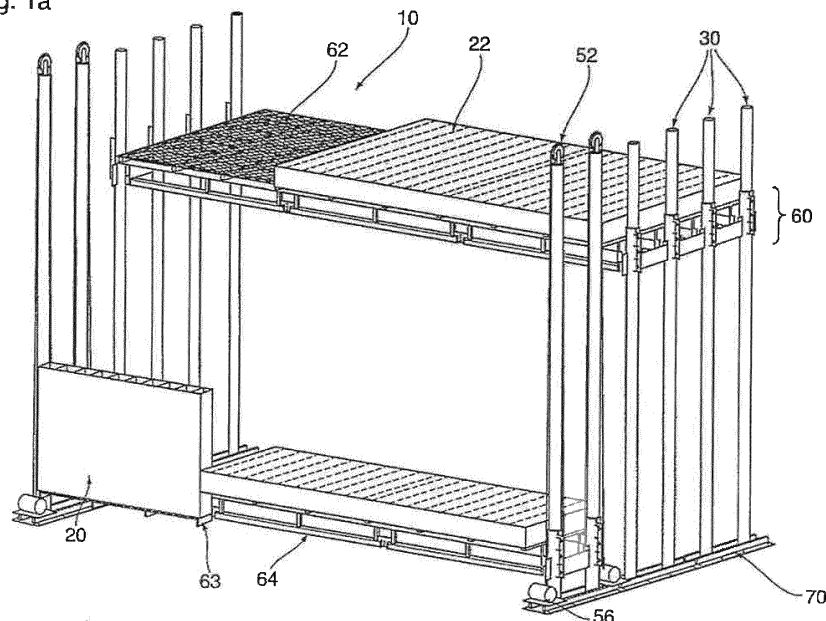
(71) Applicant: **Dynamic Shelters Inc.**
Calgary, Alberta T2C 2G8 (CA)

(54) **Kit for assembling a building structure resistant to overhead ordinance detonations**

(57) Kits for assembling a protective building structure that is resistant to and protects occupants from overhead ordinance detonations, are provided. The kits comprise modular parts for assembling an overhead protective building structure that can be packaged for delivery and assembly in a field location. The kits have self-contained mechanisms for facilitating assembly of the kits with limited construction resources. A pivoting support

frame permits the panel members to pivot from a vertical position for filling the panel members with fill material, to a horizontal position on the support frame, to thereby form the overhead cover. Self-raising means are also included in the kits to lift and vertically position the overhead cover along supporting stanchions positioned at each end of the support frame.

Fig. 1a



EP 2 754 782 A3



EUROPEAN SEARCH REPORT

Application Number
EP 14 15 1056

5

10

15

20

25

30

35

40

45

50

55

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	US 6 415 557 B1 (MCCALLEY RICHARD M [US]) 9 July 2002 (2002-07-09) * column 3, line 22 - line 38 * * claims 20-22; figures 1-5,8-10,14-16 *	1,5-7, 14-16	INV. E04H9/04 E04H9/10 F41H5/24
A	US 2010/043629 A1 (CARBERRY JOHN [US] ET AL) 25 February 2010 (2010-02-25) * page 4, left-hand column, paragraph 46 - page 5, left-hand column, paragraph 55; figures 1-3,17,18 *	1,4-7	
A	WO 2009/148652 A2 (US GOVERNMENT [US]; DURST BARTLEY P [US]; CUMMINS TONEY K [US]; KINNEB) 10 December 2009 (2009-12-10) * page 4, line 1 - page 2, line 6 * * page 9, line 31 - page 11, line 10 * * page 14, line 27 - line 30; figures 1,2,10 *	1,5-7, 15,16	
A,D	US 2011/226166 A1 (SMITH BRIAN [GB]) 22 September 2011 (2011-09-22) * page 2, left-hand column, paragraph 19 - page 3, left-hand column, paragraph 34; figures 1-5 *	1,4-7	TECHNICAL FIELDS SEARCHED (IPC) E04H F41H F42D
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 12 January 2018	Examiner Stefanescu, Radu
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

1
EPO FORM 1503 03.02 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

EP 14 15 1056

5

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

12-01-2018

10

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6415557	B1	09-07-2002	NONE

US 2010043629	A1	25-02-2010	AP 3561 A 22-01-2016
			CO 6501146 A2 15-08-2012
			EP 2350555 A2 03-08-2011
			GB 2464618 A 28-04-2010
			IL 212469 A 30-11-2014
			JP 2012506989 A 22-03-2012
			US 2010043629 A1 25-02-2010
			US 2011000362 A1 06-01-2011
			US 2011209605 A1 01-09-2011
			US 2012279383 A1 08-11-2012
			WO 2010048391 A2 29-04-2010
			ZA 201102511 B 27-06-2012

WO 2009148652	A2	10-12-2009	US 2011000514 A1 06-01-2011
			WO 2009148652 A2 10-12-2009

US 2011226166	A1	22-09-2011	NONE

15

20

25

30

35

40

45

50

55

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82