

Search query (1): [SP]: An environmentally friendly fuel distribution station comprising: an upper canopy, said upper canopy including a fuel tank and an outer shell enclosing said fuel tank; and a fuel distribution interface suspended from said upper canopy, said fuel distribution interface selectively distributing fuel from said fuel tank during a fueling operation.

Results: 9

Search history

Search [SP]: An environmentally friendly fuel distribution station comprising: an upper canopy, said upper canopy including a fuel tank and an outer shell enclosing said fuel tank; and a fuel distribution interface suspended from said upper canopy, said fuel distribution interface selectively distributing fuel from said fuel tank during a fueling operation. (Results 9)

1) Family number: 3839008 (US5251473A)

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Title: METHOD AND STORAGE TANK SYSTEM FOR ABOVEGROUND STORAGE OF FLAMMABLE LIQUIDS

Priority: US19900587019 19900921 US19910747994 19910821 CA19912051307 19910913

Family:

Publication number	Publication date	Application number	Application date
CA2051307 AA	19920322	CA19912051307	19910913
US5251473 A	19931012	US19900587019	19900921
US5564588 A	19961015	US19910747994	19910821

Probable Assignee: ACE TANK AND EQUIPMENT CO

Assignee(s):(std): ACE TANK AND EQUIPMENT CO ; ACE TANK AND EQUIPMENT COMPANY

Assignee(s): REESE R ALLAN ; ACE TANK AND EQUIPMENT CO A CORP OF WASHINGTON

Inventor(s):(std): REESE R ALLAN

Agent(s): MACRAE AND CO

International class (IPC 8-9): B60S5/02 B65D90/02 B65D90/32 B67D5/60 B67D7/78 F17C13/12 (Advanced/Invention); B60S5/00 B65D90/02 B67D7/78 F17C13/00 (Core/Invention)

International class (IPC 1-7): B65D25/18 B65D90/02 B65D90/06 B65D90/32 B65D90/48 B67D5/60 G01M3/04

CPC: Y10S220/09 F17C2201/0119 F17C2201/035 F17C2203/0341 F17C2203/0631 F17C2203/0639 F17C2205/0176 F17C2205/018 F17C2205/0326 F17C2205/0364 F17C2205/0379 F17C2209/221 F17C2209/228 F17C2221/032 F17C2223/0153 F17C2223/033 F17C2227/0135 F17C2250/034 F17C2250/036 F17C2250/0408 F17C2250/0452 F17C2260/022 F17C2260/036 F17C2260/038 F17C2260/042 F17C2265/065 F17C2270/0139 B60S5/02 B65D90/029 B67D7/78 F17C13/126 Y10T137/4824 Y10T137/86212 Y10T137/86228

European class: B60S5/02 B65D90/02 B67D7/78 F17C13/12D

US class: 137/264 137/574 137/576 220/429 220/444 220/445 220/560.01 220/560.03 220/565 220/DIG.9 73/49.2 73/49.3

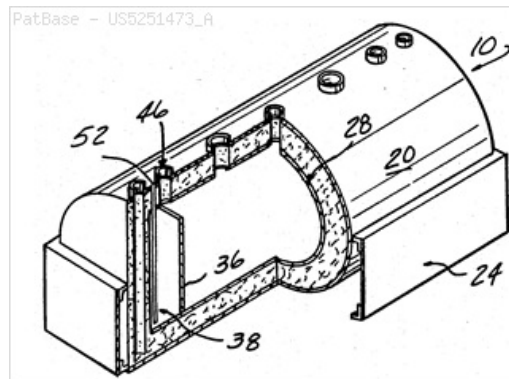
[Classification Explorer](#)

Cited documents: US5103996 A, US5102005 A, US5092024 A, US5081761 A, US5071166 A, US5038456 A, US5012949 A, US4991613 A, US4986436 A, US4974739 A, US4895272 A, US4798496 A, US4779450 A, US4744137 A, US4708015 A, US4697618 A, US4685327 A, US4519415 A, US3942331 A, US3848765 A, US2777295 A, US2648171 A, US2172836 A, US2085085 A, US1258479 A, DE2856442 A1,

Forward Citations: WO18071515, WO17139312, WO16075998, WO15169998, WO15144897, USD798992, USD720037, US9399548, US9396636, US9162816, US9121319, US8646641, US8505761, US7765910, US7506568, US7475791, US6712086, US6698610, US6644165, US6516754, US6514009, US6349873, US6286707, US6257437, US6254309, US6250345, US6024242, US6006588, US5971009, US5929325, US5884709, US5695089, US5657788, US5601204, US5570714, US5450978, US2014144918, US2013213969, US2011155741, US2011121003, US2010282362, US2009158977, US2009044690, US2009026212, US2008006333, US2006283508, US2006118563, US2006096980, US2005115621, US10232782, RU2535498, JP6419538, JP2016094948, FR3019165, EP1447322, CN102815476,

Abstract:

Inner and outer welded steel protective tanks are separated by a space containing a granular insulating material such as perlite preventing excessive heating of fuel in a storage space in the inner tank, even when there is a fire at the site. The inner tank is subdivided into portions by a partition defining a storage space and an overflow containment space receiving overflow from the storage space portion, with a sensor detecting overflow. The overflow containment space is also arranged to collect separated fuel when the tank system is used with a vapor recovery system. The granular insulating material acts as an explosion suppressant by dissipating heat and fuel vapors which may be present in the insulation space as a result of leakage from the inner tank.



2) Family number: 22468333 (US2021544A)

Title: SERVICE STATION
Priority: US19330664803 19330406
Family:

Publication number	Publication date	Application number	Application date
US2021544 A	19351119	US19330664803	19330406

Probable Assignee: SHANNON CROWN GEORGE

Assignee(s):(std): SHANNON CROWN GEORGE

Inventor(s):(std): SHANNON CROWN GEORGE

Inventor(s): CROWN GEORGE SHANNON

International class (IPC 8-9): B67D7/38 (Advanced/Invention);
 B67D7/38 (Core/Invention)

International class (IPC 1-7): B67D5/36

CPC: B67D7/38 Y10T137/3802

European class: 42E21D B67D7/38

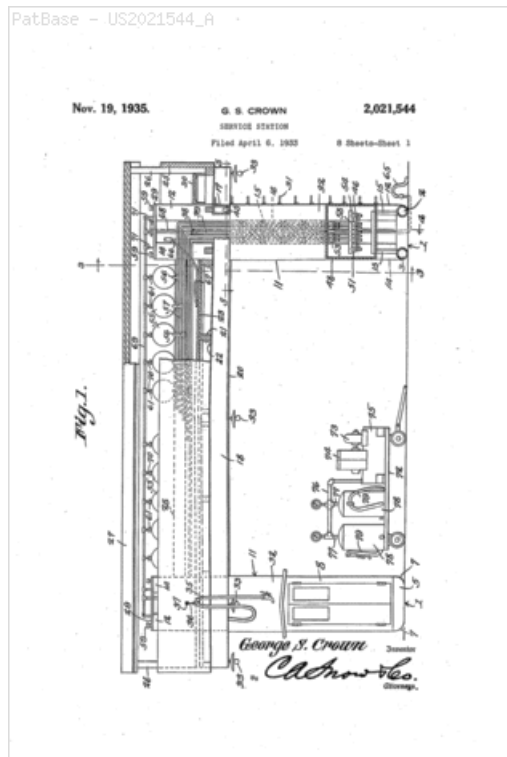
US class: 137/234.6 222/132 222/173 222/192 222/263 222/265

[Classification Explorer](#)

Forward Citations: WO18071515, WO17139312, WO0169012, WO0169012, WO0071464, US8402990, US7721751, US6820378, US6748982, US6401009, US6311873, US6230939, US5479958, US5413135, US5033489, US4986446, US4901748, US4880026, US2658240, US2016023639, US2004187399, EP1203130,

Abstract:

1. Dispensing mechanism for a filling station of the type in which a motor car is driven between spaced standards and beneath a, canopy supported at its sides and intermediate its ends on the standards, the dispensing mechanism embodying vertical standards carrying the canopy and spaced to receive a motor car between them, the lower portions of the standards being hollow, means for supporting the standards at their lower ends on the ground, said means embodying hollow, horizontal members connected intermediate their ends to the hollow lower portions of the standards, the hollow horizontal members and the lower portions of the standards constituting liquid-containers, and inlet and outlet means for the said liquid-containers.



3) Family number: 73175335 (US2019071301A)

© PatBase

Title: FUEL DISTRIBUTION STATION

Priority: US20170541922P 20170807 US20180055521 20180806

Family:	Publication number	Publication date	Application number	Application date
	US2019071301 AA	20190307	US20180055521	20180806
	WO19032492 A1	20190214	WO2018US45481	20180807

Probable Assignee: CAPAT LLC

Assignee(s):(std): CAJIGA ALEXANDRA ; CAJIGA JOSE A ; CAPAT LLC ; VILLAR ARTURO CAJIGA ; VILLAR VICENTE CAJIGA

Inventor(s):(std): CAJIGA JOSE A ; VILLAR ARTURO CAJIGA ; VILLAR VICENTE CAJIGA ; CAJIGA ALEXANDRA

Agent(s): TUCCILLO NICHOLAS

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

International class (IPC 8-9): B60S5/02 B67D7/04 B67D7/32 B67D7/40 B67D7/62 B67D7/78 B67D7/84 E04H1/12 (Advanced/Invention)

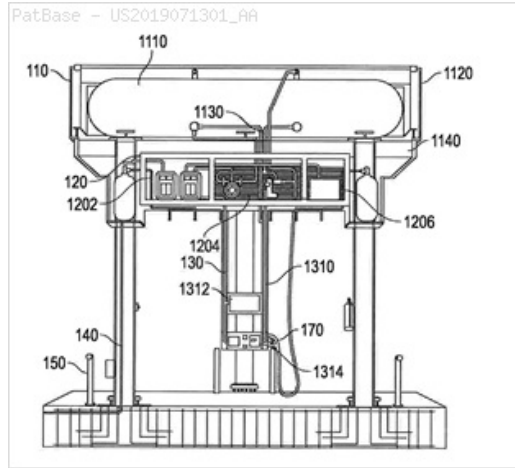
CPC: B67D7/78 B67D7/40 E04H1/1233 B67D2210/00031 B67D7/62 B67D7/32 B67D7/84

[Classification Explorer](#)

Cited documents: US5954102 A, US4986446 A, US2151877 A,

Abstract:

An environmentally friendly fuel distribution station includes an upper canopy, said upper canopy including a fuel tank and an outer shell enclosing said fuel tank, a plurality of supporting columns supporting said upper canopy and said fuel tank, a fuel distribution interface suspended from said upper canopy, said fuel distribution interface selectively distributing fuel from said fuel tank during a fueling operation, and a convenience store suspended from at least one of the upper canopy and one or more of the plurality of supporting columns.



4) Family number: 10679408 (US5954102A)

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Title: Suspended type fueling system

Priority: JP19960342349 19961209

Family:	Publication number	Publication date	Application number	Application date
	DE69720659 D1	20030515	DE19976020659	19971208
	DE69720659 T2	20040429	DE19976020659T	19971208
	EP0846651 A1	19980610	EP19970309865	19971208
	EP0846651 B1	20030409	EP19970309865	19971208
	ES2196267 T3	20031216	ES19970309865T	19971208
	JP10167397 A2	19980623	JP19960342349	19961209
	KR100221446 B1	19990915	KR19970064113	19971128
	KR19980063641 A	19981007	KR19970064113	19971128
	US5954102 A	19990921	US19970986518	19971208

Probable Assignee: TATSUNO CORP

Assignee(s):(std): KABUSHIKIKAISHA TATSUNO MECHAT ; TATSUNO CO LTD ; TATSUNO CORP ; TATSUNO MECHATRONICS KK

Assignee(s): TATSUNO CORP TOKIO TOKYO ; KABUSHIKIKAISHA TATSUNO MECHATRONICS

Inventor(s):(std): FUKUMOTO SHOICHI ; SATO YOSHIYUKI ; TERAHARA YOSEI ; TERAHARA YOUSEI ; TERAHARA YOSEI C O TATSUNO MEC ; SATOU YOSHIYUKI ; HUKUMOTO SHOICHI

Inventor(s): TERAHARA YOSEI C O TATSUNO MECHATRONICS

Designated states: BE DE ES FR GB NL

International class (IPC 8-9): B67D7/22 B67D7/34 B67D7/38 B67D7/40 B67D7/42 (Advanced/Invention); B67D7/22 B67D7/32 B67D7/38 B67D7/42 (Core/Invention)

International class (IPC 1-7): B67D5/06 B67D5/08 B67D5/22 B67D5/36 B67D5/365 B67D5/37

CPC: B67D7/228 B67D7/342 B67D7/38 B67D7/425

European class: B67D7/22C4B B67D7/34B B67D7/38 B67D7/42E

US class: 141/392 141/59 141/83 141/94 141/98 222/14 222/28 222/40 222/72

JP class F-Term: 3E083 3E083/AA06 3E083/AB01 3E083/AB08 3E083/AC03 3E083/AC09 3E083/AC23 3E083/AD12 3E083/AF05 3E083/AG08 3E083/AG11

JP class F-Index: B67D5/22/B B67D5/365/C B67D7/22/B B67D7/40/C

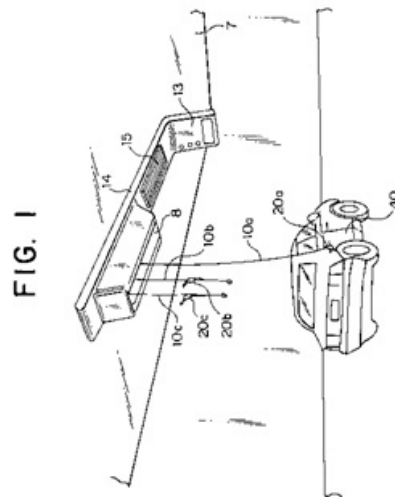
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Cited documents: US5363988 A, US5249612 A, US5217051 A, US5209275 A, US5184309 A, US4838323 A, US4627553 A, US4359074 A, US3946900 A, US3773219 A, JP8113299 A2, JP50028016 A2, JP2166095 A2, EP0719728 A1, EP0566345 A1, EP0450798 A1, DE3433071 A1,

Forward Citations: WO19032492, WO17139312, US9902276, US7713335, US7082406, US6488057, US6334457, US2016167941, US2013319578, US2011074351, US2010072320, US2008098893, US2008017664, US2006108475, JP4936954, JP4341069, JP2008247407, JP2005313901,

Abstract:

A suspended type fueling system of the present invention is composed of an oil reservoir, fueling tube, fueling hose with a nozzle, pump on the fueling tube, pump motor for driving the pump, flow-meter, control unit, fueling operation unit on the fueling nozzle. The fueling tube is connected to the oil reservoir underground at one end and to the fueling hose at the other end. The fueling tube is extended overhead and drawn to a lower part therefrom. The fueling operation unit contains an indication member for indicating fueling data measured by the flow meter, a nozzle ascent-descent switch for transmitting nozzle ascent and descent signals to the control unit, and a combined-use-switch for suspending oil discrimination and performing a rounding off of fueling.



5) Family number: 33077474 (US2010023162A)

Title: METHOD, SYSTEM AND COMPONENTS FOR OPERATING A FUEL DISTRIBUTION SYSTEM WITH UNMANNED SELF-SERVICE GASOLINE STATIONS

Priority: RU20070125706 20041208 WO2004EP13980 20041208

Family:

Publication number	Publication date	Application number	Application date
CA2589186 A	20070525	CA20042589186	20041208
CN101076490 A	20071121	CN200480044555	20041208
EP1828969 A1	20070905	EP20040803646	20041208
IN00637MN2007 A	20070824	IN2007MN00637	20070503
RU2007125706 A	20090120	RU20070125706	20041208
US2010023162 AA	20100128	US20040720632	20041208
WO06061039 A2	20060615	WO2004EP13980	20041208

Probable Assignee: ULTRA PROIZVODNJA ELEKTRONSKIH NAPRAV DDO

Assignee(s):(std): ARTNAK STELAN ; GRESAK KRISTIJAN ; OMERZEL SAMO ; ULTRA PROIZV ELEKTRONSKIH NAPR

Assignee(s): ULTRA PROIZVODNJA ELEKTRONSKIH NAPRAV D O O ; ULTRA PROIZVODNJA ELEKTRONSKIH NAPRAV DDO ; ULTRA PROIZVODNJA ELEKTRONSKIH NAPRAV DOO ; ULTRA PROIZVODNJA ELEKTRONSKIH NAPRAV DOOCESTA OTONA ZUPANCICA 23A, 1410ZAGORJESI

Inventor(s):(std): ARTNAK K GRESAK S OMERZEL S ; GRESAK KRISTIJAN ; OMERZEL SAMO ; ARTNAK STELAN

Inventor(s): K GRESAK S OMERZEL S ARTNAK ; KGRESAK SOMERZEL SARTNAK ; ARTNAK STELANSI ; GRESAK KRISTIJANSI ; OMERZEL SAMOSI

Agent(s): BORDEN LADNER GERVAIS LLP; DICKINSON WRIGHT PLLC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN VU ZA ZM ZW

International class (IPC 8-9): B60S5/00 B67D7/08 B67D7/14 G06F17/00 G06Q10/00 G06Q10/04 G06Q10/06 G06Q10/08 G06Q20/00 G06Q50/00 G07F13/02 (Advanced/Invention); B60S5/00 B67D7/08 G06F17/00 G06Q10/00 G06Q20/00 G06Q50/00 G07F13/00 (Core/Invention)

International class (IPC G06F17/60 1-7):

CPC: B67D7/14 B67D7/08 G06Q10/0637 G06Q10/087 G07F13/025

European class: B67D7/08 B67D7/14 G06Q10/0637 G06Q10/087 G07F13/02B

US class: 700/241 700/241P 705/28 705/28S 705/7.36 705/7.360S 705/8

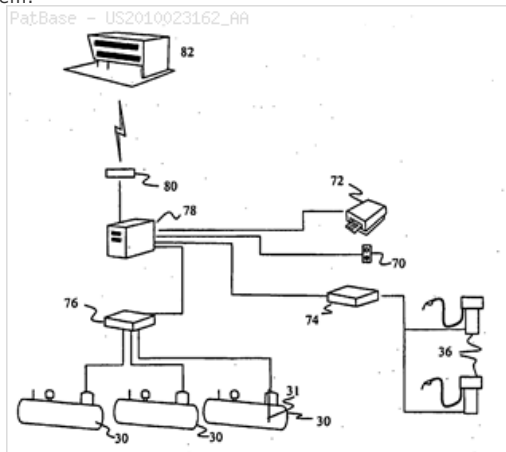
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Cited documents: US6546314 BA, US5363093 A,

Forward Citations: WO19040075, WO17139312, WO16081900, WO14099315, WO13022621, WO12110505, WO12110502, WO12103498, WO12103498, WO11099874, US9916749, US9858627, US9733629, US9708170, US9697485, US9651954, US9412279, US9267834, US9251421, US9202190, US9104993, US9076139, US8972294, US8825546, US2017323381, US2016171870, US2015336669, US2015220896, US2015112741, US2014207277, US2014180474, US2013066813, US2013038455, US2011040399, US2009043415,

Abstract:

There are disclosed a method and a device for operating a fuel distribution system having a coordination center, unmanned self-service gasoline stations with fuel reservoirs and gasoline supply vehicles, the method comprising the steps of periodically determining the available amounts of remaining fuel in the fuel reservoirs; determining the present positions and fuel levels of supply vehicles; and generating an optimized delivery path for each of said supply vehicles on the basis of said determined available amounts of remaining fuel in the fuel reservoirs, said present positions and said fuel levels of said supply vehicles. Further there is provided an unmanned self-service gasoline station and a method for operation and a system.



6) Family number: 66575519 (US2017225938A)

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Title: FUEL DISTRIBUTION STATION
Priority: US20160292978P 20160209 US20170427353 20170208 WO2017US16911 20170208
Family:

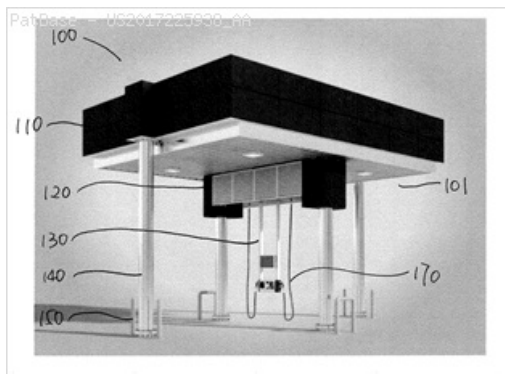
Publication number	Publication date	Application number	Application date
AU2017217389 AA	20180830	AU20170217389	20170208
BR112018016340 A2	20190430	BR20181116340	20170208
CA3014291 AA	20180809	CA20173014291	20170208
CN108778861 A	20181109	CN201780017729	20170208
CO20180008868 A2	20180831	CO20180008868	20180827
EP3452342 A1	20190313	EP20170750656	20170208
ID201811229 A	20181012	ID2018PID06904	20170208
IN201817030756 A	20181207	IN201817030756	20180816
JP2019506342 T2	20190307	JP20180543093T	20170208
KR20180117633 A	20181029	KR20187025812	20170208
MX2018009698 A1	20181129	MX20180009698	20170208
PE19282018 A1	20181213	PE20180001506	20170208
PH2018550128 A	20190227	PH20180550128	20180809
US2017225938 AA	20170810	US20170427353	20170208
WO17139312 A1	20170817	WO2017US16911	20170208

Probable Assignee: CAPAT LLC
Assignee(s):(std): CAJIGA ALEXANDRA ; CAJIGA JOSE ; CAJIGA JOSE A ; CAPAT LLC ; VILLAR ARTURO CAJIGA ; VILLAR VICENTE CAJIGA ; VILLAR VINCENTE ; VILLAR ARTURO
Inventor(s):(std): CAJIGA ALEXANDRA ; VILLAR ARTURO CAJIGA ; CAJIGA JOSE A ; VILLAR VICENTE CAJIGA ; VILLAR VINCENTE ; CAJIGA JOSE ; VILLAR ARTURO ; CAJIGA VILLAR ARTURO ; CAJIGA VILLAR VICENTE ; VINCENTE VILLAR ; ARTURO VILLAR ; JOSE CAJIGA ; ALEXANDRA CAJIGA ; VILLAR VICENTE
Inventor(s): JOSE A CAJIGA ; ARTURO JOSE CAJIGA ; ARTURO CAJIGA VILLAR ; VICENTE CAJIGA VILLAR
Agent(s): SPRUSON AND FERGUSON; ROBIC; RGTH; PRUDENCE JAHJA SH LLM; ONDA MAKOTO; ONDA HIRONORI; TUCCILLO NICHOLAS
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KH KM KN KP KR KW KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW
International class (IPC 8-9): B60S5/02 B65D90/00 B67D7/04 B67D7/08 B67D7/38 B67D7/40 B67D7/78 E04H1/12 F17C1/00 F17C5/00 (Advanced/Invention)
International class (IPC 1-7): B60S5/02 E04H1/12 F17C1/00
CPC: B67D7/08 B67D7/04 B67D7/40 B67D7/78 B60S5/02 F17C5/00 F17C5/007 F17C13/12 F17C2205/0111 F17C2205/013 F17C2205/0134 F17C2221/012 F17C2221/033 F17C2221/035 F17C2223/0123 F17C2223/0153 F17C2223/033 F17C2223/036 F17C2260/042 F17C2270/0139
JP class F-Term: 3D026 3D026/CA01 3D026/CA03 3D026/CA06 3D026/CA10 3E070 3E070/AA03 3E070/AB03 3E070/AB31 3E070/AB32 3E070/VA30 3E172 3E172/AA02 3E172/AA05 3E172/AA06 3E172/AB01 3E172/AB04 3E172/AB05 3E172/BB05 3E172/BD10 3E172/DA90 3E172/KA03
JP class F-Index: B60S5/02 B65D90/00/P F17C1/00/Z

Cited documents: US6237647 BA, US5954102 A, US5251473 A, US4986446 A, US4901748 A, US2021544 A, US2010023162 AA,

Abstract:

An environmentally friendly fuel distribution station includes an upper canopy, said upper canopy including a fuel tank and an outer shell enclosing said fuel tank, and a fuel distribution interface suspended from said upper canopy, said fuel distribution interface selectively distributing fuel from said fuel tank during a fueling operation.



7) Family number: 4426550 (US4986446A)

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Title: SERVICE STATION IMPROVEMENTS
Priority: US19880228733 19880805 US19890444403 19891201
Family:

Publication number	Publication date	Application number	Application date
US4986446 A	19910122	US19890444403	19891201

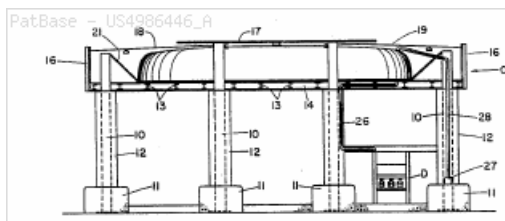
Probable Assignee: SOUTHWEST CANOPY CO
Assignee(s):(std): SOUTHWEST CANOPY CO ; SOUTHWEST CANOPY COMPANY
Inventor(s):(std): PARKHURST LARRY S ; MONTGOMERY JERRY A
International class (IPC 8-9): B60S5/02 B67D7/78 (Advanced/Invention); B60S5/00 B67D7/78 (Core/Invention)
International class (IPC 1-7): B67D5/64
CPC: B67D7/78 B60S5/02 Y10T137/3802 E04H1/1233
European class: B60S5/02 B67D7/78
US class: 137/234.6 222/105 222/135 222/173 222/94

Classification Explorer

Cited documents: US4796676 A, US4696186 A, US3747800 A, US2021544 A, US2002777 A, NL8501388 A,
Forward Citations: WO19032492, WO17139312, WO13006249, WO12177451, WO0169012, WO0169012, US9759383, US9566953, US9403511, US9377164, US9234627, US9181078, US8667690, US8573242, US8402990, US8176931, US7721751, US7421770, US7297186, US6820378, US6748982, US6311873, US5865346, US5711456, US5400924, US5273087, US5213142, US5199471, US5114046, US2016023639, US2015013839, US2013232916, US2005242109, KR101577619, JP5793244, JP5789048, JP2014525862, JP2014524865, EP2729330, EP2729330, EP2729330, EP2720974, EP1591412, EP1203130, CZ297973, CN103687762, CN103648966, CN103648966,

Abstract:

Service station for dispensing fuel to vehicles from fuel dispensers connected by fluid conduits to one or more fuel storage tanks characterized in that the fuel storage tanks are self-contained, flexible and collapsible bladder type tanks supported in an elevated position above the fuel dispensers and the vehicles to which fuel is to be dispensed. An open top containment vessel may also be supported at an elevated position and into which the bladder type tanks may be preferably lowered for non-attached disposition therein.



8) Family number: 15396681 (US6237647B)

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Title: Automatic refueling station
Priority: US19980080866P 19980406 US19990286237 19990405
Family:

Publication number	Publication date	Application number	Application date
US19980080866P	19980406	US19990286237	19990405

Probable Assignee: FREDKIN EDWARD
Assignee(s): FREDKIN EDWARD ; PONG WILLIAM
Inventor(s):(std): FREDKIN EDWARD ; PONG WILLIAM
International class (IPC 8-9): B67D7/04 B67D7/14 B67D7/34 (Advanced/Invention)

International class (IPC 1-7): B67D5/00

CPC: B67D7/0401 B67D7/145 B67D7/348 B67D2007/0409 B67D2007/0417 B67D2007/0436 B67D2007/0444 B67D2007/0453 B67D2007/0461 B67D2007/0471 B67D2007/0473

European class: B67D7/04A B67D7/14B B67D7/34C4 L67D7/04A2B2B L67D7/04A2D L67D7/04A2K4 L67D7/04A6 L67D7/04A6D L67D7/04A6F2D L67D7/04A6F4D L67D7/04A6F4F

US class: 141/231 141/94 141/98

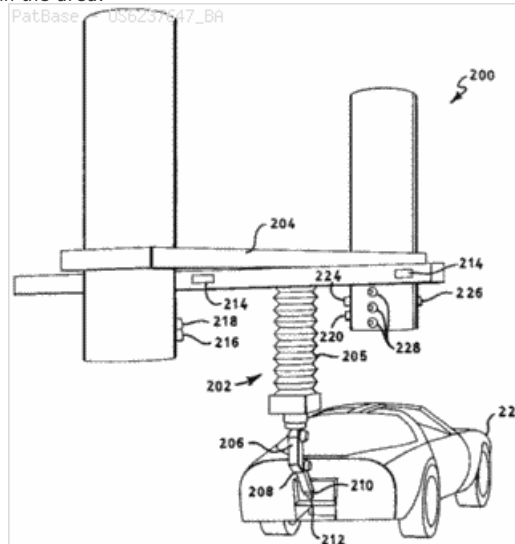
[Classification Explorer](#)

Cited documents: WO9406031 A1, WO9405592 A1, WO9319004 A1, US5977654 A, US5868179 A, US5638875 A, US5634503 A, US5628351 A, US5609190 A, US5404923 A, US5394330 A, US5383500 A, US5249612 A, US4881581 A, US3642036 A,

Forward Citations: WO19059900, WO18015807, WO17139312, WO07059781, WO06087376, WO06005953, WO06005953, WO03100726, WO03036567, US9995076, US9881216, US9708170, US9605804, US9407878, US9347614, US9347612, US9222620, US9212783, US9169114, US9121217, US9045927, US9036028, US8783303, US8720968, US8627860, US8547437, US8539990, US8502868, US8461804, US8447847, US8393362, US8225458, US8174572, US8164302, US8013729, US7900622, US7891387, US7825792, US7671728, US7602143, US7591288, US7469725, US7460685, US7359868, US7346187, US7286157, US7280673, US7221775, US7096895, US7050085, US6809651, US6738073, US6690374, US6654019, US2018022596, US2017362076, US2016023639, US2015170298, US2014330450, US2014027013, US2013074985, US2011215941, US2011181690, US2010265100, US2010145899, US2010002082, US2009314382, US2009131836, US2009102919, US2009055044, US2009025701, US2009006589, US2008303902, US2008302442, US2008109320, US2007283004, US2007231638, US2007211914, US2007193650, US2007182818, US2007113921, US2007051757, US2006237591, US2005265582, US2005187901, US2005086116, US2005078853, US2005078852, US2005058321, US2004187951, US2004130620, US2004119848, US2004114481, US2004104814, US2004036628, US2003120660, US2003074209, US2002180759, US2002178078, US2002010622, US10315907, US10207912, US10207411, US10155653, US10138112, US10087064, US10077998, US10046962, KR20180060630, KR100955844, GB2431632, GB2431632, FR2882353, EP1586015, EP1586015, CN103863991,

Abstract:

An automatic refueling station and method detects the arrival of a vehicle to be refueled at the refueling station. Upon detection of the vehicle, the vehicle is polled by the station to obtain information from the vehicle which identifies the vehicle and the customer associated with the vehicle. The information is stored on an identification transponder or tag affixed to the vehicle windshield. The system uses the identifying information to access a vehicle database and a customer database. The vehicle database can provide information about the vehicle such as the location of the vehicle's fuel filler opening, the size of the vehicle and other information related to a recommended fuel filling rate for the vehicle. The customer identifying information is used to access the customer database to obtain information such as customer billing information and the amount of fuel being purchased. Using the data retrieved from the databases, a refueling module can locate the fuel filler opening and refuel the vehicle at a optimum fuel rate. A network of sensors deployed in the refueling area facilitate the refueling procedure. A vision system aides in locating the fuel filler opening and guiding the fuel filler nozzle to the opening. Other sensors such as force, torque, infrared, sonar, magnetic and hall effect sensors aide in guiding the nozzle into a docking position with the vehicle. Other sensors in the area provide monitoring of the area to prevent hazards such as collisions between vehicles and persons and criminal activity in the area.



9) Family number: 3340828 (US4901748A)

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Title: FILLING STATION STRUCTURE
Priority: US19840611986 19840518
Family:

Publication number	Publication date	Application number	Application date
JP61050855 A2	19860313	JP19850102800	19850516
NL8501388 A	19851216	NL19850001388	19850514

Probable Assignee: ALBERT SHOTMEYER TE HAWTHORNE NEW JERSEY VER ST V AM

Assignee(s):(std): ARUBAATO SHIYOTSUTOMAIAA ; SHOTMEYER ALBERT

Assignee(s): ALBERT SHOTMEYER TE HAWTHORNE NEW JERSEY VER ST V ; ALBERT SHOTMEYER TE HAWTHORNE NEW JERSEY VER ST V AM

Inventor(s):(std): ARUBAATO SHIYOTSUTOMAIAA ; SHOTMEYER ALBERT

International class (IPC 8-9): B60S5/02 B67D7/78 E04H1/12 E04H3/02 (Advanced/Invention); B60S5/00 B67D7/78 E04H1/12 E04H3/02 (Core/Invention)

International class (IPC 1-7): B60S5/02 B67D5/60 E04H3/02

CPC: Y10T137/3802 Y10T137/6969 B67D7/78 B60S5/02 E04H1/1233

European class: B60S5/02 B67D7/78 E04H1/12B5

US class: 137/234.6 137/357

JP class F-Term: 2E026 3D026 3D026/CA00 3D026/CA03 3D026/CA04 3D026/CA05 3D026/CA08 3D026/CA09 3D026/CA10

JP class F-Index: B60S5/02 E04H3/02/D

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Abstract:

A filling station structure includes a canopy for covering a vehicle refueling area. A pair of fuel storage vessels are elevated above the ground and contain separate tanks for holding fuel to be dispensed to the vehicles. The fuel storage vessels are contiguous with the canopy to form an integrated, covered filling station with above-ground, elevated tanks.

