

		"D513509" "D516552" "D517541" "D518042" "D523429" "D528541" "D528993" "D534531" "D535292" "D544846" "D581371" "D593085" "D593086" "D593091" "D605635").PN.				
S11	5	"12170951"	US-PGPUB; USPAT	OR	ON	2011/03/22 19:17
S13	11	345/169.ccls. and (rotat\$4 near scroll near wheel)	US-PGPUB; USPAT	OR	ON	2011/03/22 19:28
S16	3	(rotat\$4 near display) same (scroll near wheel) with base	US-PGPUB; USPAT	OR	ON	2011/03/22 19:31
S19	15	(rotat\$4 near display) and (scroll and wheel) same base	US-PGPUB; USPAT	OR	ON	2011/03/22 19:34
S21	76	Behar near Yves.inv.	US-PGPUB; USPAT	OR	ON	2011/03/22 19:40
S22	2	"20060264243"	US-PGPUB; USPAT	OR	ON	2011/03/22 19:43
S23	1	"6295038".pn.	US-PGPUB; USPAT	OR	ON	2011/03/22 19:57
S25	1	345/184.ccls. and (scroll near wheel) and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/03/24 11:34
S30	1	"4481382".pn.	USPAT	OR	ON	2011/03/24 12:45
S34	7	(laptop) with (scroll near wheel) and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/03/24 16:43
S35	1	"6184867".pn.	US-PGPUB; USPAT	OR	ON	2011/03/24 16:45
S39	11	345/184.ccls. and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/03/25 15:38
S41	1	"455"/\$.ccls. and (second near navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/03/25 16:01
S48	1	"11606556"	US-PGPUB; USPAT	OR	ON	2011/03/25 17:32
S51	5	(PDA or laptop or cellular) with (two near navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/03/25 18:40
S53	1	"20050246327"	US-PGPUB; USPAT	OR	ON	2011/03/25 20:11
S54	1	"7467356".pn.	US-PGPUB; USPAT	OR	ON	2011/03/26 19:50
S55	2	"20040001049"	US-PGPUB; USPAT	OR	ON	2011/10/11 12:57
S56	1	"20020010707"	US-PGPUB; USPAT	OR	ON	2011/10/11 12:57
S58	12	("20040001049" "20020010707" "5926364" "6144358" "6341061" "6437974" "6492974" "6882335" "6295038" "7698407" "20050221865" "20080024465").pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 13:08
S59	1	"6040822".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 14:59
S60	2	"20010016508"	US-PGPUB; USPAT	OR	ON	2011/10/11 15:00
S73	9	(laptop) same (frame near mode) or (stand near mode) same (longtudinal	US-PGPUB; USPAT	OR	ON	2011/10/11 15:50

		near axis)				
S75	86	Behar near Yves.inv.	US-PGPUB; USPAT	OR	ON	2011/10/11 15:56
S78	1	"7061472".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 16:10
S80	1	"6341061".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/11 16:20
S81	1	"6304431".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/11 16:22
S82	1	"6295038".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/11 16:23
S83	1	"6297752".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/11 16:24
S84	1	"5966284".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/11 16:25
S86	1	"5926364".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 16:42
S87	1	"6144358".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 16:42
S88	1	"6341061".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 16:43
S89	1	"6437974".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 16:43
S91	1	"6492974".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 16:50
S92	1	"6882335".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 16:50
S94	106	(laptop) same (rotat\$3 near axis)	US-PGPUB; USPAT	OR	ON	2011/10/11 16:54
S96	18	(laptop) same (rotat\$3 near axis) same (frame)	US-PGPUB; USPAT	OR	ON	2011/10/11 16:55
S97	319	(laptop or mobile) same (rotat\$3 near axis) same (frame)	US-PGPUB; USPAT	OR	ON	2011/10/11 16:58
S99	26	(laptop) same (longitudinal near axis) same (rotat\$3)	US-PGPUB; USPAT	OR	ON	2011/10/11 17:04
S101	14	345/169.ccls. and (longitudinal near axis) same (rotat\$3)	US-PGPUB; USPAT	OR	ON	2011/10/11 17:07
S103	1	"6040822".pn.	US-PGPUB; USPAT	OR	ON	2011/10/11 17:14
S104	2	"20040001049"	US-PGPUB; USPAT	OR	ON	2011/10/11 17:18
S106	4	"10185154"	US-PGPUB; USPAT	OR	ON	2011/10/12 13:52
S112	2	"20040001049"	US-PGPUB; USPAT	OR	ON	2011/10/12 16:11
S113	1	"20050221865"	US-PGPUB; USPAT	OR	ON	2011/10/12 16:21
S131	18	"455"/\$.ccls. and (scroll near wheel) and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/10/12 17:51

S132	2	345/169.ccls. and (scroll near wheel) and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/10/12 17:53
S133	23	(laptop or cellular or mobile) with (scroll near wheel) and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/10/12 17:55
S134	7	(laptop) with (scroll near wheel) and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/10/12 17:55
S135	1	"20010016508".pn.	US-PGPUB; USPAT	OR	ON	2011/10/12 18:03
S136	69	(laptop) with (scroll near wheel)	US-PGPUB; USPAT	OR	ON	2011/10/12 18:04
S142	305	(laptop or cellular) same (scroll near wheel)	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 10:07
S143	117	(laptop) same (scroll near wheel)	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 10:07
S146	77	S143 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 10:08
S147	1	"20060284787"	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 10:16
S148	1	"7330923".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 10:17
S151	1	"20050221865"	US-PGPUB; USPAT	OR	ON	2011/10/13 14:48
S152	2	"20010016508"	US-PGPUB; USPAT	OR	ON	2011/10/13 14:51
S154	86	Behar near Yves.inv.	US-PGPUB; USPAT	OR	ON	2011/10/13 15:08
S157	1	"6266236".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 15:17
S158	2	"20040001049"	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/13 15:31
S159	40	Morenstein near Joshua.inv.	US-PGPUB; USPAT	OR	ON	2011/10/13 15:34
S160	21	Hibmacronan near Christopher.inv.	US-PGPUB; USPAT	OR	ON	2011/10/13 15:34
S161	16	Edahiro near Naoya.inv.	US-PGPUB; USPAT	OR	ON	2011/10/13 15:34
S162	18	Day near Matthew.inv.	US-PGPUB; USPAT	OR	ON	2011/10/13 15:34
S169	54	345/169.ccls. and (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/10/14 12:36
S170	51	S169 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/14 12:36
S171	8	(laptop) with (navigat\$3 near button)	US-PGPUB; USPAT	OR	ON	2011/10/14 12:40
S196	1	"20060264243"	USPAT	OR	OFF	2011/10/14 15:29

S197	69	(laptop) with (scroll near wheel)	US-PGPUB; USPAT	OR	ON	2011/10/14 16:08
S198	50	S197 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/14 16:08
S200	153	(laptop) same (scroll near wheel)	US-PGPUB; USPAT	OR	ON	2011/10/14 16:25
S201	95	S200 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/14 16:25
S225	1	"5767842".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2011/10/15 14:00
S238	305	(scroll near wheel) same (laptop or cellular)	US-PGPUB; USPAT	OR	OFF	2011/10/17 10:13
S240	117	(scroll near wheel) same (laptop)	US-PGPUB; USPAT	OR	OFF	2011/10/17 10:13
S250	2	"5436954".pn.	US-PGPUB; USPAT; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2011/10/17 14:02
S252	1	"6295038".pn.	US-PGPUB; USPAT	OR	ON	2011/10/17 14:12
S282	2	"20060264243"	US-PGPUB; USPAT	OR	ON	2011/10/18 09:30
S328	1	"7084919".pn.	US-PGPUB; USPAT	OR	ON	2012/05/21 13:23
S329	2	"20040198460"	US-PGPUB; USPAT	OR	ON	2012/05/21 13:23
S330	1	"20050272462"	US-PGPUB; USPAT	OR	ON	2012/05/21 13:23
S331	1	"5436954".pn.	US-PGPUB; USPAT	OR	ON	2012/05/21 13:24
S334	1	"09979897"	US-PGPUB; USPAT	OR	ON	2012/05/21 14:02
S335	28	("5719799" "5982429" "6069648" "6510325" "6697117" "6750848").PN. OR ("7084919").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/21 14:36
S336	75	("4120038" "5442512" "5475441" "5488558").PN. OR ("5719799").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/21 16:01
S337	103	Behar near Yves.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:08
S338	43	Morenstein near Joshua.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:08
S339	22	Hibmacronan near Christopher.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:08
S340	23	Edahiro near Naoya.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:08
S341	19	Day near Matthew.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:08
S342	9	S337 and S338 and S339 and S340 and S341	US-PGPUB; USPAT	OR	ON	2012/05/21 16:08

S343	2	"20040001049"	US-PGPUB; USPAT	OR	ON	2012/05/21 16:13
S345	14	("20050018396" "20050041378" "6067224" "D395868" "D452238" "D463797" "D476326" "D491177" "D491936" "D494162" "D513509" "D516552" "D523429").PN. OR ("D593085").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/21 16:20
S346	103	Behar near Yves.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:59
S347	43	Morenstein near Joshua.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:59
S348	22	Hibmacronan near Christopher.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:59
S349	23	Edahiro near Naoya.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:59
S350	19	Day near Matthew.inv.	US-PGPUB; USPAT	OR	ON	2012/05/21 16:59
S351	9	S346 and S347 and S348 and S349 and S350	US-PGPUB; USPAT	OR	ON	2012/05/21 17:00
S352	4	("20070242421" "20080024388" "20080158795" "20090190295").PN.	US-PGPUB; USPAT	OR	ON	2012/05/21 17:01
S353	117737	configuration with display	US-PGPUB; USPAT	OR	ON	2012/05/21 17:08
S354	1739765	sensor or detector	US-PGPUB; USPAT	OR	ON	2012/05/21 17:08
S355	325998	laptop or "notebook computer" or "portable computer"	US-PGPUB; USPAT	OR	ON	2012/05/21 17:08
S356	37894	S353 and S354	US-PGPUB; USPAT	OR	ON	2012/05/21 17:09
S357	89456	S354 and S355	US-PGPUB; USPAT	OR	ON	2012/05/21 17:09
S358	349331	hinge	US-PGPUB; USPAT	OR	ON	2012/05/21 17:09
S359	4988	S358 and S357	US-PGPUB; USPAT	OR	ON	2012/05/21 17:10
S360	3370	S359 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/21 17:10
S361	6728	flip with image	US-PGPUB; USPAT	OR	ON	2012/05/21 17:11
S362	46	S361 and S359	US-PGPUB; USPAT	OR	ON	2012/05/21 17:11
S363	32	S362 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/21 17:11
S364	2400838	rotate or rotatable or rotating	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/21 17:15
S365	40	S362 and S364	US-PGPUB; USPAT	OR	ON	2012/05/21 17:16
S366	2214	345/169.ccls.	US-PGPUB; USPAT	OR	ON	2012/05/21 17:17
S367	2966	361/679.21,679.26,679.27.ccls.	US-PGPUB; USPAT	OR	ON	2012/05/21 17:17

S368	4137	455/575.1-575.2.ccls.	US-PGPUB; USPAT	OR	ON	2012/05/21 17:19
S369	3238	345/168.ccls.	US-PGPUB; USPAT	OR	ON	2012/05/21 17:21
S370	2620	S369 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/21 17:22
S371	1855	S366 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/21 17:22
S378	1	"6492974".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/22 15:10
S379	2	"20060264243"	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/22 15:56
S381	5	"12170939"	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/22 16:48
S382	1	"5436954".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/22 16:51
S413	1	"6492974".pn.	US-PGPUB; USPAT	OR	OFF	2012/05/29 14:24
S414	1	"11559763"	US-PGPUB; USPAT	OR	ON	2012/05/29 17:57
S419	17	("20030048595" "20040228076" "20050063145" "20050128695" "5712760" "5847698" "6464195" "6642909" "6665175" "D399526" "D495694" "D528541" "D535292").PN. OR ("D593091").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/30 14:49
S421	1	"5436954".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/30 14:50
S432	312	361/679.3.ccls.	US-PGPUB; USPAT	OR	ON	2012/05/31 12:18
S433	260	S432 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/31 12:18
S434	757	345/184.ccls.	US-PGPUB; USPAT	OR	ON	2012/05/31 12:19
S435	622	S434 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2012/05/31 12:19
S440	1	"7061472".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/14 10:31
S441	1	"6295038".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/14 10:36
S442	63	("4243986" "4749364" "5038301" "5115229" "5307055" "5335192" "5384579" "5537127" "5539658" "5568603" "5590021" "5659361" "5856819").PN. OR	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/14 10:37

		("6295038").URPN.				
S444	1	"5436954".pn.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/14 12:47
S445	23	("5490039" "5745340" "6262785" "6295038" "6487068" "6489932" "6643124" "6700773").PN. OR ("6909597").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/14 16:16
S446	35	("5262926" "5414444" "5508720" "5644338" "5739810" "5926364" "5949643" "5966284" "6006243" "6144358" "6295038" "6297752" "6304431" "6327482" "6341061" "6492974" "6700773" "6836404").PN. OR ("7061472").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/14 16:17
S449	7	("6693652" "7756928" "20050210399" "20070240076" "20090150826" "20010032320" "20080235594").PN.	US-PGPUB; USPAT	OR	OFF	2013/01/14 16:39
S450	110	Behar near Yves.inv.	US-PGPUB; USPAT	OR	ON	2013/01/14 16:42
S451	49	Morenstein near Joshua.inv.	US-PGPUB; USPAT	OR	ON	2013/01/14 16:42
S452	24	Hibmacronan near Christopher.inv.	US-PGPUB; USPAT	OR	ON	2013/01/14 16:43
S453	24	Edahiro near Naoya.inv.	US-PGPUB; USPAT	OR	ON	2013/01/14 16:43
S454	21	Day near Matthew.inv.	US-PGPUB; USPAT	OR	ON	2013/01/14 16:43
S455	10	(S450 and S451 and S452 and S453 and S454)	US-PGPUB; USPAT	OR	ON	2013/01/14 16:44
S456	5	S455 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/14 16:44
S457	1	"7061472".pn.	US-PGPUB; USPAT	OR	ON	2013/01/18 09:50
S458	1	"5436954".pn.	US-PGPUB; USPAT	OR	ON	2013/01/18 09:51
S459	3193	345/169,184.ccls.	US-PGPUB; USPAT	OR	ON	2013/01/18 11:52
S460	6206	345/168-169,184.ccls.	US-PGPUB; USPAT	OR	ON	2013/01/18 11:53
S461	814	345/184.ccls.	US-PGPUB; USPAT	OR	ON	2013/01/18 11:53
S462	3180	361/679.21,679.26,679.27.ccls.	US-PGPUB; USPAT	OR	ON	2013/01/18 11:54
S463	3519	345/168.ccls.	US-PGPUB; USPAT	OR	ON	2013/01/18 11:54
S464	2665	S463 and @ad<="20080710"	US-PGPUB; USPAT; USOCR	OR	OFF	2013/01/18 11:59
S467	121	"Behar Yves".inv.	US-PGPUB; USPAT	OR	ON	2013/08/10 12:29
S468	55	"Morenstein Joshua".inv.	US-PGPUB; USPAT	OR	ON	2013/08/10 12:30

S469	26	"Hibmacronan Christopher".inv.	US-PGPUB; USPAT	OR	ON	2013/08/10 12:30
S470	28	"Edahiro Naoya".inv.	US-PGPUB; USPAT	OR	ON	2013/08/10 12:30
S471	24	"Day Matthew".inv.	US-PGPUB; USPAT	OR	ON	2013/08/10 12:30
S472	30	("20040207568" "20040212602" "20050063145" "20050091596" "20050134717" "20050282596" "20060268500" "20070138806" "20080042987" "20080174570" "20080284738" "20090019383" "20090244012" "20090244832" "5515345" "5547698" "5790371" "5793355" "5847698" "5900848" "5949643" "6067224" "6097389" "6222507" "6464195" "6642909" "6665175" "6697055" "6972752" "7366994").PN.	US-PGPUB; USPAT	OR	ON	2013/08/10 12:31
S478	2	"2004302179"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/08/10 12:37
S481	2	"2005242436"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/08/10 12:39
S482	2	"2001167211"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/08/10 12:40
S483	2	"2005159741"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/08/10 12:40
S485	2	"2006227409"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/08/10 12:42
S487	2618	345/169.ccls.	US-PGPUB; USPAT	OR	ON	2013/08/10 12:59
S488	838	345/184.ccls.	US-PGPUB; USPAT	OR	ON	2013/08/10 13:07
S489	17	(laptop) same (frame near mode) or (stand near mode) same (longtudinal	US-PGPUB; USPAT	OR	ON	2013/08/10 13:07

		near axis)				
S490	19	(laptop) same (rotat\$3 near axis) same (frame)	US-PGPUB; USPAT	OR	ON	2013/08/10 13:08
S491	400	(laptop or mobile) same (rotat\$3 near axis) same (frame)	US-PGPUB; USPAT	OR	ON	2013/08/10 13:09
S498	862	"455"/\$.ccls. and (scroll near wheel)	US-PGPUB; USPAT	OR	ON	2013/08/10 14:47
S499	3369	361/679.21,679.26,679.27.ccls.	US-PGPUB; USPAT	OR	ON	2013/08/10 14:51
S500	4755	455/575.1-575.2.ccls.	US-PGPUB; USPAT	OR	ON	2013/08/10 14:52
S501	3773	345/168.ccls.	US-PGPUB; USPAT	OR	ON	2013/08/10 14:52
S502	427	361/679.3.ccls.	US-PGPUB; USPAT	OR	ON	2013/08/10 14:53
S503	838	345/184.ccls.	US-PGPUB; USPAT	OR	ON	2013/08/10 14:53
S504	1	"8289688".pn.	US-PGPUB; USPAT	OR	ON	2013/08/10 14:54
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		"D392944" "D395868" "D399526" "D416003" "D452238" "D462069" "D463797" "D476326").PN. OR ("D479708" "D491177" "D491936" "D494162" "D495674" "D495694" "D504128" "D512997" "D513509" "D516552" "D517541" "D518042" "D523429" "D528541" "D528993" "D534531" "D535292" "D544846" "D581371" "D593085" "D593086" "D593091" "D605635").PN. OR ("8289688").URPN.				
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S507	1	"20070242421"	US- PGPUB; USPAT; USOCR	OR	OFF	2013/08/10 15:28
S508	1	"20080024388"	US- PGPUB; USPAT; USOCR	OR	OFF	2013/08/10 15:28
S509	2	"20080158795"	US- PGPUB; USPAT; USOCR	OR	OFF	2013/08/10 15:29
S510	2	"20090190295"	US- PGPUB; USPAT; USOCR	OR	OFF	2013/08/10 15:29
S511	90	("20030142469" "20030221876" "20040114319" "20050052833" "20050099533" "20050124394" "20050186985" "20050239520" "20060126284" "20060146488" "20060238968" "20060264243" "20070217135" "20080169351" "4825395" "5175672" "5243549" "5251102" "5416730" "5477129" "5481645" "5583744" "5594617" "5768164" "5841630" "5898600" "5926364" "6073187" "6078496" "6116767" "6154359" "6307740" "6341061" "6353529" "6392871" "6392877" "6430038" "6456488" "6480373" "6480374" "6492974" "6558057" "6612668" "6628506" "6643124" "6654234" "6687119" "6700773" "6707666" "6744623" "6791597" "6792480" "6816365" "6819961" "6825415" "6831229" "6862171" "6873521" "6882529" "6900981" "6903927" "6912121" "6930881" "6947279" "6980420" "6980423" "7016183" "7061472" "7104516" "7106579" "7113397" "7155266" "7196901" "7255317" "7328481" "7345872" "7352565" "7353050" "7419099" "7450978" "7489503" "7492891" "7570482" "7630193" "7667959" "7787914" "7930803" "7934689" "8106887" "D359275").PN. OR ("8208249").URPN.	US- PGPUB; USPAT; USOCR	OR	OFF	2013/08/10 15:29
S513	146046	laptop or "notebook computer" or	USPAT	OR	ON	2013/08/10

		"portable computer"				15:40
S514	1057480	sensor or detector	USPAT	OR	ON	2013/08/10 15:40
S515	4035	flip with image	USPAT	OR	ON	2013/08/10 15:40
S516	182	S513 and S514 and S515	USPAT	OR	ON	2013/08/10 15:40
S518	0	S516 and easel near mode	USPAT	OR	ON	2013/08/10 15:41
S519	2	S516 and frame near mode	USPAT	OR	ON	2013/08/10 15:41
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S521	1878	455/575.3.ccls.	US- PGPUB; USPAT	OR	ON	2013/08/10 15:44
S522	8504	345/156.ccls.	US- PGPUB; USPAT	OR	ON	2013/08/10 15:52
S524	3256	345/156.ccls. and (rotate or rotatable or rotating)	US- PGPUB; USPAT	OR	ON	2013/08/10 15:55
S526	65291	S524 and "laptop" or "notebook computer" or "portable computer"	USPAT	OR	ON	2013/08/10 15:56
S547	14566	345/173.ccls.	US- PGPUB; USPAT	OR	ON	2013/08/12 11:01
S548	3177	345/173.ccls. and (rotate or rotatable or rotating)	US- PGPUB; USPAT	OR	ON	2013/08/12 11:08
S549	65265	S548 and "laptop" or "notebook computer" or "portable computer"	USPAT	OR	ON	2013/08/12 11:08
S552	2918	345/173.ccls. and (laptop) same (frame near mode) or (stand near mode)	US- PGPUB; USPAT	OR	ON	2013/08/12 11:20
S553	2	S552 and flip with image	US- PGPUB; USPAT	OR	ON	2013/08/12 11:21

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S531	1	(laptop) same (frame near mode) or (stand near mode) same (longtudinal near axis)	USPAT; UPAD	OR	ON	2013/08/10 13:08
S532	10	(laptop) same (rotat\$3 near axis) same (frame)	USPAT; UPAD	OR	ON	2013/08/10 13:09
S533	236	(laptop or mobile) same (rotat\$3 near axis) same (frame)	USPAT; UPAD	OR	ON	2013/08/10 13:10
S536	152404	laptop or "notebook computer" or "portable computer"	USPAT; UPAD	OR	ON	2013/08/10 15:33
S537	59335	configuration with display	USPAT; UPAD	OR	ON	2013/08/10 15:34
S538	1063798	sensor or detector	USPAT; UPAD	OR	ON	2013/08/10 15:34
S539	18427	S537 and S538	USPAT; UPAD	OR	ON	2013/08/10 15:35
S540	3485	S536 and S539	USPAT; UPAD	OR	ON	2013/08/10 15:35

S542	4080	flip with image	USPAT; UPAD	OR	ON	2013/08/10 15:35
S543	79	S540 and S542	USPAT; UPAD	OR	ON	2013/08/10 15:36
S544	59	S543 and @ad<="20080710"	USPAT; UPAD	OR	OFF	2013/08/10 15:36
S545	1	S540 and easel near mode	USPAT; UPAD	OR	ON	2013/08/10 15:38
S546	10	S540 and frame near mode	USPAT; UPAD	OR	ON	2013/08/10 15:38

8/ 12/ 2013 3:13:11 PM
C:\ Users\ sabebe\ Documents\ EAST\ Workspaces\ 12170951.wsp

Issue Classification 	Application/Control No. 12170951	Applicant(s)/Patent Under Reexamination BEHAR ET AL.
	Examiner SOSINA ABEBE	Art Unit 2692

☐ Claims renumbered in the same order as presented by applicant															
☐ CPA															
☐ T.D.															
☐ R.1.47															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	22	17												
2	2	7	18												
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/SOSINA ABEBE/ Examiner.Art Unit 2692	08/09/2013	Total Claims Allowed:	
(Assistant Examiner)	(Date)	22	
/LUN-YI LAO/ Supervisory Patent Examiner.Art Unit 2692	08/16/2013	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	26

Receipt date: 07/01/2013

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

12170951 - GAI: 2692

P10/05/09a (01-10)

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951
	Filing Date		2008-07-10
	First Named Inventor	Yves Behar	
	Art Unit	2692	
	Examiner Name	S. Abebe	
	Attorney Docket Number	L2039-700111	

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6972752		2005-12-06	Nako et al.	
	2	5515345		1996-05-07	Barreira et al.	
	3	5793355		1998-08-11	Youens	
	4	5847698		1998-12-08	Reavey et al.	
	5	6464195		2002-10-15	Hildebrandt	
	6	6642909		2003-11-04	Oliva	
	7	6665175		2003-12-16	deBoer et al.	
	8	6067224		2000-05-23	Nobuchi	

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	Filing Date		2008-07-10	
	First Named Inventor	Yves Behar		
	Art Unit		2692	
	Examiner Name	S. Abebe		
	Attorney Docket Number		L2039-700111	

	9	5790371		1998-08-04	Latocha et al.	
	10	5900848		1999-05-04	Haneda et al.	
	11	6222507		2001-04-24	Gouko	
	12	5949643		1999-09-07	Batio	
	13	6697055		2004-02-24	Bullister	
	14	5547698		1996-08-20	Lansbergen et al.	
	15	6097389		2000-08-01	Morris et al.	
	16	7366994		2008-04-29	Loui	

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	1	20050134717		2005-06-23	Misawa	

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	Filing Date		2008-07-10	
	First Named Inventor	Yves Behar		
	Art Unit		2692	
	Examiner Name	S. Abebe		
	Attorney Docket Number		L2039-700111	

2	20050282596		2005-12-22	Park et al.	
3	20050063145		2005-03-24	Homer et al.	
4	20060268500		2006-11-30	Kuhn	
5	20080284738		2008-11-20	HOVDEN et al.	
6	20090244832		2009-10-01	Behar et al.	
7	20040207568		2004-10-21	Ooshima et al.	
8	20070138806		2007-06-21	Ligtenberg et al.	
9	20080042987		2008-02-21	Westerman et al.	
10	20090244012		2009-10-01	Behar et al.	
11	20040212602		2004-10-28	Nako et al.	
12	20050091596		2005-04-28	Anthony et al.	

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	Filing Date		2008-07-10	
	First Named Inventor	Yves Behar		
	Art Unit		2692	
	Examiner Name	S. Abebe		
	Attorney Docket Number		L2039-700111	

	13	20090019383		2009-01-15	Riley et al.	
	14	20080174570		2008-07-24	Jobs et al.	

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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² i	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	6-242853	JP	A	1994-09-02	Hitachi Ltd et al.		☒
	2	6-259166	JP	A	1994-09-16	Hitachi Ltd		☒
	3	8-179851	JP	A	1996-07-12	Toshiba Corp		☒
	4	5-197507	JP	A	1993-08-06	Hitachi Ltd		☒
	5	1292112	CN	A	2001-04-18	Sharp Kk		☒
	6	2005-242436	JP	A	2005-09-08	Matsushita Electric Ind Co Ltd		☒
	7	2001-167211	JP	A	2001-06-22	Hitachi Ltd et al.		☒

Receipt date: 07/01/2013 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951	12170951 - GAU: 2692
	Filing Date		2008-07-10	
	First Named Inventor	Yves Behar		
	Art Unit	2692		
	Examiner Name	S. Abebe		
	Attorney Docket Number	L2039-700111		

8	2005-159741	JP	A	2005-06-16	Fuji Photo Film Co Ltd	☒
9	10-111658	JP	A	1998-04-28	Fujitsu Ltd	☒
10	6090200	JP	A	1994-03-29	HITACHI LTD	☒
11	2004-302179	JP	A	2004-10-28	Hitachi Ltd	☒
12	11-296259	JP		1999-10-29	CANON INC.	☒
13	2006-227409	JP		2006-08-31	NIKON CORP.	☒

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NON-PATENT LITERATURE DOCUMENTS

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	Japanese Office Action mailed 12-4-2012 from national phase entry of the corresponding PCT application. (L2039-7001JP).	☐
	2	Partial translation of Japanese Office Action from national phase examination of the Corresponding PCT application. (Letter dated 12-7-12 including English partial translation of JP OA dated 12-4-12).	☐
	3	Search Report from corresponding International Application PCT/US2009/038599 dated March 6, 2009	☐

Receipt date: 07/01/2013 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951	12170951 - GAU: 2692
	Filing Date		2008-07-10	
	First Named Inventor	Yves Behar		
	Art Unit	2692		
	Examiner Name	S. Abebe		
	Attorney Docket Number	L2039-700111		

4	International Search Report from a commonly owned PCT application PCT/US09/39117, dated September 29, 2009.	☐
5	Final Office Action for Japanese Application No. 2011-503058 mailed April 16, 2013, 3 pages.	☒

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¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

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	Filing Date		2008-07-10	
	First Named Inventor	Yves Behar		
	Art Unit	2692		
	Examiner Name	S. Abebe		
	Attorney Docket Number	L2039-700111		

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Matthew H. Grady/	Date (YYYY-MM-DD)	2013-07-01
Name/Print	Matthew H. Grady	Registration Number	52957

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Search Notes 	Application/Control No. 12170951	Applicant(s)/Patent Under Reexamination BEHAR ET AL.
	Examiner SOSINA ABEBE	Art Unit 2629

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
345	169,184	03/24/11	SA
	updated the above searches	10/13/11	SA
345	168-169,184	05/21/12	SA
361	679.3,679.21,679.26-679.27	05/21/12	SA
	Updated the above searches	01/18/13	SA
345	156,168-169,184	08/10/13	SA
361	679.3,679.21,679.26-679.27	08/10/13	SA
455	575.3	08/10/13	SA
345	173	08/12/13	SA

SEARCH NOTES		
Search Notes	Date	Examiner
Inventor name search	03/24/11	SA
East Search	03/24/11	SA
Consulted with SPE LunYi Lao	10/13/11	SA
Updated East Search	10/13/11	SA
Updated East Search	05/21/12	SA
Consulted with Primary Grant Sitta	05/22/12	SA
Consulted with Gregory Tryder	01/08/13	SA
Updated East Search	01/18/13	SA
Consulted with SPE LunYi Lao	08/08/13	SA
Updated East Search	08/10/13	SA

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INTERFERENCE SEARCH

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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/170,951	07/10/2008	Yves Behar	L2039-700111	2004

TITLE OF INVENTION: PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1780	\$300	\$0	\$2080	11/22/2013

EXAMINER	ART UNIT	CLASS-SUBCLASS
ABEBE, SOSINA	2692	345-169000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.	2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 1 <u>Lando & Anastasi, LLP</u> 2 _____ 3 _____
---	--

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

LITL LLC

Boston, MA

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☒ Issue Fee
- ☒ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 56/2762 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see form PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature /Matthew H. Grady/

Date November 19, 2013

Typed or printed name Matthew H. Grady

Registration No. 52,957

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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Electronic Patent Application Fee Transmittal

Application Number:	12170951			
Filing Date:	10-Jul-2008			
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS			
First Named Inventor/Applicant Name:	Yves Behar			
Filer:	Matthew H. Grady			
Attorney Docket Number:	L2039-700111			
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Publ. Fee- Early, Voluntary, or Normal	1504	1	300	300
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl Issue Fee	1501	1	1780	1780

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				2080

Electronic Acknowledgement Receipt

EFS ID:	17438361
Application Number:	12170951
International Application Number:	
Confirmation Number:	2004
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Customer Number:	37462
Filer:	Matthew H. Grady
Filer Authorized By:	
Attorney Docket Number:	L2039-700111
Receipt Date:	19-NOV-2013
Filing Date:	10-JUL-2008
Time Stamp:	14:58:05
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$2080
RAM confirmation Number	1501
Deposit Account	502762
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	-_Issue_Fee_Payment_1.PDF	331458 9f5cf0ed0238e1544961835430694148745e fec7	no	2

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	32291 a9c22cb1eeb8afe1a3f2750d4a76ed7b9197 ad35	no	2
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Warnings:

Information:

Total Files Size (in bytes):			363749
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/170,951	07/10/2008	Yves Behar	L2039-700111	2004
37462	7590	12/06/2013		
LANDO & ANASTASI, LLP ONE MAIN STREET, SUITE 1100 CAMBRIDGE, MA 02142			EXAMINER ABEBE, SOSINA	
			ART UNIT 2627	PAPER NUMBER
			NOTIFICATION DATE 12/06/2013	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@LALaw.com
gengelso@LALaw.com



UNITED STATES DEPARTMENT OF COMMERCE
U.S. Patent and Trademark Office

Address : COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
12/170,951	10 July, 2008	BEHAR ET AL.	L2039-700111

LANDO & ANASTASI, LLP ONE MAIN STREET, SUITE 1100 CAMBRIDGE, MA 02142		EXAMINER	
		SOSINA ABEBE	
		ART UNIT	PAPER
		2627	20131202

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

Correction on the Abstract 7/10/2008 has been made.

/SRILAKSHMI K KUMAR/
Supervisory Patent Examiner, Art Unit 2627

/S. A./
Examiner, Art Unit 2627

DETAILED ACTION

SUPPLEMENTAL EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given is a telephone interview with Matthew H. Grady on 12/02/2013.

The application has been amended as follows:

ABSTRACT

A portable computer that is configurable between a laptop mode (in which the portable computer has a conventional laptop appearance) and an easel mode in which the base of the computer and its display component stand vertically forming an inverted "V." The portable computer includes a hinge assembly that couples the display component to the base of the computer, and allows the display component to be rotated about an axis along an interface between the display component and the base to configure the portable computer between a closed position, the laptop mode and the easel mode. The portable computer further comprises a scroll wheel and optional navigation buttons. ~~that~~

Contact Information

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sosina Abebe whose telephone number is (571) 270-7929. The examiner can normally be reached on Mon-Friday from 9:00-5:30 If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Srilakshmi Kumar can be reached on (571) 272-7769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/S. A./

Examiner, Art Unit 2627

/SRILAKSHMI K KUMAR/

Supervisory Patent Examiner, Art Unit 2627

Application/Control Number: 12/170,951
Art Unit: 2627

Page 4

Receipt date: 12/18/2009 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951	12170951 - GAU: 2629
	Filing Date		2008-07-10	
	First Named Inventor	Yves Behar		
	Art Unit	2115		
	Examiner Name	Not Yet Assigned		
	Attorney Docket Number	A2029-700111		

9	6262885		2001-07-17	Philip George Emma et al.	
10	6266236	B1	2001-07-24	Edmund Ku et al.	
11	6275376		2001-08-14	Joung-Nam Moon	
12	6343006		2002-01-29	Jerry Moscovitch et al.	
13	6377444		~~4/2002~~ ~~2003-04-23~~	Scott D. Price et al.	Change(s) applied to document, /R.K.C./
14	6510049	B2	2003-01-21	John B. Rosen	12/9/2013
15	6628267	B2	2003-09-03	John Peter Karidis et al.	
16	6697055	B1	2004-02-24	Edward Bullister	
17	6771494	B2	2004-08-03	Kenji Shimano	
18	6788527	B2	2004-09-07	Paul J. Doczy et al.	
19	6829140	B2	2004-12-07	Kenji Shimano et al.	

Receipt date: 11/03/2010 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951	12170951 - GAU: 2629
	Filing Date		2008-07-10	
	First Named Inventor	Yves Behar		
	Art Unit	2629		
	Examiner Name	HJERPE, RICHARD A		
	Attorney Docket Number	L2039-700111		

20	D512997		2005-12-20	Lee	
21	D517541		2006-03-21	Maskatia	
22	D518042		2006-03-28	Kanayama	
23	D534531		2007-01-02	Ogasawara	
24	5793355		1998-08-11	Youens	
25	D399526		1998-10-13	Brady	
26	D495694		2004-09-07	Chase	
27	D528541		2006-09-19	Maskatia	
28	5712760		1998-01-27	Coulon	Change(s) applied to document, /R.K.C./ 12/9/2013
29	~~5547698~~ 5847698		1998-12-08	Reavey	
30	6464195		2002-10-15	Hildebrandt	

Receipt date: 11/03/2010

Doc code: IDS

12170951 - GAI: 2629

P10/05/05a (04-10)

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12170951
	Filing Date		2008-07-10
	First Named Inventor	Yves Behar	
	Art Unit	2629	
	Examiner Name	HJERPE, RICHARD A	
	Attorney Docket Number	L2039-700111	

U.S.PATENTS							Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	
	1	6661426	B1	2003-12-09	Jetha		
	2	D593085		5/2009 ~~2008-03-12~~	Behar	Change(s) applied to document,	
	3	D593091		5/2009 ~~2008-03-12~~	Behar	/R.K.C./ 12/9/2013	
	4	D593086		5/2009 ~~2008-07-15~~	Behar		
	5	D605635		12/2009 ~~2009-04-06~~	Edahiro		
	6	D333636	S	1993-03-02	Issa		
	7	5515345	A	1996-05-07	Barreira		
	8	D392944	S	1998-03-31	Issa		



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UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/170,951	01/07/2014	8624844	L2039-700111	2004

37462 7590 12/18/2013
LANDO & ANASTASI, LLP
ONE MAIN STREET, SUITE 1100
CAMBRIDGE, MA 02142

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 494 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Yves Behar, Oakland, CA;
Joshua Morenstein, San Francisco, CA;
Christopher Hibmacronan, Oakland, CA;
Naoya Edahiro, San Francisco, CA;
Matthew David Day, San Francisco, CA;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the Office electronic filing system in accordance with 37 CFR § 1.6(a)(4).

Dated: January 24, 2013
Electronic Signature for Matthew H. Grady: /Matthew H. Grady/

Docket No.: L2039-700111

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Letters Patent of:
Yves Behar et al.

Patent No.: 8,624,844

Issued: January 7, 2014

For: PORTABLE COMPUTER WITH MULTIPLE
DISPLAY CONFIGURATIONS

REQUEST FOR CERTIFICATE OF CORRECTION PURSUANT TO 37 C.F.R. § 1.322

Commissioner for Patents

Dear Madam:

Applicant submits herewith a Request for Certificate of Correction under 37 C.F.R. §1.322 of the above-identified issued patent, to correct a typographical error made through no fault of the Applicant.

It is respectfully requested that the correction shown on the attached sheet be made to the patent. In column 17, claim 1, line 47, insert the word - - mode - - after the word “frame” (see Examiner’s Amendment to the claims in the Notice of Allowance dated August 22, 2013).

There is no required fee as set forth under 37 C.F.R. §1.322 since the errors were not made by the Applicant. It is requested that the undersigned be contacted by telephone at (617) 395-7000 with any questions relating to this Request. The Commissioner is hereby authorized to charge any

deficiencies or credit any over payments to the undersigned's account, Deposit Account No. 50/2762, Ref. No. L2039-700111.

Dated: January 24, 2014

Respectfully submitted,

Electronic signature: /Matthew H. Grady/

Matthew H. Grady

Registration No.: 52,957

Marcus E. Browne

Registration No.: 71,897

LANDO & ANASTASI LLP

Riverfront Office Park

One Main Street, Suite 1100

Cambridge, Massachusetts 02142

(617) 395-7000

Attorneys for Applicant

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

Page 1 of 1

PATENT NO. : 8,624,844
APPLICATION NO. : 12/170,951
ISSUE DATE : January 7, 2014
INVENTOR(S) : Yves Behar et al.

It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Claims:

Column 17, Claim 1, Line 47, insert - - mode - - after the word "frame".

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the Office electronic filing system in accordance with 37 CFR § 1.6(a)(4).

Dated: January 24, 2014

Electronic Signature for Matthew H. Grady: /Matthew H. Grady/

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Matthew H. Grady(Attorney for Applicant)

LANDO & ANASTASI LLP

1

Riverfront Office Park

One Main Street

Suite 1100

Cambridge, Massachusetts 02142

Electronic Acknowledgement Receipt

EFS ID:	18017146
Application Number:	12170951
International Application Number:	
Confirmation Number:	2004
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Customer Number:	37462
Filer:	Matthew H. Grady
Filer Authorized By:	
Attorney Docket Number:	L2039-700111
Receipt Date:	24-JAN-2014
Filing Date:	10-JUL-2008
Time Stamp:	14:32:51
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Certificate of Correction	Request_for_Certificate_of_Correction_No_Fee.pdf	21488 d6a624970358cc1a906d6115f130f69bb16ff198	no	2

Warnings:

Information:

2	Request for Certificate of Correction	Certificate_of_Correction.pdf	16819 cc942e1c4300f462634949410c401291a011c81c	no	1
Warnings:					
Information:					
Total Files Size (in bytes):				38307	
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 8,624,844 B2
APPLICATION NO. : 12/170951
DATED : January 7, 2014
INVENTOR(S) : Yves Behar et al.

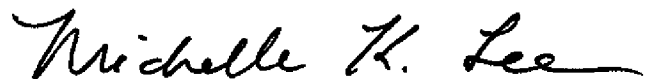
Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Claims:

Column 17, Claim 1, Line 47, insert -- mode -- after the word "frame".

Signed and Sealed this
First Day of April, 2014



Michelle K. Lee
Deputy Director of the United States Patent and Trademark Office



UNITED STATES PATENT AND TRADEMARK OFFICE

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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	PATENT NUMBER	GROUP ART UNIT	FILE WRAPPER LOCATION
12/170,951	8624844	2627	9200



Correspondence Address/Fee Address Change

The following fields have been set to Customer Number 23628 on 02/05/2016

- Correspondence Address
- Maintenance Fee Address

The address of record for Customer Number 23628 is:

23628
WOLF GREENFIELD & SACKS, P.C.
600 ATLANTIC AVENUE
BOSTON, MA 02210-2206

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POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

☒ Practitioners associated with the Customer Number: 23628

OR

☐ Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

☒ The address associated with Customer Number: 23628

OR

☐ Firm or Individual Name

Address

City

State

Zip

Country

Telephone

Email

Assignee Name and Address:

LITL LLC

501 Boylston Street

Boston, MA 02116

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	2/24/2016
Name	Kristin Carroll	Telephone	617-535-8000
Title	General Counsel		

Electronic Acknowledgement Receipt

EFS ID:	25245180
Application Number:	12170951
International Application Number:	
Confirmation Number:	2004
Title of Invention:	PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS
First Named Inventor/Applicant Name:	Yves Behar
Customer Number:	23628
Filer:	Edward J. Russavage/Sara Sikorski
Filer Authorized By:	Edward J. Russavage
Attorney Docket Number:	L2039-700111
Receipt Date:	18-MAR-2016
Filing Date:	10-JUL-2008
Time Stamp:	17:08:06
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Assignee showing of ownership per 37 CFR 3.73	L203970001US02-373-EJR.pdf	25817 e4343e74dfa90e0d024a7e2ac809bac5a4542bfd	no	2

Warnings:

Information:

2	Power of Attorney	L203990000US00-prePOA-EJR.pdf	326446 11ff6f04a180721786985cac1b8da2341fc5a7d1	no	1
Warnings:					
Information:					
Total Files Size (in bytes):			352263		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: LiTL LLC

Application No./Patent No.: 8,624,844 Filed/Issue Date: January 7, 2014

Titled: PORTABLE COMPUTER WITH MULTIPLE DISPLAY CONFIGURATIONS

LiTL LLC, a Corporation
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest in;
 2. ☐ an assignee of less than the entire right, title, and interest in
(The extent (by percentage) of its ownership interest is _____ %); or
 3. ☐ an assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)
- the patent application/patent identified above by virtue of either:

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

OR

- B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Yves Behar To: AQUENT LLC
The document was recorded in the United States Patent and Trademark Office at Reel 021810, Frame 0331, or for which a copy thereof is attached.
2. From: Joshua Morenstein To: AQUENT LLC
The document was recorded in the United States Patent and Trademark Office at Reel 021810, Frame 0331, or for which a copy thereof is attached.
3. From: Christopher Hibmacronan To: AQUENT LLC
The document was recorded in the United States Patent and Trademark Office at Reel 021810, Frame 0331, or for which a copy thereof is attached.

☒ Additional documents in the chain of title are listed on a supplemental sheet(s).

- ☒ As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Edward J. Russavage/
Signature

Edward J. Russavage
Printed or Typed Name

3/17/2016
Date

Attorney for Assignee
Title

Certificate of Electronic Filing Under 37 CFR 1.8

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted via the Office electronic filing system in accordance with 37 CFR § 1.6(a)(4).

Dated: March 18, 2016 Electronic Signature for Sara A. Sikorski: /Sara A. Sikorski/

STATEMENT UNDER 37 CFR 3.73(b) - Supplemental Sheet

Continuation of chain of title from the inventor(s) to the current assignee.

4. From: Naoya Edahiro To: AQUENT LLC
The document was recorded in the United States Patent and Trademark Office at
Reel 021810 , Frame 0331 , or for which a copy thereof is attached.
5. From: Matthew David Day To: AQUENT LLC
The document was recorded in the United States Patent and Trademark Office at
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6. From: AQUENT LLC To: LITL LLC
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/170,951	07/10/2008	Yves Behar	L2039-700111

23628
WOLF GREENFIELD & SACKS, P.C.
600 ATLANTIC AVENUE
BOSTON, MA 02210-2206

CONFIRMATION NO. 2004
POA ACCEPTANCE LETTER



Date Mailed: 03/31/2016

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 03/18/2016.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/ylueng/



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/170,951	07/10/2008	Yves Behar	L2039-700111

23628
WOLF GREENFIELD & SACKS, P.C.
600 ATLANTIC AVENUE
BOSTON, MA 02210-2206

**CONFIRMATION NO. 2004
POWER OF ATTORNEY NOTICE**



Date Mailed: 03/31/2016

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 03/18/2016.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/ylueng/

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LENOVO (UNITED STATES) INC.,
Petitioner,

v.

LITL LLC,
Patent Owner.

IPR2021-00822
Patent 8,624,844 B2

Before MICHELLE N. ANKENBRAND, GARTH D. BAER, and
BRIAN D. RANGE, *Administrative Patent Judges*.

BAER, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Lenovo (United States) Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–16 and 18–22 of U.S. Patent No. 8,624,844 B2 (Ex. 1001, “the ’844 patent”). LiTL LLC (“Patent Owner”) filed a Preliminary Response. Paper 5 (“Prelim. Resp.”).

We have authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2020). The standard for institution is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted unless “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” As discussed below, we determine that Petitioner does not show a reasonable likelihood of prevailing with respect to the challenged claims. Accordingly, we deny institution of an *inter partes* review.

II. BACKGROUND

A. *Related Matters*

The parties identify the following as a related matter: *LiTL LLC v. Lenovo (United States), Inc. and Lenovo (Beijing) Limited*, 1:20-cv-00689-RGA (D. Del.). Pet. 2; Paper 4, 1. Patent Owner also identifies the following as related matters: IPR2021-00681, IPR2021-00786, IPR2021-00800, and IPR2021-00821. Paper 4, 2.

B. *The ’844 Patent (Ex. 1001)*

The ’844 patent is titled “Portable Computer with Multiple Display Configurations.” Ex. 1001, code (54). The computer system of the ’844 patent describes different profiles to customize the graphical user interface in different modes, including a laptop mode in which the portable computer

has a conventional laptop appearance, with the display inclined at a viewing angle from the base (*id.* at 6:26–28); an easel mode in which the base of the computer and its display stand upright forming an inverted “V,” and the display and keyboard are on opposite sides (*id.* at 7:48–61); and a frame mode in which the display and base are at a similar orientation and angle as in easel mode, but with the base lying flat on a surface and the keyboard facing down (*id.* at 16:3–13).

Figure 17 of the '844 patent, reproduced below, illustrates a portable computer in laptop mode. *Id.* at 5:13–15.

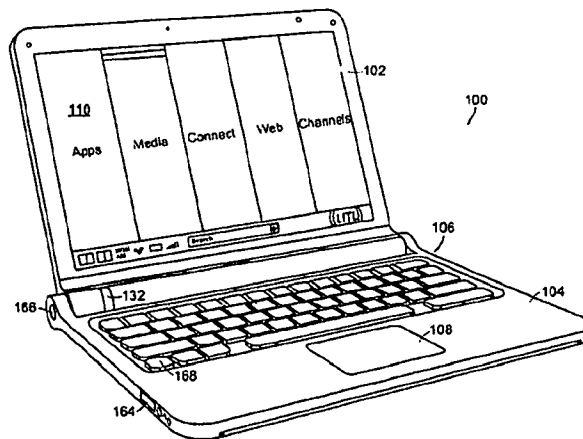


FIG. 17

Figure 4 of the '844 patent, reproduced below, illustrates the portable computer in easel mode. *Id.* at 4:47–48.

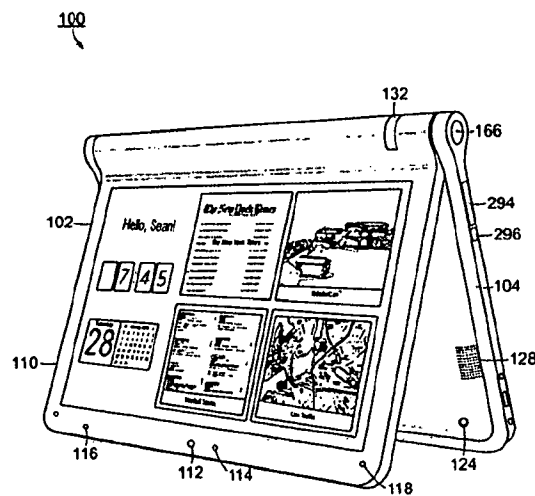


FIG. 4

Figure 26 of the '844 patent, reproduced below, illustrates the portable computer configured into frame mode. *Id.* at 5:35–37.

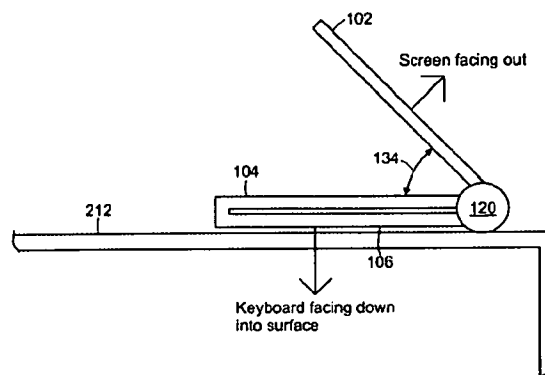


FIG. 26

The '844 patent explains that the display's orientation can change based on the different modes or in response to a user's input. *Id.* at 2:42–44.

C. Challenged Claims

Among challenged claims 1–16 and 18–22, claims 1, 10, and 18 are independent. Claim 1 is exemplary of the claimed subject matter and is reproduced as follows:

1. A portable computer configurable between a plurality of display modes including a laptop mode and an easel mode wherein transitions between the plurality of display modes allows an operator to interact with a single display screen in each of the plurality of display modes, the portable computer comprising:

a base including a keyboard;

a main display component rotatably coupled to the base such that the main display component and the base are rotatable with respect to one another about a longitudinal axis running along an interface between the main display component and the base to transition between at least the laptop mode and the easel mode, the main display component including the single display screen, wherein the transition between the laptop mode and the easel mode allows the operator to operate the portable computer while viewing the single display screen in each of the plurality of display modes, wherein

the laptop mode is configured to display to a user on the main display component a first content mode having a first content display orientation with the main display component oriented towards the user and the keyboard oriented to receive input from the user;

the easel mode is configured to display to the user on the main display component a second content mode having a second content display orientation with the main display component oriented towards the user and the keyboard oriented away from the user, wherein the first and second content display orientations are 180 degrees relative to each other, and wherein the portable computer is operable in the easel mode to enable the user to interact with displayed content without interacting with the keyboard; and

a navigation control disposed at least partially within the base and rotatable about the longitudinal axis, the navigation control configured to permit a user to control at least one of operating parameters of the portable computer and content displayed on the single display screen wherein the plurality of modes

includes a frame [mode¹] in which the main display component is oriented towards the operator, the base contacts a substantially horizontal surface, and the keyboard faces the substantially horizontal surface.

Ex. 1001, 17:9–51.

D. Asserted Grounds of Unpatentability

Petitioner asserts the challenged claims are unpatentable based on the following grounds:

Claim(s) Challenged	35 U.S.C. § ²	Reference(s)/Basis
1, 3–5, 7–10, 13–16	103	Shimura, ³ Tsuji, ⁴ Pogue ⁵
6	103	Shimura, Tsuji, Pogue, Escamilla ⁶
2	103	Shimura, Tsuji, Pogue, Escamilla, Yeh ⁷
18, 22	103	Shimura, Tsuji, Pogue, Lin ⁸

¹ Original claim 1 recites a “frame” not a “frame mode.” Ex. 1001, 17:47. On April 1, 2014, the Office issued a Certificate of Correction that inserts the word “mode” after the word “frame” in claim 1. *Id.* at Certificate of Correction.

² The Leahy-Smith America Invents Act (“AIA”) amended 35 U.S.C. § 103. *See* Pub. L. No. 112-29, 125 Stat. 284, 285–88 (2011). As the application that issued as the ’844 patent was filed before the effective date of the relevant amendments, the pre-AIA version of § 103 applies.

³ JP1994-242853 (H6-242853), published September 2, 1994 (Ex. 1003). We refer to the Certified English translation (Ex. 1004, “Shimura”).

⁴ US 2005/0062715 A1, published Mar. 24, 2005 (Ex. 1005, “Tsuji”).

⁵ Windows XP Home Edition: The Missing Manual (2d ed.) (David Pogue, Pogue Press, LLC & O’Reilly Media, Inc. 2004) (Ex. 1006, “Pogue”).

⁶ US 6,724,365 B1, Apr. 20, 2004 (Ex. 1007, “Escamilla”).

⁷ US 6,396,419 B1, May 28, 2002 (Ex. 1008, “Yeh”).

⁸ US 2007/0013682 A1, published Jan. 18, 2007 (Ex. 1009, “Lin”).

Claim(s) Challenged	35 U.S.C. § ²	Reference(s)/Basis
11, 12, 19, 21	103	Shimura, Tsuji, Pogue, Escamilla, Lin

Pet. 3–4. Petitioner supports the asserted grounds with the Declaration of Jean Renard Ward. Ex. 1010.

III. DISCUSSION

A. *Level of Ordinary Skill in the Art*

Petitioner contends that a person of ordinary skill in the art (“POSITA”)

would have had at least a Bachelor’s degree in Electrical Engineering, Computer Engineering, or Computer Science, plus two to three years of work experience in designing hardware and/or software aspects of the User Interface (UI) for portable computing devices; the POSITA would also be familiar with designs of the user interface employed and displayed by the operating system and its organization of content and functionality. Alternatively, the POSITA would have received a graduate degree such as a Master’s or PhD degree with at least one year of work experience related to hardware and/or software design aspects of the UI for portable computing devices; the POSITA would also be familiar with designs of the user interface employed and displayed by the operating system and its organization of content and functionality.

Pet. 15–16 (citing Ex. 1010 ¶ 26).

Patent Owner does not dispute Petitioner’s asserted level of ordinary skill in the art. *See generally* Prelim. Resp.

We find, based on the current record, that Petitioner’s contention is reasonable. For purposes of this Decision, we adopt the level of ordinary skill in the art Petitioner proposes.

B. Claim Construction

Petitioner proposes a claim construction for “content mode,” as well as several related terms, i.e., “first content mode,” “second content mode,” and “mode(s) of content.” Pet. 16–18. We determine we need not explicitly construe those terms to determine whether to institute an *inter partes* review. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

We determine, however, that construction is necessary for “frame mode.” Claim 1 recites, among other things, “[a] portable computer configurable between a plurality of display modes . . . wherein the plurality of modes includes a frame mode in which the main display component is orientated towards the operator, the base contacts a substantially horizontal surface, and the keyboard faces the substantially horizontal surface.” Ex. 1001, 17:9–51; *see id.* at Certificate of Correction. Independent claims 10 and 18 have similar “frame mode” limitations. *Id.* at 18:65–19:2, 20:25–29. The ’844 patent explains that frame mode is “illustrated in FIG. 26.” *Id.* at 16:2–3. Figure 26 is reproduced below.

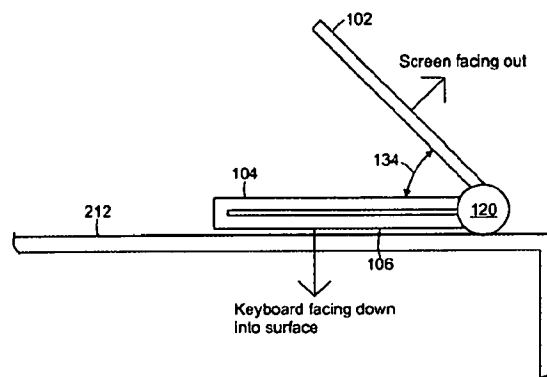


FIG. 26

Figure 26 and the accompanying text characterize frame mode as having the keyboard face down on a surface with the screen face up, and the base and display components forming a non-zero angle 134, similar to easel mode's inverted "V." *See id.* at 16:6–13.

Frame mode is distinct from "tablet mode," which the '844 patent acknowledges was known in the art. *See id.* at 1:32–55 (citing U.S. Patent Nos. 6,771,494 (Ex. 2009) and 6,266,236 ("the '236 patent") (Ex. 2010)). In tablet mode, the display is "rotated and folded against the base." *Id.* at 1:43–46. Tablet mode is depicted, for example, in the '236 patent's Figure 2, which is reproduced below.

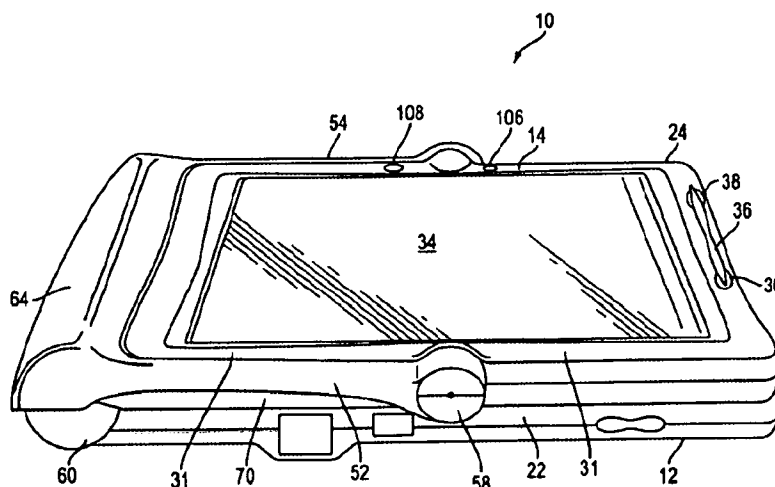


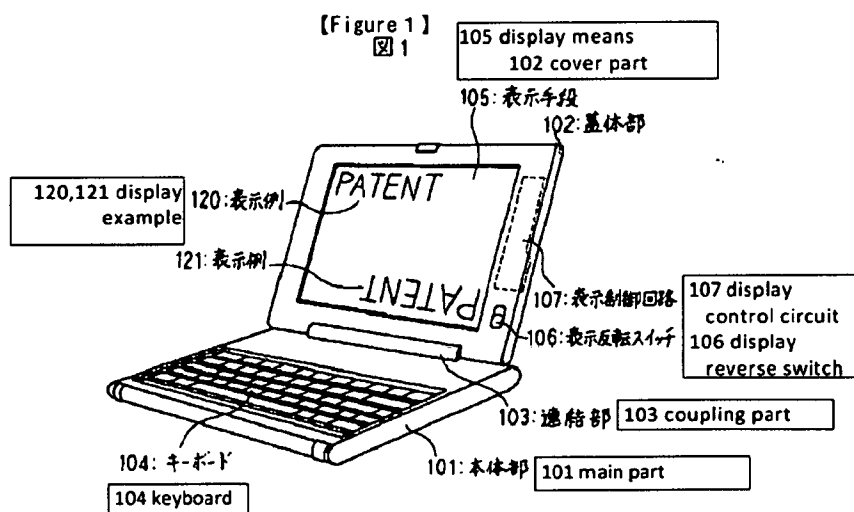
Figure 2

“[T]he specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Philips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005). Consistent with the ’844 patent’s specification, for purposes of this Decision, we construe “frame mode” as having the keyboard face down on a surface with the screen face up, and the base and display components forming a non-zero angle. Frame mode is distinct from “tablet mode,” where the display is flush against the base.

C. Analysis

1. Overview of Shimura (Exs. 1003 and 1004)

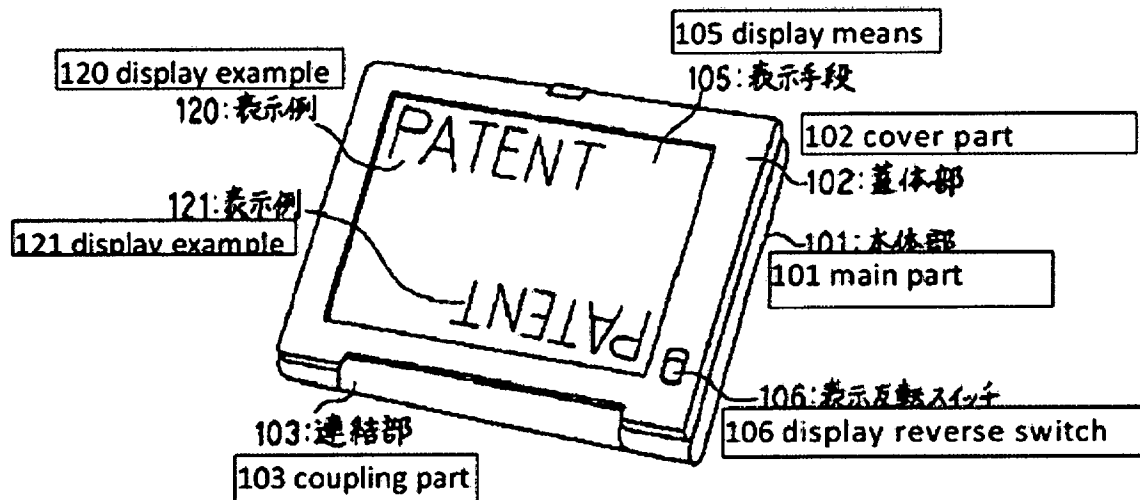
All grounds rely on Shimura. Shimura is a Japanese patent application publication (Ex. 1003), for which Petitioner provided a certified English translation (Ex. 1004). Shimura relates to a personal computer that “can adopt a mode suitable for a user environment centered on a pen input operation and a mouse input operation while retaining a mode which can use a keyboard.” Ex. 1004, code (57). Figure 1 of Shimura, reproduced below, illustrates an example of the personal computer. *Id.*



As shown in Figure 1, the personal computer includes main part 101 provided with keyboard 104 on the front; cover part 102 provided with display 105 on the front; and coupling mechanism 103, which enables the opening and closing of computer parts 101 and 102 and is used to couple one end of main part 101 and one end of cover part 102 with display 105 such that cover part 102 faces main part 101. *Id.* Coupling mechanism 103 is structured so that it can also open cover part 102 so that the orientation of cover part 102 exceeds 180° relative to main part 101. *Id.* Figure 4 of Shimura, reproduced below, shows an inclined view of the personal computer, with main part 101 rotated nearly 360° with respect to cover part 102. *Id.* ¶¶ 16–17, Fig. 4.

[Figure 4]

図4



As shown in Figure 4, coupling mechanism 103 enables the rotation of cover part 102 with respect to main part 101. *Id.* ¶¶ 12–13. Coupling mechanism 103 is fastened by hinges to main part 101 and cover part 102. *Id.* ¶ 12.

2. Obviousness Analysis

Based on the present record, Petitioner does not demonstrate a reasonable likelihood of showing the asserted prior art would have rendered obvious the subject matter of challenged claims 1–16 and 18–22. Independent claims 1, 10, and 18 require a “frame mode in which the main display component is oriented towards the operator, the base contacts a substantially horizontal surface, and the keyboard faces the substantially horizontal surface.” Ex. 1001, 17:47–51, 18:66–19:2, 20:27–30, Certificate of Correction. For all of its asserted grounds, Petitioner relies on Shimura’s Figure 4 for teaching the claimed “frame mode.” Pet. 57, 87, 102. We agree with Patent Owner that Shimura’s Figure 4 does not disclose or suggest a frame mode. *See* Prelim. Resp. 27–32.

Shimura’s Figure 4 (reproduced below, left) depicts the device’s display folded against the base—i.e., tablet mode—rather than in a frame mode where the base and display components form a non-zero angle similar to easel mode’s inverted “V,” as depicted in the ’844 patent’s Figure 26 (reproduced below, right).

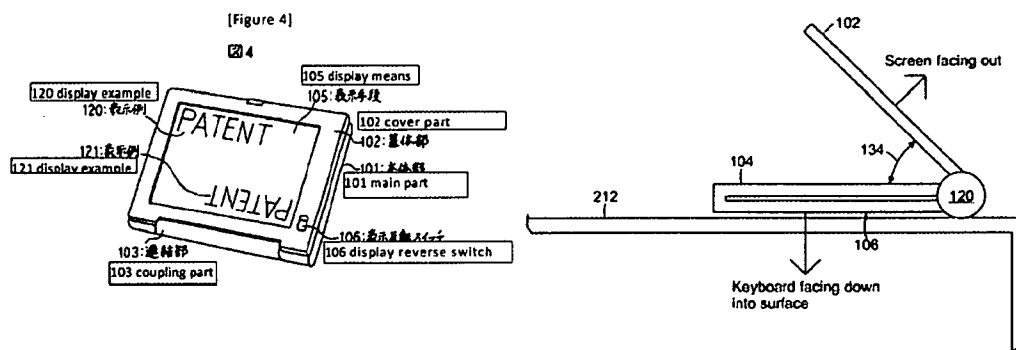


FIG. 26

Although, as Petitioner notes, Shimura teaches that its computer can be configured to any angle between 0° to 360°, *see* Pet. 22 n.1 (citing Ex. 1004

¶¶ 8, 10, 17), that too does not disclose frame mode. This is so because, as Patent Owner explains, beyond the required opening angle, frame mode additionally requires a hinge that “must support the display to prevent it from collapsing into tablet mode.” Prelim. Resp. 31. Petitioner points to nothing in Shimura that would indicate its hinge could support the display in frame mode. *See* Pet. 22, 41–42, 46–47, 53, 57, 59, 70. Thus, on the current record, Petitioner has not made a sufficient showing that the asserted combinations of Shimura and other references teach or suggest the claimed plurality of modes including a “frame mode” as required in all the challenged claims.

IV. CONCLUSION

For the reasons above, we determine that Petitioner has not established a reasonable likelihood that it would prevail in showing that at least one of the challenged claims is unpatentable.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petition is denied, and we do not institute an *inter partes* review of any claim of the '844 patent based on a ground asserted in the Petition.

IPR2021-00822
Patent 8,624,844 B2

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Exhibit 1005



US006154359A

United States Patent [19]

Kamikakai et al.

[11] Patent Number: **6,154,359**[45] Date of Patent: ***Nov. 28, 2000**[54] **PORTABLE INFORMATION PROCESSING APPARATUS**1-237808 9/1989 Japan .
2-76775 6/1990 Japan .

(List continued on next page.)

[75] Inventors: **Hideaki Kamikakai; Katsuichi Goto,**
both of Kawasaki, Japan**OTHER PUBLICATIONS**[73] Assignee: **Fujitsu Limited,** Kawasaki, Japan

[*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

Hewlett Packard Part No. F1310-90001, "HP OmniGo 100: Quick Start and User's Reference Guide", Edition 1, Sep. 1995.

Nikkei Sangyo Shimbun, Nov. 26, 1996, "Portable Personal Computer".

Nihon Keizai Shimbun, Nov. 26, 1996, "Developed Network available Portable PC".

Business Computer News, Dec. 2, 1996, "30,000 Visitors to Fujitsu 'Cyberspace World'".

ASCII, A Monthly Magazine of Home & Office Computer Science. vol. 21, No. 1, Jan. 1997, "Quick Perfect Report on New Machines from Fujitsu".

Nikkan Kogyo Shimbun, Jun. 4, 1997, "Entering the Market for Portable Information Terminals—Fujitsu Low-priced A5 Size".

[21] Appl. No.: **08/962,394**[22] Filed: **Oct. 31, 1997****[30] Foreign Application Priority Data**

Dec. 2, 1996 [JP] Japan 8-321975

[51] Int. Cl.⁷ **G06F 1/16; E05D 11/00**[52] U.S. Cl. **361/681; 16/342; 16/366;**
361/680[58] Field of Search 361/680, 681,
361/683; 364/708.1; 16/342, 366

Primary Examiner—Leo P. Picard

Assistant Examiner—Lisa Lea-Edmonds

Attorney, Agent, or Firm—Staas & Halsey LLP

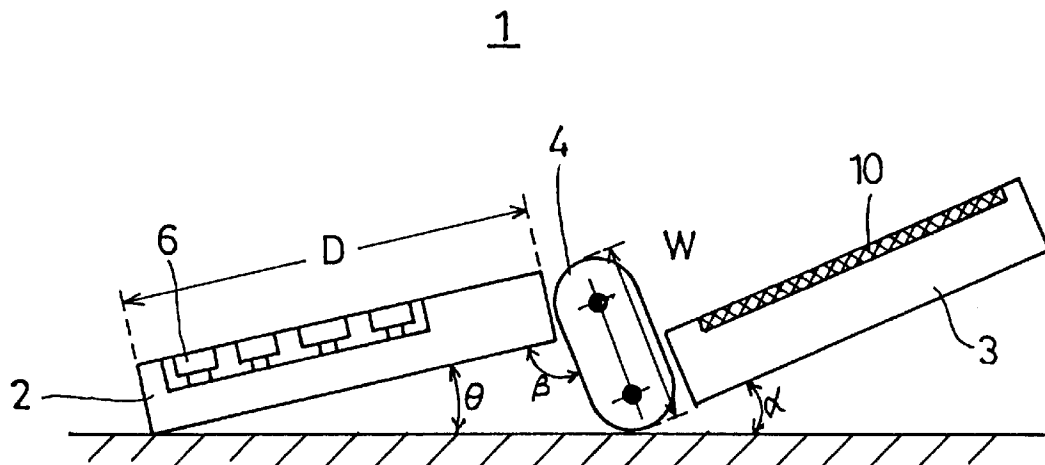
[57]

ABSTRACT

A portable electronic device has a main body, a display part having a display panel, and a connection part having a first rotary part respectively connected to and rotatably interconnecting a second rotary part and supporting the main body and the display part relatively to each other. The first rotary part maintains a fixed angular relationship between the main body and the connection part and permits adjustment of the angle therebetween when a first rotary manipulation force is applied therebetween which exceeds a rotary manipulation force due to the weight of the main body itself. The second rotary part maintains a fixed angular relationship between the main body and the connection part and permits adjustment of the angle between the display part and the connector when a second rotary manipulation force is applied therebetween which exceeds a rotary manipulation force due to the weight of the main body itself.

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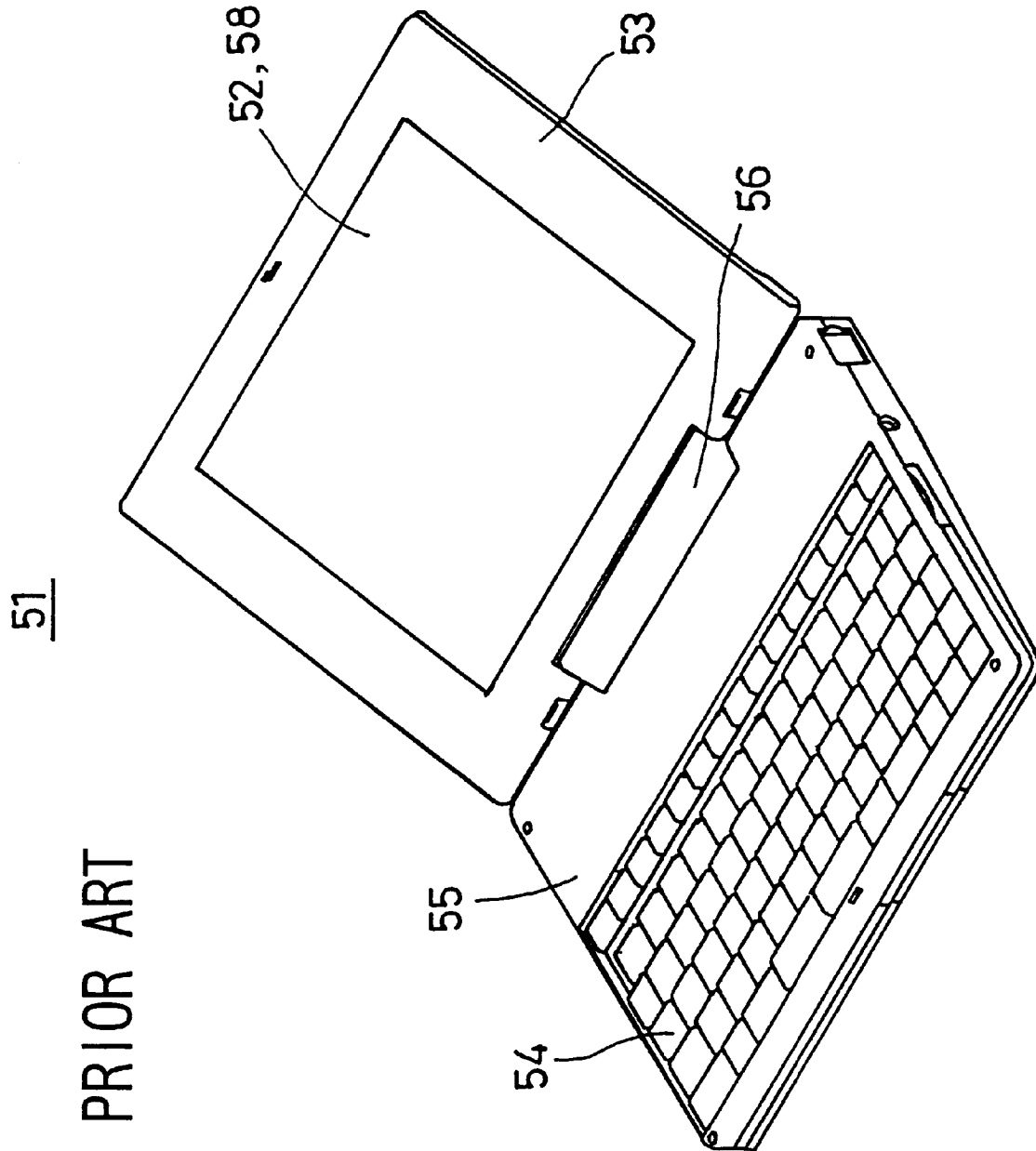


FIG. 2 PRIOR ART

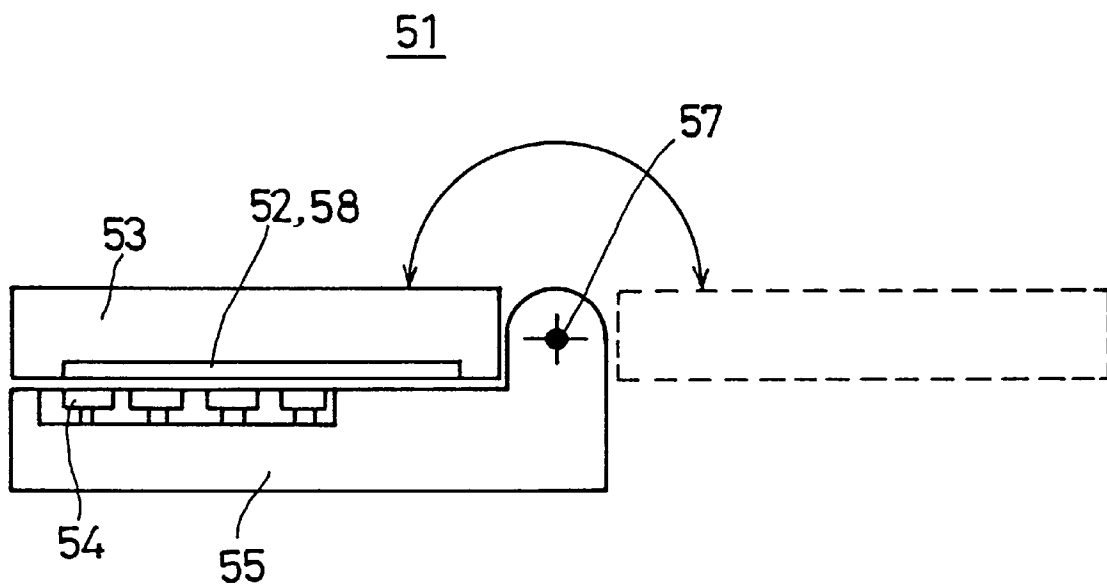


FIG. 3

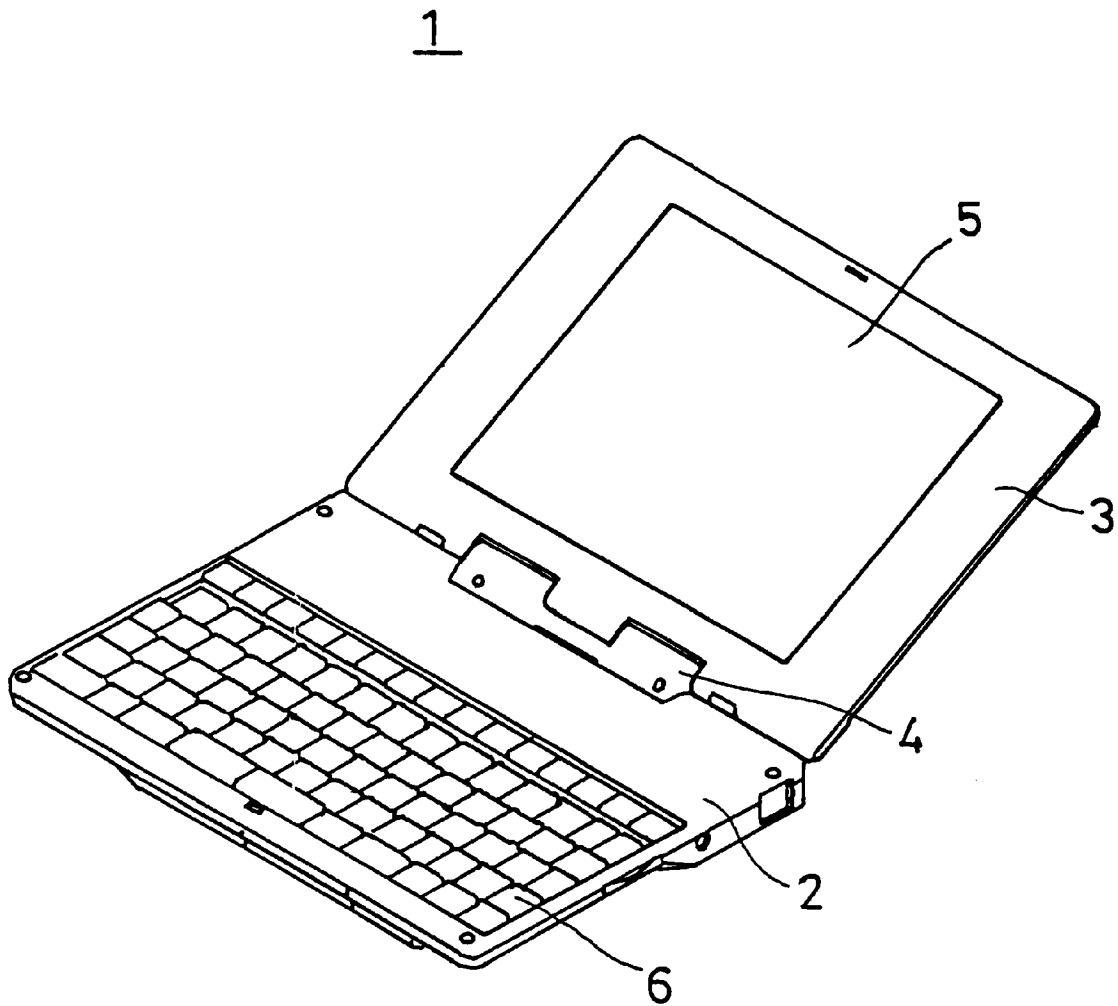


FIG. 4B

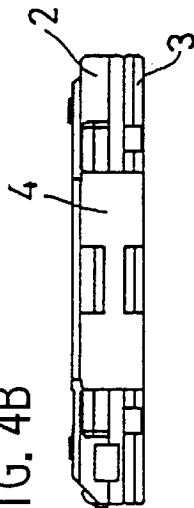


FIG. 4D

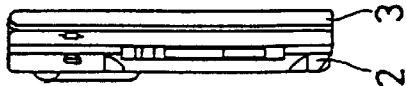


FIG. 4A

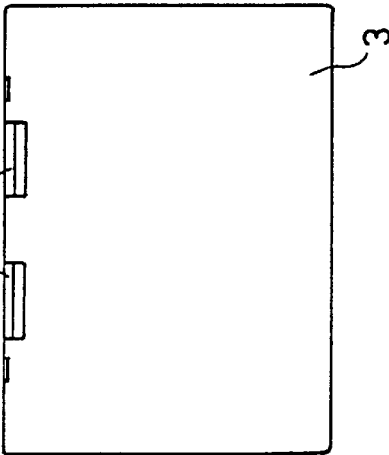


FIG. 4E

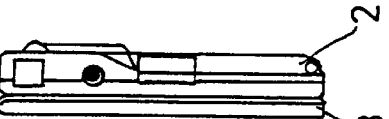


FIG. 4C



FIG. 4F

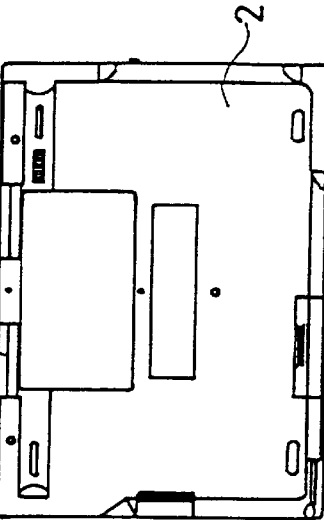


FIG. 5

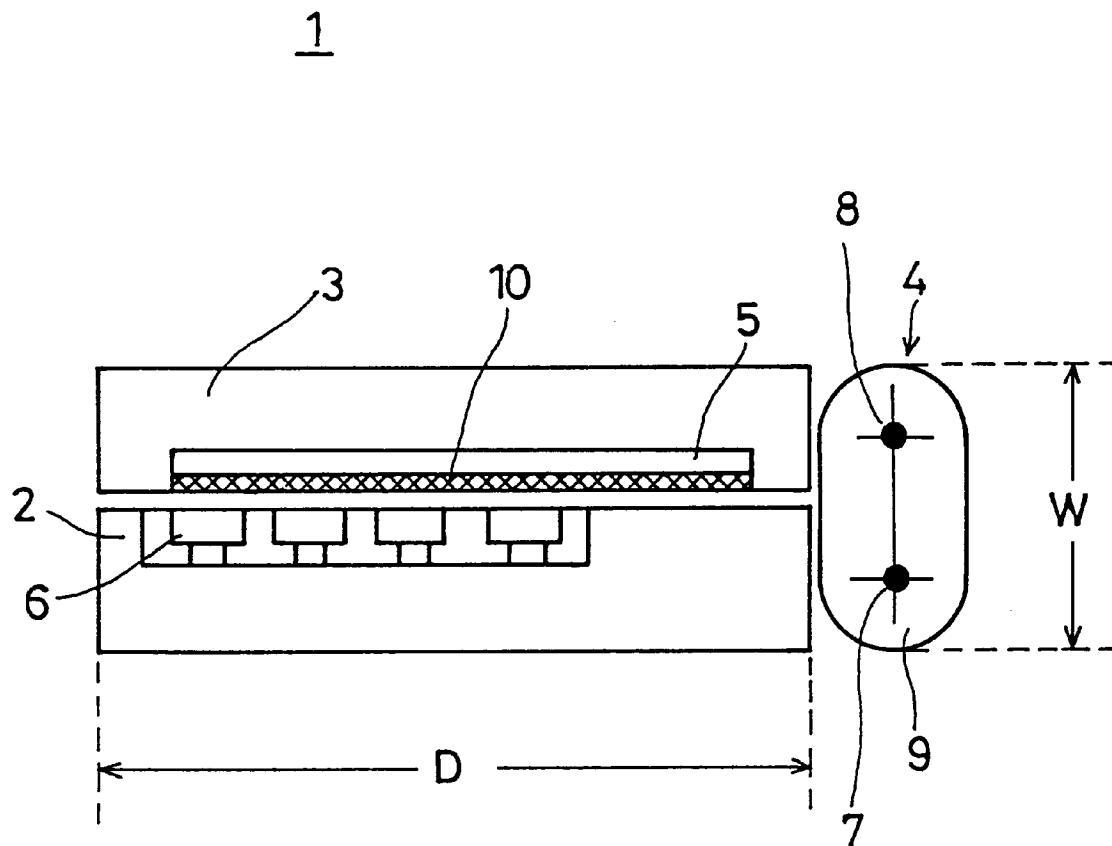


FIG. 6A

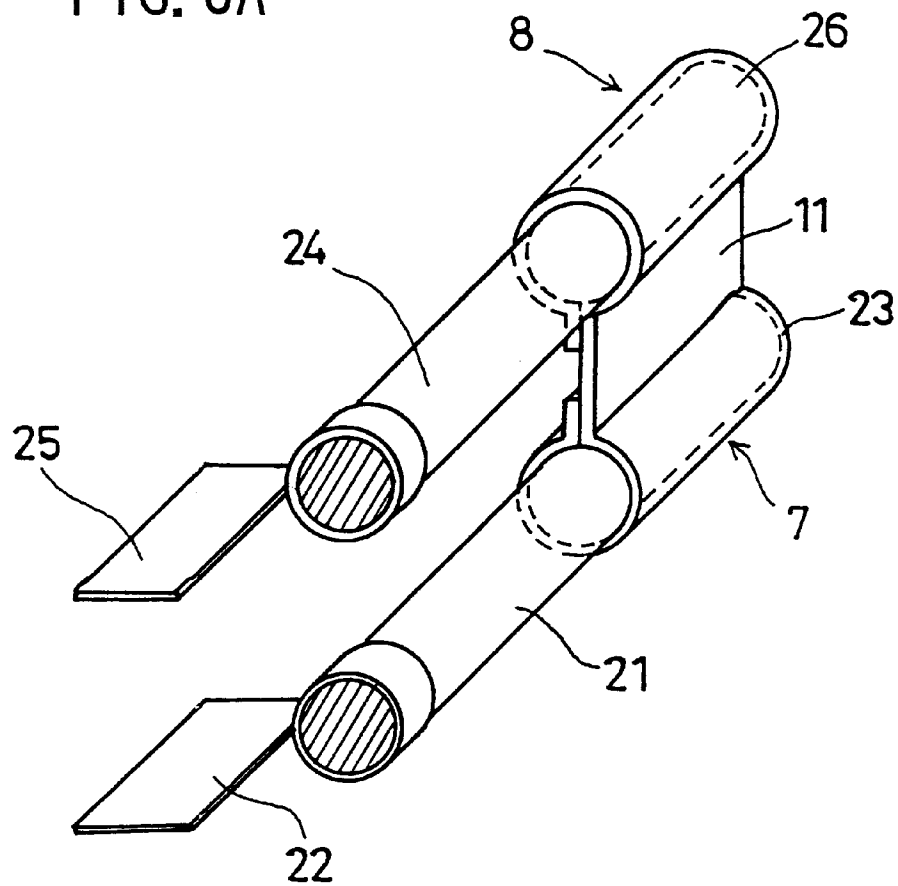


FIG. 6B

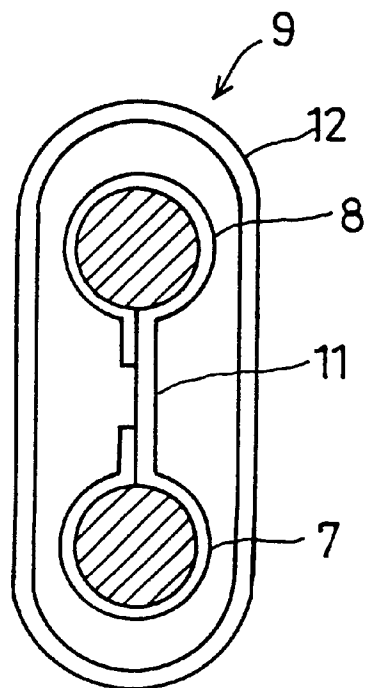


FIG. 7

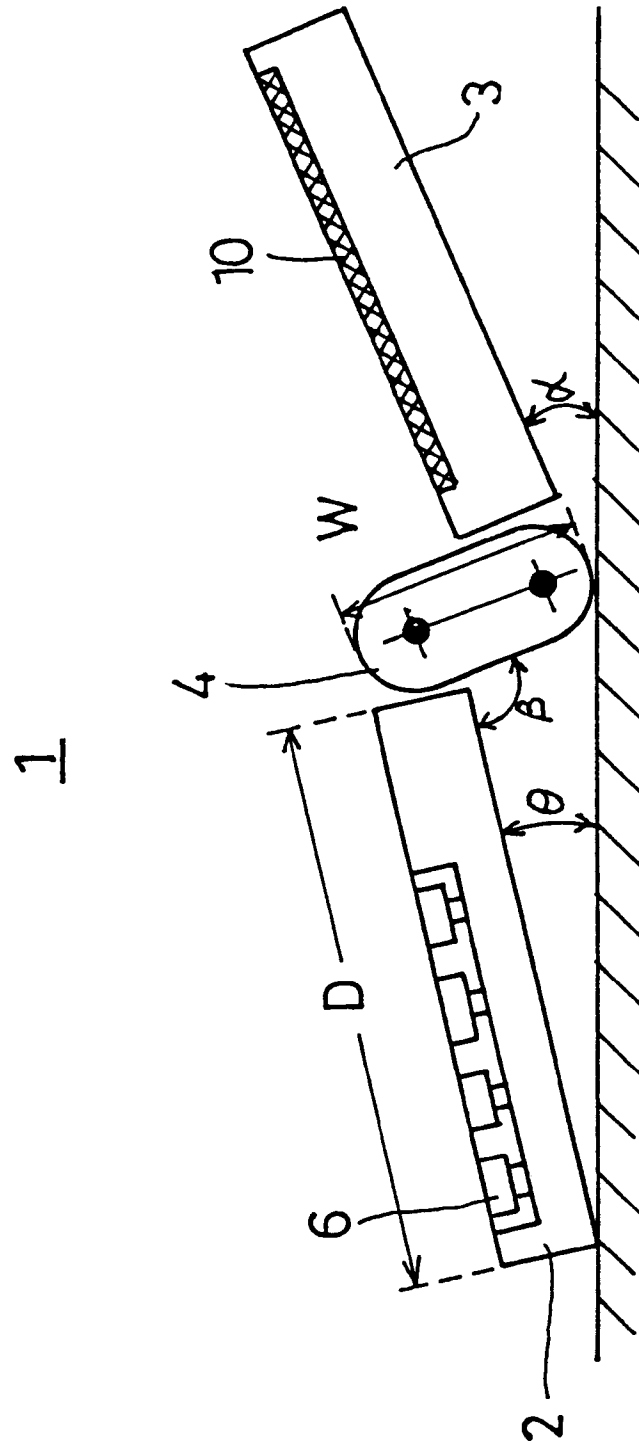


FIG. 8

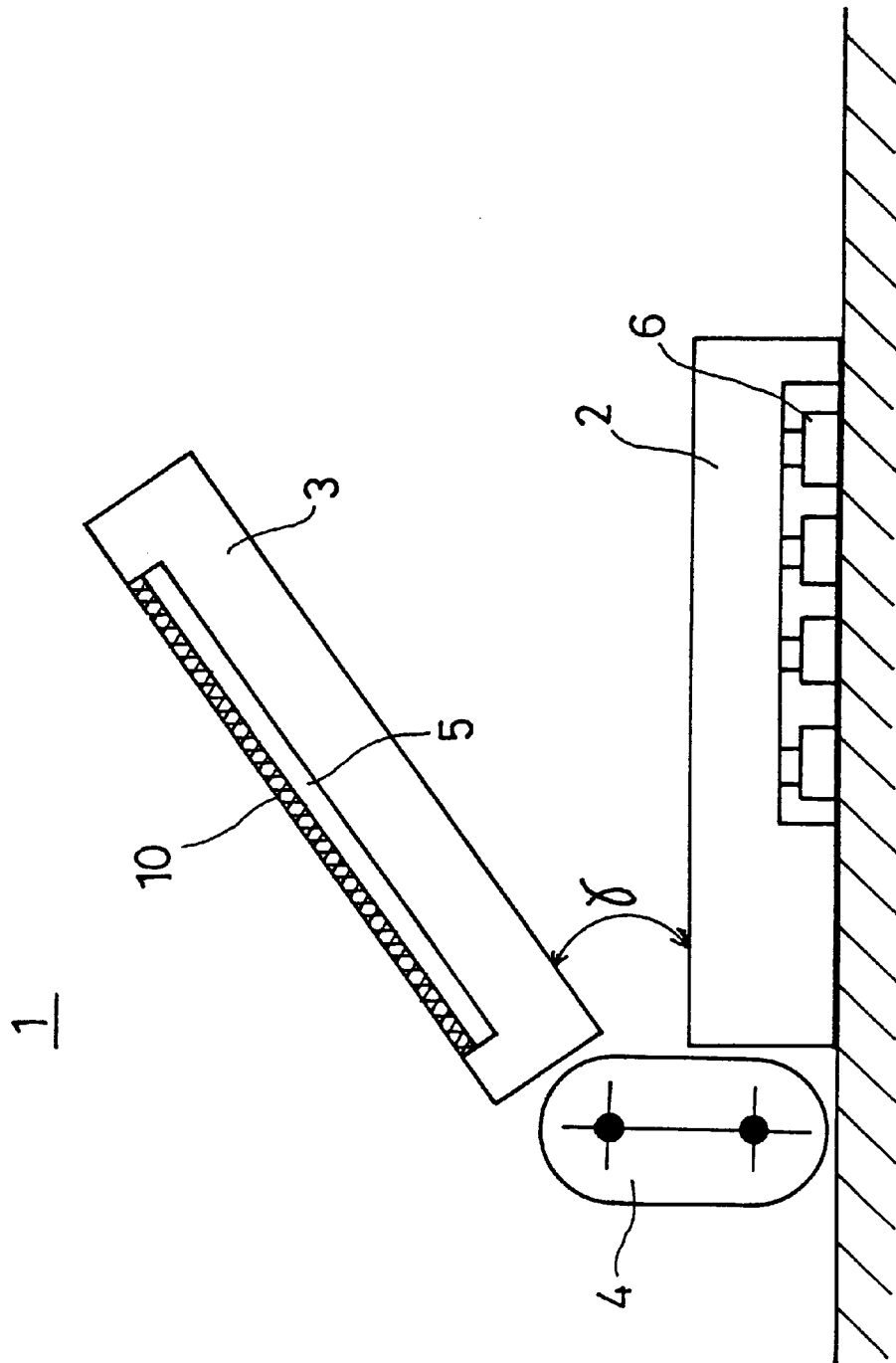
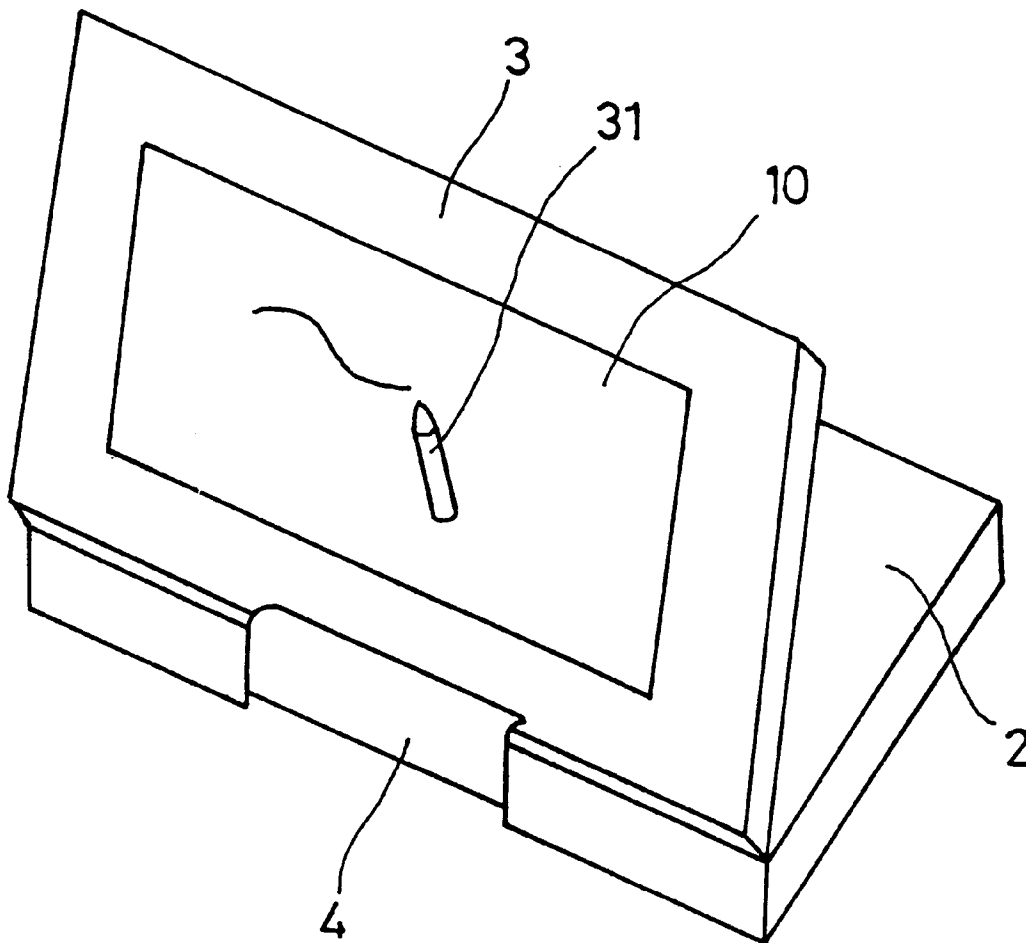


FIG. 9

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PORTABLE INFORMATION PROCESSING APPARATUS

BACKGROUND OF THE INVENTION

The present invention generally relates to portable information processing apparatuses and, more particularly, to an information processing apparatus having a display part which includes a display panel and a pen input part formed on the display panel, a main body which includes a keyboard, and a connection part which connects the display part and the main body.

Recently, portable information processing apparatuses typified by lap-top and palm-top computers have become popular due to the ease with which the portable information apparatuses can be carried by the user. With respect to such portable information processing information apparatuses, there are demands to reduce the size of the apparatus and to simultaneously realize easy operation under various environments.

FIG. 1 is a perspective view showing an example of a conventional portable information processing apparatus. In addition, FIG. 2 is a cross sectional view for explaining the conventional portable information processing apparatus shown in FIG. 1 in a folded state.

A portable information processing apparatus 51 shown in FIG. 1 generally includes a display part 53 made up of a liquid crystal display panel 52 and a pen input part 58 formed on the liquid crystal display panel 52, a main body 55 having a keyboard 54 for inputting data, and a connection part 56. The display part 53 is connected to the main body 55 via the connection part 56.

Normally, when using the portable information processing apparatus 51 and inputting data, for example, the display part 53 is opened to an open position indicated by a dotted line in FIG. 2 so that the user can see the liquid crystal display panel 52 as shown in FIG. 1 when manipulating the keyboard 54.

On the other hand, when the user carries the portable information processing apparatus 51, the display part 53 is closed to a folded position indicated by a solid line in FIG. 2 so that the display part 53 and the keyboard 54 are not exposed to the outside and are protected from external shock. The display part 53 in the folded position also reduces the area of the portable information processing apparatus 51 as a whole, making it easy to carry the portable information processing apparatus 51. Hence, when carrying the portable information processing apparatus 51, the display part 53 is closed with respect to the main body 55 about the connection part 56, so that the display part 53 and the keyboard 54 which are to be protected from the external shock confront each other.

As may be seen from FIG. 2, the connection part 56 enables the display part 53 to be opened to the open position with respect to the main body 55 when using the portable information processing apparatus 51, and to be closed to the folded position with respect to the main body 55 when not using the portable information processing apparatus 51, that is, when carrying the portable information processing apparatus 51. As shown in FIG. 2, the connection part 56 has a single axis structure 57.

Because the connection part 56 has the single-shaft structure 57, the display part 53 can be opened with respect to the main body 55 from the folded position to the open position for an angular range of 180°. If the portable information processing apparatus 51 is provided with a means for

locking the display part 53 can be locked at a certain rotary position as shown in FIG. 1 so as to facilitate viewing of the liquid crystal display panel 52.

However, the portable information processing apparatus 51 occupies an area which is larger when the display part 53 is in the open position compared to the case where the display part 53 is in the folded position. For this reason, the portable information processing apparatus 51 is difficult to operate when the portable information processing apparatus 51 is set up on a surface having an area smaller than that of the main body 55, such as when the portable information processing apparatus 51 is used on the user's lap or in the user's palm.

In other words, the portable information processing apparatus 51 in this case is unstable and must be held by the user's hand in order to input data from the keyboard 54 and/or from the pen input part 58 which is formed on the liquid crystal display panel 52 by the user's other hand. Particularly in the state where the display part 53 is opened with respect to the main body 55 to the open position, it is extremely difficult for the user to positively and stably hold the display part 53 of the portable information processing apparatus 51 while inputting the data from the pen input part 58.

SUMMARY OF THE INVENTION

Accordingly, it is a general object of the present invention to provide a novel and useful portable information processing apparatus in which the problems described above are eliminated.

Another and more specific object of the present invention is to provide a portable information processing apparatus which enables easy operation, such as data input from a keyboard and/or a pen input part, even when the portable information processing apparatus is set up on a small surface, such as the user's lap, the user's palm or the like.

Still another object of the present invention is to provide a portable information processing apparatus comprising a main body, a display part having a display panel, and a connection part, having a first rotary part and a second rotary part, supporting the main body and the display part, wherein the first rotary part is linked to the main body so that the connection part and the main body turn relative to each other when a rotary manipulation force greater than a first predetermined value is applied on the main body, and the second rotary part is linked to the display part so that the connection part and the display part turn relative to each other when a rotary manipulation force greater than a second predetermined value is applied on the display part. According to the portable information processing apparatus of the present invention, it is possible to enable easy operation, such as data input from a keyboard and/or a pen input part, even when the portable information processing apparatus is set up on a small surface, the user's lap, the user's palm or the like.

Other objects and further features of the present invention will be apparent from the following detailed description when read in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view showing an example of a conventional portable information processing apparatus;

FIG. 2 is a cross sectional view for explaining the conventional portable information processing apparatus shown in FIG. 1 in a folded state;

FIG. 3 is a perspective view showing an embodiment of a portable information processing apparatus according to the present invention;

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FIGS. 4A, 4B, 4C, 4D, 4E and 4F respectively are a plan view, a rear view, a front view, a left side view, a right side view and a bottom view of the embodiment of the portable information processing apparatus in a state where a display part is closed with respect to a main body;

FIG. 5 is a cross sectional view showing the internal structure of the embodiment of the portable information processing apparatus;

FIGS. 6A and 6B respectively are a disassembled perspective view and a cross sectional view showing important parts of a connection element;

FIG. 7 is a cross sectional view showing the embodiment of the portable information processing apparatus in a state where only the main body is turned with respect to the display part and the connection part;

FIG. 8 is a cross sectional view showing the embodiment of the portable information processing apparatus in a state where both the main body and the display part are turned with respect to the connection part; and

FIG. 9 is a perspective view showing the embodiment of the portable information processing apparatus for explaining a pen input.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

FIG. 3 shows an embodiment of a portable information processing apparatus according to the present invention in a state where a display part is opened with respect to a main body. In addition, FIGS. 4A, 4B, 4C, 4D, 4E and 4F respectively show a plan view, a rear view, a front view, a left side view, a right side view and a bottom view of the portable information processing apparatus shown in FIG. 3 in a state where the display part is closed with respect to the main body. Furthermore, FIG. 5 shows a cross section of an internal structure of the portable information processing apparatus shown in FIG. 3 in the state where the display part is closed with respect to the main body.

As shown in FIGS. 3 through 5, a portable information processing apparatus 1 generally includes a main body 2, a display part 3 which can open and close with respect to the main body 2, and a connection part 4. The main body 2 includes a keyboard 6 for inputting data. On the other hand, the display part 3 includes a liquid crystal display panel 5, and a pen input part 10 which is formed on the surface of the liquid crystal display panel 5.

The portable information processing apparatus 1 may be a lap-top computer, a palm-top computer, a notebook type word processor, a portable communication tool such as a communication terminal, or the like.

The display part 3 and the main body 2 are connected via the connection part 4. The connection part 4 is linked to related ends or edges, of the display part 3 and the main body 2 which confront each other in a folded or closed state of the display part 3. The connection part 4 includes a first rotary part 7 and a second rotary part 8. The first rotary part 7 is linked to the main body 2, and enables turning of the main body 2 when a rotary manipulation force greater than or equal to a predetermined value is applied on the main body 2. On the other hand, the second rotary part 8 is linked to the display part 3, and enables turning of the display part 3 when a rotary manipulation force greater than or equal to a predetermined value is applied on the display part 3.

FIGS. 6A and 6B respectively are diagrams generally showing the construction of important parts of the connection part 4. More particularly, FIG. 6A shows a disassembled

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perspective view of an important part of the connection part 4, and FIG. 6B shows a cross sectional view of an important part of the connection part 4.

As shown in FIG. 6B, the connection part 4 includes a support part 9, which supports the first and second rotary parts 7 and 8. The support part 9 is made up of a plate-shaped member 11 which connects and supports the first and second rotary parts 7 and 8, and a cover 12 which covers and protects the first and second rotary parts 7 and 8.

The first rotary part 7 includes a rotary shaft 21 and a pipe-shaped bearing member 23. A part of the rotary shaft 21 is mounted on the main body 2 via a mounting part 22. The bearing member 23 supports the rotary shaft 21 in a rotatable state where the rotary shaft 21 firmly fits into the bearing member 23. Hence, friction exists between the inner peripheral surface of the bearing part 23 and the outer peripheral surface of the rotary shaft 21. By this friction, a rotary torque (or rotation-decelerating moment), is generated so as to interfere with (i.e., restrain or impede the rotation of the rotary shaft 21 when the main body 2 is turned and the rotary shaft 21 turns. The rotary torque is set greater than a rotary force owing to the weight of the main body 2 itself, but less than a rotary manipulation force which is applied on the main body 2 when the main body 2 is turned by the user's hand.

On the other hand, the second rotary part 8 includes a rotary shaft 24 and a pipe-shaped bearing member 26. A part of the rotary shaft 24 is mounted on the display part 3 via a mounting part 25. The bearing member 26 supports the rotary shaft 24 in a rotatable state where the rotary shaft 24 firmly fits into the bearing member 26. Hence, friction exists between the inner peripheral surface of the bearing part 26 and the outer peripheral surface of the rotary shaft 24. By this friction, a rotary torque (or rotation-decelerating moment) is generated so as to interfere with i.e., restrain or impede the rotation of the rotary shaft 24 when the display part 3 is turned and the rotary shaft 24 turns. The rotary torque is set greater than a rotary force owing to the weight of the display part 3 itself, but less than a rotary manipulation force which is applied on the display part 3 when the display part 3 is turned by the user's hand.

The bearing members 23 and 26 and the plate-shaped member 11 are formed from a single metal plate which is bent to form the members 23, 26 and 11 as shown in FIG. 6A. The single metal plate is bent to form two pipe-shaped portions which form the bearing members 23 and 26, and ends of the single metal plate is soldered in a vicinity of a center of the plate-shaped member 11. The inner diameter of the pipe-shaped portions are adjusted so that the rotary shaft 21 fits into and is supported by the bearing member 23 without a gap, and the rotary shaft 24 fits into and is supported by the bearing member 26 without a gap. As a result, friction exists between the outer peripheral surface of the rotary shaft 21 and the inner peripheral surface of the bearing member 23, and friction similarly exists between the outer peripheral surface of the rotary shaft 24 and the inner peripheral surface of the bearing member 26.

By the above described construction of the first rotary part 7, the rotary shaft 21 will not rotate if the rotary manipulation force applied on the main body 2 or the connection part 4 is less than a predetermined rotary force. The rotary shaft 21 rotates only when the rotary manipulation force applied on the main body 2 or the connection part 4 is greater than or equal to the predetermined rotary force, and in this case, the main body 2 or the connection part 4 turns as the rotary shaft 21 turns.

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When the user stops turning the main body 2 or stops turning the connection part 4 with respect to the main body 2, the main body 2 or the connection part 4 stops turning due to the friction between the bearing member 23 and the rotary shaft 21. An angle formed between the main body 2 and the connection part 4 is fixed to that at the time when the rotary manipulation force is released, and the main body 2 and the connection part 4 are supported at this angular position.

In addition, because the second rotary part 8 has a construction similar to that of the first rotary part 7, the rotary shaft 24 will not rotate if the rotary manipulation force applied on the display part 3 or the connection part 4 is less than a predetermined rotary force. The rotary shaft 24 rotates only when the rotary manipulation force applied on the display part 3 or the connection part 4 is greater than or equal to the predetermined rotary force, and in this case, the display part 3 or the connection part 4 turns as the rotary shaft 24 turns.

When the user stops turning the display part 3 or stops turning the connection part 4 with respect to the main body 2, the display part 3 or the connection part 4 stops turning due to the friction between the bearing member 26 and the rotary shaft 24. An angle formed between the display part 3 and the connection part 4 is fixed to that at the time when the rotary manipulation force is released, and the display part 3 and the connection part 4 are supported at this angular position.

Next, a description will be given of the various positions the display part 3 can take with respect to the main body 2 due to the double-shaft structure of the connection part 4.

As shown in FIG. 5, the portable information processing apparatus 1 is normally carried by the user in a state where the display part 3 is folded, that is, closed, with respect to the main body 2. In this state, the display part 3 is stacked on top of the main body 2 so that the liquid crystal display panel 5 (pen input part 10) confronts the keyboard 6. In this state, an angle formed between the display part 3 and the main body 2 is 0°. In this state where the angle formed between the display part 3 and the main body 2 is 0°, an angle formed between the display part 3 and the connection part 4 is 90°, and an angle formed between the main body 2 and the connection part 4 is also 90°. Since the connection part 4 has the double-shaft structure, the display part 3 and the main body 2 can turn independently of each other, and both the display part 3 and the main body 2 can be turned to arbitrary rotary positions.

FIG. 7 shows a cross section of the portable information processing apparatus 1 in a state where only the main body 2 is turned with respect to the display part 3 and the connection part 4.

In FIG. 7, the main body 2 is turned by approximately 180° with respect to the display part 3 and the connection part 4. When the portable information processing apparatus 1 is set up on a flat set-up surface in this state, the connection part 4 supports the main body 2 in a tilted state on the flat set-up surface such that the main body 2 forms an angle θ to the flat set-up surface.

The angle θ is determined by a width D of the main body 2, a width W of the connection part 4 which is approximately the same as the thickness of the portable information processing apparatus 1, and an angle β which is determined by the extent of the turn of the main body 2 relative to part 4 and is formed between the main body 2 and the connection part 4. Hence, a tilt angle of the main body 2 with respect to the flat set-up surface can be arbitrarily selected within an angular range of 0° to θ .

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In this case, a tilt angle α of the display part 3 with respect to the flat set-up surface can be arbitrarily selected within an angular range of 0° to $(\theta + \beta - 90^\circ)$, and the display part 3 can be set to a tilt angle which makes information displayed on the display part 3 easily visible by the user. The maximum tilt angle $(\theta + \beta - 90^\circ)$ includes the angle of 90° because in the folded or closed state of the display part 3, the angle formed between the display part 3 and the connection part 4 is 90°.

Therefore, this embodiment enables easy and convenient operation of the keyboard 6 of the main body 2 since the main body 2 can be freely tilted with respect to the set-up surface when the portable information processing apparatus 1 is in use.

As may be seen from FIG. 2 described above, the main body 55 of the conventional portable information processing apparatus 51 cannot be tilted unless a special tilting mechanism is additionally provided, because of the single-shaft structure of the connection part 56 used to support the main body 55 and the display part 53. In other words, the single-shaft structure of the connection part 56 makes it impossible to turn one of the main body 55 and the display part 53 with respect to the other by an angle greater than 180°.

FIG. 8 shows a cross section of the portable information processing apparatus 1 in a state where both the main body 2 and the display part 3 are turned with respect to the connection part 4.

In FIG. 8, the main body 2 is set up on the flat set-up surface with the keyboard 6 facing down, and the display part 3 and the main body 2 form an angle within an angular range of 270° to 360° in this state. Hence, an angle γ formed between the surface 3a of the display part 3, opposite to the surface 3b provided with the liquid crystal display panel 5 and the pen input part 10, and the surface 2a of the main body 2, opposite to the surface 2b provided with the keyboard 6, is within an angular range of 0° to 90°.

In this case, the surface 2b of the main body 2, forming the bottom surface of the portable information processing apparatus 1 in the folded state of the display part 3, and the surface 3a of the display part 3, forming the top surface of the portable information processing apparatus 1 in the folded state of the display part 3, face each other as shown in FIG. 8. In addition, the pen input part 10 is easily accessible by the user, because the area occupied by the portable information processing apparatus 1 in this state is not much different from that in the folded state of the display part 3 and the portable information processing apparatus 1 can easily be maintained in a stable state. Accordingly, the user can easily input data from the pen input part 10 by manipulating a pen (not shown) with respect to the pen input part.

Preferably, the portable information processing apparatus 1 is provided with a mechanism for disabling the keyboard 6 when the angle γ formed between the surface 3a of the display part 3, opposite to the surface 3b provided with the pen input part 10, and the surface 2a of the main body 2, opposite to the surface 2b provided with the keyboard 6, is within an angular range of 0° to 90°, so that the data input is only possible from the pen input part 10. A mechanism similar to a known mechanism for turning OFF power of the portable information processing apparatus 1 when the display part 3 is folded and closed with respect to the main body 2 may be used to disable the keyboard 6. In this case, it possible to prevent erroneous manipulation of the keyboard 6 and to prevent erroneous inputs from the keyboard 6 when making the data input from the pen input part 10 in the position of the portable information processing apparatus 1 shown in FIG. 8.

FIG. 9 shows a perspective view of the portable information processing apparatus 1 for explaining a pen input from the pen input part 10.

FIG. 9 shows the portable information processing apparatus 1 in a state where the angle γ described above is $0 < \gamma < 90^\circ$. However, the display part 3 may take an upright position ($\gamma = 90^\circ$) or a horizontal position ($\gamma = 0^\circ$) to suit the user's needs. The portable information processing apparatus 1 can be positively maintained in a stable state on a table, a surface having a relatively small area which may be smaller than the bottom surface area of the main body 2, the lap of the user, the palm of the user or the like, because of the relatively small area occupied by the portable information processing apparatus 1 in the state where only the pen input part 10 needs to be enabled and the keyboard 6 may be disabled. As a result, the data input can be made by the user with ease by manipulating a pen 31 with respect to the pen input part 10.

In the embodiment described above, a part of the rotary shaft 21 is fixed to the main body 2 and the rotary shaft 21 is supported by the bearing member 23 in the first rotary part 7. However, it is possible not to fix the rotary shaft 21 to the main body 2. In other words, instead of fixing the rotary shaft 21 to the main body 2, a part of a bearing member 23 may be fixed to the main body 2 and the first rotary part 7 may be formed by such a bearing member and a rotary shaft which is supported by such a bearing member.

Similarly, instead of fixing the rotary shaft 24 to the main body 2, a part of a bearing member 26 may be fixed to the main body 2 and the first rotary part 7 may be formed by such a bearing member and a rotary shaft which is supported by such a bearing member.

In addition, although the display part 3 of the described embodiment includes the liquid crystal display panel 5, the display panel of the display part 3 is not limited to the liquid crystal display panel 5, and other suitable display panels such as a plasma display panel (PDP) may be used in place of the liquid crystal display panel 5.

Further, the present invention is not limited to these embodiments, but various variations and modifications may be made without departing from the scope of the present invention.

What is claimed is:

1. An electronic device, comprising:

a main body;

a display part; and

a connector comprising first and second rotary parts rotatably interconnecting said main body and said display part and affording independent rotation of each thereof in any sequence and through at least 180° relatively to the connector, in each of clockwise and counterclockwise directions, and a range of rotation of the main body relative to the display part of substantially 360° , and thus between fully closed and fully opened positions relatively to each other;

said first rotary part being linked to said main body so that said connection part and said main body rotate, relatively to each other, when a first rotary manipulation force, greater than a first predetermined value, is applied therebetween; and

said second rotary part being linked to said display part so that said connection part and said display part rotate, relatively to each other, when a second rotary manipulation force, greater than a second predetermined value, is applied therebetween.

2. The electronic device as claimed in claim 1, wherein said connector connects to respective, confronting edge portions of said main body and said display part.

3. The electronic device as claimed in claim 1, wherein said first rotary part comprises:

a rotary shaft fixed at a first axial portion thereof to said main body; and

a bearing member rotatably receiving and engaging a second axial portion of said rotary shaft, friction between said rotary shaft and said bearing member being set so that said rotary shaft rotates relatively to said bearing when said first rotary manipulation force is applied therebetween.

4. The electronic device as claimed in claim 1, wherein said second rotary part comprises:

a rotary shaft fixed at a first portion thereof to said main body; and

a bearing member rotatably receiving and engaging a second axial portion said rotary shaft, friction between said rotary shaft and said bearing member being set so that said rotary shaft rotates relatively to said bearing when said second rotary manipulation force is applied therebetween.

5. The electronic device as claimed in claim 1, wherein: said first rotary part and said second rotary part of said connection part comprise respective first and second shafts having corresponding, parallel axes of rotation.

6. The electronic device as claimed in claim 1, wherein said first predetermined value is greater than a rotary force due to a weight of said main body itself.

7. The electronic device as claimed in claim 1, wherein said second predetermined value is greater than a rotary force due to a weight of said display part itself.

8. The electronic device as claimed in claim 1, wherein said display part is selected from a group consisting of a liquid crystal display panel and a plasma display panel.

9. An electronic device, comprising:

a main body having a main surface and an input device received on the main surface;

a display part; and

a connector comprising first and second rotary parts rotatably interconnecting said main body and said display part and affording selective, relative rotation therebetween of substantially 360° ;

said first rotary part being linked to said main body so that said connection part and said main body rotate, relatively to each other, when a rotary manipulation force greater than a first predetermined value is applied therebetween;

said second rotary part being linked to said display part so that said connection part and said display part rotate, relatively to each other, when a rotary manipulation force greater than a second predetermined value is applied therebetween; and

said main body forms a first angle with respect to said connection part when rotated relatively to said connection part and is tilted by a second angle with respect to a support surface on which the electronic device is placed, in a state where the input device faces in a direction opposite to the support surface and said display part forms a third angle with respect to the support surface, where the third angle is in the range from 0° to 90° .

10. The electronic device as claimed in claim 9, wherein said input device is a keyboard.

11. An electronic device comprising:

- a main body having a first main surface with an input device thereon and an opposite, second main surface;
- a display part having a first main surface with a display screen thereon and an opposite, second main surface;
- a connection part, having a first rotary part and a second rotary part rotatably interconnecting said main body and said display part,

said first rotary part being linked to said main body so that said connection part and said main body rotate, relatively to each other, when a first rotary manipulation force, greater than a first predetermined value, is applied therebetween,

said second rotary part being linked to said display part so that said connection part and said display part rotate, relatively to each other, when a second rotary manipulation force, greater than a second predetermined value, is applied therebetween; and

said main body and said display part are each rotatable with respect to said connection part and relatively to each other to a selected angle between the respective, second main surfaces thereof within an angular range of 0° to 90°.

12. The electronic device as claimed in claim 11, wherein said input device is a keyboard.

13. A portable electronic device, comprising:

- a main body having first and second opposite main surfaces and an input device on the first main surface;
- a display part having first and second opposite main surfaces and a display panel on the second main surface;

a connector having first and second rotary parts respectively connected to and rotatably interconnecting the main body and the display part and affording independent rotation of each thereof in any sequence and through at least 180° relatively to the connector, in each of clockwise and counterclockwise directions, and a range of rotation of the main body relative to the display part of substantially 360°, and thus between fully closed and fully opened positions relatively to each other;

the first rotary part releaseably maintaining a fixed angular relationship between the main body and the connection part by exerting a first frictional force opposing a first, static rotary manipulation force therebetween produced by the weight of the main body itself and permitting adjustment of the angular relationship when a first, separate rotary manipulation force is applied therebetween which exceeds a combination of the first frictional force and the first, static rotary manipulation forces; and

the second rotary part releaseably maintaining a fixed angular relationship between the main body and the connection part by exerting a second frictional force opposing a second, static rotary manipulation force therebetween produced by the weight of the display part itself and permitting adjustment of the angular relationship when a second, separate rotary manipulation force is applied therebetween which exceeds a combination of the second frictional force and the second, static rotary manipulation force.

14. The portable electronic device recited in claim 13, wherein the connector permits relative rotation of the main

body and the display part to a selected angle between the respective first main surfaces thereof in a range substantially of from 0° to 360°.

15. The portable electronic device recited in claim 13, wherein the first and second rotary parts define respective first and second, parallel axes of rotation, the parallel axes lying in a common plate parallel to first edges of the main body and display part, the first and second rotary parts affording selective rotations of the main body and the display part about the respective first and second axes, respectively, from an angle of 0° between the respective first main surfaces thereof, corresponding to a closed relationship of the main body and the display part, each thereof through an angle of 180° and in opposite relative directions of rotation, to an angle of 0° between the respective, second main surfaces of the main body and the display part.

16. A portable electronic device, comprising:

a main body having a first and second opposite main surface and an input device on the first main surface and an edge transverse to the first and second main surfaces and a first thickness;

a display part having first and second, opposite main surfaces and a display panel on the first main surface and an edge transverse to the first and second main surfaces and a first thickness;

a connector comprising a first rotary part defining a first axis of rotation and a second rotary part defining a second axis of rotation, parallel to the first axis of rotation and lying in a common plane therewith, the first rotary part being connected to the main body and the main body extending radially from the first axis of rotation and being selectively rotatable about the first axis through 180° from a first position transverse to and extending in a first direction from the common plane to a second position transverse to and extending from the common plane in a second, opposite direction and the second rotary part being connected to the display part and the display part extending radially from the second axis of rotation and being selectively rotatable about the second axis through 180° from a first position transverse to and extending from the common plane in the first direction to a second position transverse to and extending from the common plane in a second, opposite direction, each of the first and second rotary parts being rotatable relatively to the respective axes thereof through at least 180° in each of clockwise and counterclockwise directions, independently of each other and in any sequence, and the connector affording a range of rotation between the main body and the display part of substantially 360°, and thus between fully closed and fully opened positions relatively to each other.

17. A portable electronic device as recited in claim 16, wherein the main body and the display part are rotatable with the respective first and second rotary parts about the respective first and second axes in first and second, opposite senses between the respective first and second positions thereof.

18. An electronic device, comprising:

a main body having a main surface;

a display part; and

a connector comprising first and second rotary parts rotatably interconnecting said main body and said display part and affording selective, relative rotation therebetween of substantially 360°;

said first rotary part being lined to said main body so that said connection part and said main body rotate, relatively to each other;

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said second rotary part being linked to said display part so that said connection part and said display part rotate, relatively to each other; and

said main body forms a first angle with respect to said connection part when rotated relatively to said connection part and is tilted by a second angle with respect to a support surface on which the electronic device is placed, in a state in which the main surface faces in a direction opposite to the support surface and said display part forms a third angle with respect to the support surface, wherein the third angle is in a range from 0° to 90°.

19. The electronic device as claimed in claim **18**, wherein said main surface has an input device.

20. The electronic device as claimed in claim **19**, wherein said input device is a keyboard.

21. An electronic device comprising:

a main body having a first main surface and a second main surface;

a display part having a first main surface with a display screen thereon and an opposite, second main surface; and

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a connection part having a first rotary part and a second rotary part rotatably interconnecting said main body and said display part;

said first rotary part being linked to said main body so that said connection part and said main body are rotatable, relatively to each other;

said second rotary part being linked to said display part so that said connection part and said display part are rotatable, relatively to each other;

said main body and said display part each being rotatable with respect to said connection part; and

said display part being supported at a second angle between the respective, second main surfaces thereof, wherein the selected angle is greater than 0° and less than or equal to 90°.

22. The electronic device as claimed in claim **21**, wherein said first main surface has an input device.

23. The electronic device as claimed in claim **22**, wherein said input device is a keyboard.

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