

		G02B27/646 OR G02B6/0035 OR G02B27/022 OR G02B5/30 OR G02B6/005 OR G02B2027/0181 OR G02B2027/012 OR G02B26/0833 OR G02B27/283 OR G02B6/0038 OR G02B13/06 OR G02B6/0036 OR G02B2027/011 OR G02B3/14 OR G02B5/3025 OR G02B2027/0161 OR G02B7/09 OR G02B2027/0114 OR G02B27/286 OR G02B27/30 OR G02B5/32 OR G02B6/0016 OR G02B2027/0154 OR G02B27/0018 OR G02B6/0023 OR G02B6/0076 OR G02B5/3083 OR G02B6/003 OR G02B26/105 OR G02B5/208 OR G02B7/008 OR G02B2027/0194 OR G02B6/0068 OR G02B9/60 OR G02B9/64 OR G02B27/1086 OR G02B30/34 OR G02B5/005 OR G02B5/1823 OR G02B5/1857 OR G02B5/1866 OR G02B5/1871 OR G02B6/0055 OR G02B6/29325 OR G02B7/08 OR G02B13/004 OR G02B13/009 OR G02B2027/015 OR G02B27/0977 OR G02B5/08 OR G02B19/0057 OR G02B27/0916 OR G02B6/00 OR G02B6/0053 OR G02B7/102 OR G02B13/02 OR G02B2027/013 OR G02B2027/0136 OR				
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		G02B26/10 OR G02B27/0103 OR G02B27/0149 OR G02B30/56 OR G02B27/0025 OR G02B27/4272 OR G02B30/27 OR G02B30/52 OR G02B6/0088 OR G02B9/62 OR G02B13/0065 OR G02B30/00 OR G02B6/0006 OR G02B6/0008 OR G02B6/4204 OR G02B6/443 OR G02B6/4471 OR G02B7/023 OR G02B2027/0145 OR G02B2027/0159 OR G02B2027/0163 OR G02B3/0006 OR G02B6/0065 OR G02B7/02 OR G02B7/04 OR G02B7/12 OR G02B1/002 OR G02B17/086 OR G02B2027/0152 OR G02B21/365 OR G02B26/0816 OR G02B27/02 OR G02B30/35 OR G02B5/04 OR G02B5/3016 OR G02B6/0018 OR G02B6/0031 OR G02B6/0078 OR G02B6/105 OR G02B7/003 OR G02B7/021 OR G02B9/34 OR G02B1/041 OR G02B15/10 OR G02B26/005 OR G02B27/00 OR G02B27/0955 OR G02B27/10 OR G02B27/1033 OR G02B6/002 OR G02B6/0051 OR G02B6/124 OR G02B13/001 OR G02B13/0035 OR G02B2027/0109 OR G02B2027/0183 OR G02B21/06 OR G02B26/00 OR				
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		G02B26/0841 OR G02B27/141 OR G02B27/425 OR G02B3/0087 OR G02B5/1809 OR G02B5/1847 OR G02B6/0026 OR G02B6/02066 OR G02B6/122 OR G02B6/1221 OR G02B6/274 OR G02B6/2766 OR G02B9/04 OR G02B13/008 OR G02B13/14 OR G02B2027/0107 OR G02B2027/0143 OR G02B26/004 OR G02B26/007 OR G02B27/0037 OR G02B5/18 OR G02B5/20 OR G02B5/201 OR G02B6/0021 OR G02B6/0056 OR G02B6/32 OR G02B7/002 OR G02B9/36 OR G02B13/00 OR G02B13/0015 OR G02B13/003 OR G02B13/04 OR G02B13/18 OR G02B15/142 OR G02B19/009 OR G02B2027/0116 OR G02B27/0972 OR G02B27/281 OR G02B27/64 OR G02B3/00 OR G02B30/10 OR G02B30/24 OR G02B30/26 OR G02B5/26 OR G02B6/0028 OR G02B6/0045 OR G02B6/0046 OR G02B6/0073 OR G02B6/0083 OR G02B6/009 OR G02B9/12 OR G02B13/006 OR G02B17/0605 OR G02B2003/0093 OR G02B2027/0198 OR G02B2207/113 OR G02B25/001 OR G02B26/103 OR					
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		G02B27/0944 OR G02B27/1046 OR G02B27/4294 OR G02B27/58 OR G02B3/0056 OR G02B3/08 OR G02B3/12 OR G02B5/124 OR G02B5/223 OR G02B5/3058 OR G02B6/0025 OR G02B6/0033 OR G02B6/0061 OR G02B6/12009 OR G02B6/29356 OR G02B7/10 OR G02B1/00 OR G02B1/10 OR G02B1/11 OR G02B13/002 OR G02B13/007 OR G02B15/1421 OR G02B15/143503 OR G02B15/144105 OR G02B15/144113 OR G02B15/1451 OR G02B15/26 OR G02B19/0014 OR G02B19/0076 OR G02B2027/0129 OR G02B2027/019 OR G02B2027/0196 OR G02B21/0012 OR G02B2207/115 OR G02B23/00 OR G02B23/18 OR G02B26/023 OR G02B26/0808 OR G02B26/085 OR G02B26/0858 OR G02B26/0875 OR G02B27/0189 OR G02B27/024 OR G02B27/144 OR G02B27/149 OR G02B27/28 OR G02B27/288 OR G02B27/44 OR G02B27/48 OR G02B3/005 OR G02B30/22 OR G02B30/36 OR G02B30/50 OR G02B5/0284 OR G02B5/1842 OR G02B5/1876 OR G02B5/22 OR G02B5/23 OR				
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L75	622	G02B6/0011 OR G02B6/0015 OR G02B6/0048 OR G02B6/0058 OR G02B6/006 OR G02B6/0086 OR G02B6/02 OR G02B6/06 OR G02B6/12019 OR G02B6/27 OR G02B6/4206 OR G02B7/005 OR G02B7/028 OR G02B7/105 OR G02B7/1821 OR G02B7/1822 OR G02B7/1824 OR G02B7/28 OR G02B7/285 OR G02B7/346 OR G02B7/38 OR G02B9/18).cpc.) L30 AND (G02C11/10 OR G02C11/06 OR G02C7/04 OR G02C5/143 OR G02C11/00 OR G02C5/146 OR G02C5/001 OR G02C5/14 OR G02C7/101 OR G02C3/003 OR G02C2200/08 OR G02C2200/02 OR G02C7/083 OR G02C7/12 OR G02C5/16 OR G02C5/22 OR G02C7/16 OR G02C7/086 OR G02C9/04 OR G02C11/04 OR G02C2200/10 OR G02C5/12 OR G02C9/00 OR G02C7/06 OR G02C7/081 OR G02C7/104 OR G02C5/02 OR G02C7/105 OR G02C7/08 OR G02C5/006 OR G02C7/00 OR G02C1/10 OR G02C5/20 OR G02C5/045 OR G02C7/021 OR	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
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L76	2091	G02C1/06 OR G02C2202/06 OR G02C3/006 OR G02C5/08 OR G02C5/2209 OR G02C5/2272 OR G02C9/02 OR G02C2200/26 OR G02C3/04 OR G02C5/2236 OR G02C5/2254 OR G02C5/2263 OR G02C7/02).cpc.) L31 AND ((G02B27/017 OR G02B2027/0178 OR G02B27/0172 OR G02B2027/014 OR G02B2027/0138 OR G02B27/0093 OR G02B2027/0187 OR G02B27/0176 OR G02B2027/0127 OR G02B2027/0118 OR G02B2027/0134 OR G02B27/0101 OR G02B27/0179 OR G02B2027/0141 OR G02B2027/0156 OR G02B6/34 OR G02B2027/0132 OR G02B2027/0174 OR G02B2027/0185 OR G02B2027/0123 OR G02B2027/0147 OR G02B27/01 OR G02B27/4205 OR G02B6/10 OR G02B2027/0105 OR G02B26/101 OR G02B27/42 OR G02B27/4227 OR G02B26/001 OR G02B2027/0169 OR G02B27/0081 OR G02B27/0075 OR G02B27/028 OR G02B2027/0112 OR G02B2027/0125 OR G02B6/0001 OR G02B6/0035 OR G02B27/022 OR G02B6/005 OR G02B2027/012 OR G02B27/283 OR G02B5/30 OR G02B6/0038 OR	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
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		G02B6/0036 OR G02B13/0045 OR G02B2027/0181 OR G02B5/3025 OR G02B2027/0161 OR G02B2027/011 OR G02B2027/0114 OR G02B27/30 OR G02B6/0016 OR G02B2027/0154 OR G02B27/286 OR G02B3/14 OR G02B6/0023 OR G02B5/3083 OR G02B6/003 OR G02B6/0076 OR G02B27/0018 OR G02B7/008 OR G02B26/0833 OR G02B13/06 OR G02B2027/0194 OR G02B27/1086 OR G02B5/1823 OR G02B5/1857 OR G02B5/1866 OR G02B5/1871 OR G02B6/0055 OR G02B6/29325 OR G02B2027/015 OR G02B30/34 OR G02B26/105 OR G02B6/0053 OR G02B26/10 OR G02B27/0103 OR G02B27/646 OR G02B5/08 OR G02B9/60 OR G02B2027/0136 OR G02B30/27 OR G02B30/52 OR G02B5/208 OR G02B6/0068 OR G02B6/0088 OR G02B7/09 OR G02B9/62 OR G02B13/009 OR G02B2027/013 OR G02B30/56 OR G02B5/32 OR G02B6/0006 OR G02B6/0008 OR G02B6/4204 OR G02B6/443 OR G02B6/4471 OR G02B9/64 OR G02B2027/0163 OR G02B27/0977 OR G02B6/0065 OR				
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		G02B13/004 OR G02B2027/0159 OR G02B30/00 OR G02B6/00 OR G02B7/023 OR G02B7/12 OR G02B1/002 OR G02B17/086 OR G02B2027/0145 OR G02B21/365 OR G02B27/0025 OR G02B27/02 OR G02B5/04 OR G02B5/3016 OR G02B6/0018 OR G02B6/0031 OR G02B6/105 OR G02B7/003 OR G02B13/02 OR G02B2027/0152 OR G02B27/00 OR G02B27/0149 OR G02B27/10 OR G02B27/1033 OR G02B27/4272 OR G02B6/002 OR G02B6/0051 OR G02B6/124 OR G02B13/001 OR G02B13/0035 OR G02B15/10 OR G02B2027/0109 OR G02B2027/0183 OR G02B21/06 OR G02B26/00 OR G02B27/141 OR G02B27/425 OR G02B3/0006 OR G02B30/35 OR G02B5/005 OR G02B5/1809 OR G02B5/1847 OR G02B6/0026 OR G02B6/02066 OR G02B6/122 OR G02B6/1221 OR G02B6/274 OR G02B6/2766 OR G02B7/021 OR G02B7/04 OR G02B7/08 OR G02B1/041 OR G02B13/0065 OR G02B13/008 OR G02B13/14 OR G02B2027/0107 OR G02B2027/0143 OR G02B26/005 OR					
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		G02B26/007 OR G02B5/20 OR G02B6/0056 OR G02B6/32 OR G02B7/002 OR G02B9/36 OR G02B13/003 OR G02B13/18 OR G02B15/142 OR G02B19/009 OR G02B2027/0116 OR G02B26/0816 OR G02B27/0972 OR G02B27/281 OR G02B27/64 OR G02B3/00 OR G02B30/10 OR G02B30/24 OR G02B30/26 OR G02B5/18 OR G02B5/26 OR G02B6/0045 OR G02B6/0046 OR G02B6/0073 OR G02B6/0083 OR G02B6/009 OR G02B7/02 OR G02B7/102 OR G02B9/04 OR G02B9/12 OR G02B9/34 OR G02B17/0605 OR G02B2027/0198 OR G02B2207/113 OR G02B25/001 OR G02B26/0841 OR G02B26/103 OR G02B27/0037 OR G02B27/0944 OR G02B27/0955 OR G02B27/1046 OR G02B27/4294 OR G02B27/58 OR G02B5/124 OR G02B5/201 OR G02B5/223 OR G02B6/0025 OR G02B6/0028 OR G02B6/0033 OR G02B6/0061 OR G02B6/0078 OR G02B6/12009 OR G02B6/29356 OR G02B1/00 OR G02B1/10 OR G02B13/007 OR G02B13/04 OR G02B15/1421 OR					
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		G02B2027/0129 OR G02B2027/019 OR G02B2027/0196 OR G02B21/0012 OR G02B2207/115 OR G02B23/00 OR G02B23/18 OR G02B26/004 OR G02B26/0808 OR G02B26/085 OR G02B26/0858 OR G02B26/0875 OR G02B27/0189 OR G02B27/024 OR G02B27/144 OR G02B27/149 OR G02B27/44 OR G02B27/48 OR G02B3/005 OR G02B30/22 OR G02B30/36 OR G02B30/50 OR G02B5/0284 OR G02B5/1842 OR G02B5/1876 OR G02B5/22 OR G02B5/23 OR G02B5/3058 OR G02B6/0011 OR G02B6/0015 OR G02B6/0048 OR G02B6/0058 OR G02B6/006 OR G02B6/0086 OR G02B6/02 OR G02B6/06 OR G02B6/12019 OR G02B6/27 OR G02B7/005 OR G02B7/105 OR G02B7/1824 OR G02B7/28 OR G02B7/285 OR G02B7/346 OR G02B1/007 OR G02B1/04 OR G02B1/115 OR G02B1/118 OR G02B13/0055 OR G02B13/006 OR G02B13/0075 OR G02B15/06 OR G02B17/08 OR G02B19/0047 OR G02B2003/0093 OR G02B2027/0158 OR G02B2027/0192 OR G02B21/00 OR					
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L77	580	G02B2207/101 OR G02B2207/123 OR G02B27/0068 OR G02B27/0938 OR G02B27/0961 OR G02B27/108 OR G02B27/142 OR G02B27/28 OR G02B27/285 OR G02B27/62 OR G02B3/0037 OR G02B3/0056 OR G02B3/0068 OR G02B3/02 OR G02B3/04 OR G02B3/08 OR G02B30/29 OR G02B30/31 OR G02B5/0252 OR G02B5/045 OR G02B5/0841 OR G02B5/10 OR G02B5/12 OR G02B5/122 OR G02B5/128 OR G02B5/136 OR G02B5/1861 OR G02B5/28 OR G02B6/0085 OR G02B6/2706 OR G02B6/276 OR G02B6/29311 OR G02B6/3512 OR G02B6/3522 OR G02B6/4214 OR G02B7/10 OR G02B7/287).cpc.) L31 AND (G02C11/10 OR G02C11/06 OR G02C7/04 OR G02C5/143 OR G02C5/146 OR G02C11/00 OR G02C5/14 OR G02C7/101 OR G02C5/001 OR G02C3/003 OR G02C2200/08 OR G02C7/083 OR G02C2200/02 OR G02C7/12 OR G02C5/16 OR G02C7/16 OR G02C7/086 OR G02C9/04 OR G02C2200/10 OR G02C5/22 OR	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
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L78	785	G02C11/04 OR G02C9/00 OR G02C7/06 OR G02C7/081 OR G02C5/02 OR G02C5/12 OR G02C7/104 OR G02C7/105 OR G02C7/08 OR G02C5/006 OR G02C7/00 OR G02C5/20 OR G02C5/045 OR G02C7/021 OR G02C2202/06 OR G02C3/006 OR G02C5/08 OR G02C5/2209 OR G02C5/2272 OR G02C9/02 OR G02C1/10 OR G02C2200/26 OR G02C3/04 OR G02C5/2236 OR G02C5/2254 OR G02C5/2263 OR G02C7/02 OR G02C11/08 OR G02C13/005 OR G02C2202/10 OR G02C5/003 OR G02C5/126 OR G02C5/2227 OR G02C5/2281 OR G02C7/022 OR G02C7/085).cpc.) L32 AND ((G02B27/017 OR G02B2027/0178 OR G02B2027/014 OR G02B27/0172 OR G02B2027/0138 OR G02B27/0093 OR G02B2027/0187 OR G02B2027/0118 OR G02B27/0176 OR G02B27/0101 OR G02B2027/0134 OR G02B2027/0127 OR G02B6/34 OR G02B2027/0123 OR G02B2027/0147 OR G02B5/30 OR G02B27/0081 OR G02B27/0179 OR G02B2027/0185 OR G02B27/4205 OR	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
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		G02B6/005 OR G02B2027/0105 OR G02B27/01 OR G02B27/42 OR G02B27/4227 OR G02B6/10 OR G02B2027/0174 OR G02B6/0038 OR G02B6/0076 OR G02B7/008 OR G02B27/283 OR G02B2027/0114 OR G02B2027/012 OR G02B2027/0125 OR G02B2027/0132 OR G02B27/0018 OR G02B27/1086 OR G02B27/30 OR G02B5/1823 OR G02B5/1857 OR G02B5/1866 OR G02B5/1871 OR G02B5/3025 OR G02B6/0016 OR G02B6/0023 OR G02B6/0035 OR G02B6/0036 OR G02B6/29325 OR G02B2027/0156 OR G02B2027/0141 OR G02B27/0103 OR G02B26/001 OR G02B7/12 OR G02B30/52 OR G02B1/002 OR G02B2027/0161 OR G02B21/06 OR G02B21/365 OR G02B26/00 OR G02B27/02 OR G02B27/10 OR G02B27/286 OR G02B30/34 OR G02B30/56 OR G02B5/08 OR G02B5/1809 OR G02B5/1847 OR G02B5/3083 OR G02B6/0026 OR G02B6/122 OR G02B6/1221 OR G02B6/124 OR G02B7/04 OR G02B2027/0109 OR G02B2027/0136 OR G02B26/101 OR G02B6/0018 OR G02B6/002 OR					
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		G02B19/009 OR G02B2027/0116 OR G02B2027/013 OR G02B2027/015 OR G02B2027/0152 OR G02B2027/0163 OR G02B2027/0181 OR G02B26/105 OR G02B27/0075 OR G02B27/0149 OR G02B6/0053 OR G02B2027/011 OR G02B2027/0112 OR G02B2027/0154 OR G02B2027/0194 OR G02B27/00 OR G02B27/141 OR G02B5/04 OR G02B5/18 OR G02B6/00 OR G02B6/12009 OR G02B2027/0159 OR G02B2207/113 OR G02B2207/115 OR G02B26/0816 OR G02B26/103 OR G02B3/005 OR G02B30/35 OR G02B30/36 OR G02B5/23 OR G02B5/3058 OR G02B6/0028 OR G02B6/003 OR G02B6/0045 OR G02B6/0055 OR G02B6/0056 OR G02B6/006 OR G02B6/0065 OR G02B6/0068 OR G02B6/0088 OR G02B6/12019 OR G02B1/041 OR G02B19/0047 OR G02B2003/0093 OR G02B2027/019 OR G02B2027/0192 OR G02B21/0012 OR G02B27/0025 OR G02B27/0189 OR G02B27/0961 OR G02B27/0972 OR G02B3/00 OR G02B3/0068 OR G02B3/08 OR G02B3/14 OR G02B30/26 OR G02B5/045 OR G02B5/1842 OR					
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L79	397	G02B5/28 OR G02B6/32 OR G02B6/3512 OR G02B7/287).cpc.) L32 AND ((G02C11/10 OR G02C11/06 OR G02C5/143 OR G02C5/14 OR G02C7/101 OR G02C3/003 OR G02C7/04 OR G02C5/001 OR G02C5/146 OR G02C7/083 OR G02C2200/08 OR G02C11/00 OR G02C5/16 OR G02C2200/10 OR G02C11/04 OR G02C7/12 OR G02C7/081 OR G02C7/06 OR G02C7/104 OR G02C7/16 OR G02C7/08 OR G02C2200/02 OR G02C7/00 OR G02C7/105 OR G02C9/00 OR G02C7/086 OR G02C9/04 OR G02C5/20 OR G02C7/021 OR G02C2202/06 OR G02C5/006 OR G02C5/045 OR G02C5/08 OR G02C5/2209 OR G02C5/2272 OR G02C1/10 OR G02C5/12 OR G02C5/22 OR G02C5/2236 OR G02C5/2254 OR G02C7/02 OR G02C11/08 OR G02C13/005 OR G02C5/02 OR G02C5/2227 OR G02C5/2263 OR G02C5/2281 OR G02C7/022 OR G02C9/02).cpc.)	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
L80	152	L34 AND ((G02B2027/0178 OR G02B27/017 OR G02B2027/014 OR	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM

		G02B27/0172 OR G02B27/0093 OR G02B2027/0138 OR G02B2027/0187 OR G02B6/34 OR G02B27/0176 OR G02B2027/0118 OR G02B2027/0127 OR G02B27/0101 OR G02B27/0081 OR G02B27/4205 OR G02B2027/0105 OR G02B2027/0185 OR G02B27/0179 OR G02B27/42 OR G02B27/4227 OR G02B6/10 OR G02B6/0038 OR G02B6/005 OR G02B6/0076 OR G02B7/008 OR G02B27/283 OR G02B2027/0114 OR G02B2027/012 OR G02B2027/0125 OR G02B2027/0174 OR G02B27/0018 OR G02B27/1086 OR G02B27/30 OR G02B5/1823 OR G02B5/1857 OR G02B5/1866 OR G02B5/1871 OR G02B5/3025 OR G02B6/0016 OR G02B6/0023 OR G02B6/0035 OR G02B6/0036 OR G02B6/29325 OR G02B5/30 OR G02B2027/0132 OR G02B2027/0134 OR G02B2027/0156 OR G02B2027/0123 OR G02B21/06 OR G02B21/365 OR G02B27/286 OR G02B30/52 OR G02B27/01 OR G02B6/0018 OR G02B6/002 OR G02B2027/0147 OR G02B2027/015 OR G02B27/0149 OR G02B6/0053 OR G02B2027/0112 OR G02B2027/0141 OR G02B2027/0152 OR				
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L81	151	G02B2027/0161 OR G02B5/18 OR G02B6/00 OR G02B6/12009 OR G02B7/12 OR G02B2027/011 OR G02B2027/0154 OR G02B2207/113 OR G02B2207/115 OR G02B27/0075 OR G02B5/23 OR G02B5/3058 OR G02B6/0028 OR G02B6/003 OR G02B6/0045 OR G02B6/0056 OR G02B6/006 OR G02B6/0065 OR G02B6/0068 OR G02B6/0088 OR G02B6/12019 OR G02B2027/013 OR G02B2027/0163 OR G02B2027/0181 OR G02B2027/019 OR G02B27/0189 OR G02B30/26 OR G02B5/04 OR G02B5/1842 OR G02B5/28 OR G02B6/32 OR G02B6/3512).cpc.) L34 AND (G02C11/10 OR G02C11/06 OR G02C5/143 OR G02C5/14 OR G02C3/003 OR G02C5/001 OR G02C5/146 OR G02C2200/08 OR G02C5/16 OR G02C11/00 OR G02C11/04 OR G02C7/08 OR G02C7/081 OR G02C7/086 OR G02C9/00 OR G02C9/04 OR G02C2200/02 OR G02C2202/06 OR G02C5/045 OR G02C5/2209 OR G02C7/083 OR G02C7/101 OR G02C5/12 OR G02C13/005 OR G02C5/22 OR	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
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L82	108	G02C5/2254 OR G02C5/2281 OR G02C7/022 OR G02C7/04 OR G02C9/02).cpc.) L35 AND ((G02B2027/0178 OR G02B27/017 OR G02B27/0093 OR G02B2027/014 OR G02B27/0172 OR G02B2027/0138 OR G02B2027/0187 OR G02B2027/0118 OR G02B5/30 OR G02B27/0176 OR G02B21/06 OR G02B21/365 OR G02B27/286 OR G02B2027/0134 OR G02B2027/0132 OR G02B2027/0147 OR G02B6/0053 OR G02B2027/0112 OR G02B2027/0127 OR G02B27/0149 OR G02B5/18 OR G02B6/12009 OR G02B2027/011 OR G02B2027/0123 OR G02B2027/0141 OR G02B2027/0156 OR G02B2207/113 OR G02B2207/115 OR G02B27/0075 OR G02B27/01 OR G02B27/0101 OR G02B5/23 OR G02B5/3058 OR G02B6/0018 OR G02B6/002 OR G02B6/0028 OR G02B6/003 OR G02B6/0038 OR G02B6/0045 OR G02B6/005 OR G02B6/0056 OR G02B6/006 OR G02B6/0065 OR G02B6/0068 OR G02B6/0076 OR G02B6/0088 OR G02B6/12019 OR G02B7/008 OR G02B27/0081 OR G02B5/04 OR G02B5/1842 OR	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
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L83	95	G02B5/28).cpc.) L35 AND ((G02C11/10 OR G02C11/06 OR G02C5/143 OR G02C5/14 OR G02C3/003 OR G02C5/146 OR G02C5/001 OR G02C2200/08 OR G02C11/04 OR G02C11/00 OR G02C7/081 OR G02C7/08 OR G02C7/086 OR G02C9/00 OR G02C2202/06 OR G02C5/2209 OR G02C7/083 OR G02C7/101 OR G02C9/04 OR G02C5/12 OR G02C5/22 OR G02C5/2254 OR G02C5/2281).cpc.)	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
L84	10	L37 AND ((G02B2027/0178 OR G02B27/017 OR G02B27/0093 OR G02B2027/014 OR G02B27/0172 OR G02B2027/0138 OR G02B2027/0187 OR G02B2027/0118 OR G02B5/30 OR G02B27/0176 OR G02B2027/0134 OR G02B2027/0147 OR G02B2027/0112 OR G02B2027/0127 OR G02B2027/0132 OR G02B27/0149 OR G02B5/18 OR G02B6/12009 OR G02B2027/011 OR G02B2027/0123 OR G02B2207/113 OR G02B2207/115 OR G02B5/23 OR G02B5/3058 OR G02B6/0038 OR G02B6/0045 OR G02B6/0053 OR G02B6/0056 OR G02B6/12019 OR G02B7/008 OR G02B5/04 OR G02B5/1842 OR	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM

L85	7	G02B5/28).cpc.) L37 AND ((G02C11/10 OR G02C11/06 OR G02C5/146 OR G02C5/143 OR G02C2200/08 OR G02C5/001 OR G02C11/04 OR G02C5/14 OR G02C7/081 OR G02C7/08 OR G02C7/086 OR G02C9/00 OR G02C2202/06 OR G02C5/2209 OR G02C7/083 OR G02C7/101).cpc.)	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
L86	6	L37 AND ((351/158 OR 351/121 OR 351/41 OR 351/116 OR 351/119 OR 359/630 OR 359/13 OR 359/554 OR 359/567 OR 381/327 OR 381/381).ccls.)	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/05 01:07 PM
L87	1	"25484714".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	2024/02/05 02:24 PM
L88	6	"34435134".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	2024/02/05 02:26 PM
L89	22	"27496316".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2024/02/05 02:27 PM

L90	34	(Artificial Intelligence) More like doc: US-11243416-B2 Text: (US-10061144-B2 OR US-9547184-B2 OR US-8905542-B2 OR US-11204512-B2 OR US-20220011603-A1 OR US-8500271-B2 OR US-20050264752-A1 OR US-11536988-B2 OR US-9690121-B2 OR US-7922321-B2 OR US-11086147-B2 OR US-8109629-B2 OR US-20180335650-A1 OR US-11762224-B2 OR US-20110187990-A1 OR US- 20200218094-A1 OR US-20170090219-A1 OR US-20150085245-A1 OR US- 20230017635-A1 OR US-20130308089-A1).did.	CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/27 12:02 PM
L91	29	(Artificial Intelligence) More like doc: US-6349001-B1 Text: (CA-2307877-C OR EP-1027627-A1 OR WO-9923524-A1 OR EP-1027627-A4 OR US-6091546-A OR JP-2001522063-A OR EP-1027627-B1 OR WO-9923524-A8 OR CA-2307877-A1 OR US-6204974-B1 OR US-6384982-B1 OR EP-1169663-A1 OR US-6356392-B1 OR WO-0055676-A1 OR EP-1169663-A4 OR JP-2002539498-A OR EP-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/27 12:02 PM

L92	33	1027626-A1 OR CA-2307869-C OR EP-1547434-B8 OR EP-1547434-A2).did. (Artificial Intelligence) More like doc: US-7278734-B2 Text: (US-20050201585-A1 OR US-8020989-B2 OR US-20080089545-A1 OR AU-2005306412-B2 OR EP-1828833-B1 OR WO-2006055884-A2 OR EP-1828833-A2 OR AU-2005306412-A2 OR AU-2005306412-A1 OR CA-2932965-C OR CA-2932965-A1 OR AU-2013263854-A1 OR EP-1547434-A2 OR AU-2003254210-A1 OR CA-2494661-A1 OR US-20060203183-A1 OR US-20040160573-A1 OR US-7150526-B2 OR AU-2013263854-B2 OR CN-1720763-A).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/27 12:02 PM
L93	28	(Artificial Intelligence) More like doc: US-6911172-B2 Text: (US-20040000733-A1 OR US-20040239874-A1 OR US-20020159023-A1 OR EP-1485748-A2 OR WO-02089496-A2 OR US-9244292-B2 OR US-6929365-B2 OR US-20040029582-A1 OR CA-2445952-A1 OR US-20050239502-A1 OR US-7331666-B2 OR US-6769767-B2 OR US-20160109729-A1 OR JP-2005502902-A OR JP-4246500-B2 OR TW-I252005-B OR EP-1485748-B1 OR WO-02089496-A3 OR TH-61710-A OR US-20200064654-A1).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/27 12:03 PM
L94	7432	(eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2024/02/27 04:12 PM

L95	60	AND circuit AND speaker\$2 AND (battery WITH (charge\$4 OR recharge\$4) WITH external)	CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/27 04:12 PM
L96	6529	(eyewear\$4 OR glasses\$4 OR spetacI\$4 OR eyegalss\$4) AND frame AND circuit AND speaker\$2 AND (battery WITH (charge\$4 OR recharge\$4) WITH external WITH cord)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/27 04:14 PM
L97	6529	(eyewear\$4 OR glasses\$4 OR spetacI\$4 OR eyegalss\$4) AND frame AND circuit AND speaker\$2 AND ((battery near10 (charge\$4 OR recharge\$4)) near20 external)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/02/27 04:14 PM

L115	3482	(351/158,121).ccls.	VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:00 PM
L116	2573	(351/41,111).ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:00 PM
L117	1000	(351/123,124).ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:01 PM
L118	3412	(359/13,629).ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	OR	ON	ON	2024/05/14 12:01 PM

L119	5523	(359/630-633).ccls.	EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:01 PM
L120	3403	(381/381,327,328).ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:01 PM
L121	4068	(381/380,370,381).ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:01 PM

L131	806	g02c1/00.cpc.	JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:08 PM
L132	17282	g02c11/10.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:08 PM
L133	3090	g02c11/06.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:09 PM
L134	3174	g02c5/001.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,	OR	ON	ON	2024/05/14 12:09 PM

L135	4012	g02c5/02.cpc.	HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:09 PM
L136	4853	g02c5/14.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:09 PM
L137	5010	g02c5/146.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2024/05/14 12:10 PM

			IBM_TDB)				
L138	5174	g02c5/22.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:10 PM
L139	35428	g02b27/01.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:10 PM
L140	71042	g02b27/017.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 12:10 PM
L141	27914	g02b27/0176.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS,	OR	ON	ON	2024/05/14 12:10 PM

L184	4	"27569502".fmid.	IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	2024/05/14 01:18 PM
L2686	0	98 AND (button near5 piezo\$6)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/05/15 09:02 AM
L2687	7	98 AND ((button OR switch) near5 piezo\$6)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/05/15 09:02 AM
L2689	11	"49715056".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	OR	ON	ON	2024/05/15 09:04 AM

L2691	147	142 AND ((button OR switch) near5 piezo\$6)	EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO) (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/05/15 09:08 AM
L2692	9	122 AND ((button OR switch) near5 piezo\$6)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/05/15 09:11 AM
L2693	174	(eyewear\$4 OR glasses\$4 OR spetaci\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND ((button OR switch) near5 piezo\$6)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/15 09:19 AM
L2695	174	(eyewear\$4 OR glasses\$4 OR spetaci\$4 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY,	OR	ON	ON	2024/05/15 09:22 AM

L2696	195	eyegalss\$4) AND frame AND circuit AND control\$4 AND batter\$4 AND connect\$4 AND (audio OR speak\$4) AND ((button OR switch) near5 piezo\$6)	CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/15 09:22 AM
L2697	280	(eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND batter\$4 AND ((button OR switch) near5 piezo\$6)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/15 09:23 AM
L2699	3	"34225259".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK,	OR	ON	ON	2024/05/15 09:27 AM

L2702	160650	(G02C11/10 OR G02C5/143 OR G02C5/146 OR G02C11/06 OR H02J7/0045 OR G02C2200/08 OR G02C5/14 OR G02C11/00 OR H02J7/00).cpc.	TH, TN, TR, TW, UA, VN); FPRS; JPO) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 11:03 AM
L2703	3610	2702 AND 54	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	2024/09/04 11:11 AM
L2704	2449	2702 AND 56	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	2024/09/04 11:11 AM
L2706	1324	2702 AND 59	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO,	OR	ON	ON	2024/09/04 11:11 AM

L2708	614	2702 AND 61	NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	2024/09/04 11:12 AM
L2709	133	2702 AND 65	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	2024/09/04 11:12 AM
L2710	17	2702 AND 49	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	2024/09/04 11:12 AM
L2711	3	2702 AND 52	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO,	OR	ON	ON	2024/09/04 11:12 AM

L2723	13639	115 116 117 118 118 121 121	NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 11:40 AM
L2730	281	2723 AND 54	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 11:42 AM
L2731	190	2723 AND 56	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 11:42 AM
L2732	102	2723 AND 60	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2024/09/04 11:42 AM

			CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L2733	46	2723 AND 63	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 11:42 AM
L2734	7	2723 AND 49	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 11:43 AM
L2736	156642	131 132 133 134 135 136 137 138 139 140 141	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 11:58 AM

L2737	9928	2736 AND 54	VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 11:58 AM
L2738	7717	2736 AND 56	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 11:58 AM
L2739	3553	2736 AND 60	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 11:58 AM
L2741	1437	2736 AND 61	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	OR	ON	ON	2024/09/04 11:58 AM

L2742	360	2736 AND 63	EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 11:58 AM
L2743	96	2736 AND 49	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 11:59 AM
L2744	3	2736 AND 52	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO;	OR	ON	ON	2024/09/04 11:59 AM

L2745	390	(US-0000347-\$ US-0000733-\$ US-0001827-\$ US-0003803-\$ US-0004325-\$ US-0005069-\$ US-0005230-\$ US-0008763-\$ US-0011603-\$ US-0012127-\$ US-0017635-\$ US-0017997-\$ US-0018274-\$ US-0021407-\$ US-0022690-\$ US-0023158-\$ US-0026146-\$ US-0028309-\$ US-0029582-\$ US-0030442-\$ US-0032449-\$ US-0033061-\$ US-0033622-\$ US-0033623-\$ US-0033660-\$ US-0034478-\$ US-0034542-\$ US-0035830-\$ US-0036103-\$ US-0045283-\$ US-0045928-\$ US-0046887-\$ US-0050668-\$ US-0050754-\$ US-0054092-\$ US-0055888-\$ US-0057654-\$ US-0059159-\$ US-0059212-\$ US-0059381-\$ US-0061579-\$ US-0062046-\$ US-0062338-\$ US-0062357-\$ US-0063378-\$ US-0063763-\$ US-0064746-\$ US-0065257-\$ US-0067580-\$ US-0067585-\$ US-0068057-\$ US-0068559-\$ US-0072828-\$ US-0073375-\$ US-0074721-\$ US-	JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 12:21 PM
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		0098192-\$ US-					
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		0101411-\$ US-					
		0101568-\$ US-					
		0102734-\$ US-					
		0104864-\$ US-					
		0105445-\$ US-					
		0107822-\$ US-					
		0109491-\$ US-					
		0109600-\$ US-					
		0110368-\$ US-					
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		0117121-\$ US-					
		0122208-\$ US-					
		0128737-\$ US-					
		0131575-\$ US-					
		0132382-\$ US-					
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		0143519-\$ US-					
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		0146829-\$ US-					
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		0150986-\$ US-					
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L2756	1466	2745 2746 2747 2748 2749 2750 2751 2752	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO,	OR	ON	ON	2024/09/04 12:24 PM

L2757	228	2756 AND 54	RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 12:24 PM
L2759	131	2756 AND 59	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 12:24 PM
L2761	60	2756 AND 63	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 12:25 PM
L2763	12	2756 AND 49	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY,	OR	ON	ON	2024/09/04 12:25 PM

L2764	2	2756 AND 52	CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 12:25 PM
L2765	556	("197708" "198608" "198805" "198909" "99411" "199511" "199609" "199709" "199807" "200011" "200101" "200102" "200205" "200208" "200210" "200302" "200512" "200907" "1129988" "6081194" "681194" "7312791" "8237349" "2107638").DID.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 12:37 PM
L2766	383	(US-10042186-\$ US-10060790-\$ US-10061144-\$ US-10310296-\$ US-10345625-\$ US-10359311-\$ US-10359459-\$ US-10624790-\$ US-10777048-\$ US-11042045-\$ US-1255265-\$ US-1917745-\$ US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 12:37 PM

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L2767	381	7405801-\$ US- 7429965-\$ US- 7438409-\$ US- 7438410-\$ US- 7445332-\$ US- 7481531-\$ US- 7500746-\$ US- 7500747-\$ US- 7512414-\$).DID. (US-20190310132-\$ US-20190318589-\$ US-20190387351-\$ US-20200012127-\$ US-20200218094-\$ US-20200364992-\$ US-3060308-\$ US- 3597054-\$ US- 3710115-\$ US- 3858001-\$ US- 3883701-\$ US- 4165487-\$ US- 4254451-\$ US- 4283127-\$ US- 4322585-\$ US- 4348664-\$ US- 4389217-\$ US- 4526473-\$ US- 4535244-\$ US- 4608492-\$ US- 4683587-\$ US- 4751691-\$ US- 4757714-\$ US- 4773095-\$ US- 4806011-\$ US- 4822160-\$ US- 4822161-\$ US- 4851686-\$ US- 4856086-\$ US- 4859047-\$ US- 4882769-\$ US- 4904078-\$ US- 4942629-\$ US- 4962469-\$ US- 4967268-\$ US- 4985632-\$ US- 5008548-\$ US- 5015086-\$ US- 5020150-\$ US- 5026151-\$ US- 5036311-\$ US- 5050150-\$ US- 5064410-\$ US- 5093576-\$ US- 5106179-\$ US- 5148023-\$ US- 5151600-\$ US- 5161250-\$ US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 12:37 PM
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L2770	345	9753288-\$ US- 9759917-\$ US- 9766463-\$ US- 9781408-\$ US- 9800990-\$ US- 9829707-\$ US- 9836122-\$ US- 9841599-\$ US- 9857590-\$).DID. (US-5036311-\$ US- 5050150-\$ US- 5064410-\$ US- 5093576-\$ US- 5106179-\$ US- 5148023-\$ US- 5151600-\$ US- 5161250-\$ US- 5172256-\$ US- 5264877-\$ US- 5306917-\$ US- 5353378-\$ US- 5359370-\$ US- 5359444-\$ US- 5367345-\$ US- 5379464-\$ US- 5382986-\$ US- 5394005-\$ US- 5452026-\$ US- 5452480-\$ US- 5455637-\$ US- 5455640-\$ US- 5457751-\$ US- 5463428-\$ US- 5500532-\$ US- 5510961-\$ US- 5513384-\$ US- 5533130-\$ US- 5541641-\$ US- 5581090-\$ US- 5585871-\$ US- 5589398-\$ US- 5590417-\$ US- 5606743-\$ US- 5608808-\$ US- 5634201-\$ US- 5671035-\$ US- 5686727-\$ US- 5694475-\$ US- 5715323-\$ US- 5737436-\$ US- 5818381-\$ US- 5835185-\$ US- 5900720-\$ US- 5903395-\$ US- 5923398-\$ US- 5941837-\$ US- 5946071-\$ US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 12:37 PM
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L2771	342	8770742-\$ US- 8905542-\$ US- 9033493-\$ US- 9244292-\$ US- 9400390-\$ US- 9405135-\$ US- 9488520-\$ US- 9547184-\$ US- 9690121-\$ US- 9922236-\$ US- D369167-\$).DID. (US-10042186-\$ US- 10045732-\$ US- 10108984-\$ US- 10123732-\$ US- 10180572-\$ US- 10215568-\$ US- 10227063-\$ US- 10254856-\$ US- 10276028-\$ US- 10310296-\$ US- 10310597-\$ US- 10345625-\$ US- 10359459-\$ US- 10448867-\$ US- 10463300-\$ US- 10466491-\$ US- 10466510-\$ US- 10469916-\$ US- 10473950-\$ US- 10561376-\$ US- 10613355-\$ US- 10617342-\$ US- 10624790-\$ US- 10649220-\$ US- 10663740-\$ US- 10678322-\$ US- 10684478-\$ US- 10684687-\$ US- 10686972-\$ US- 10690936-\$ US- 10722128-\$ US- 10742965-\$ US- 10777048-\$ US- 10824253-\$ US- 10831316-\$ US- 10853589-\$ US- 10908421-\$ US- 10997943-\$ US- 11042045-\$ US- 11061252-\$ US- 11086147-\$ US- 11115074-\$ US- 11137626-\$ US- 11138301-\$ US- 11156856-\$ US- 11204512-\$ US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 12:37 PM
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L2774	156	2773 AND 54	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 12:40 PM
L2776	98	2773 AND 58	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,	OR	ON	ON	2024/09/04 12:41 PM

L2779	57	2773 AND 61	HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 12:41 PM
L2781	31	2773 AND 65	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 12:41 PM
L2782	18	2773 AND 49	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2024/09/04 12:42 PM

L2784	50	(Artificial Intelligence) Similar to: 18/597,874 with 0 CPC Selections and 0 Text Selections Text: (US-20170131575-A1 OR US-20210364827- A9 OR US- 20190187492-A1 OR US-20170146829-A1 OR US-20230273464- A1 OR US- 20240036361-A1 OR US-11921355-B2 OR US-20230359266-A1 OR US-20130201440- A1 OR US- 20110187990-A1 OR US-9690121-B2 OR US-8500271-B2 OR US-20120133885-A1 OR US-20150253590- A1 OR US- 20170090219-A1 OR US-8905542-B2 OR US-20180335650-A1 OR US-20210364828- A1 OR US-11243416- B2 OR US-10061144- B2 OR US- 20130308089-A1 OR US-20150085245-A1 OR US-20220357599- A1 OR US- 20230017635-A1 OR US-20070046887-A1 OR US-7922321-B2 OR US-20230408850-A1 OR US-20200012127- A1 OR US-9547184-B2 OR US-7581833-B2 OR US-8465151-B2 OR US-11829518-B1 OR US-11733549-B2 OR US-20220260859-A1 OR US-9033493-B2 OR US-11086147-B2 OR US-8109629-B2 OR US-10330956-B2 OR US-20050264752-A1 OR US-11762224-B2 OR US-11513371-B2 OR US-20240094800- A1 OR EP-3134825-B1 OR US-20050078274-	IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/09/04 01:05 PM
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L2785	44	A1 OR US-20190278110-A1 OR US-20200218094-A1 OR US-20190285913-A1 OR US-20220011603-A1 OR US-11536988-B2 OR US-20230236444-A1).did. (Artificial Intelligence) Similar to: 18/597,874 with 0 CPC Selections and 3 Text Selections Text: (US-11921355-B2 OR US-20240036361-A1 OR US-20230273464-A1 OR US-20210314698-A1 OR JP-20220108194-A5 OR US-20180239413-A1 OR US-20170045928-A1 OR CN-108472686-B OR EP-3566468-B1 OR US-20170180863-A1 OR US-10146262-B1 OR US-10495885-B2 OR US-11829518-B1 OR US-20190064750-A1 OR US-20170322416-A1 OR EP-3345142-A1 OR WO-2017040397-A1 OR US-20170131575-A1 OR CA-2997538-A1 OR EP-3320832-A1 OR US-20160282628-A1 OR US-20180132031-A1 OR WO-2023194827-A1 OR US-20180113524-A1 OR US-20220361787-A1 OR AU-2016316932-B2 OR US-20180253159-A1 OR US-20180113504-A1 OR US-20180113590-A1 OR US-20220313089-A1 OR EP-3242153-A1 OR US-20210096372-A1 OR US-9690121-B2 OR US-10338394-B2 OR EP-3998946-A1 OR WO-2021016094-A1	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/09/04 01:05 PM
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L2786	49	OR US-9977483-B2 OR US-20210364827-A9 OR US-20190187492-A1 OR EP-3625976-A1 OR WO-2018210974-A1 OR EP-2929405-A2 OR WO-2014089074-A2 OR US-10694299-B2 OR US-11778428-B2 OR US-20230127100-A1 OR JP-2020184692-A OR US-11144125-B2 OR US-20180185665-A1 OR WO-2021224497-A1).did. (Artificial Intelligence) Similar to: 18/597,874 with 2 CPC Selections and 3 Text Selections Text: (US-20240036361-A1 OR US-11921355-B2 OR US-20230273464-A1 OR US-20210314698-A1 OR US-11829518-B1 OR US-20170131575-A1 OR US-9690121-B2 OR US-20190187492-A1 OR US-20210364827-A9 OR US-20230359266-A1 OR US-20170146829-A1 OR US-20230412967-A1 OR US-20220167077-A1 OR WO-2022109190-A1 OR US-11653140-B2 OR US-20220011603-A1 OR JP-2023538681-A OR WO-2021222214-A1 OR EP-4144099-A1 OR US-20150253590-A1 OR US-10330956-B2 OR US-20210341762-A1 OR US-11086147-B2 OR US-11762224-B2 OR US-9033493-B2 OR US-20210364828-A1 OR US-20220260859-A1 OR US-8109629-B2 OR US-11733549-B2 OR US-8465151-B2 OR US-20230408850-A1	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/09/04 01:05 PM
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L2787	49	OR US-11500227-B2 OR US-20120133885-A1 OR US-20150085245-A1 OR US-20130201440-A1 OR US-20130308089-A1 OR US-20110187990-A1 OR US-20170090219-A1 OR US-20180335650-A1 OR US-20050264752-A1 OR US-7581833-B2 OR US-20070046887-A1 OR CN-108472686-B OR US-7922321-B2 OR EP-3242153-A1 OR US-20190364352-A1 OR US-10531173-B2 OR US-10338394-B2 OR EP-3320832-A1 OR US-11204512-B2).did. (Artificial Intelligence) Similar to: 18/597,874 with 2 CPC Selections and 3 Text Selections Text: (US-20240036361-A1 OR US-11921355-B2 OR US-20230273464-A1 OR US-20170131575-A1 OR US-9690121-B2 OR US-20210364827-A9 OR US-20190187492-A1 OR US-20170146829-A1 OR US-11829518-B1 OR US-20210314698-A1 OR US-20230359266-A1 OR US-20150253590-A1 OR US-20160370606-A1 OR CN-113330355-A OR US-8465151-B2 OR US-20220260859-A1 OR US-11733549-B2 OR US-10025119-B2 OR US-10330956-B2 OR US-20120133885-A1 OR US-20180143451-A1 OR US-11086147-B2 OR US-20230408850-A1 OR US-9033493-B2 OR US-20130201440-A1	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/09/04 01:05 PM
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L2788	48	OR US-20210364828-A1 OR US-11762224-B2 OR US-8109629-B2 OR US-9897822-B2 OR US-20150346511-A1 OR US-20070046887-A1 OR US-7581833-B2 OR US-9158116-B1 OR US-20150309317-A1 OR WO-2016205601-A1 OR CN-113454521-A OR US-9423842-B2 OR WO-2021222214-A1 OR EP-4144099-A1 OR US-20210341762-A1 OR US-20230412967-A1 OR US-11500227-B2 OR US-20160085278-A1 OR US-20200249733-A1 OR US-20220167077-A1 OR CN-114222941-A OR WO-2022109190-A1 OR US-20170031395-A1 OR US-20150309534-A1 OR WO-2015031107-A1).did. (Artificial Intelligence) Similar to: 18/597,874 with 4 CPC Selections and 3 Text Selections Text: (US-20240036361-A1 OR US-11921355-B2 OR US-20230273464-A1 OR US-20170131575-A1 OR US-9690121-B2 OR US-20190187492-A1 OR US-20210364827-A9 OR US-20170146829-A1 OR US-11829518-B1 OR US-20210314698-A1 OR US-20230359266-A1 OR US-20150253590-A1 OR US-10330956-B2 OR US-11086147-B2 OR US-11762224-B2 OR US-9033493-B2 OR US-20220260859-A1 OR US-11733549-B2 OR US-8109629-B2 OR	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/09/04 01:05 PM
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L2789	47	US-20210364828-A1 OR US-20230408850-A1 OR US-8465151-B2 OR US-20120133885-A1 OR US-20130201440-A1 OR US-7581833-B2 OR US-20070046887-A1 OR US-20230412967-A1 OR US-20220167077-A1 OR WO-2022109190-A1 OR US-11653140-B2 OR WO-2021222214-A1 OR US-20160370606-A1 OR EP-4144099-A1 OR US-20180143451-A1 OR CN-113330355-A OR US-20220011603-A1 OR US-9897822-B2 OR US-10025119-B2 OR US-20210341762-A1 OR US-9158116-B1 OR US-20150346511-A1 OR DE-202022101915-U1 OR US-20150309317-A1 OR US-11500227-B2 OR US-20240094800-A1 OR US-20110187990-A1 OR US-7806525-B2 OR WO-2021254359-A1 OR US-11668958-B2 OR JP-2023538681-A).did. (Artificial Intelligence) Similar to: 18/597,874 with 6 CPC Selections and 3 Text Selections Text: (US-20240036361-A1 OR US-11921355-B2 OR US-20170131575-A1 OR US-20230273464-A1 OR US-9690121-B2 OR US-20210364827-A9 OR US-20190187492-A1 OR US-20170146829-A1 OR US-20150253590-A1 OR US-10330956-B2 OR US-11762224-B2 OR US-11086147-B2	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/09/04 01:05 PM
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L2790	317	OR US-8109629-B2 OR US-20210364828-A1 OR US-9033493-B2 OR US-20120133885-A1 OR US-20230408850- A1 OR US-11733549- B2 OR US- 20220260859-A1 OR US-20130201440-A1 OR US-8465151-B2 OR CN-113330355-A OR US-11829518-B1 OR US-7581833-B2 OR US-20070046887-A1 OR US-20210314698- A1 OR US- 20230359266-A1 OR WO-2021222214-A1 OR EP-4144099-A1 OR DE-202022101915-U1 OR US-20210341762- A1 OR US- 20190204617-A1 OR US-11500227-B2 OR FR-3126050-A3 OR ES-1289195-U OR CA- 3149165-A1 OR US- 11849273-B2 OR GB- 2609686-A OR NL- 2031025-A OR NL- 2031025-B1 OR US- 20230040338-A1 OR CH-718869-A2 OR US- 20210191159-A1 OR JP-3237752-U OR US- 11668958-B2 OR KR- 20210080253-A OR AT-525342-B1 OR US- 20220113562-A1 OR DE-102020102281-A1 OR CA-3103299- A1).did. (US-20040029582-\$ US-20040059212-\$ US-20040063378-\$ US-20040096078-\$ US-20040100384-\$ US-20040101178-\$ US-20040128737-\$ US-20040150986-\$ US-20040156012-\$ US-20040157649-\$ US-20040160571-\$ US-20040160572-\$ US-20040160573-\$ US-20040197002-\$ US-20040227219-\$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2024/09/04 01:17 PM
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L2792	283	20150253590-\$ US- 20160246075-\$ US- 20160302992-\$ US- 20170068117-\$ US- 20170074721-\$ US- 20170090219-\$ US- 20170131575-\$ US- 20170146829-\$ US- 20170303187-\$ US- 20180314079-\$ US- 20180335650-\$ US- 20180348050-\$ US- 20190033623-\$ US- 20190187492-\$ US- 20190272800-\$ US- 20190278110-\$ US- 20190285913-\$).DID. (US-20010005230-\$ US-20010028309-\$ US-20010050754-\$ US-20020017997-\$ US-20020021407-\$ US-20020081982-\$ US-20020084990-\$ US-20020089639-\$ US-20020090103-\$ US-20020098877-\$ US-20020101568-\$ US-20020109600-\$ US-20020140899-\$ US-20020159023-\$ US-20020197961-\$ US-20030018274-\$ US-20030022690-\$ US-20030032449-\$ US-20030062046-\$ US-20030065257-\$ US-20030067585-\$ US-20030068057-\$ US-20030083591-\$ US-20030214630-\$ US-20030226978-\$ US-20030231293-\$ US-20040000733-\$ US-20040029582-\$ US-20040059212-\$ US-20040063378-\$ US-20040096078-\$ US-20040100384-\$ US-20040101178-\$ US-20040128737-\$ US-20040150986-\$ US-20040156012-\$ US-20040157649-\$ US-20040160571-\$ US-20040160572-\$ US-20040160573-\$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:17 PM
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L2793	211	(US-3192826-\$ US-3216308-\$ US-3229580-\$ US-3524710-\$ US-3610825-\$ US-3787109-\$ US-3885095-\$ US-3915548-\$ US-3923370-\$ US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO,	OR	ON	ON	2024/09/04 01:17 PM

		3936605-\$ US- 3940204-\$ US- 4052073-\$ US- 4082432-\$ US- 4195915-\$ US- 4218111-\$ US- 4447128-\$ US- 4550984-\$ US- 4649434-\$ US- 4664475-\$ US- 4665385-\$ US- 4722601-\$ US- 4751691-\$ US- 4753514-\$ US- 4799765-\$ US- 4806001-\$ US- 4806011-\$ US- 4818048-\$ US- 4826287-\$ US- 4852988-\$ US- 4853306-\$ US- 4867551-\$ US- 4869575-\$ US- 4884137-\$ US- 4961626-\$ US- 4968117-\$ US- 4973132-\$ US- 4973139-\$ US- 4988183-\$ US- 5003300-\$ US- 5013134-\$ US- 5028119-\$ US- 5044709-\$ US- 5050962-\$ US- 5053755-\$ US- 5129716-\$ US- 5138470-\$ US- 5162828-\$ US- 5212471-\$ US- 5214425-\$ US- 5231379-\$ US- 5281957-\$ US- 5281960-\$ US- 5309169-\$ US- 5320538-\$ US- 5325386-\$ US- 5334991-\$ US- 5348477-\$ US- 5359669-\$ US- 5367345-\$ US- 5369415-\$ US- 5381267-\$ US- 5384654-\$ US- 5392158-\$ US- 5416876-\$ US- 5446507-\$ US- 5455591-\$ US- 5459612-\$ US-	MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
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L2794	125	5469185-\$ US- 5491510-\$ US- 5506728-\$ US- 5519410-\$ US- 5537253-\$ US- 5539578-\$ US- 5576887-\$ US- 5579148-\$ US- 5583590-\$ US- 5585871-\$ US- 5589846-\$ US- 5596451-\$ US- 5606743-\$ US- 5610765-\$ US- 5626410-\$ US- 5629790-\$ US- 5648789-\$ US- 5653751-\$ US- 5654827-\$ US- 5654828-\$ US- 5671037-\$ US- 5673139-\$ US- 5682173-\$ US- 5699194-\$ US- 5712649-\$ US- 5717479-\$ US- 5719588-\$ US- 5744788-\$ US- 5751493-\$ US- 5808589-\$ US- 5815326-\$ US- 5886822-\$ US- 5943171-\$ US- 5973845-\$ US- 5991103-\$ US- 6005720-\$ US- 6023372-\$ US- 6081304-\$ US- 6091546-\$ US- D195365-\$ US- RE28847-\$).DID. (US-10042186-\$ US- 10222617-\$ US- 10345625-\$ US- 10613355-\$ US- 10624790-\$ US- 10777048-\$ US- 11061252-\$ US- 12003393-\$ US- 20040160572-\$ US- 20090097688-\$ US- 20090296044-\$ US- 20100177277-\$ US- 20100265456-\$ US- 20110080556-\$ US- 20110102734-\$ US- 20110109873-\$ US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:17 PM
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L2795	156	20120002159-\$ US- 20130010256-\$ US- 20160109729-\$ US- 20170068117-\$ US- 20190126060-\$ US- 20200004050-\$ US- 3042548-\$ US- 3683168-\$ US- 3923384-\$ US- 4447504-\$ US- 4449799-\$ US- 4618226-\$ US- 4675259-\$ US- 4756605-\$ US- 4770954-\$ US- 4883728-\$ US- 4977899-\$ US- 5007726-\$ US- 5142406-\$ US- 5455637-\$ US- 5455638-\$ US- 5835185-\$ US- 5900720-\$ US- 5933496-\$ US- 6099117-\$ US- 6325507-\$ US- 64764696-\$ US- 6552511-\$ US- 7150526-\$ US- 7339353-\$ US- 7461936-\$ US- 8337013-\$ US- 8465151-\$ US- 8500271-\$ US- 8770742-\$ US- 8787970-\$ US- 8801174-\$ US- 8876285-\$ US- 8905541-\$ US- 8944590-\$ US- 9192772-\$ US- 9207515-\$ US- 9274395-\$ US- 9405135-\$ US- 9470909-\$ US- 9482880-\$ US- 9619201-\$ US- 9632059-\$ US- 9720258-\$ US- 9720260-\$).DID. (US-20020098877-\$ US-20020118825-\$ US-20020176330-\$ US-20030003969-\$ US-20030022690-\$ US-20030067585-\$ US-20030068057-\$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS,	OR	ON	ON	2024/09/04 01:17 PM
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		US-20040000733-\$ US-20040132509-\$ US-20040156012-\$ US-20040157649-\$ US-20040160572-\$ US-20040160573-\$ US-20040239874-\$ US-20050046789-\$ US-20050046790-\$ US-20050128431-\$ US-20050185815-\$ US-20060183427-\$ US-2424935-\$ US- 2856466-\$ US- 2882348-\$ US- 2999136-\$ US- 3104290-\$ US- 3119903-\$ US- 3495898-\$ US- 3588384-\$ US- 3665122-\$ US- 3769663-\$ US- 3883701-\$ US- 4636048-\$ US- 4683587-\$ US- 4856086-\$ US- 4882769-\$ US- 4902120-\$ US- 4904078-\$ US- 5020150-\$ US- 5159639-\$ US- 5327178-\$ US- 5335285-\$ US- 5367345-\$ US- 5533130-\$ US- 5579400-\$ US- 5606743-\$ US- 5608808-\$ US- 5634201-\$ US- 5694475-\$ US- 5715323-\$ US- 5717479-\$ US- 5737436-\$ US- 5781272-\$ US- 5892564-\$ US- 5988812-\$ US- 6010216-\$ US- 6012812-\$ US- 6176576-\$ US- 6218958-\$ US- 6233344-\$ US- 6233345-\$ US- 6252970-\$ US- 6301050-\$ US- 6301367-\$ US- 6311155-\$ US- 6325507-\$ US- 6349001-\$ US-	IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
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L2796	93	6356392-\$ US- 6384982-\$ US- 6392798-\$ US- 6409338-\$ US- 6421031-\$ US- 6456721-\$ US- 6490362-\$ US- 6690807-\$ US- 6729726-\$ US- 6769767-\$ US- 6929365-\$ US- 6966647-\$ US- 7004582-\$ US- 7013009-\$ US- D207919-\$ US- D212863-\$ US- D418153-\$ US- D426845-\$ US- D435058-\$ US- D445416-\$ US- D462708-\$ US- RE35051-\$).DID. (US-20010035242-\$ US-20020072387-\$ US-20020193151-\$ US-20030036414-\$ US-20030040285-\$ US-20030042348-\$ US-20030108217-\$ US-20030182003-\$ US-20040077382-\$ US-20040204165-\$ US-20050078274-\$ US-20050128431-\$ US-20050201585-\$ US-20050220316-\$ US-20050248717-\$ US-20050255883-\$ US-20050255898-\$ US-20060013410-\$ US-20060023158-\$ US-20060093178-\$ US-20060153409-\$ US-20060177086-\$ US-20060185062-\$ US-20060251283-\$ US-20070064969-\$ US-20090175482-\$ US-2249572-\$ US- 3528734-\$ US- 4456797-\$ US- 4902120-\$ US- 4942617-\$ US- 5034995-\$ US- 5164987-\$ US- 5422957-\$ US- 5608808-\$ US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:17 PM
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L2797	887	5715323-\$ US- 5737436-\$ US- 5881160-\$ US- 6095820-\$ US- 6097822-\$ US- 6176576-\$ US- 6633770-\$ US- 6643528-\$ US- 6690808-\$ US- 6920228-\$ US- 7519192-\$ US- 7702122-\$ US- D533539-\$).DID. 2790 2791 2792 2793 2794 2795 2796	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:18 PM
L2798	140	2797 AND 54	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:18 PM
L2799	80	2797 AND 58	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK,	OR	ON	ON	2024/09/04 01:18 PM

L2800	44	2797 AND 61	TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:19 PM
L2801	19	2797 AND 65	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:19 PM
L2802	1	2797 AND 49	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:19 PM
L2803	30	"20050201585"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2024/09/04 01:36 PM

L2804	46	"20050264752"	CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:36 PM
L2805	13	"2005167902"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:36 PM
L2806	20	"20050278446"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN,	OR	ON	ON	2024/09/04 01:36 PM

L2807	7	"20050052537"	WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	2024/09/04 01:36 PM
L2808	23	"2005086522"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:36 PM
L2809	16	"20050090295"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:36 PM
L2810	27	(Artificial Intelligence) More like doc: US-20020140899-A1 Text: (US-6871951-B2 OR US-20050270481-A1 OR WO-02057836-A1	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS,	OR	ON	ON	2024/09/04 01:39 PM

L2811	35	OR EP-1358517-A1 OR EP-1358517-A4 OR CA-2433338-A1 OR AU-2002330292-A1 OR US-7475984-B2 OR US-20090195749-A1 OR CA-2650681-A1 OR EP-2063311-A1 OR AU-2002330292-B2 OR US-20030058406-A1 OR US-6733130-B2 OR US-20060238701-A1 OR US-20070091258-A1 OR US-20050206844-A1 OR US-6491394-B1 OR US-7077519-B2 OR US-6491391-B1).did. (Artificial Intelligence) More like doc: US-20130329183-A1 Text: (WO-2013188343-A9 OR EP-2859405-A1 OR WO-2013188343-A1 OR TW-201415113-A OR JP-2015522841-A OR JP-6158317-B2 OR AR-091410-A1 OR WO-2017221247-A1 OR GB-2472120-A OR EP-2859405-A4 OR CN-104914578-A OR EP-2927735-B1 OR EP-2927735-A2 OR CN-104914578-B OR EP-2927735-A3 OR US-20220163806-A1 OR US-20240205614-A1 OR WO-2022219405-A1 OR US-20150261015-A1 OR EP-3469462-A1).did.	IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:40 PM
L2812	45	(Artificial Intelligence) More like doc: US-20050052537-A1 Text: (JP-2005086522-A OR JP-2009049584-A OR JP-4433015-B2 OR US-20060056830-A1 OR US-7499635-B2 OR JP-2017068184-A OR JP-2017068175-A OR JP-3843035-B2 OR US-7525596-B2 OR US-20140071301-A1 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO;	OR	ON	ON	2024/09/04 01:40 PM

L2813	38	US-20050057685-A1 OR JP-3906586-B2 OR US-7625143-B2 OR JP-2006243656-A OR US-20060055787-A1 OR WO-2014140834-A1 OR US-20140267642-A1 OR WO-2014140830-A1 OR KR-101665510-B1 OR US-7576778-B2).did. (Artificial Intelligence) More like doc: US-20030030597-A1 Text: (US-20050078378-A1 OR US-7145726-B2 OR US-6771423-B2 OR US-20030184868-A1 OR US-5642221-A OR EP-3134763-B1 OR EP-3134763-A1 OR WO-2016032653-A1 OR US-20160062120-A1 OR US-9285591-B1 OR WO-03023756-A1 OR EP-1433160-A1 OR US-20040113867-A1 OR US-20030090439-A1 OR CN-105793764-B OR CN-105793764-A OR EP-3525033-A1 OR EP-3525033-B1 OR JP-2021086141-A OR WO-2016195906-A1).did.	JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:40 PM
L2814	45	(Artificial Intelligence) More like doc: US-20140049831-A1 Text: (EP-2698662-A1 OR US-9239462-B2 OR JP-2014038239-A OR JP-6069946-B2 OR CN-103592762-A OR JP-2014191007-A OR JP-6065694-B2 OR JP-2014228817-A OR US-20160252726-A1 OR JP-2015014628-A OR JP-2013250537-A OR JP-2015031776-A OR US-20140184477-A1 OR WO-2015140859-A1 OR JP-2014186235-A OR US-9229236-B2 OR JP-WO2015140859-A1 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:40 PM

L2815	35	JP-6450944-B2 OR CN-105899997-B OR CN-105899997-A).did. (Artificial Intelligence) More like doc: US-20240036361-A1 Text: (US-12044901-B2 OR US-9690121-B2 OR US-9033493-B2 OR US-20170146829-A1 OR US-20170131575-A1 OR US- 20100309426-A1 OR US-20210364827-A9 OR US-20190187492-A1 OR US-8465151-B2 OR US-11762224-B2 OR US-20090296044-A1 OR US-11536988-B2 OR US-12025855-B2 OR US-8109629-B2 OR US-20230408850-A1 OR US- 20130201440-A1 OR US-11733549-B2 OR US-20070046887-A1 OR US-10330956-B2 OR US-20220260859-A1).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:41 PM
L2816	31	(Artificial Intelligence) More like doc: US-20230273464-A1 Text: (US-20220357599-A1 OR US-20230017635-A1 OR US- 20200218094-A1 OR US-20220011603-A1 OR US-12025855-B2 OR US-11644693-B2 OR US-20230236444-A1 OR US- 20190278110-A1 OR US-11536988-B2 OR US-11803069-B2 OR US-20120050668-A1 OR US-20140268008-A1 OR US- 20160246075-A9 OR US-11921355-B2 OR US-20230359266-A1 OR US-11829518-B1 OR US-20240094800-A1 OR US-11630331-B2 OR US-12001599-B2 OR US-8430507-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:41 PM

L2818	6	B2).did. "20240036361"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:42 PM
L2819	11	"20230017635"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:43 PM
L2820	26	"20200012127"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:43 PM
L2821	73	"20170289323"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS,	OR	ON	ON	2024/09/04 01:44 PM

L2823	17	"20140049831"	IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:45 PM
L2825	17	"20130329183"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/09/04 01:45 PM
L2826	50	"20120050668"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO))	OR	ON	ON	2024/09/04 01:46 PM
L2827	97	(US-0005069-\$ US-	(US-PGPUB; USPAT;	OR	ON	ON	2024/09/04

		0017634-\$ US- 0033660-\$ US- 0044416-\$ US- 0045928-\$ US- 0057654-\$ US- 0064746-\$ US- 0091200-\$ US- 0114770-\$ US- 0136414-\$ US- 0189548-\$ US- 02511706-\$ US- 0283894-\$ US- 0291667-\$ US- 0292333-\$ US- 0357599-\$ US- 0379425-\$ US- 0415388-\$ US- 10802582-\$ US- 11513371-\$ US- 11536988-\$ US- 11630331-\$ US- 11644361-\$ US- 11644693-\$ US- 2725462-\$ US- 20020136414-\$ US- 20030064746-\$ US- 20030091200-\$ US- 20040005069-\$ US- 20040114770-\$ US- 20060291667-\$ US- 20070189548-\$ US- 20100045928-\$ US- 20110292333-\$ US- 20120283894-\$ US- 20210379425-\$ US- 20220357599-\$ US- 20220415388-\$ US- 20230017634-\$ US- 20230033660-\$ US- 20230057654-\$ US- 3104290-\$ US- 3119903-\$ US- 5519781-\$ US- 5819183-\$ US- 6311155-\$ US- 6678381-\$ US- 7801570-\$ US- 8582789-\$ US- 8849185-\$).DID.	USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				01:53 PM
L2828	78	(US-10359459-\$ US- 10624790-\$ US- 10777048-\$ US- 20030231293-\$ US- 20040059212-\$ US- 20040101178-\$ US- 20060034478-\$ US- 20070035830-\$ US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV,	OR	ON	ON	2024/09/04 01:53 PM

L2829	75	20080100792-\$ US- 20090073375-\$ US- 20090141233-\$ US- 20120033061-\$ US- 20130072828-\$ US- 20130148519-\$ US- 20140132913-\$ US- 20160302992-\$ US- 20170074721-\$ US- 20170090219-\$ US- 20170131575-\$ US- 20170146829-\$ US- 20170303187-\$ US- 20190272800-\$ US- 20190278110-\$ US- 20190285913-\$ US- 20190310132-\$ US- 20190318589-\$ US- 20190387351-\$ US- 20200012127-\$ US- 20200364992-\$ US- 3858001-\$ US- 4904078-\$ US- 5455637-\$ US- 5541641-\$ US- 5923398-\$ US- 6091546-\$ US- 6788309-\$ US- 6816314-\$ US- 6857741-\$ US- 7023594-\$ US- 7517083-\$).DID.	MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
		(AU-2005259090-\$ CA-2388872-\$ CN- 1110465-\$ CN- 214896080-\$ DE- 69800345-\$ EP- 1156572-\$ EP- 2082281-\$ EP- 3306380-\$ JP- 2001183620-\$ JP- 2002027680-\$ JP- 2002218669-\$ JP- 2003017020-\$ JP- 2020027271-\$ JP- 6742059-\$ KR- 100238065-\$ KR- 100720019-\$ KR- 20010078034-\$ KR- 200165484-\$ KR- 200250874-\$ KR- 200262295-\$ NZ- 527050-\$ WO- 2001035159-\$ WO- 2002054135-\$ WO- 2009062381-\$ WO- 2010010204-\$ WO-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:53 PM

L2830	65	2019011925-\$).DID. (US-7517083-\$ US-7527374-\$ US-7543934-\$ US-7581833-\$ US-7621634-\$ US-7648236-\$ US-7677723-\$ US-7760898-\$ US-7771046-\$ US-7792552-\$ US-7806525-\$ US-7922321-\$ US-7976159-\$ US-8109629-\$ US-8142015-\$ US-8174569-\$ US-8337013-\$ US-8430507-\$ US-8434863-\$ US-8465151-\$ US-8485661-\$ US-8500271-\$ US-8770742-\$ US-8905542-\$ US-9033493-\$ US-9244292-\$ US-9400390-\$ US-9405135-\$ US-9488520-\$ US-9547184-\$ US-9690121-\$ US-D369167-\$).DID.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:53 PM
L2831	43	(US-0045283-\$ US-0090295-\$ US-0359266-\$ US-0408850-\$ US-11480802-\$ US-11803069-\$ US-11829518-\$ US-20030045283-\$ US-20050090295-\$ US-20230359266-\$ US-20230408850-\$ US-5790311-\$ US-7430299-\$ US-7787647-\$ US-8009849-\$ US-8175886-\$ US-8251875-\$ US-8571241-\$ US-8620208-\$ US-8626246-\$ US-9183351-\$ US-9369814-\$).DID.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:53 PM
L2832	40	(US-7976159-\$ US-8109629-\$ US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP,	OR	ON	ON	2024/09/04 01:53 PM

		8142015-\$ US- 8174569-\$ US- 8337013-\$ US- 8430507-\$ US- 8434863-\$ US- 8465151-\$ US- 8485661-\$ US- 8500271-\$ US- 8770742-\$ US- 8905542-\$ US- 9033493-\$ US- 9244292-\$ US- 9400390-\$ US- 9405135-\$ US- 9488520-\$ US- 9547184-\$ US- 9690121-\$).DID.	AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L2833	33	(US-0063763-\$ US- 0117121-\$ US- 0146097-\$ US- 0260859-\$ US- 0273464-\$ US- 0399691-\$ US- 0415338-\$ US- 11721183-\$ US- 11733549-\$ US- 11762224-\$ US- 20020146097-\$ US- 20030063763-\$ US- 20190117121-\$ US- 20210399691-\$ US- 20220260859-\$ US- 20220415338-\$ US- 20230273464-\$).DID.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:53 PM
L2834	24	(US-0026146-\$ US- 0036103-\$ US- 0089545-\$ US- 0122208-\$ US- 0178743-\$ US- 10571715-\$ US- 11326941-\$ US- 20050036103-\$ US- 20080089545-\$ US- 20180122208-\$ US- 20210026146-\$ US- 20220178743-\$).DID.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:53 PM
L2835	20	(US-11086147-\$ US- 11204512-\$ US- 20050278446-\$ US- 20080211921-\$ US- 20120062357-\$ US- 20190033622-\$ US- 20210271116-\$ US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS,	OR	ON	ON	2024/09/04 01:53 PM

L2836	40	20210364827-\$ US- 20210364828-\$ US- 9922236-\$).DID. (US-0011603-\$ US- 0054092-\$ US- 0104864-\$ US- 0172691-\$ US- 0226838-\$ US- 0369402-\$ US- 11243416-\$ US- 20040104864-\$ US- 20130172691-\$ US- 20140226838-\$ US- 20190369402-\$ US- 20220011603-\$ US- 20220054092-\$ US- 5144344-\$ US- 5475798-\$ US- 5777715-\$ US- 6301050-\$ US- 6346929-\$ US- 6717737-\$ US- 6771423-\$).DID.	IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:53 PM
L2837	16	(US-11042045-\$ US- 11086147-\$ US- 20050278446-\$ US- 20070248238-\$ US- 20080211921-\$ US- 20120062357-\$ US- 20210271116-\$ US- 9922236-\$).DID.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:53 PM
L2838	13	(US-9880441-\$ US- 9882992-\$ US- 9910298-\$ US- 9922236-\$ US- 9939934-\$ US- 9952883-\$ US- 9965681-\$).DID.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK,	OR	ON	ON	2024/09/04 01:53 PM

L2839	10	(EP-1027626-\$ EP-2290433-\$).DID.	TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:53 PM
L2840	9	("20070211574" "20190378493" "20020044416" "200124576").DID.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:53 PM
L2841	498	2827 2828 2829 2830 2831 2832 2833 2834 2835 2836 2837 2838 2839 2840	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:54 PM
L2842	96	2841 AND 54	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2024/09/04 01:55 PM

			CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L2844	63	2841 AND 59	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:55 PM
L2846	28	2841 AND 65	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:55 PM
L2847	7	2841 AND 49	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:56 PM

L2848	1	2841 AND 52	VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:56 PM
L2849	29	"20090296044"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:59 PM
L2850	31	"20070046887"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 01:59 PM
L2852	25	"20070248238"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	OR	ON	ON	2024/09/04 02:00 PM

L2853	21	"20040160573"	EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 02:00 PM
L2854	31	"20040000733"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 02:00 PM
L2855	24	"20030063763"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO;	OR	ON	ON	2024/09/04 02:00 PM

L2856	18	"20030045283"	JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 02:01 PM
L2859	131	"20030030597"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 02:01 PM
L2860	23	"20020146097"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 02:02 PM
L2861	26	"20020140899"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,	OR	ON	ON	2024/09/04 02:02 PM

L2862	42	(Artificial Intelligence) More like doc: US-20030045283-A1 Text: (WO-2023130105-A1 OR DK-2153693-T3 OR AU-2008261403-A1 OR AU-2008261403-B2 OR CA-2689257-A1 OR EP-2153693-A1 OR DE-102006049213-B4 OR US-8300864-B2 OR US-20090296967-A1 OR US-20080123865- A1 OR EP-1643802-A2 OR CN-101682824-A OR DE-102004047759- B3 OR EP-1643801-A2 OR AU-2009231433-A1 OR EP-2107825-A1 OR EP-1915031-A2 OR DE-102006049213-A1 OR CN-101175342-B OR CN-101175342- A).did.	HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 02:03 PM
L2863	39	(Artificial Intelligence) More like doc: US-20050090295-A1 Text: (WO-2005036922-A1 OR EP-1673960-A4 OR EP-1673960-A1 OR CA-2542622-A1 OR EP-1949370-A1 OR WO-2007019702-A1 OR US-20070041589- A1 OR CA-2619268-A1 OR EP-1251715-B1 OR EP-1251715-B2 OR US-8121323-B2 OR US-7647077-B2 OR US-20030012392-A1 OR EP-1251715-A2 OR US-20070127752-A1 OR US-7181034-B2 OR CA-2382362-C OR US- 20110136537-A1 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 02:03 PM

L2864	22	CA-2420989-C OR WO-2010006707-A1).did. (Artificial Intelligence) More like doc: US-20170289323-A1 Text: (US-8140658-B1 OR US-10757000-B2 OR US-20100201516-A1 OR US-20100148940-A1 OR US-20110035491-A1 OR US-20150046582-A1 OR US-8836503-B2 OR US-9628365-B2 OR US-7844687-B1 OR US-7797367-B1 OR US-8832244-B2 OR US-8812654-B2 OR US-7484008-B1 OR US-7891004-B1 OR US-8079118-B2 OR US-20110029644-A1 OR US-7904569-B1 OR US-8601595-B2 OR US-20120079149-A1 OR US-6859831-B1).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 02:03 PM
L2865	39	(Artificial Intelligence) More like doc: JP-2005167902-A Text: (JP-2007318476-A OR JP-4887907-B2 OR JP-2009157290-A OR US-8174569-B2 OR JP-2004120154-A OR US-20070291966-A1 OR US-20030090439-A1 OR WO-03023756-A1 OR EP-1433160-A1 OR JP-2006209144-A OR WO-2018186062-A1 OR US-20200053449-A1 OR JP-2002539498-A OR US-20120268433-A1 OR US-6356392-B1 OR US-6204974-B1 OR JP-4411547-B2 OR EP-1169663-A4 OR WO-0055676-A1 OR EP-1169663-A1).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 02:03 PM
L2866	33	(Artificial Intelligence) More like doc: US-20070046887-A1	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY,	OR	ON	ON	2024/09/04 02:04 PM

L2867	33	Text: (US-7581833-B2 OR US-20090296044-A1 OR US-20100309426-A1 OR US-8109629-B2 OR US-8465151-B2 OR US-20220260859-A1 OR US-20210364828-A1 OR US-20120133885-A1 OR US-20230408850-A1 OR US-20170146829-A1 OR US-20150253590-A1 OR US-20130201440-A1 OR US-20190033623-A1 OR US-20170131575-A1 OR US-20190187492-A1 OR US-20210364827-A9 OR US-9033493-B2 OR US-11086147-B2 OR US-10330956-B2 OR US-9690121-B2).did. (Artificial Intelligence) More like doc: US-20090296044-A1 Text: (US-8109629-B2 OR US-20070046887-A1 OR US-20210364828-A1 OR US-20220260859-A1 OR US-20120133885-A1 OR US-20230408850-A1 OR US-20100309426-A1 OR US-9033493-B2 OR US-20190033623-A1 OR US-10330956-B2 OR US-7581833-B2 OR US-20150253590-A1 OR US-20170146829-A1 OR US-20130201440-A1 OR US-8465151-B2 OR US-20190187492-A1 OR US-20210364827-A9 OR US-20170131575-A1 OR US-11086147-B2 OR US-9690121-B2).did.	CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 02:04 PM
L2868	30	(Artificial Intelligence) More like doc: US-20120050668-A1 Text:	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2024/09/04 02:04 PM

		(US-8430507-B2 OR US-20160246075-A9 OR US-20140268008-A1 OR US-11803069-B2 OR US-20070030442-A1 OR US-10345625-B2 OR US-20230236444-A1 OR US-7806525-B2 OR US-20190278110-A1 OR US-10310296-B2 OR US-7500747-B2 OR US-20230359266-A1 OR US-20140268013-A1 OR US-20170068117-A9 OR US-11829518-B1 OR US-20240094800-A1 OR US-20110102734-A1 OR US-11630331-B2 OR US-8434863-B2 OR US-12001599-B2).did.	CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L2869	55	"11204512"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 02:10 PM
L2870	39	"11243416"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 02:10 PM
L2871	69	"11183269"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP,	OR	ON	ON	2024/09/04 02:10 PM

L2872	29	"10628831"	AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 02:10 PM
L2873	72	"10310296"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 02:11 PM
L2874	37	"9122082"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO,	OR	ON	ON	2024/09/04 02:11 PM

L2875	172	"7278734"	RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 02:27 PM
L2876	239	"7192136"	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 02:27 PM
L2877	177	"7922321"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 02:27 PM
L2878	142	"7150526"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 02:27 PM
L2879	57	"6911172"	(US-PGPUB; USPAT;	OR	ON	ON	2024/09/04

L2880	610	"6349001"	USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	02:27 PM
L2881	114	"6771423"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 02:27 PM
L2882	123	"5835185"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 02:27 PM

L2883	129	"5671037"	NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/09/04 02:27 PM
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PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N1	13414	((("HOWELL") near3 ("Thomas")) OR ((("CHAO") near3 ("David")) OR ((("THOMAS") near3 ("C")) OR ((("TONG") near3 ("Peter")))).INV.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/05 01:06 PM
N2	143	((("HOWELL") near3 ("Thomas")) OR ((("CHAO") near3 ("David")) OR ((("THOMAS") near3 ("C")) OR ((("TONG") near3 ("Peter")))).INV. AND (eyewear\$4 OR glasses\$4 OR spetaci\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/05 01:06 PM
N3	129	((("HOWELL") near3 ("Thomas")) OR ((("CHAO") near3 ("David")) OR ((("THOMAS") near3 ("C")) OR ((("TONG")	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/05 01:06 PM

N4	125	near3 ("Peter"))).INV. AND (eyewear\$4 OR glasses\$4 OR spetaci\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) (((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David")) OR (("THOMAS") near3 ("C")) OR ("TONG") near3 ("Peter"))).INV. AND (eyewear\$4 OR glasses\$4 OR spetaci\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND (communicat\$4 near10 wireless\$4) AND (audio OR speak\$4) AND embed\$4	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/05 01:06 PM
N5	103	(((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David")) OR (("THOMAS") near3 ("C")) OR ("TONG") near3 ("Peter"))).INV. AND (eyewear\$4 OR glasses\$4 OR spetaci\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/05 01:06 PM
N379	91	(((("HOWELL") near3 ("Thomas")) OR (("CHAO") near3 ("David")) OR	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 11:10 AM

N380	91	("THOMAS") near3 ("C")) OR ("TONG") near3 ("Peter"))).INV. AND (eyewear\$4 OR glasses\$4 OR spectac\$4 OR eyegals\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second AND bridge	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 11:10 AM
N381	86	(((("HOWELL") near3 ("Thomas")) OR ("CHAO") near3 ("David")) OR ("THOMAS") near3 ("C")) OR ("TONG") near3 ("Peter"))).INV. AND (eyewear\$4 OR glasses\$4 OR spectac\$4 OR eyegals\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 11:10 AM

N382	857	AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second AND bridge AND partial\$4 ((eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND control\$4 AND (memor\$4 OR stor\$4)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 11:44 AM
N383	168	((eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 11:44 AM
N384	131	((eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND connect\$4).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 11:44 AM
N388	43	((eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 12:02 PM
N389	42	((eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND (temple SAME (speakers WITH audio))).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 12:02 PM
N390	14	((eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4)	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 12:02 PM

N391	9	AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 12:26 PM
N392	6	((eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 12:26 PM
N393	5	((eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4) AND embed\$4).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 12:26 PM
N394	4	((eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND (communicat\$4 near10 wireless\$4) AND (audio OR speak\$4) AND embed\$4).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 12:43 PM
N395	4	((eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND circuit AND	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 12:43 PM

N396	3	control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone).clm. ((eyewear\$4 OR glasses\$4 OR spetacI\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 12:43 PM
N397	0	((eyewear\$4 OR glasses\$4 OR spetacI\$4 OR eyegalss\$4) AND frame AND circuit AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second AND bridge AND partial\$4).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 01:06 PM
N398	0	((eyewear\$4 OR glasses\$4 OR spetacI\$4 OR eyegalss\$4) AND frame AND (circuit near10 board) AND control\$4 AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 01:06 PM

N399	0	AND right AND first AND second AND bridge AND partial\$4).clm. ((eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND (circuit near10 board) AND (electric\$4 WITH control\$4) AND (memor\$4 OR stor\$4) AND batter\$4 AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second AND bridge AND partial\$4).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 01:06 PM
N400	0	((eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND (circuit near10 board) AND (electric\$4 WITH control\$4) AND (memor\$4 OR stor\$4) AND (batter\$4 near10 rechargeable) AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second AND bridge AND partial\$4).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 01:38 PM
N401	0	((eyewear\$4 OR glasses\$4 OR spetac\$4 OR eyegalss\$4) AND frame AND (circuit near10 board) AND (electric\$4 WITH control\$4) AND (memor\$4 OR stor\$4) AND (batter\$4 near10 rechargeable) AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 01:38 PM

N404	0	embed\$4 AND microphone AND left AND right AND first AND second AND bridge AND partial\$4 AND impair\$4 AND compensat\$4 AND amplif\$6 AND customiz\$4).clm. ((eyewear\$4 OR glasses\$4 OR spetacl\$4 OR eyegalss\$4) AND frame AND (circuit near10 board) AND (electric\$4 WITH control\$4) AND (memor\$4 OR stor\$4) AND (batter\$4 near10 rechargeable) AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second AND bridge AND partial\$4 AND impair\$4 AND compensat\$4 AND (amplif\$6 WITH customiz\$4)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 01:57 PM
N405	0	((eyewear\$4 OR glasses\$4 OR spetacl\$4 OR eyegalss\$4) AND frame AND (circuit near10 board) AND (electric\$4 WITH control\$4) AND (memor\$4 OR stor\$4) AND (batter\$4 near10 rechargeable) AND connect\$4 AND communicat\$4 AND (audio OR speak\$4) AND wireless\$4 AND embed\$4 AND microphone AND left AND right AND first AND second AND bridge AND partial\$4 AND impair\$4 AND compensat\$4 AND (amplif\$6 WITH customiz\$4) AND (detect\$3 WITH infrared)).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2024/09/04 01:57 PM

PE2E SEARCH - Search History (Similarity Search)

Ref #	Sort and Retrieval Information	Text Selections	CPC Selections
L2784	Sort results by: Similarity to Application # 18/597,874 Retrieve results by: Application # 18/597,874	No selections	No selections
L2785	Sort results by: Similarity to Application # 18/597,874 Retrieve results by: Application # 18/597,874	(Abstract) Techniques for providing eyewear or other head-worn personal electronic apparatus with electrical components are disclosed. The electrical components can provide electrical technology to eyewear or other head-worn personal electronic apparatus without having to substantially compromise aesthetic design principles. The electrical components can be partially or completely internal to eyewear or other head-worn personal electronic apparatus. The electrical components can operate independently or together with other electrical components provided elsewhere. Apparatus for presenting after-market electrical components are also disclosed. (Claims) 1. A system, comprising: a head-worn personal electronic apparatus, including at least: a head-worn structure configured to be worn by a user; a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;	No selections

		a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure; a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric device being at least partially contained within the head-worn structure, wherein the received user input operating to at least alter operation of the head-worn electronic personal audio apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to	
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		enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and a charging apparatus having at least a charging connector, wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus. (Claims) 2. A head-worn personal electronic apparatus, comprising: a head-worn structure configured to be worn by a user; a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user;	
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L2786	Sort results by: Similarity to Application # 18/597,874 Retrieve results by: Application # 18/597,874	a second microphone at least partially contained within the head-worn structure; a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric device being at least partially contained within the head-worn structure, wherein the received user input operating to at least alter operation of the head-worn electronic personal audio apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; and wireless communication circuitry at least partially contained within the head-worn structure. (Abstract) Techniques for providing eyewear or other head-worn personal electronic apparatus with electrical components are disclosed. The electrical components can provide electrical technology to eyewear or other head-worn personal electronic apparatus without having to substantially compromise aesthetic design principles. The electrical components can be partially or completely internal to eyewear or other head-worn personal electronic apparatus. The electrical components can operate independently or together with other electrical components provided elsewhere. Apparatus for presenting after-market electrical components are also disclosed.	(G02C11/10) Electronic devices other than hearing aids (G02C11/06) Hearing aids
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		(Claims) 1. A system, comprising: a head-worn personal electronic apparatus, including at least: a head-worn structure configured to be worn by a user; a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure; a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric device being at least partially contained within the head-worn structure, wherein the received user input operating to at least alter operation of the head-worn electronic personal audio apparatus; a rechargeable battery contained within the head-worn structure;	
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		electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and a charging apparatus having at least a charging connector, wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus. (Claims) 2. A head-worn personal electronic apparatus, comprising: a head-worn structure configured to be worn by a user;	
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		a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure; a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric device being at least partially contained within the head-worn structure, wherein the received user input operating to at least alter operation of the head-worn electronic personal audio apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; and wireless communication circuitry at least partially contained within the head-worn structure.	
L2787	Sort results by: Similarity to	(Abstract) Techniques for	(G02C5/143) Side-members having special

	Application # 18/597,874 Retrieve results by: Application # 18/597,874	providing eyewear or other head-worn personal electronic apparatus with electrical components are disclosed. The electrical components can provide electrical technology to eyewear or other head-worn personal electronic apparatus without having to substantially compromise aesthetic design principles. The electrical components can be partially or completely internal to eyewear or other head-worn personal electronic apparatus. The electrical components can operate independently or together with other electrical components provided elsewhere. Apparatus for presenting after-market electrical components are also disclosed. (Claims) 1. A system, comprising: a head-worn personal electronic apparatus, including at least: a head-worn structure configured to be worn by a user; a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned	ear pieces (G02C5/146) Side-members having special front end
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		to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure; a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric device being at least partially contained within the head-worn structure, wherein the received user input operating to at least alter operation of the head-worn electronic personal audio apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and a charging apparatus having at least a charging connector, wherein on placement of the head-worn personal electronic	
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		apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus. (Claims) 2. A head-worn personal electronic apparatus, comprising: a head-worn structure configured to be worn by a user; a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure; a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric device being at least partially contained within the head-	
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L2788	Sort results by: Similarity to Application # 18/597,874 Retrieve results by: Application # 18/597,874	worn structure, wherein the received user input operating to at least alter operation of the head-worn electronic personal audio apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; and wireless communication circuitry at least partially contained within the head-worn structure. (Abstract) Techniques for providing eyewear or other head-worn personal electronic apparatus with electrical components are disclosed. The electrical components can provide electrical technology to eyewear or other head-worn personal electronic apparatus without having to substantially compromise aesthetic design principles. The electrical components can be partially or completely internal to eyewear or other head-worn personal electronic apparatus. The electrical components can operate independently or together with other electrical components provided elsewhere. Apparatus for presenting after-market electrical components are also disclosed. (Claims) 1. A system, comprising: a head-worn personal electronic apparatus, including at least: a head-worn structure configured to be worn by a	(G02C5/143) Side-members having special ear pieces (G02C5/146) Side-members having special front end (G02C11/06) Hearing aids (G02C11/10) Electronic devices other than hearing aids
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		user; a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure; a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric device being at least partially contained within the head-worn structure, wherein the received user input operating to at least alter operation of the head-worn electronic personal audio apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; wireless communication circuitry at least partially contained within the head-worn structure, the wireless	
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		communication circuitry being electrically connected to at least the rechargeable battery; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and a charging apparatus having at least a charging connector, wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus. (Claims) 2. A head-worn personal electronic apparatus, comprising: a head-worn structure configured to be worn by a user; a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a motion detector at least partially contained within the head-worn structure and	
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		configured to provide motion data pertaining to the head-worn personal electronic apparatus; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure; a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric device being at least partially contained within the head-worn structure, wherein the received user input operating to at least alter operation of the head-worn electronic personal audio apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; and wireless communication circuitry at least partially contained within the head-worn structure.	
L2789	Sort results by: Similarity to Application # 18/597,874 Retrieve results by: Application # 18/597,874	(Abstract) Techniques for providing eyewear or other head-worn personal electronic apparatus with electrical components are disclosed. The electrical components can provide electrical technology to eyewear or other head-worn personal electronic apparatus without having to substantially compromise aesthetic design principles. The electrical components can	(G02C5/143) Side-members having special ear pieces (G02C5/146) Side-members having special front end (G02C11/06) Hearing aids (G02C11/10) Electronic devices other than hearing aids (G02C2200/08) Modular frames, easily exchangeable frame parts and lenses

		be partially or completely internal to eyewear or other head-worn personal electronic apparatus. The electrical components can operate independently or together with other electrical components provided elsewhere. Apparatus for presenting after-market electrical components are also disclosed. (Claims) 1. A system, comprising: a head-worn personal electronic apparatus, including at least: a head-worn structure configured to be worn by a user; a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure; a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric	(H02J7/0045) Circuit arrangements for charging or depolarising batteries or for supplying loads from batteries characterised by the mechanical construction concerning the insertion or the connection of the batteries
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		device being at least partially contained within the head-worn structure, wherein the received user input operating to at least alter operation of the head-worn electronic personal audio apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and a charging apparatus having at least a charging connector, wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic	
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		apparatus is placed in the charging apparatus. (Claims) 2. A head-worn personal electronic apparatus, comprising: a head-worn structure configured to be worn by a user; a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user; a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user; a second microphone at least partially contained within the head-worn structure; a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric device being at least partially contained within the head-worn structure, wherein the received user input operating to at least alter operation of the head-worn electronic personal audio apparatus; a rechargeable battery contained within the head-worn structure; electronic circuitry contained within the head-worn	
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		structure, the electronic circuitry being electrically connected to at least the rechargeable battery; and wireless communication circuitry at least partially contained within the head-worn structure.	
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: HOWELL et al. Attorney Docket No.: IPVCP003X1C4X1C2
Application No.: 18/597,874 Examiner: LEI, JIE
Filed: March 6, 2024 Group: 2872
Title: SYSTEM FOR CHARGING
EMBEDDED BATTERY IN
WIRELESS HEAD-WORN
PERSONAL ELECTRONIC
APPARATUS

AMENDMENT A

Mail Stop _____
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Office Action dated June 4, 2024, please amend the above-identified patent application as follows:

Amendments to the Specification are reflected on page 2 of this paper.

Amendments to the Claims are reflected in the listing of claims which begins on page 3 of this paper.

Remarks/Arguments begin on page 7 of this paper.

AMENDMENTS TO THE SPECIFICATION

Please **AMEND** paragraph [0001] of the specification, as follows:

--

[0001] This application is a continuation of U.S. Patent Application No. 18/375,893, filed October 2, 2023, now U.S. Patent No. 12,044,901, and entitled "SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC APPARATUS," which is incorporated herein by reference, which in turn is a continuation of U.S. Patent Application No. 16/182,969, filed November 7, 2018, now U.S. Patent No. 12,078,870, and entitled "EYEWEAR HOUSING FOR CHARGING EMBEDDED BATTERY IN EYEWEAR FRAME" which is incorporated herein by reference, which in turn is a continuation of U.S. Patent Application No. 16/127,957, now U.S. Patent No. 11,086,147, filed September 11, 2018, and entitled "EYEWEAR SUPPORTING ELECTRICAL COMPONENTS AND APPARATUS THEREFOR" which is incorporated herein by reference, which in turn is a continuation of U.S. Patent Application No. 14/715,501, now U.S. Patent No. 10,330,956, filed May 18, 2015, and entitled "EYEWEAR SUPPORTING ELECTRICAL COMPONENTS AND APPARATUS THEREFOR" which is incorporated herein by reference, which in turn is a continuation of U.S. Patent Application No. 13/367,346, filed February 6, 2012, now U.S. Patent No. 9,033,493, and entitled "EYEWEAR SUPPORTING ELECTRICAL COMPONENTS AND APPARATUS THEREFOR" which is incorporated herein by reference, which in turn is a continuation of U.S. Patent Application No. 12/462,286, filed July 31, 2009, now U.S. Patent No. 8,109,629, and entitled "EYEWEAR SUPPORTING ELECTRICAL COMPONENTS AND APPARATUS THEREFOR" which is incorporated herein by reference, which in turn is a continuation of U.S. Patent Application No. 11/580,222, filed October 11, 2006, now U.S. Patent No. 7,581,833, and entitled "EYEWEAR SUPPORTING AFTER-MARKET ELECTRICAL COMPONENTS" which is hereby incorporated herein by reference.

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AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A system, comprising:
 - a head-worn personal electronic apparatus, including at least:
 - a head-worn structure configured to be worn by a user;
 - a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;
 - a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus;
 - a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user;
 - a second microphone at least partially contained within the head-worn structure;
 - a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric device being ~~at least partially~~ contained within the head-worn structure, wherein the received user input operating to at least alter operation of the head-worn personal electronic ~~personal audio~~ apparatus;
 - a rechargeable battery contained within the head-worn structure;
 - electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery;

wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and

a charging apparatus having at least a charging connector,

wherein on placement of the head-worn personal electronic apparatus at least partially in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus.

2. (Currently Amended) A head-worn personal electronic apparatus, comprising:

a head-worn structure configured to be worn by a user;

a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;

a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus;

a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user;

a second microphone at least partially contained within the head-worn structure;

a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric device being at least partially contained within the head-worn structure, wherein the received user input operating to at least alter operation of the head-worn personal electronic ~~personal~~ ~~audio~~ apparatus;

a rechargeable battery contained within the head-worn structure;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; and

wireless communication circuitry at least partially contained within the head-worn structure.

3. (Original) A head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic comprises:

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery.

4. (Canceled).

5. (New) A head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic apparatus is configured to support audio output to the user via the speaker, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

6. (New) A head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic apparatus is configured to support voice calls to the user, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns at least accepting or declining a voice call to the user.

7. (New) A system as recited in claim 1, wherein the head-worn personal electronic apparatus is configured to support audio output to the user via the speaker, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

8. (New) A system as recited in claim 1, wherein the head-worn personal electronic apparatus is configured to support voice calls to the user, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns at least accepting or declining a voice call to the user.

REMARKS

In the Office Action, the Examiner rejected claim 4 under the second paragraph of 35 USC § 112, and rejected claims 1-3 under 35 USC § 103(a). These rejections are fully traversed below.

Claims 1 and 2 have been amended to further clarify the subject matter regarded as the invention. Claim 4 has been canceled from the application without prejudice or disclaimer. New claims 5-8 have been added to the application. Claims 1-3 and 5-8 are pending.

Reconsideration of the application is respectfully requested based on the following remarks.

REJECTION OF CLAIM 4 UNDER 35 USC § 112, SECOND PARAGRAPH

In the Office Action, the Examiner rejected claim 4 under the second paragraph of 35 USC § 112 as being indefinite. To expedite examination, claim 4 has been canceled from the application without prejudice or disclaimer. Accordingly, it is respectfully requested that the Examiner withdraw the rejection of claim 4 under the second paragraph of 35 USC § 112.

REJECTION OF CLAIMS 1-3 UNDER 35 USC § 103

In the Office Action, the Examiner rejected claim 1 under 35 USC § 103 as being unpatentable over Spitzer (US Patent No. 6,349,001) in view of Jannard et al. (US Patent Pub. No. 2005/0050201585) and Mizusawa (US Patent 2005/0052537) and further in view of Kallman et al. (US Patent No. 5,835,185); and rejected claims 2-3 under 35 USC § 103 as being unpatentable over Jannard et al. (US Patent Pub. No. 2005/0050201585) and Mizusawa. Applicant respectfully disagrees.

Claim 1

Claim 1 was rejected in view of a combination of Spitzer, Jannard et al., Kallman et al. and Mizusawa. Applicant respectfully disagrees with the rejection of claim 1 for at least the following reasons.

Mizusawa pertains to an imaging apparatus, such as a camera, that is fixed to a goggles body. Mizusawa, para. [0009]. This is reflected in FIG. 2, which illustrates an imaging apparatus 10 having an imaging device 13 being “fixed to a frame 12 of spectacles in the goggles body.” Mizusawa, para. [0041]. The imaging apparatus 10 of Mizusawa does include a shutter button 15, E.g., Mizusawa, [0042]. However, the imaging device 13 and this the shutter button 15 as parts of the imaging apparatus 10 are affixed to the frame 12. As such, the teachings of Mizusawa are contrary to what is recited in claim 1. For example, claim 1 recites that the piezoelectric device is “contained within the head-worn structure, wherein the received user input operating to at least alter operation of the head-worn personal electronic apparatus....” However, the imaging device 13 of Mizusawa is neither “at least partially contained within the head-worn structure,” nor does it receive a user input “operating to at least alter operation of the head-worn personal electronic apparatus,” as recited in claim 1. For example, the imaging apparatus 10 of Mizusawa is an apparatus mounted to the goggles body, and further the shutter button 15 is part of the imaging apparatus 10 and serves to cause the imaging device 13 of Mizusawa (also part of the imaging apparatus 10) to capture an image.

Initially, Applicant submits that there is no reasonable rationale for one skilled in the art to seek to combine these four references, and thus no *prima facie* rejection of claim 1. Any alleged justification to combine these references is non-specific and/or without justification, improperly driven by hindsight, and fails to offer a reasonable rationale as to why one skilled in the art would attempt such a combination.

Claims 2-3

In rejecting claims 2-3, the Examiner notes that “Jannard does not specifically disclose the wherein the button device is a piezoelectric device, and the piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device.” However, in view of this admitted deficiency, the Examiner further relied on Mizusawa for allegedly teaching “a mounted imaging apparatus ... wherein the button device is a piezoelectric device....”

Applicant respectfully disagrees with the rejection of claims 2-3 for at least the following reasons. First, claim 2 recites that “the piezoelectric device being contained within the head-worn structure” or as previously recited “the piezoelectric device being at least partially contained within the head-worn structure.” To the contrary, Mizusawa discloses a mounted imaging device having a piezoelectric device that is mounted and thus not in any way “contained within the head-worn structure of claim 2. Second, there is no motivation to combine Jannard et al. and Mizusawa. There is no reasonable basis to presume that one skilled in the art would seek to mount Mizusawa’s imaging device to Jannard et al.’s wearable wireless audio device (e.g., sunglasses) that includes a support which includes an ear stem. One skilled in the art would not look to add Mizusawa’s mounted imaging device to the ear stem of Jannard et al. The alleged justification to combine these references is non-specific and/or without justification, improperly driven by hindsight, and fail to offer a reasonable rationale as to why one skilled in the art would attempt such a combination.

Conclusion

Based on the foregoing, it is submitted that claims 1-3 are patentably distinct from any combination of Spitzer, Jannard et al., Kallman et al. and/or Mizusawa. Additional limitations (beyond those discussed above) recited in the independent claims or the dependent claims need not be further discussed because the limitations/arguments discussed above are sufficient to distinguish the claimed invention from the cited art. Accordingly, it is respectfully requested that the Examiner withdraw the rejection of claims under 35 U.S.C. § 103.

SUMMARY

It is submitted that the rejection under 35 USC § 112 have been traversed. In addition, it is submitted that the rejection under 35 USC § 103 has been traversed. Therefore, it is submitted that all claims are in condition for allowance.

Reconsideration of the application and an early Notice of Allowance are earnestly solicited. If there are any issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned representative at the telephone number listed below.

Respectfully submitted,

/C. Douglass Thomas/

C. Douglass Thomas
Reg. No. 32,947

(650) 903-9200, x103

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: HOWELL et al.

Attorney Docket No.: IPVCP003X1C4X1C2

Application No.: 18/597,874

Examiner: LEI, JIE

Filed: March 6, 2024

Group: 2872

Title: SYSTEM FOR CHARGING
EMBEDDED BATTERY IN WIRELESS
HEAD-WORN PERSONAL ELECTRONIC
APPARATUS

AMENDMENT A TRANSMITTAL

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Transmitted herewith is an Amendment in the above-identified application.

The fee has been calculated as shown below.

	Claims After Amendment		Highest Previously Paid For	Present Extra	Small Entity Rate Fee	Large Entity Rate Fee
Total Claims	7	MINUS	20	00	x 40 =	x 100 =
Independent Claims	2	MINUS	3	00	x 192 =	x 480 =
Multiple Dependent Claim Present and Fee Not Previously Paid					\$	\$
Total					\$0.00	\$0.00

- ☐ Applicant(s) hereby petition for a _____ - month extension(s) of time to respond to the aforementioned Office Action.
- ☒ Applicant(s) believe that no (additional) Extension of Time is required; however, if it is determined that such an extension is required, Applicant(s) hereby petition that such an extension be granted and authorize the Commissioner to charge the required fees for an Extension of Time under 37 CFR 1.136 to Deposit Account No. 50-3874 (Order No. IPVCP003X1C4X1C2).
- ☒ Any fees due are being paid electronically herewith.
- ☒ Please charge any additional fees required to facilitate filing the enclosed response, to Deposit Account No. 50-3874 (Order No. IPVCP003X1C4X1C2).

Respectfully submitted,

/C. Douglass Thomas/

C. Douglass Thomas
Reg. No. 32,947

Appln. No. 18/597,874

Atty. Docket No. IPVCP003X1C4X1C2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: HOWELL et al. Attorney Docket No.: IPVCP003X1C4X1C2

Application No.: 18/597,874 Examiner: LEI, JIE

Filed: March 6, 2024 Group: 2872

Title: SYSTEM FOR CHARGING
EMBEDDED BATTERY IN
WIRELESS HEAD-WORN
PERSONAL ELECTRONIC
APPARATUS

AMENDMENT A

Mail Stop _____
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Office Action dated June 4, 2024, please amend the above-identified patent application as follows:

Amendments to the Specification are reflected on page 2 of this paper.

Amendments to the Claims are reflected in the listing of claims which begins on page 3 of this paper.

Remarks/Arguments begin on page 7 of this paper.

AMENDMENTS TO THE SPECIFICATION

Please **AMEND** paragraph [0001] of the specification, as follows:

- -

[0001] This application is a continuation of U.S. Patent Application No. 18/375,893, filed October 2, 2023, now U.S. Patent No. 12,044,901, and entitled "SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC APPARATUS," which is incorporated herein by reference, which in turn is a continuation of U.S. Patent Application No. 16/182,969, filed November 7, 2018, now U.S. Patent No. 12,078,870, and entitled "EYEWEAR HOUSING FOR CHARGING EMBEDDED BATTERY IN EYEWEAR FRAME" which is incorporated herein by reference, which in turn is a continuation of U.S. Patent Application No. 16/127,957, now U.S. Patent No. 11,086,147, filed September 11, 2018, and entitled "EYEWEAR SUPPORTING ELECTRICAL COMPONENTS AND APPARATUS THEREFOR" which is incorporated herein by reference, which in turn is a continuation of U.S. Patent Application No. 14/715,501, now U.S. Patent No. 10,330,956, filed May 18, 2015, and entitled "EYEWEAR SUPPORTING ELECTRICAL COMPONENTS AND APPARATUS THEREFOR" which is incorporated herein by reference, which in turn is a continuation of U.S. Patent Application No. 13/367,346, filed February 6, 2012, now U.S. Patent No. 9,033,493, and entitled "EYEWEAR SUPPORTING ELECTRICAL COMPONENTS AND APPARATUS THEREFOR" which is incorporated herein by reference, which in turn is a continuation of U.S. Patent Application No. 12/462,286, filed July 31, 2009, now U.S. Patent No. 8,109,629, and entitled "EYEWEAR SUPPORTING ELECTRICAL COMPONENTS AND APPARATUS THEREFOR" which is incorporated herein by reference, which in turn is a continuation of U.S. Patent Application No. 11/580,222, filed October 11, 2006, now U.S. Patent No. 7,581,833, and entitled "EYEWEAR SUPPORTING AFTER-MARKET ELECTRICAL COMPONENTS" which is hereby incorporated herein by reference.

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AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A system, comprising:
 - a head-worn personal electronic apparatus, including at least:
 - a head-worn structure configured to be worn by a user;
 - a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;
 - a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus;
 - a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user;
 - a second microphone at least partially contained within the head-worn structure;
 - a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric device being ~~at least partially~~ contained within the head-worn structure, wherein the received user input operating to at least alter operation of the head-worn personal electronic ~~personal~~ ~~audio~~ apparatus;
 - a rechargeable battery contained within the head-worn structure;
 - electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery;

wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the rechargeable battery; and

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; and

a charging apparatus having at least a charging connector,

wherein on placement of the head-worn personal electronic apparatus at least partially in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus.

2. (Currently Amended) A head-worn personal electronic apparatus, comprising:

a head-worn structure configured to be worn by a user;

a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user;

a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus;

a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user;

a second microphone at least partially contained within the head-worn structure;

a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric device being ~~at least partially~~ contained within the head-worn structure, wherein the received user input operating to at least alter operation of the head-worn personal electronic ~~personal~~ ~~audio~~ apparatus;

a rechargeable battery contained within the head-worn structure;

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery; and

wireless communication circuitry at least partially contained within the head-worn structure.

3. (Original) A head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic comprises:

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery.

4. (Canceled).

5. (New) A head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic apparatus is configured to support audio output to the user via the speaker, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

6. (New) A head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic apparatus is configured to support voice calls to the user, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns at least accepting or declining a voice call to the user.

7. (New) A system as recited in claim 1, wherein the head-worn personal electronic apparatus is configured to support audio output to the user via the speaker, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns control of the audio output being provided to the user.

8. (New) A system as recited in claim 1, wherein the head-worn personal electronic apparatus is configured to support voice calls to the user, and

wherein the at least one operation of the head-worn personal electronic apparatus being altered concerns at least accepting or declining a voice call to the user.

REMARKS

In the Office Action, the Examiner rejected claim 4 under the second paragraph of 35 USC § 112, and rejected claims 1-3 under 35 USC § 103(a). These rejections are fully traversed below.

Claims 1 and 2 have been amended to further clarify the subject matter regarded as the invention. Claim 4 has been canceled from the application without prejudice or disclaimer. New claims 5-8 have been added to the application. Claims 1-3 and 5-8 are pending.

Reconsideration of the application is respectfully requested based on the following remarks.

REJECTION OF CLAIM 4 UNDER 35 USC § 112, SECOND PARAGRAPH

In the Office Action, the Examiner rejected claim 4 under the second paragraph of 35 USC § 112 as being indefinite. To expedite examination, claim 4 has been canceled from the application without prejudice or disclaimer. Accordingly, it is respectfully requested that the Examiner withdraw the rejection of claim 4 under the second paragraph of 35 USC § 112.

REJECTION OF CLAIMS 1-3 UNDER 35 USC § 103

In the Office Action, the Examiner rejected claim 1 under 35 USC § 103 as being unpatentable over Spitzer (US Patent No. 6,349,001) in view of Jannard et al. (US Patent Pub. No. 2005/0050201585) and Mizusawa (US Patent 2005/0052537) and further in view of Kallman et al. (US Patent No. 5,835,185); and rejected claims 2-3 under 35 USC § 103 as being unpatentable over Jannard et al. (US Patent Pub. No. 2005/0050201585) and Mizusawa. Applicant respectfully disagrees.

Claim 1

Claim 1 was rejected in view of a combination of Spitzer, Jannard et al., Kallman et al. and Mizusawa. Applicant respectfully disagrees with the rejection of claim 1 for at least the following reasons.

Mizusawa pertains to an imaging apparatus, such as a camera, that is fixed to a goggles body. Mizusawa, para. [0009]. This is reflected in FIG. 2, which illustrates an imaging apparatus 10 having an imaging device 13 being “fixed to a frame 12 of spectacles in the goggles body.” Mizusawa, para. [0041]. The imaging apparatus 10 of Mizusawa does include a shutter button 15, E.g., Mizusawa, [0042]. However, the imaging device 13 and this the shutter button 15 as parts of the imaging apparatus 10 are affixed to the frame 12. As such, the teachings of Mizusawa are contrary to what is recited in claim 1. For example, claim 1 recites that the piezoelectric device is “contained within the head-worn structure, wherein the received user input operating to at least alter operation of the head-worn personal electronic apparatus...” However, the imaging device 13 of Mizusawa is neither “at least partially contained within the head-worn structure,” nor does it receive a user input “operating to at least alter operation of the head-worn personal electronic apparatus,” as recited in claim 1. For example, the imaging apparatus 10 of Mizusawa is an apparatus mounted to the goggles body, and further the shutter button 15 is part of the imaging apparatus 10 and serves to cause the imaging device 13 of Mizusawa (also part of the imaging apparatus 10) to capture an image.

Initially, Applicant submits that there is no reasonable rationale for one skilled in the art to seek to combine these four references, and thus no *prima facie* rejection of claim 1. Any alleged justification to combine these references is non-specific and/or without justification, improperly driven by hindsight, and fails to offer a reasonable rationale as to why one skilled in the art would attempt such a combination.

Claims 2-3

In rejecting claims 2-3, the Examiner notes that “Jannard does not specifically disclose the wherein the button device is a piezoelectric device, and the piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device.” However, in view of this admitted deficiency, the Examiner further relied on Mizusawa for allegedly teaching “a mounted imaging apparatus ... wherein the button device is a piezoelectric device....”

Applicant respectfully disagrees with the rejection of claims 2-3 for at least the following reasons. First, claim 2 recites that “the piezoelectric device being contained within the head-worn structure” or as previously recited “the piezoelectric device being at least partially contained within the head-worn structure.” To the contrary, Mizusawa discloses a mounted imaging device having a piezoelectric device that is mounted and thus not in any way “contained within the head-worn structure of claim 2. Second, there is no motivation to combine Jannard et al. and Mizusawa. There is no reasonable basis to presume that one skilled in the art would seek to mount Mizusawa’s imaging device to Jannard et al.’s wearable wireless audio device (e.g., sunglasses) that includes a support which includes an ear stem. One skilled in the art would not look to add Mizusawa’s mounted imaging device to the ear stem of Jannard et al. The alleged justification to combine these references is non-specific and/or without justification, improperly driven by hindsight, and fail to offer a reasonable rationale as to why one skilled in the art would attempt such a combination.

Conclusion

Based on the foregoing, it is submitted that claims 1-3 are patentably distinct from any combination of Spitzer, Jannard et al., Kallman et al. and/or Mizusawa. Additional limitations (beyond those discussed above) recited in the independent claims or the dependent claims need not be further discussed because the limitations/arguments discussed above are sufficient to distinguish the claimed invention from the cited art. Accordingly, it is respectfully requested that the Examiner withdraw the rejection of claims under 35 U.S.C. § 103.

SUMMARY

It is submitted that the rejection under 35 USC § 112 have been traversed. In addition, it is submitted that the rejection under 35 USC § 103 has been traversed. Therefore, it is submitted that all claims are in condition for allowance.

Reconsideration of the application and an early Notice of Allowance are earnestly solicited. If there are any issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned representative at the telephone number listed below.

Respectfully submitted,

/C. Douglass Thomas/

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
18/597,874

RECEIPT DATE / TIME
08/30/2024 02:02:37 PM Z ET

ATTORNEY DOCKET #
IPVCP003X1C4X1C2

Title of Invention

SYSTEM FOR CHARGING EMBEDDED BATTERY IN WIRELESS HEAD-WORN PERSONAL ELECTRONIC APPARATUS

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # -

CONFIRMATION # 7223

FILED BY Angela Nijim

PATENT CENTER # 66993763

FILING DATE 03/06/2024

CUSTOMER # 34071

FIRST NAMED INVENTOR Thomas A. Howell

CORRESPONDENCE ADDRESS -

AUTHORIZED BY Peter Tong

Documents

TOTAL DOCUMENTS: 3

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
IPVCP003X1C4X1C2_AmdA _AsFiled_8-24- APP.TEXT.docx	10	Application body structured text document	26 KB
Warning: The automatic document description has been replaced.			
IPVCP003X1C4X1C2_AmdA Trans_8-24.pdf	1	Transmittal Letter	16 KB
IPVCP003X1C4X1C2_AmdA _AsFiled_8-24.pdf	10	Auxiliary PDF of Application	57 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
IPVCP003X1C4X1C2_AmdA_A sFiled_8-24-APP.TEXT.docx	6936F433082FD9A9158880BD3D795FA45B71A338FBF3DD10E 42C00CB23CB3FBDD97B24E73B8471E456AF9D3373B3AC770 4C3AB361CDF72D181B20FE02DDA767B
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 18/597,874		Filing Date 03/06/2024		☐ To be Mailed	
ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO									
APPLICATION AS FILED - PART I									
	(Column 1)	(Column 2)							
FOR	NUMBER FILED	NUMBER EXTRA			RATE (\$)			FEE (\$)	
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A			N/A				
☐ SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A			N/A				
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A			N/A				
TOTAL CLAIMS (37 CFR 1.16(j))	minus 20 =	*			x \$100 =				
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*			x \$480 =				
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).								
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))									
* If the difference in column 1 is less than zero, enter "0" in column 2.							TOTAL		
APPLICATION AS AMENDED - PART II									
	(Column 1)	(Column 2)	(Column 3)						
AMENDMENT	08/30/2024	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(j))	* 7	Minus	** 20	= 0		x \$100 =	0	
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0		x \$480 =	0	
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE	0		
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(j))	*	Minus	**	=		x \$0 =		
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x \$0 =		
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE			
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/597,874	03/06/2024	Thomas A. Howell	IPVCP003X1C4X1C2	7223
34071	7590	06/13/2024	EXAMINER	
IPVENTURE, INC.			LEI, JIE	
4010 Moorpark Avenue			ART UNIT	PAPER NUMBER
Suite 211			2872	
San Jose, CA 95117			MAIL DATE	DELIVERY MODE
			06/13/2024	PAPER

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
18/597,874	03/06/2024	Thomas A. Howell	IPVCP003X1C4X1C2	7223
34071	7590	06/04/2024	EXAMINER	
IPVENTURE, INC. 4010 Moorpark Avenue Suite 211 San Jose, CA 95117			LEI, JIE	
			ART UNIT	PAPER NUMBER
			2872	
			MAIL DATE	DELIVERY MODE
			06/04/2024	PAPER

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DETAILED ACTION

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Notice of Pre-AIA or AIA Status

2. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

Information Disclosure Statement

3. The information disclosure statements (IDS) submitted on 4/23/2024, 4/4/2024, 3/20/2024 and 3/6/2024 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements have been considered by the examiner.

Claim Rejections - 35 USC § 112

4. The following is a quotation of 35 U.S.C. 112(b):

(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 4 is rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

Regarding claim 4, claim 4 is rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

It is noted that the features upon which applicant relies (i.e., for examples, system structures, method steps) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Therefore proper amendments are required in order to clarify the scopes of the claims and overcome the rejections.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102 of this title, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person

having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 1 is rejected under 35 U.S.C. 103 as being unpatentable over Spitzer (US 6349001) in a view of Jannard et al (US 20050201585) and Mizusawa (US 20050052537), and further in a view of Kallman et al (US 5835185).

Regarding Claim 1, Spitzer teaches a system (abstract; fig. 1), comprising:

a head-worn personal electronic apparatus (fig. 1), including at least:

a head-worn structure configured to be worn by a user (fig. 1, 100);

a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user (fig. 1, 108-audio; fig. 21, lower figure, audio outputs (--speakers), fixed to both temples; col. 9, line 49-52, The integration of microphones, speakers, camera and display within or upon the eyeglass frames makes possible a wide range of communication and recording devices, in addition to computer input and output devices);

a position detector at least partially contained within the head-worn structure (fig. 1, 110);

a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user (fig. 1, 106- microphone; col. 8, line 1-5, a directional air conduction audio microphone may be used by placing it at the bottom of the eyeglass frame oriented so as to preferentially detect the sound of the user's speech);

a second microphone at least partially contained within the head-worn structure (fig. 21, upper figure, microphones, fixed to both temples; col. 8, line 1-15, A plurality of microphones may be used in order to make possible the implementation of noise reduction techniques using analog or digital signal processing. For certain applications, it is desirable to sense ambient sound instead of or in addition to the user's speech. For the particular application of assisting the hearing impaired, the microphone would be so oriented so that sound coming from the area in front of the user is preferentially detected);

a battery contained within the head-worn structure (fig. 1, 112);

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the battery (fig. 1, 110- internal electronics and position sensors; col. 4, line 11-23, an eyeglass interface system 100; the eyeglass system is mounted a display assembly 102; a camera assembly 104; an audio output subsystem 108, an audio input subsystem 106 such as a microphone, an interconnection subsystem 110, and a power subsystem 112, such as internal batteries);

wireless communication circuitry at least partially contained within the head-worn structure, the wireless communication circuitry being electrically connected to at least the battery (fig. 15, 849; col. 8, line 41-44, integrated circuits 849 may be formed within the temple 800; col. 12, line 41-55, wherein the integrated circuits include a cellular telephone transceiver (--wireless communication); fig. 17C, 960,980, 925-battery; col. 9, line 6-25, The subsystems described above are connected to remote electronics either by wire as noted above, or by infrared link, radio frequency methods; comprises an RF link in which signals are transmitted and received by antenna 980. These signals are passed to and from transceiver circuit 960, which is in communication with the I/O data stream); and

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being electrically connected to at least the battery (figs. 13-15, 849).

But Spitzer does not specifically disclose that wherein a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus; a piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device, the piezoelectric device being at least partially contained within the head-worn structure, wherein the received user input operating to at least alter operation of the head-worn

electronic personal audio apparatus; a rechargeable battery contained within the head-worn structure.

However, Jannard teaches a head-worn personal electronic apparatus (abstract; figs. 3A-M), wherein

a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus (fig. 3A, 10A, 40, ¶[0247], line 1-24, the audio devices 10, 10A, 10B, 10C, and 10D is provided wherein the audio devices can include and/or communicate with a variety of sensors, including but not limited to motion, radar, heat, light, smoke, air-quality, oxygen, CO and distance; GPS unit; fig. 3J, 304; fig. 22, 304, 322; ¶[0296], line 1-4, the user controls 322 include a button, dial, switch, lever, sensor, touchpad, microphone, and/or any other input device that may be used by a user to control the audio device 304);

a button device configured to receive a user input based on a force induced on the button device, the button device being at least partially contained within the head-worn structure (figs. 3E and 3I, 73a-e), wherein the received user input operating to at least alter operation of the head-worn electronic personal audio apparatus (¶[0161], line 1-12, the internal cavity 252 includes at least one compartment configured to receive an electronic circuit board 264 which includes at least one switch for each of the buttons 73a, 73b; one for each of the buttons 73a, 73b, which are configured to control a volume output from the speakers 14A', 16A');

a rechargeable battery contained within the head-worn structure (fig. 3J, 274, 288; ¶[0163], line 1-7, The power source recess includes an opening 272 sized to receive a power storage device 274. In the illustrated embodiment, the power storage device 274 is in the form of an AAAA-sized battery. Of course, the power storage device 274 can be in the form of any type or any size of battery and can have any shape).

Therefore, it would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to modify the system of Spitzer by the head-worn personal electronic apparatus of Jannard for the purpose of an audio device which is generally light-weight, and able to be worn comfortably by a user for an extended period of time. (¶[0310], line 1-6).

But Spitzer - Jannard combination does not specifically disclose that wherein the button device is a piezoelectric device, and the piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device.

However, Mizusawa teaches a mounted imaging apparatus (abstract; fig. 2 and fig. 4), wherein the button device is a piezoelectric device (fig. 2, 10, 15; fig. 4, 15, 23), and the piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device (¶[0056], line 1-11, when the photographer pushes the shutter button 15, a piezoelectric element 23 converts the pressure of the finger into an electric signal, which is transmitted to the control section 21).

Therefore, it would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to modify the head-worn personal electronic apparatus of Spitzer - Jannard combination by the mounted imaging apparatus of Mizusawa for the purpose of compactness of the entire apparatus ([0027], line 1-10).

But Spitzer - Jannard - Mizusawa combination does not specifically disclose that wherein a charging apparatus having at least a charging connector; at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery; wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus.

However, Kallman teaches an eyewear system (abstract; fig. 4), wherein,

a charging apparatus having at least a charging connector (fig. 5, 124-charge, 116, 118-- electrical contacts; col. 17, line 58-62, Operatively connected to electrical

contacts 116, 118 and preferably located within eyewear case 110 is an external battery CHARGER circuit 124 packaged in any suitable form, as by a discrete or integrated circuit (IC) devices interconnected as by use of a PCB powered by a battery B1),

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery (fig. 1, 10, 16, 18, and wires connecting 10, 12, 16, 18; -- Power supply system 10 contained within the frame, batteries 16, 18 contained within temples, see above; fig. 4, 106, 108; col. 17, line 24-29, bridge 84 preferably is provided with dual external electrical contacts 106, 108 for the series-connected dual lead-acid cell, or other suitable rechargeable-cell, batteries of one of the disclosed battery subsystems, for external charging by a battery charging eyewear case now to be described);

wherein on placement of the head-worn personal electronic apparatus in the charging apparatus, electrical connection results at least from the at least one conductive element connecting with the charging connector, and thereby the rechargeable battery of the head-worn personal electronic apparatus is able to be recharged while the head-worn personal electronic apparatus is placed in the charging apparatus (fig. 5, 112, 114, 116, 118, 122, 124; col. 17, line 29-65; FIG. 5 is an isometric view of an eyewear case 110 that securely and protectively cradles and covers eyewear 38' (wherein it will be appreciated that eyewear 38', not shown for the sake of simplicity and clarity, may be identical with eyewear 38 described and illustrated above as being powered by dual lead acid batteries) while charging its batteries;

eyewear 38' is grippingly engaged adjacent its bridge 84 such that its dual batteries, e.g. dual lead acid batteries 16, 18 are charged; structure indicated at 112 includes mechanical bridge-gripping structure 114 and a pair of electrical contacts or regions 116, 118 configured for matingly electrically engaging corresponding battery circuit contacts or regions 106, 108 of eyewear 38'; Operatively connected to electrical contacts 116, 118 and preferably located within eyewear case 110 is an external battery CHARGER circuit 124 packaged in any suitable form, as by a discrete or integrated circuit (IC) devices interconnected as by use of a PCB powered by a battery B1).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention to modify the eyewear of Spitzer - Jannard - Mizusawa combination by the eyewear system of Kallman for the purpose of extending useful battery life, reducing battery replacement cost and minimizing frame and temple size (col. 2, line 63—col. 3, line 5).

8. Claims 2-3 are rejected under 35 U.S.C. 103 as being unpatentable over Jannard et al (US 20050201585) in a view of Mizusawa (US 20050052537).

Regarding Claim 2, Jannard teaches a head-worn personal electronic apparatus (abstract; figs. 3A-M), comprising:

a head-worn structure configured to be worn by a user (fig. 3A, 10A, 40);

a speaker at least partially contained within the head-worn structure, the speaker being configured to be worn proximate to an ear of the user when the head-worn structure is being worn by the user (fig. 3A-C, 14A, 16A);

a motion detector at least partially contained within the head-worn structure and configured to provide motion data pertaining to the head-worn personal electronic apparatus (fig. 3A, 10A, 40, ¶[0247], line 1-24, the audio devices 10, 10A, 10B, 10C, and 10D is provided wherein the audio devices can include and/or communicate with a variety of sensors, including but not limited to motion, radar, heat, light, smoke, air-quality, oxygen, CO and distance; GPS unit; fig. 3J, 304; fig. 22, 304, 322; ¶[0296], line 1-4, the user controls 322 include a button, dial, switch, lever, sensor, touchpad, microphone, and/or any other input device that may be used by a user to control the audio device 304);

a first microphone at least partially contained within the head-worn structure, the first microphone being positioned to pick up at least audio input from at least the user (fig. 12, 124D);

a second microphone at least partially contained within the head-worn structure (fig. 12, 124D', 124D");

a button device configured to receive a user input based on a force induced on the button device, the button device being at least partially contained within the head-worn structure (figs. 3E and 3I, 73a-e), wherein the received user input operating to at

least alter operation of the head-worn electronic personal audio apparatus (§[0161], line 1-12, the internal cavity 252 includes at least one compartment configured to receive an electronic circuit board 264 which includes at least one switch for each of the buttons 73a, 73b; one for each of the buttons 73a, 73b, which are configured to control a volume output from the speakers 14A', 16A');

a rechargeable battery contained within the head-worn structure (fig. 3J, 274, 288; §[0163], line 1-7, The power source recess includes an opening 272 sized to receive a power storage device 274. In the illustrated embodiment, the power storage device 274 is in the form of an AAAA-sized battery. Of course, the power storage device 274 can be in the form of any type or any size of battery and can have any shape),

electronic circuitry contained within the head-worn structure, the electronic circuitry being electrically connected to at least the rechargeable battery (fig. 3J, 288, 284-printed circuit board; §[0169], line 1-21, the data transfer port 288; the data transfer port is configured to operate according to the universal serial bus (USE) transfer protocol. In one implementation of the invention, the earstem is provided with a mini USE port. The mini USE port enables both downloading of digital music from a source into the eyeglass, as well as charging a rechargeable battery carried by the eyeglass), and

wireless communication circuitry at least partially contained within the head-worn structure (fig. 3A, 10A; §[0132], line 1-11, the audio device 10A can include a wireless receiver or transceiver for receiving digital signals from another device; §[0235], line 1-8,

at least a portion of a frame of an eyeglass is used as the antenna for the wireless transceiver 114).

But Jannard does not specifically disclose that wherein the button device is a piezoelectric device, and the piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device.

However, Mizusawa teaches a mounted imaging apparatus (abstract; fig. 2 and fig. 4), wherein the button device is a piezoelectric device (fig. 2, 10, 15; fig. 4, 15, 23), and the piezoelectric device configured to receive a user input based on a force induced on the piezoelectric device (§[0056], line 1-11, when the photographer pushes the shutter button 15, a piezoelectric element 23 converts the pressure of the finger into an electric signal, which is transmitted to the control section 21).

Therefore, it would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to modify the head-worn personal electronic apparatus of Jannard by the mounted imaging apparatus of Mizusawa for the purpose of compactness of the entire apparatus (§[0027], line 1-10).

Regarding Claim 3, Jannard – Mizusawa combination teaches a head-worn personal electronic apparatus as recited in claim 2, wherein the head-worn personal electronic comprises:

at least one conductive element at least partially included within the head-worn structure, the at least one conductive element being at least partially exposed to enable interconnection therewith, the at least one conductive element being electrically connected to at least the rechargeable battery (fig. 3J, 288, 284-printed circuit board; ¶[0169], line 1-21, the data transfer port 288; the data transfer port is configured to operate according to the universal serial bus (USE) transfer protocol. In one implementation of the invention, the earstem is provided with a mini USE port. The mini USE port enables both downloading of digital music from a source into the eyeglass, as well as charging a rechargeable battery carried by the eyeglass).

Examiner's Note

9. Regarding the references, the Examiner cites particular figures, paragraphs, columns and line numbers in the reference(s), as applied to the claims above. Although the particular citations are representative teachings and are applied to specific limitations within the claims, other passages, internally cited references, and figures may also apply. In preparing a response, it is respectfully requested that the Applicant fully consider the references, in their entirety, as potentially disclosing or teaching all or part of the claimed invention, as well as fully consider the context of the passage as taught by the reference(s) or as disclosed by the Examiner.

Conclusion

10. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Jie Lei whose telephone number is (571) 272 7231. The examiner can normally be reached on Mon.-Thurs. 8:00 am to 5:30 pm.

11. If attempts to reach the examiner by the telephone are unsuccessful, the examiner's supervisor, Thomas Pham can be reached on (571) 272 3689. The Fax number for the organization where this application is assigned is (571) 273 8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published application 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). If you would like assistance from a USPTO Customer Services Representative or access to the automated information system, call 800-786-9199(In USA or Canada) or 571-272-1000.

/JIE LEI/
Primary Examiner, Art Unit 2872

Notice of References Cited	Application/Control No. 18/597,874		Applicant(s)/Patent Under Reexamination Howell et al.	
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U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date YYYY-MM-DD	Name	CPC Classification	US Classification
*	A	US-20050052537-A1	2005-03-10	Mizusawa, Masayuki	H04N23/51	348/208.1
	B					
	C					
	D					
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FOREIGN PATENT DOCUMENTS

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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in YYYY-MM-DD format are publication dates. Classifications may be US or foreign.

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Notice of References Cited

Part of Paper No. 20240515

<i>Search Notes</i> 	Application/Control No. 18/597,874	Applicant(s)/Patent Under Reexamination Howell et al.
	Examiner JIE LEI	Art Unit 2872

CPC - Searched*		
Symbol	Date	Examiner
G02C 1/00, 11/10, 11/06, 5/00, 5/001, 5/02, 5/14, 5/22, 5/143, 5/146, 2200/08	05/15/2024	JL
G02B 27/01, 27/017, 27/0176; HO2J 7/0045	05/15/2024	JL

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner
351	158, 41, 111, 121, 123, 124	05/15/2024	JL
359	13, 629-633	05/15/2024	JL
381	381, 327, 328, 370, 380	05/15/2024	JL

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

/JIE LEI/ Primary Examiner, Art Unit 2872	
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<i>Search Notes</i> 	Application/Control No. 18/597,874	Applicant(s)/Patent Under Reexamination Howell et al.
	Examiner JIE LEI	Art Unit 2872

Search Notes		
Search Notes	Date	Examiner
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G02B 27/01, 27/017, 27/0176; HO2J 7/0045	05/15/2024	JL
351/158, 41, 111, 121, 123, 124	05/15/2024	JL
359/13, 629-633	05/15/2024	JL
381/381, 327, 328, 370, 380	05/15/2024	JL
Inventor name search	05/15/2024	JL
NPL and foreign search (google scholar, google patent, globaldossier and Dialog search)	05/15/2024	JL
PE2E text search	05/15/2024	JL
Similarity search	05/15/2024	JL

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
	USPGPUB, USPAT	05/15/2024	JL

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Web Search History

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date, time	web site	search string
5/14/2024 12:35:01 PM	Google Patents	Search Term 1 optic Search Term 2 eye Search Term 3 adjacent folding Search Term 4 image source Search Term 5 folding optic Before Priority Date: priority:20010507
5/14/2024 12:35:20 PM	Google Scholar	glasses light assembly light housing pair
5/14/2024 12:35:20 PM	Google Patents	Search Term 1 glasses Search Term 2 light assembly Search Term 3 light Search Term 4 housing Search Term 5 pair Before Priority Date: priority:20030130
5/14/2024 12:35:29 PM	Google Scholar	support wearer eyeglass frame audio
5/14/2024 12:35:29 PM	Google Patents	Search Term 1 support Search Term 2 wearer Search Term 3 eyeglass Search Term 4 frame Search Term 5 audio Before Priority Date: priority:20000602
5/14/2024 12:35:38 PM	Google Scholar	video scaler overlay memory display

date, time	web site	search string
5/14/2024 12:35:38 PM	Google Patents	Search Term 1 video Search Term 2 scaler Search Term 3 overlay Search Term 4 memory Search Term 5 display Before Priority Date: priority:20001003
5/14/2024 12:35:47 PM	Google Scholar	dimensional subject frame frames model
5/14/2024 12:35:47 PM	Google Patents	Search Term 1 dimensional Search Term 2 subject Search Term 3 frame Search Term 4 frames Search Term 5 model Before Priority Date: priority:20001031
5/14/2024 1:01:43 PM	Google Scholar	bone conduction headset user band ear
5/14/2024 1:01:43 PM	Google Patents	Search Term 1 bone conduction Search Term 2 headset Search Term 3 user Search Term 4 band Search Term 5 ear Before Priority Date: priority:20010705
5/14/2024 1:01:52 PM	Google Scholar	display apparatus image display holding member combiner lens

date, time	web site	search string
5/14/2024 1:01:52 PM	Google Patents	Search Term 1 display apparatus Search Term 2 image display Search Term 3 holding member Search Term 4 combiner Search Term 5 lens Before Priority Date: priority:20000911
5/14/2024 1:02:01 PM	Google Scholar	glasses intelligent tag chip coil digital data
5/14/2024 1:02:01 PM	Google Patents	Search Term 1 glasses Search Term 2 intelligent tag Search Term 3 chip Search Term 4 coil Search Term 5 digital data Before Priority Date: priority:20030513
5/14/2024 1:02:08 PM	Google Scholar	light emitting emitting diodes illumination electrical user
5/14/2024 1:02:08 PM	Google Patents	Search Term 1 light emitting Search Term 2 emitting diodes Search Term 3 illumination Search Term 4 electrical Search Term 5 user Before Priority Date: priority:20030331
5/14/2024 1:02:24 PM	Google Scholar	touch headset user interface sensitive surface control output

date, time	web site	search string
5/14/2024 1:02:24 PM	Google Patents	Search Term 1 touch Search Term 2 headset Search Term 3 user interface Search Term 4 sensitive surface Search Term 5 control output Before Priority Date: priority:20061130
5/14/2024 1:02:32 PM	Google Scholar	eyeglasses wire dep electronic temple
5/14/2024 1:02:32 PM	Google Patents	Search Term 1 eyeglasses Search Term 2 wire Search Term 3 dep Search Term 4 electronic Search Term 5 temple Before Priority Date: priority:20061213
5/14/2024 1:02:40 PM	Google Scholar	housing portion communications device wireless communications right ear housing
5/14/2024 1:02:40 PM	Google Patents	Search Term 1 housing portion Search Term 2 communications device Search Term 3 wireless communications Search Term 4 right ear Search Term 5 housing Before Priority Date: priority:20061214
5/14/2024 1:02:48 PM	Google Scholar	coil external frame external coil visor

date, time	web site	search string
5/14/2024 1:02:48 PM	Google Patents	Search Term 1 coil Search Term 2 external Search Term 3 frame Search Term 4 external coil Search Term 5 visor Before Priority Date: priority:20061222
5/14/2024 1:18:55 PM	Google Scholar	(headphone) (cradle) (transmitter) (audio) (signal)
5/14/2024 1:18:55 PM	Google Patents	Search Term 1 (headphone) (cradle) (transmitter) (audio) (signal) Before Priority Date: priority:20070130
5/14/2024 1:18:56 PM	Google Scholar	headphone cradle transmitter audio signal
5/14/2024 1:18:56 PM	Google Patents	Search Term 1 headphone Search Term 2 cradle Search Term 3 transmitter Search Term 4 audio Search Term 5 signal Before Priority Date: priority:20070130

date, time	web site	search string
5/14/2024 1:19:03 PM	Google Patents	Search Term 1 (headphone) Search Term 2 (cradle) Search Term 3 (transmitter) Search Term 4 (audio) Search Term 5 (signal) Before Priority Date: priority:20070130
5/14/2024 1:19:15 PM	Google Scholar	support latching temple receiver female
5/14/2024 1:19:15 PM	Google Patents	Search Term 1 support Search Term 2 latching Search Term 3 temple Search Term 4 receiver Search Term 5 female Before Priority Date: priority:20030811
5/14/2024 1:19:23 PM	Google Scholar	electro active lens correction focal
5/14/2024 1:19:23 PM	Google Patents	Search Term 1 electro Search Term 2 active Search Term 3 lens Search Term 4 correction Search Term 5 focal Before Priority Date: priority:20020116
5/14/2024 1:19:30 PM	Google Scholar	cap signal radiation amount visor

date, time	web site	search string
5/14/2024 1:19:30 PM	Google Patents	Search Term 1 cap Search Term 2 signal Search Term 3 radiation Search Term 4 amount Search Term 5 visor Before Priority Date: priority:20030723
5/14/2024 1:19:39 PM	Google Scholar	oscillator capacitive ratio capacitance node
5/14/2024 1:19:39 PM	Google Patents	Search Term 1 oscillator Search Term 2 capacitive Search Term 3 ratio Search Term 4 capacitance Search Term 5 node Before Priority Date: priority:20010330
5/14/2024 1:19:48 PM	Google Scholar	cord eyeglass tethered electrical recited
5/14/2024 1:19:48 PM	Google Patents	Search Term 1 cord Search Term 2 eyeglass Search Term 3 tethered Search Term 4 electrical Search Term 5 recited Before Priority Date: priority:20030415
5/14/2024 1:20:03 PM	Google Scholar	light emitting display device user emitting device pixel portion

date, time	web site	search string
5/14/2024 1:20:03 PM	Google Patents	Search Term 1 light emitting Search Term 2 display device Search Term 3 user Search Term 4 emitting device Search Term 5 pixel portion Before Priority Date: priority:20031028
5/14/2024 1:20:10 PM	Google Scholar	headset mode dual digital signal signal processor
5/14/2024 1:20:10 PM	Google Patents	Search Term 1 headset Search Term 2 mode Search Term 3 dual Search Term 4 digital signal Search Term 5 signal processor Before Priority Date: priority:20031014
5/14/2024 1:20:18 PM	Google Scholar	conduction speaker bone conduction bone head glasses
5/14/2024 1:20:18 PM	Google Patents	Search Term 1 conduction speaker Search Term 2 bone conduction Search Term 3 bone Search Term 4 head Search Term 5 glasses Before Priority Date: priority:20031118
5/14/2024 1:37:25 PM	Google Scholar	sound speaker display device observer video display

date, time	web site	search string
5/14/2024 1:37:25 PM	Google Patents	Search Term 1 sound Search Term 2 speaker Search Term 3 display device Search Term 4 observer Search Term 5 video display Before Priority Date: priority:20031205
5/14/2024 1:37:34 PM	Google Scholar	sensor rule storing sensor signals external conditions
5/14/2024 1:37:34 PM	Google Patents	Search Term 1 sensor Search Term 2 rule Search Term 3 storing Search Term 4 sensor signals Search Term 5 external conditions Before Priority Date: priority:20011113
5/14/2024 1:37:42 PM	Google Scholar	operating frequency shutter lenses lenses shutter opening
5/14/2024 1:37:42 PM	Google Patents	Search Term 1 operating frequency Search Term 2 shutter lenses Search Term 3 lenses Search Term 4 shutter Search Term 5 opening Before Priority Date: priority:20030206
5/14/2024 1:37:51 PM	Google Scholar	speaker audio device audio support wearable wireless

date, time	web site	search string
5/14/2024 1:37:51 PM	Google Patents	Search Term 1 speaker Search Term 2 audio device Search Term 3 audio Search Term 4 support Search Term 5 wearable wireless Before Priority Date: priority:20000602
5/14/2024 1:37:59 PM	Google Scholar	head mounted focus mounted display image unit
5/14/2024 1:37:59 PM	Google Patents	Search Term 1 head mounted Search Term 2 focus Search Term 3 mounted display Search Term 4 image Search Term 5 unit Before Priority Date: priority:20040602
5/14/2024 1:38:13 PM	Google Scholar	improving vision corrector vision wavefront sensor light
5/14/2024 1:38:13 PM	Google Patents	Search Term 1 improving vision Search Term 2 corrector Search Term 3 vision Search Term 4 wavefront sensor Search Term 5 light Before Priority Date: priority:20021004
5/14/2024 1:38:19 PM	Google Scholar	lens coating transmission altering color base

date, time	web site	search string
5/14/2024 1:38:19 PM	Google Patents	Search Term 1 lens Search Term 2 coating Search Term 3 transmission altering Search Term 4 color Search Term 5 base Before Priority Date: priority:20030129
5/14/2024 1:38:25 PM	Google Scholar	lens coating layer infrared absorbing scratch
5/14/2024 1:38:25 PM	Google Patents	Search Term 1 lens Search Term 2 coating Search Term 3 layer Search Term 4 infrared absorbing Search Term 5 scratch Before Priority Date: priority:20030129
5/14/2024 2:32:24 PM	Google Scholar	electro active lens lenses phoropter
5/14/2024 2:32:24 PM	Google Patents	Search Term 1 electro Search Term 2 active Search Term 3 lens Search Term 4 lenses Search Term 5 phoropter Before Priority Date: priority:19990702
5/14/2024 2:32:31 PM	Google Scholar	lens coating curve optical altering layer

date, time	web site	search string
5/14/2024 2:32:31 PM	Google Patents	Search Term 1 lens Search Term 2 coating Search Term 3 curve Search Term 4 optical Search Term 5 altering layer Before Priority Date: priority:20030129
5/14/2024 2:32:45 PM	Google Scholar	eyeglasses microphone connector cable connection
5/14/2024 2:32:45 PM	Google Patents	Search Term 1 eyeglasses Search Term 2 microphone Search Term 3 connector Search Term 4 cable Search Term 5 connection Before Priority Date: priority:20020124
5/14/2024 2:32:53 PM	Google Scholar	radiation output electronic circuit recited monitoring
5/14/2024 2:32:53 PM	Google Patents	Search Term 1 radiation Search Term 2 output Search Term 3 electronic circuit Search Term 4 recited Search Term 5 monitoring Before Priority Date: priority:20040415
5/14/2024 2:33:00 PM	Google Scholar	user ear set forth transmitting apparatus electronic module

date, time	web site	search string
5/14/2024 2:33:00 PM	Google Patents	Search Term 1 user Search Term 2 ear Search Term 3 set forth Search Term 4 transmitting apparatus Search Term 5 electronic module Before Priority Date: priority:20030401
5/14/2024 2:53:48 PM	Google Scholar	glasses pair pedometer recited temple
5/14/2024 2:53:48 PM	Google Patents	Search Term 1 glasses Search Term 2 pair Search Term 3 pedometer Search Term 4 recited Search Term 5 temple Before Priority Date: priority:20031009
5/14/2024 2:54:05 PM	Google Scholar	subscriber computer expert technical home
5/14/2024 2:54:05 PM	Google Patents	Search Term 1 subscriber Search Term 2 computer Search Term 3 expert Search Term 4 technical Search Term 5 home Before Priority Date: priority:20040527
5/14/2024 2:54:27 PM	Google Scholar	eyeglasses wireless arms wireless communication frame

date, time	web site	search string
5/14/2024 2:54:27 PM	Google Patents	Search Term 1 eyeglasses Search Term 2 wireless Search Term 3 arms Search Term 4 wireless communication Search Term 5 frame Before Priority Date: priority:20030415
5/14/2024 2:54:45 PM	Google Scholar	glasses pair connector temple recited
5/14/2024 2:54:45 PM	Google Patents	Search Term 1 glasses Search Term 2 pair Search Term 3 connector Search Term 4 temple Search Term 5 recited Before Priority Date: priority:20031009
5/14/2024 2:54:52 PM	Google Scholar	audio eyeglasses recited frame assembly mass storage
5/14/2024 2:54:52 PM	Google Patents	Search Term 1 audio Search Term 2 eyeglasses Search Term 3 recited Search Term 4 frame assembly Search Term 5 mass storage Before Priority Date: priority:20040811
5/14/2024 2:55:04 PM	Google Scholar	mode portable telephone noncommunicative functioning communicative

date, time	web site	search string
5/14/2024 2:55:04 PM	Google Patents	Search Term 1 mode Search Term 2 portable telephone Search Term 3 noncommunicative Search Term 4 functioning Search Term 5 communicative Before Priority Date: priority:20000825
5/14/2024 2:55:12 PM	Google Scholar	picture pictures image bridging series
5/14/2024 2:55:12 PM	Google Patents	Search Term 1 picture Search Term 2 pictures Search Term 3 image Search Term 4 bridging Search Term 5 series Before Priority Date: priority:20010123
5/14/2024 3:11:41 PM	Google Scholar	(tempo) (music) (recited) (event) (song)
5/14/2024 3:11:41 PM	Google Patents	Search Term 1 (tempo) (music) (recited) (event) (song) Before Priority Date: priority:20041124
5/14/2024 3:11:42 PM	Google Scholar	tempo music recited event song

date, time	web site	search string
5/14/2024 3:11:42 PM	Google Patents	Search Term 1 tempo Search Term 2 music Search Term 3 recited Search Term 4 event Search Term 5 song Before Priority Date: priority:20041124
5/14/2024 3:11:47 PM	Google Patents	Search Term 1 (tempo) Search Term 2 (music) Search Term 3 (recited) Search Term 4 (event) Search Term 5 (song) Before Priority Date: priority:20041124
5/14/2024 3:12:00 PM	Google Scholar	light lens viewing window shutter control
5/14/2024 3:12:00 PM	Google Patents	Search Term 1 light Search Term 2 lens Search Term 3 viewing window Search Term 4 shutter Search Term 5 control Before Priority Date: priority:20030710
5/14/2024 3:12:06 PM	Google Scholar	electro phoropter optical power active lenses

date, time	web site	search string
5/14/2024 3:12:06 PM	Google Patents	Search Term 1 electro Search Term 2 phoropter Search Term 3 optical power Search Term 4 active Search Term 5 lenses Before Priority Date: priority:20030206
5/14/2024 3:12:13 PM	Google Scholar	patterned electrode liquid crystal electrodes layer pattern
5/14/2024 3:12:13 PM	Google Patents	Search Term 1 patterned electrode Search Term 2 liquid crystal Search Term 3 electrodes Search Term 4 layer Search Term 5 pattern Before Priority Date: priority:20040413
5/14/2024 3:12:21 PM	Google Scholar	glasses temple speaker pair hearing
5/14/2024 3:12:21 PM	Google Patents	Search Term 1 glasses Search Term 2 temple Search Term 3 speaker Search Term 4 pair Search Term 5 hearing Before Priority Date: priority:20031009
5/14/2024 3:12:33 PM	Google Scholar	glasses pair information recited event

date, time	web site	search string
5/14/2024 3:12:33 PM	Google Patents	Search Term 1 glasses Search Term 2 pair Search Term 3 information Search Term 4 recited Search Term 5 event Before Priority Date: priority:20031009
5/14/2024 3:12:41 PM	Google Scholar	temple adapter pair glasses electrical component
5/14/2024 3:12:41 PM	Google Patents	Search Term 1 temple Search Term 2 adapter Search Term 3 pair Search Term 4 glasses Search Term 5 electrical component Before Priority Date: priority:20031009
5/14/2024 3:12:48 PM	Google Scholar	electro lens active optical lens controller
5/14/2024 3:12:48 PM	Google Patents	Search Term 1 electro Search Term 2 lens Search Term 3 active Search Term 4 optical lens Search Term 5 controller Before Priority Date: priority:20000623
5/14/2024 3:12:55 PM	Google Scholar	glasses temple clock pair lens holder

date, time	web site	search string
5/14/2024 3:12:55 PM	Google Patents	Search Term 1 glasses Search Term 2 temple Search Term 3 clock Search Term 4 pair Search Term 5 lens holder Before Priority Date: priority:20031009
5/14/2024 3:13:02 PM	Google Scholar	cells optical component optical component walls
5/14/2024 3:13:02 PM	Google Patents	Search Term 1 cells Search Term 2 optical component Search Term 3 optical Search Term 4 component Search Term 5 walls Before Priority Date: priority:20040702

Web Search History

date, time	web site	search string
4/19/2024 8:05:53 AM	Google	audio smart glasses
4/19/2024 8:06:01 AM	Google	Bluetooth audio smart glasses
4/19/2024 8:06:08 AM	Google	Wireless audio smart glasses
4/19/2024 8:06:15 AM	Google	Best audio smart glasses
4/19/2024 8:06:21 AM	Google	Bluetooth Audio Glasses
4/19/2024 8:06:28 AM	Google	Bluetooth Sunglasses
4/19/2024 8:06:40 AM	Google	Sunglasses with Bluetooth speakers
4/19/2024 8:06:55 AM	Google	Bluetooth Sunglasses with Camera
4/19/2024 8:06:58 AM	Google	Bluetooth sunglasses Bose
4/19/2024 8:24:58 AM	Google	Audio glasses
4/19/2024 8:25:35 AM	Google	Best audio glasses
4/19/2024 8:25:58 AM	Google	Wireless audio glasses
4/19/2024 8:26:59 AM	Google	vr glasses
4/19/2024 8:27:14 AM	Google	Best VR headset for PC
4/19/2024 8:27:26 AM	Google	VR Headset for Phone
4/19/2024 8:27:41 AM	Google	ar glasses
4/19/2024 8:28:16 AM	Google	Nreal AR glasses
4/19/2024 8:28:24 AM	Google	Best AR glasses
4/19/2024 8:29:43 AM	Google Scholar	lens electronic frame eyewear electro

date, time	web site	search string
4/19/2024 8:29:43 AM	Google Patents	Search Term 1 lens Search Term 2 electronic Search Term 3 frame Search Term 4 eyewear Search Term 5 electro Before Priority Date: priority:20041102
4/19/2024 8:31:19 AM	Google Scholar	panoramic image video display camera
4/19/2024 8:31:19 AM	Google Patents	Search Term 1 panoramic Search Term 2 image Search Term 3 video Search Term 4 display Search Term 5 camera Before Priority Date: priority:20040519
4/19/2024 8:31:51 AM	Google Scholar	audio wearer support audio device ear
4/19/2024 8:31:51 AM	Google Patents	Search Term 1 audio Search Term 2 wearer Search Term 3 support Search Term 4 audio device Search Term 5 ear Before Priority Date: priority:20000602
4/19/2024 8:37:05 AM	Google Scholar	steam superheater head valve boiler

date, time	web site	search string
4/19/2024 8:37:05 AM	Google Patents	Search Term 1 steam Search Term 2 superheater Search Term 3 head Search Term 4 valve Search Term 5 boiler Before Priority Date: priority:19251130
4/19/2024 8:37:13 AM	Google Scholar	magnet sections members connector contacts
4/19/2024 8:37:13 AM	Google Patents	Search Term 1 magnet Search Term 2 sections Search Term 3 members Search Term 4 connector Search Term 5 contacts Before Priority Date: priority:19370614
4/19/2024 8:37:20 AM	Google Scholar	lens sac lenses temple spectacle
4/19/2024 8:37:20 AM	Google Patents	Search Term 1 lens Search Term 2 sac Search Term 3 lenses Search Term 4 temple Search Term 5 spectacle Before Priority Date: priority:19460709
4/19/2024 8:37:27 AM	Google Scholar	lenses spectacles liquid space vision

date, time	web site	search string
4/19/2024 8:37:27 AM	Google Patents	Search Term 1 lenses Search Term 2 spectacles Search Term 3 liquid Search Term 4 space Search Term 5 vision Before Priority Date: priority:19460816
4/19/2024 9:02:57 AM	Google Scholar	lens fluid diaphragm tension pressure
4/19/2024 9:02:57 AM	Google Patents	Search Term 1 lens Search Term 2 fluid Search Term 3 diaphragm Search Term 4 tension Search Term 5 pressure Before Priority Date: priority:19610712
4/19/2024 9:03:04 AM	Google Scholar	pair shade panel hinge members bar
4/19/2024 9:03:04 AM	Google Patents	Search Term 1 pair Search Term 2 shade Search Term 3 panel Search Term 4 hinge members Search Term 5 bar Before Priority Date: priority:19620514
4/19/2024 9:03:11 AM	Google Scholar	crystal lens electro groove laminated

date, time	web site	search string
4/19/2024 9:03:11 AM	Google Patents	Search Term 1 crystal Search Term 2 lens Search Term 3 electro Search Term 4 groove Search Term 5 laminated Before Priority Date: priority:19620905
4/19/2024 9:03:23 AM	Google Scholar	lens casting base composite mold
4/19/2024 9:03:23 AM	Google Patents	Search Term 1 lens Search Term 2 casting Search Term 3 base Search Term 4 composite Search Term 5 mold Before Priority Date: priority:19630228
4/19/2024 9:03:43 AM	Google Scholar	assembly speaker structured recited industrial safety
4/19/2024 9:03:43 AM	Google Patents	Search Term 1 assembly Search Term 2 speaker Search Term 3 structured Search Term 4 recited Search Term 5 industrial safety Before Priority Date: priority:19960906
4/19/2024 9:03:52 AM	Google Scholar	eyewear frame transceiver temple devices

date, time	web site	search string
4/19/2024 9:03:52 AM	Google Patents	Search Term 1 eyewear Search Term 2 frame Search Term 3 transceiver Search Term 4 temple Search Term 5 devices Before Priority Date: priority:20010430
4/19/2024 9:05:04 AM	Google Scholar	ear audio eyeglass audio device wearer
4/19/2024 9:05:04 AM	Google Patents	Search Term 1 ear Search Term 2 audio Search Term 3 eyeglass Search Term 4 audio device Search Term 5 wearer Before Priority Date: priority:20020726
4/19/2024 9:05:18 AM	Google Scholar	earphone wearer eyeglass support lens
4/19/2024 9:05:18 AM	Google Patents	Search Term 1 earphone Search Term 2 wearer Search Term 3 eyeglass Search Term 4 support Search Term 5 lens Before Priority Date: priority:20000602
4/19/2024 9:05:29 AM	Google Scholar	speaker audio device audio ear wearable wireless

date, time	web site	search string
4/19/2024 9:05:29 AM	Google Patents	Search Term 1 speaker Search Term 2 audio device Search Term 3 audio Search Term 4 ear Search Term 5 wearable wireless Before Priority Date: priority:20000602
4/19/2024 9:05:45 AM	Google Scholar	optical optical element adjustable adjustable connector wearer
4/19/2024 9:05:45 AM	Google Patents	Search Term 1 optical Search Term 2 optical element Search Term 3 adjustable Search Term 4 adjustable connector Search Term 5 wearer Before Priority Date: priority:20061214
4/19/2024 9:47:40 AM	Google Scholar	speaker module detachable module detachable earstem
4/19/2024 9:47:40 AM	Google Patents	Search Term 1 speaker Search Term 2 module Search Term 3 detachable module Search Term 4 detachable Search Term 5 earstem Before Priority Date: priority:20000602
4/19/2024 9:47:47 AM	Google Scholar	sensors earphones recited user media player

date, time	web site	search string
4/19/2024 9:47:47 AM	Google Patents	Search Term 1 sensors Search Term 2 earphones Search Term 3 recited Search Term 4 user Search Term 5 media player Before Priority Date: priority:20080714
4/19/2024 9:47:58 AM	Google Scholar	eyeglass frame frame extension arm eyeglass speaker
4/19/2024 9:47:58 AM	Google Patents	Search Term 1 eyeglass frame Search Term 2 frame Search Term 3 extension arm Search Term 4 eyeglass Search Term 5 speaker Before Priority Date: priority:20010621
4/19/2024 9:48:10 AM	Google Scholar	source audio wearer speaker interface
4/19/2024 9:48:10 AM	Google Patents	Search Term 1 source Search Term 2 audio Search Term 3 wearer Search Term 4 speaker Search Term 5 interface Before Priority Date: priority:20041222
4/19/2024 9:48:33 AM	Google Scholar	sound unit outputting device user side unit

date, time	web site	search string
4/19/2024 9:48:33 AM	Google Patents	Search Term 1 sound Search Term 2 unit Search Term 3 outputting device Search Term 4 user Search Term 5 side unit Before Priority Date: priority:20110527
4/19/2024 9:48:43 AM	Google Scholar	audio communication system audio communication user zone
4/19/2024 9:48:43 AM	Google Patents	Search Term 1 audio Search Term 2 communication system Search Term 3 audio communication Search Term 4 user Search Term 5 zone Before Priority Date: priority:20131220
4/19/2024 9:48:50 AM	Google Scholar	eyeglass view elevational view side elevational ornamental design
4/19/2024 9:48:50 AM	Google Patents	Search Term 1 eyeglass Search Term 2 view Search Term 3 elevational view Search Term 4 side elevational Search Term 5 ornamental design Before Priority Date: priority:20150325
4/19/2024 9:49:08 AM	Google Scholar	module interface system electronically enabled enabled interface speaker

date, time	web site	search string
4/19/2024 9:49:08 AM	Google Patents	Search Term 1 module Search Term 2 interface system Search Term 3 electronically enabled Search Term 4 enabled interface Search Term 5 speaker Before Priority Date: priority:20000602
4/19/2024 9:49:22 AM	Google Scholar	display user eyewear system support source device
4/19/2024 9:49:22 AM	Google Patents	Search Term 1 display Search Term 2 user Search Term 3 eyewear system Search Term 4 support Search Term 5 source device Before Priority Date: priority:20130315
4/19/2024 10:18:47 AM	Google Scholar	eyewear communication system base base link modular communication
4/19/2024 10:18:47 AM	Google Patents	Search Term 1 eyewear Search Term 2 communication system Search Term 3 base Search Term 4 base link Search Term 5 modular communication Before Priority Date: priority:20130612
4/19/2024 10:18:54 AM	Google Scholar	connector electronic device eyewear plate attachment member

date, time	web site	search string
4/19/2024 10:18:54 AM	Google Patents	Search Term 1 connector Search Term 2 electronic device Search Term 3 eyewear Search Term 4 plate Search Term 5 attachment member Before Priority Date: priority:20120217
4/19/2024 10:19:01 AM	Google Scholar	side section wearer vibration vibration transducer support structure
4/19/2024 10:19:01 AM	Google Patents	Search Term 1 side section Search Term 2 wearer Search Term 3 vibration Search Term 4 vibration transducer Search Term 5 support structure Before Priority Date: priority:20110720
4/19/2024 10:19:11 AM	Google Scholar	earphone communication equipment wireless headset ears wearing state
4/19/2024 10:19:11 AM	Google Patents	Search Term 1 earphone Search Term 2 communication equipment Search Term 3 wireless headset Search Term 4 ears Search Term 5 wearing state Before Priority Date: priority:20180605
4/19/2024 10:19:38 AM	Google Scholar	loudspeaker vibration fixed position hinge supporting surface

date, time	web site	search string
4/19/2024 10:19:38 AM	Google Patents	Search Term 1 loudspeaker Search Term 2 vibration Search Term 3 fixed position Search Term 4 hinge Search Term 5 supporting surface Before Priority Date: priority:20180824
4/19/2024 10:19:44 AM	Google Scholar	speaker user frequency unit housing member
4/19/2024 10:19:44 AM	Google Patents	Search Term 1 speaker Search Term 2 user Search Term 3 frequency Search Term 4 unit Search Term 5 housing member Before Priority Date: priority:20201104
4/19/2024 10:19:57 AM	Google Scholar	radiation electro birefringent zone plate electrodes
4/19/2024 10:19:57 AM	Google Patents	Search Term 1 radiation Search Term 2 electro Search Term 3 birefringent Search Term 4 zone plate Search Term 5 electrodes Before Priority Date: priority:19630628
4/19/2024 10:20:03 AM	Google Scholar	eye patient refractometer test attachment

date, time	web site	search string
4/19/2024 10:20:03 AM	Google Patents	Search Term 1 eye Search Term 2 patient Search Term 3 refractometer Search Term 4 test Search Term 5 attachment Before Priority Date: priority:19691106
4/19/2024 10:20:12 AM	Google Scholar	fluid spectacle reservoir compartment lens
4/19/2024 10:20:12 AM	Google Patents	Search Term 1 fluid Search Term 2 spectacle Search Term 3 reservoir Search Term 4 compartment Search Term 5 lens Before Priority Date: priority:19700423
4/19/2024 10:44:16 AM	Google Scholar	assembly wearer ear protective structured
4/19/2024 10:44:16 AM	Google Patents	Search Term 1 assembly Search Term 2 wearer Search Term 3 ear Search Term 4 protective Search Term 5 structured Before Priority Date: priority:20000110
4/19/2024 10:44:23 AM	Google Scholar	internet network terminal data telephony

date, time	web site	search string
4/19/2024 10:44:23 AM	Google Patents	Search Term 1 internet Search Term 2 network Search Term 3 terminal Search Term 4 data Search Term 5 telephony Before Priority Date: priority:20000901
4/19/2024 10:45:00 AM	Google Scholar	leo pigment blocking element wavelengths short
4/19/2024 10:45:00 AM	Google Patents	Search Term 1 leo Search Term 2 pigment Search Term 3 blocking element Search Term 4 wavelengths Search Term 5 short Before Priority Date: priority:20121221
4/19/2024 10:45:07 AM	Google Scholar	display device ocular prosthesis prosthesis ocular display
4/19/2024 10:45:07 AM	Google Patents	Search Term 1 display device Search Term 2 ocular prosthesis Search Term 3 prosthesis Search Term 4 ocular Search Term 5 display Before Priority Date: priority:20130109
4/19/2024 10:45:15 AM	Google Scholar	organic semiconductor ophthalmic lens ophthalmic semiconductor layer thin film

date, time	web site	search string
4/19/2024 10:45:15 AM	Google Patents	Search Term 1 organic semiconductor Search Term 2 ophthalmic lens Search Term 3 ophthalmic Search Term 4 semiconductor layer Search Term 5 thin film Before Priority Date: priority:20130315
4/19/2024 10:45:24 AM	Google Scholar	liquid crystal crystal lens tunable liquid power optical
4/19/2024 10:45:24 AM	Google Patents	Search Term 1 liquid crystal Search Term 2 crystal lens Search Term 3 tunable liquid Search Term 4 power Search Term 5 optical Before Priority Date: priority:20130430
4/19/2024 10:45:34 AM	Google Scholar	programming ophthalmic lens media insert programming apparatus lens
4/19/2024 10:45:34 AM	Google Patents	Search Term 1 programming Search Term 2 ophthalmic lens Search Term 3 media insert Search Term 4 programming apparatus Search Term 5 lens Before Priority Date: priority:20130530
4/19/2024 10:45:42 AM	Google Scholar	ophthalmic lens programming media insert parameters programmable media

date, time	web site	search string
4/19/2024 10:45:42 AM	Google Patents	Search Term 1 ophthalmic lens Search Term 2 programming Search Term 3 media insert Search Term 4 parameters Search Term 5 programmable media Before Priority Date: priority:20130530
4/19/2024 11:10:55 AM	Google Scholar	hat brim led lens leds
4/19/2024 11:10:55 AM	Google Patents	Search Term 1 hat Search Term 2 brim Search Term 3 led Search Term 4 lens Search Term 5 leds Before Priority Date: priority:20050517
4/19/2024 11:11:06 AM	Google Scholar	light module clip light module mounting member
4/19/2024 11:11:06 AM	Google Patents	Search Term 1 light Search Term 2 module Search Term 3 clip Search Term 4 light module Search Term 5 mounting member Before Priority Date: priority:20011107
4/19/2024 11:11:17 AM	Google Scholar	light temple arm portions temple cross

date, time	web site	search string
4/19/2024 11:11:17 AM	Google Patents	Search Term 1 light Search Term 2 temple arm Search Term 3 portions Search Term 4 temple Search Term 5 cross Before Priority Date: priority:20011107
4/19/2024 11:11:32 AM	Google Scholar	temple arm temple arm members portions illuminated eyewear
4/19/2024 11:11:32 AM	Google Patents	Search Term 1 temple arm Search Term 2 temple Search Term 3 arm members Search Term 4 portions Search Term 5 illuminated eyewear Before Priority Date: priority:20011107
4/19/2024 11:11:42 AM	Google Scholar	glasses camera pair temple user
4/19/2024 11:11:42 AM	Google Patents	Search Term 1 glasses Search Term 2 camera Search Term 3 pair Search Term 4 temple Search Term 5 user Before Priority Date: priority:20031009
4/19/2024 11:11:50 AM	Google Scholar	temple glasses pair electronic device arrangement

date, time	web site	search string
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4/19/2024 11:12:01 AM	Google Scholar	glasses pair pedometer temple recited
4/19/2024 11:12:01 AM	Google Patents	Search Term 1 glasses Search Term 2 pair Search Term 3 pedometer Search Term 4 temple Search Term 5 recited Before Priority Date: priority:20031009
4/19/2024 11:12:15 AM	Google Scholar	temple connector rearward recited electrical components
4/19/2024 11:12:15 AM	Google Patents	Search Term 1 temple Search Term 2 connector Search Term 3 rearward Search Term 4 recited Search Term 5 electrical components Before Priority Date: priority:20030415
4/19/2024 11:12:27 AM	Google Scholar	coldpack electronic thermoelectric components thermoelectric components

date, time	web site	search string
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4/19/2024 11:12:34 AM	Google Scholar	piezoelectric contact lens microdevices array energy harvesting
4/19/2024 11:12:34 AM	Google Patents	Search Term 1 piezoelectric Search Term 2 contact lens Search Term 3 microdevices Search Term 4 array Search Term 5 energy harvesting Before Priority Date: priority:20130720
4/19/2024 11:31:33 AM	Google Scholar	glasses pair information recited event
4/19/2024 11:31:33 AM	Google Patents	Search Term 1 glasses Search Term 2 pair Search Term 3 information Search Term 4 recited Search Term 5 event Before Priority Date: priority:20031009
4/19/2024 11:31:41 AM	Google Scholar	eyeglasses sensor wireless communication recited communication circuitry

date, time	web site	search string
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4/19/2024 11:31:48 AM	Google Scholar	glasses audio signals user frame hearing
4/19/2024 11:31:48 AM	Google Patents	Search Term 1 glasses Search Term 2 audio signals Search Term 3 user Search Term 4 frame Search Term 5 hearing Before Priority Date: priority:20031009
4/19/2024 11:31:57 AM	Google Scholar	temple eyewear recited eyeglass frame electrical components
4/19/2024 11:31:57 AM	Google Patents	Search Term 1 temple Search Term 2 eyewear Search Term 3 recited Search Term 4 eyeglass frame Search Term 5 electrical components Before Priority Date: priority:20031009
4/19/2024 11:32:08 AM	Google Scholar	lens system intraocular lens focal length lens ciliary body

date, time	web site	search string
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4/19/2024 11:32:15 AM	Google Scholar	ophthalmic device retinal vascularization monitoring system ophthalmic signal
4/19/2024 11:32:15 AM	Google Patents	Search Term 1 ophthalmic device Search Term 2 retinal vascularization Search Term 3 monitoring system Search Term 4 ophthalmic Search Term 5 signal Before Priority Date: priority:20131122
4/19/2024 11:32:23 AM	Google Scholar	grid configurable light viewer screen
4/19/2024 11:32:23 AM	Google Patents	Search Term 1 grid Search Term 2 configurable Search Term 3 light Search Term 4 viewer Search Term 5 screen Before Priority Date: priority:20140130
4/19/2024 11:32:32 AM	Google Scholar	piezoelectric sensor vision correction vision correction piezoelectric

date, time	web site	search string
4/19/2024 11:32:32 AM	Google Patents	Search Term 1 piezoelectric sensor Search Term 2 vision correction Search Term 3 vision Search Term 4 correction Search Term 5 piezoelectric Before Priority Date: priority:20140213
4/19/2024 12:00:09 PM	Google Scholar	contact lens wireless communication lens antenna data
4/19/2024 12:00:09 PM	Google Patents	Search Term 1 contact lens Search Term 2 wireless communication Search Term 3 lens Search Term 4 antenna Search Term 5 data Before Priority Date: priority:20140325
4/19/2024 12:00:18 PM	Google Scholar	pct prosthetic capsular iol eye refractive
4/19/2024 12:00:18 PM	Google Patents	Search Term 1 pct Search Term 2 prosthetic capsular Search Term 3 iol Search Term 4 eye Search Term 5 refractive Before Priority Date: priority:20140619
4/19/2024 12:00:26 PM	Google Scholar	lens combination intraocular optical combination according lens

date, time	web site	search string
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4/19/2024 12:00:33 PM	Google Scholar	camera eyewear marker image lens
4/19/2024 12:00:33 PM	Google Patents	Search Term 1 camera Search Term 2 eyewear Search Term 3 marker Search Term 4 image Search Term 5 lens Before Priority Date: priority:20140803
4/19/2024 12:00:47 PM	Google Scholar	temple camera guide groove electronic device
4/19/2024 12:00:47 PM	Google Patents	Search Term 1 temple Search Term 2 camera Search Term 3 guide Search Term 4 groove Search Term 5 electronic device Before Priority Date: priority:20140803
4/19/2024 12:01:06 PM	Google Scholar	radiation frame output eyewear sensor

date, time	web site	search string
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4/19/2024 12:01:15 PM	Google Patents	Search Term 1 (bone conduction) (content data) (user) (head) (control unit) Before Priority Date: priority:20030807
4/19/2024 12:01:17 PM	Google Scholar	bone conduction content data user head control unit
4/19/2024 12:01:17 PM	Google Patents	Search Term 1 bone conduction Search Term 2 content data Search Term 3 user Search Term 4 head Search Term 5 control unit Before Priority Date: priority:20030807

date, time	web site	search string
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4/19/2024 12:01:31 PM	Google Scholar	conductive element optical device wearable optical fog thermal contact
4/19/2024 12:01:31 PM	Google Patents	Search Term 1 conductive element Search Term 2 optical device Search Term 3 wearable optical Search Term 4 fog Search Term 5 thermal contact Before Priority Date: priority:20140808
4/19/2024 12:01:39 PM	Google Scholar	battery examples cathode anode biomedical device
4/19/2024 12:01:39 PM	Google Patents	Search Term 1 battery Search Term 2 examples Search Term 3 cathode Search Term 4 anode Search Term 5 biomedical device Before Priority Date: priority:20140821

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US	10822218			04/12/2004	US 60527565 US 80462591 US 10822218 US 80509631	US 20060003803 A1 US 7792552 B2	01/05/2006 09/07/2010
US	10964011			10/12/2004	US 60527565 US 80533169 US 80509631 US 10964011 US 80562798 US 80818107 US 80462591 US 80805191 US 80592045	US 20050078274 A1 US 7192136 B2	04/14/2005 03/20/2007
US	11006343			12/07/2004	US 11006343 US 80527565	US 20050124324 A1 US 7116976 B2	06/09/2005 10/03/2006
US	11078857			03/11/2005	US 80847826 US 80533169 US 80562798 US 80620238 US 80618107 US 80805191 US 11078857 US 80592045 US 80647836	US 20050230596 A1	10/20/2005
US	11078855			03/11/2005	US 80647526 US 80533169 US 11078855 US 80562798 US 80620238 US 80618107 US 80805191 US 80592045 US 80647836	US 20050058158 A1 US 7503748 B1	03/05/2009 03/10/2009
CN	200510067143			04/14/2005	US 80562798	CN 1700059 A CN 100540507 C	11/23/2005 01/13/2010
CN	200520016479			04/14/2005	US 80562798	CN 2859575 Y	01/17/2007

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US	11183259			07/15/2005	US 60647825 US 60527565 US 60583169 US 11183269 US 60509631 US 10964011 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20050264752 A1 US 7922321 B2	12/01/2005 04/12/2011
US	11183263			07/15/2005	US 60647828 US 60527565 US 60583169 US 60509631 US 10964011 US 60562798 US 60620238 US 60618107 US 60605191 US 11183263 US 60592045 US 60647836	US 20060001827 A1 US 7380935 B2	01/05/2006 06/03/2006
US	11183256			07/15/2005	US 60647826 US 60527565 US 60583169 US 60509631 US 10964011 US 60562798 US 60620238 US 60618107 US 60605191 US 11183256 US 60592045 US 60647836	US 20060023158 A1 US 7600747 B2	02/02/2006 03/10/2009
US	11183262			07/15/2005	US 60647826 US 60527565 US 60583169 US 60509631 US 10964011 US 60562798 US 11183262 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20050248717 A1 US 7760888 B2	11/10/2005 07/29/2010
US	11183283			07/15/2005	US 60647828 US 60527565 US 60583169 US 60509631 US 10964011 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20050248719 A1	11/10/2005

IP Office	Application	Applicant	Title	Application Date	Priority Number	Publication Number	Publication Date
US	11183276			07/15/2005	US 60647825 US 60527565 US 60583169 US 11183276 US 60509631 US 10964011 US 60582738 US 60620238 US 60618107 US 60605191 US 60592045 US 60647838	US 20050248718 A1 US 7255437 B2	11/10/2005 08/14/2007
US	PCT/US06/22015			06/07/2006	US 60689686	WO 2006135614 A2 WO 2006135614 A3 WO 2006135614 A8 WO 2006135614 A9	12/21/2006 03/22/2007 07/10/2008 12/11/2008
CN	200680027964			06/07/2006	US 60689686	CN 101297191 A	10/29/2008
US	11452115			08/12/2006	US 11452115 US 60589586 US 11506343 US 60527565	US 20060258566 A1 US 7729683 B2	11/16/2006 06/01/2010
US	11497651			08/02/2006	US 11006343 US 60527565 US 11497651	US 20060276210 A1 US 7378434 B2	12/07/2006 05/20/2008
US	11521256			09/13/2006	US 11521256 US 60527565 US 60583169 US 60509631 US 10964011 US 60582738 US 60605191 US 60592045	US 7435410 B1	10/21/2008

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US	11580222			10/11/2006	US 60583169 US 60725998 US 11183269 US 60787550 US 60846150 US 10964011 US 60725998 US 60527565 US 60509631 US 60562798 US 60620238 US 11590272 US 60618107 US 60605191 US 60592045 US 60647836	US 20070046857 A1 US 7581833 B2	03/01/2007 09/01/2009
US	11546655			10/11/2006	US 60583169 US 60725998 US 11546655 US 60787550 US 60846150 US 10964011 US 60725998 US 11183269 US 60847826 US 60527565 US 60509631 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 2007030442 A1 US 7806525 B2	02/08/2007 10/05/2010
US	11650626			01/06/2007	US 11650626 US 60583169 US 60787550 US 60846150 US 10964011 US 11183269 US 60847826 US 60527565 US 60509631 US 60763854 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20070109491 A1 US 7677723 B2	05/17/2007 03/16/2010
US	11700550			01/30/2007	US 60583169 US 11700550 US 11078855 US 60787550 US 60846150 US 60647826 US 60763854 US 60562798 US 60620238 US 60618107 US 60605191 US 60592045 US 60647836	US 20070156330 A1	08/16/2007

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CN	200710095621			04/02/2007	US 60787850	CN 101048557 A	10/03/2007
US	11891411			08/09/2007	US 60583169 US 11183276 US 10964011 US 11891411 US 60647826 US 60527565 US 60509531 US 60562798 US 60620238 US 60618107 US 60505191 US 60592045 US 60647836	US 20070279584 A1 US 7401918 B2	12/06/2007 07/22/2008
US	11903512			08/20/2007	US 60346150 US 11903512	US 20080068559 A1 US 7543934 B2	03/29/2008 06/09/2009
US	12074302			03/03/2008	US 11521258 US 60527565 US 60583169 US 60509531 US 10964011 US 60562798 US 12074302 US 60505191 US 60592045	US 20080151179 A1 US 7621634 B2	06/25/2008 11/24/2009
US	12074961			03/07/2008	US 11497851 US 12074961 US 11006343 US 60527565	US 7890125 B1	02/15/2011
US	12152480			05/13/2008	US 60647826 US 60620238 US 60618107 US 60605191 US 11183263 US 12152480 US 60592045 US 60647836	US 20080218584 A1 US 8337013 B2	09/11/2008 12/25/2012
US	12214435			06/19/2008	US 60583169 US 11183276 US 10964011 US 11891411 US 60647826 US 60527565 US 60509531 US 60562798 US 60620238 US 60618107 US 12214435 US 60605191 US 60592045 US 60647836	US 20080278878 A1 US 7481531 B2	11/13/2008 01/27/2009

IP Office	Application	Applicant	Title	Application Date	Priority Number	Publication Number	Publication Date
US	12317043			12/18/2008	US 60583169 US 11183278 US 10964011 US 11591411 US 12317043 US 60647826 US 80527565 US 80509531 US 80562798 US 80620238 US 80618107 US 12214435 US 80605191 US 80592045 US 80647836	US 20090141233 A1 US 7771048 B2	06/04/2009 08/10/2010
US	12322377			02/02/2009	US 60647826 US 60583169 US 12322377 US 11078955 US 80562798 US 80620238 US 80618107 US 80605191 US 80592045 US 80647836	US 20090147215 A1 US 8770742 B2	06/11/2009 07/05/2014
US	12462286			07/31/2009	US 60583169 US 80725896 US 11183268 US 80787500 US 80546150 US 10964011 US 80725998 US 80647826 US 80527565 US 80509531 US 80562798 US 80620238 US 11580222 US 80618107 US 80605191 US 12462286 US 80592045 US 80647836	US 20090296044 A1 US 8109629 B2	12/03/2009 02/07/2012
US	12798995			04/14/2010	US 11452115 US 80689696 US 11006343 US 80527565 US 12798995	US 20100206272 A1 US 8744407 B2	08/12/2010 06/03/2014

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US	12803732			07/01/2010	US 60583169 US 60725896 US 11546685 US 60787550 US 60846150 US 10964011 US 12803732 US 60725999 US 11183266 US 60647826 US 60527565 US 80509631 US 80562798 US 80520238 US 60618107 US 60805191 US 80592045 US 80647836	US 20110152734 A1 US 8434863 B2	05/05/2011 06/07/2013
US	12806312			09/10/2010	US 60583169 US 60725896 US 60787550 US 10822218 US 11891411 US 80647826 US 60527565 US 12214435 US 60805191 US 12462288 US 80592045 US 60647836 US 11183266 US 11183276 US 60846150 US 10964011 US 12803732 US 60725999 US 12317043 US 80509631 US 80562798 US 80520238 US 11580222 US 60618107 US 80462591	US 20100309426 A1 US 8466151 B2	12/09/2010 06/18/2013
US	12987018			01/07/2011	US 12987018 US 11497551 US 12074961 US 11906343 US 60527565	US 8112104 B1	02/07/2012
US	13085492			04/12/2011	US 80583169 US 11183266 US 10964011 US 13085492 US 60647826 US 60527565 US 80509631 US 80562798 US 80520238 US 60618107 US 80605191 US 80592045 US 80647836	US 20110187990 A1 US 8500271 B2	08/04/2011 08/05/2013

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US	13291020			11/07/2011	US 60583169 US 60725896 US 11546685 US 60787550 US 60846150 US 10964011 US 13893732 US 60725999 US 11183256 US 60647826 US 60527565 US 60509631 US 60562798 US 60520238 US 60818107 US 13291020 US 60605191 US 60592045 US 60647836	US 2012056068 A1 US 8435507 B2	03/01/2012 04/30/2013
US	13363360			01/31/2012	US 12987018 US 11497851 US 12074961 US 1306343 US 60527565 US 13363360	US 8380419 B1	10/02/2012
US	13367346			02/06/2012	US 60583169 US 60725896 US 11078855 US 60787550 US 13367346 US 10822218 US 60647826 US 60527565 US 60605191 US 12462286 US 60592045 US 60647836 US 11183263 US 11183278 US 11546685 US 60846150 US 10964011 US 60725999 US 11183256 US 1306343 US 60509631 US 11183283 US 60562798 US 11183262 US 60520238 US 13502222 US 60818107 US 11078857 US 11183263	US 20120133885 A1 US 9033493 B2	05/31/2012 05/19/2015
US	13593483			08/23/2012	US 12987018 US 11497851 US 13593483 US 1106343 US 60527565 US 13363360 US 12074961	US 8737978 B1	05/27/2014

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US	13831445			03/14/2013	US 60583169 US 60725896 US 11078855 US 60787850 US 10822218 US 60647826 US 60527565 US 60605191 US 60582045 US 60647836 US 11183269 US 11183276 US 11546685 US 60846150 US 10964011 US 12803732 US 60725999 US 11183268 US 11006343 US 60509631 US 11183263 US 60562798 US 11183262 US 60620238 US 60618107 US 13831445 US 11078857 US 11183263	US 20140268013 A1 US 20170068117 A9 US 10310296 B2	09/18/2014 03/09/2017 06/04/2019
US	13831512			03/14/2013	US 60583169 US 60725896 US 11078855 US 60787850 US 10822218 US 11891411 US 60647826 US 60527565 US 12214435 US 60605191 US 13831512 US 12462286 US 60592045 US 60647836 US 11183269 US 11183276 US 11546685 US 60846150 US 10964011 US 12806312 US 60725999 US 11183266 US 12217043 US 11006343 US 60509631 US 11183263 US 60562798 US 11183262 US 60620238 US 11580222 US 60618107 US 60462591 US 11078857 US 11183263	US 20130291440 A1 US 9690121 B2	08/08/2013 06/27/2017
US	13831455			03/14/2013	US 13831455	US 20140278782 A1	09/15/2014

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US	13955336			07/31/2013	US 60583169 US 11078855 US 11183269 US 11183276 US 10964011 US 13955336 US 10822218 US 13085402 US 11183256 US 60647835 US 11006343 US 60527565 US 60509631 US 11183283 US 60562798 US 11183262 US 60620238 US 60618107 US 60605191 US 11078857 US 11183263 US 60592045 US 60647836	US 20130308099 A1 US 8905542 B2	11/21/2013 12/09/2014
EP	14158720			03/11/2014	US 13831455	EP 2778074 A1	09/17/2014
CA	2845503			03/11/2014	US 13831455	CA 2845503 A1	09/14/2014
CN	201410096316			03/14/2014	US 13831455	CN 104050228 A	09/17/2014

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US	14272632			05/08/2014	US 11452115 US 60689688 US 11006343 US 60527565 US 12798396 US 14272632	US 20140242956 A1 US 8204265 B2	08/25/2014 12/01/2015
US	14286976			05/23/2014	US 12987018 US 1497661 US 13593483 US 11006343 US 60527565 US 13363360 US 14286976 US 12074861	US 20140256293 A1 US 11019199 B2	09/11/2014 05/25/2021
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US	14557409			12/01/2014	US 60583169 US 11078855 US 11183299 US 11183278 US 10964011 US 13855336 US 10522218 US 13856402 US 11183258 US 14557409 US 60647826 US 11006343 US 60527565 US 60509631 US 11183283 US 60562798 US 11183262 US 60620238 US 60618107 US 60605191 US 11078857 US 11183263 US 60592045 US 60647836	US 20150055245 A1 US 9547184 B2	03/26/2015 01/17/2017
HK	14112801			12/22/2014	US 13831455	HK 1199315 A1	06/25/2015

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US	14715501			05/18/2015	US 14715501 US 80583169 US 80725896 US 11078855 US 60787850 US 13367346 US 10822218 US 80647826 US 80527565 US 60805191 US 12462286 US 80592045 US 80647836 US 11183269 US 11183276 US 11546686 US 80846150 US 10964011 US 80725999 US 11183256 US 11006343 US 80509531 US 11183283 US 80562798 US 11183262 US 80620238 US 11580222 US 80618107 US 11078857 US 11183263	US 20150253590 A1 US 10330956 B2	09/10/2015 06/25/2019
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US	15343472			11/04/2016	US 14313988 US 80583169 US 12322377 US 11078855 US 10964011 US 10822218 US 80647826 US 15343472 US 11006343 US 80562798 US 80620238 US 80618107 US 80605191 US 11078857 US 80592045 US 80647838	US 20170074721 A1 US 10080790 B2	03/16/2017 08/28/2018

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Bibliographic Data

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Foreign Priority claimed: ☐ Yes ☒ No

35 USC 119 (a-d) conditions met: ☐ Yes ☒ No ☐ Met After Allowance

Verified and Acknowledged:

/JIE LEI/

Examiner's Signature

Initials

Title:

SYSTEM FOR CHARGING EMBEDDED BATTERY IN
WIRELESS HEAD-WORN PERSONAL ELECTRONIC
APPARATUS

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
03/06/2024	351	2872	IPVCP003X1C4X1C2
RULE			

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03/18/2024

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	Applicant	HOWELL et al.
	Filing Date	March 6, 2024
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95.	2008/0144854 A1	Jun-08	Abreu			
96.	2008/0151175 A1	Jun-08	Gross			
97.	2008/0151179 A1	Jun-08	Howell et al.			
98.	2008/0158506 A1	Jul-08	Fuziak			
99.	2008/0211921 A1	Sep-08	Sako et al.			
100.	2008/0218684 A1	Sep-08	Howell et al.			
101.	2008/0262392 A1	Oct-08	Ananny et al			
102.	2008/0278678 A1	Nov-08	Howell et al.			
103.	2009/0059159 A1	Mar-09	Howell et al.			
104.	2009/0059381 A1	Mar-09	Jannard			
105.	2009/0073375 A1	Mar-09	Nakada			
106.	2009/0141233 A1	Jun-09	Howell et al.			
107.	2009/0147215 A1	Jun-09	Howell et al.			
108.	2009/0156128 A1	Jun-09	Franson et al.			
109.	2009/0251660 A1	Oct-09	Figler et al.			
110.	2009/0251661 A1	Oct-09	Fuziak, Jr.			
111.	2009/0296044 A1	Dec-09	Howell et al.			
112.	2010/0045928 A1	Feb-10	Levy			
113.	2010/0061579 A1	Mar-10	Rickards et al.			
114.	2010/0079356 A1	Apr-10	Hoellwarth			
115.	2010/0105445 A1	Apr-10	BRUNTON et al.			
116.	2010/0110368 A1	May-10	Chaum			
117.	2010/0245754 A1	Sep-10	Matsumoto et al.			
118.	2010/0296045 A1	Nov-10	Agnoli et al.			

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	119.	2010/0309426 A1	Dec-10	Howell et al.			
	120.	2011/0102734 A1	May-11	Howell et al.			
	121.	2011/0164122 A1	Jul-11	Hardacker			
	122.	2011/0187990 A1	Aug-11	Howell et al.			
	123.	2011/0241976 A1	Oct-11	Boger et al.			
	124.	2011/0273365 A1	Nov-11	West et al.			
	125.	2011/0292333 A1	Dec-11	Kozaki et al.			
	126.	2012/0033061 A1	Feb-12	Ko et al.			
	127.	2012/0050668 A1	Mar-12	Howell et al.			
	128.	2012/0062357 A1	Mar-12	Slamka			
	129.	2012/0101411 A1	Apr-12	Hausdorff et al.			
	130.	2012/0133885 A1	May-12	Howell et al.			
	131.	2012/0176580 A1	Jul-12	Sonsino			
	132.	2012/0283894 A1	Nov-12	Naboulsi			
	133.	2013/0072828 A1	Mar-13	Sweis et al.			
	134.	2013/0077175 A1	Mar-13	Hotta et al.			
	135.	2013/0143519 A1	Jun-13	Doezema			
	136.	2013/0172691 A1	Jul-13	Tran			
	137.	2013/0201440 A1	Aug-13	Howell et al.			
	138.	2013/0308089 A1	Nov-13	Howell et al.			
	139.	2014/0132913 A1	May-14	Sweis et al.			
	140.	2014/0176902 A1	Jun-14	Sweis et al.			
	141.	2014/0198293 A1	Jul-14	Sweis et al.			
	142.	2014/0226838 A1	Aug-14	Wingate et al.			
	143.	2014/0268008 A1	Sep-14	Howell et al.			
	144.	2014/0268013 A1	Sep-14	Howell et al.			
	145.	2014/0268017 A1	Sep-14	Sweis et al.			
	146.	2014/0361185 A1	Dec-14	Howell et al.			
	147.	2015/0085245 A1	Mar-15	Howell et al.			
	148.	2015/0230988 A1	Aug-15	Chao et al.			

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	149.	2015/0253590 A1	Sep-15	Howell et al.			
	150.	2015/0277123 A1	Oct-15	CHAUM et al.			
	151.	2015/0338677 A1	Nov-15	Block			
	152.	2016/0098874 A1	Apr-16	Handville et al.			
	153.	2016/0246075 A9	Aug-16	Howell et al.			
	154.	2016/0302992 A1	Oct-16	Sweis et al.			
	155.	2017/0068117 A9	Mar-17	Howell et al.			
	156.	2017/0074721 A1	Mar-17	Howell et al.			
	157.	2017/0090219 A1	Mar-17	Howell et al.			
	158.	2017/0131575 A1	May-17	Howell et al.			
	159.	2017/0146829 A1	May-17	Howell et al.			
	160.	2017/0289323 A1	Oct-17	Gelvin et al.			
	161.	2017/0303187 A1	Oct-17	Crouthamel et al.			
	162.	2018/0122208 A1	May-18	Peyrard			
	163.	2018/0314079 A1	Nov-18	Chao et al.			
	164.	2018/0335650 A1	Nov-18	Howell et al.			
	165.	2018/0348050 A1	Dec-18	Howell et al.			
	166.	2019/0004325 A1	Jan-19	Connor			
	167.	2019/0033622 A1	Jan-19	Olgun et al.			
	168.	2019/0033623 A1	Jan-19	Howell et al.			
	169.	2019/0117121 A1	Apr-19	Kutina et al.			
	170.	2019/0187492 A1	Jun-19	Howell et al.			
	171.	2019/0272800 A1	Sep-19	Tao et al.			
	172.	2019/0278110 A1	Sep-19	Howell et al.			
	173.	2019/0285913 A1	Sep-19	Howell et al.			
	174.	2019/0310132 A1	Oct-19	Howell et al.			
	175.	2019/0318589 A1	Oct-19	Howell et al.			
	176.	2019/0369402 A1	Dec-19	Woodman et al.			
	177.	2019/0378493 A1	Dec-19	KIM et al.			
	178.	2019/0387351 A1	Dec-19	Lyren et al.			

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179.	2020/0012127 A1	Jan-20	Howell et al.			
180.	2020/0218094 A1	Jul-20	Howell et al.			
181.	2020/0364992 A1	Nov-20	Howell et al.			
182.	2021/0000347 A1	Jan-21	Stump			
183.	2021/0026146 A1	Jan-21	Harder et al.			
184.	2021/0271116 A1	Sep-21	Chao et al.			
185.	2021/0364827 A9	Nov-21	Howell et al.			
186.	2021/0364828 A1	Nov-21	Howell et al.			
187.	2021/0379425 A1	Dec-21	Tran			
188.	2021/0399691 A1	Dec-21	SAMINATHAN et al.			
189.	2022/0008763 A1	Jan-22	SALEH et al.			
190.	2022/0011603 A1	Jan-22	Howell et al.			
191.	2022/0034542 A1	Feb-22	Peters et al.			
192.	2022/0054092 A1	Feb-22	Howell et al.			
193.	2022/0178743 A1	Jun-22	Howell et al.			
194.	2022/0260859 A1	Aug-22	Howell et al.			
195.	2022/0335792 A1	Oct-22	Howell et al.			
196.	2022/0357599 A1	Nov-22	Howell et al.			
197.	2022/0415338 A1	Dec-22	Howell et al.			
198.	2023/0017635 A1	Jan-23	Howell et al.			
199.	2023/0033660 A1	Feb-23	Howell et al.			
200.	2023/0057654 A1	Feb-23	Howell et al.			
201.	2023/0236444 A1	Jul-23	Howell et al.			
202.	2023/0273464 A1	Aug-23	Howell et al.			
203.	2023/0359266 A1	Nov-23	Howell et al.			
204.	2024/0036361 A1	Feb-24	Howell et al.			
205.	320,558	Jun-1885	Hull			
206.	669,949	Mar-1901	Underwood			
207.	1,255,265	Feb-1918	Zachara			
208.	1,917,745	Jul-33	Weiss			

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209.	2,249,572	Jul-41	Lieber			
210.	2,638,532	May-53	Brady			
211.	2,725,462	Nov-55	Vorgang			
212.	2,794,085	May-57	De Angelis			
213.	2,818,511	Dec-57	Ullery et al.			
214.	2,830,132	Apr-58	Borg			
215.	2,874,230	Feb-59	Carlson			
216.	2,904,670	Sep-59	Calmes			
217.	3,060,308	Oct-62	Fortuna			
218.	3,104,290	Sep-63	Rosemond et al.			
219.	3,119,903	Jan-64	Rosemond et al.			
220.	3,597,054	Aug-71	Winter			
221.	3,710,115	Jan-73	Jubb			
222.	3,858,001	Dec-74	Bonne			
223.	3,883,701	May-75	Delorenzo			
224.	4,165,487	Aug-79	Corderman			
225.	4,254,451	Mar-81	Cochran, Jr.			
226.	4,283,127	Aug-81	Rosenwinkel et al.			
227.	4,322,585	Mar-82	Liautaud			
228.	4,348,664	Sep-82	Boschetti et al.			
229.	4,389,217	Jun-83	Baughman et al.			
230.	4,526,473	Jul-85	Zahn, III			
231.	4,535,244	Aug-85	Burnham			
232.	4,608,492	Aug-86	Burnham			
233.	4,683,587	Jul-87	Silverman			
234.	4,751,691	Jun-88	Perera			
235.	4,757,714	Jul-88	Purdy et al.			
236.	4,773,095	Sep-88	Zwicker et al.			
237.	4,806,011	Feb-89	Bettinger			
238.	4,822,160	April-89	Tsai			

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239.	4,822,161	Apr-89	Jimmy			
240.	4,851,686	Jul-89	Pearson			
241.	4,856,086	Aug-89	McCullough			
242.	4,859,047	Aug-89	Badewitz			
243.	4,882,769	Nov-89	Gallimore			
244.	4,904,078	Feb-90	Gorike			
245.	4,942,629	Jul-90	Stadlmann			
246.	4,962,469	Oct-90	Ono et al.			
247.	4,967,268	Oct-90	Lipton et al.			
248.	4,985,632	Jan-91	Bianco et al.			
249.	5,008,548	Apr-91	Gat			
250.	5,015,086	May-91	Okaue et al.			
251.	5,020,150	May-91	Shannon			
252.	5,026,151	Jun-91	Waltuck et al.			
253.	5,036,311	Jul-91	Moran et al.			
254.	5,050,150	Sep-91	Ikeda			
255.	5,064,410	Nov-91	Frenkel et al.			
256.	5,093,576	Mar-92	Edmond et al.			
257.	5,106,179	Apr-92	Kamaya et al.			
258.	5,144,344	Sep-92	Takahashi et al.			
259.	5,148,023	Sep-92	Hayashi et al.			
260.	5,151,600	Sep-92	Black			
261.	5,161,250	Nov-92	Ianna et al			
262.	5,172,256	Dec-92	Sethofer et al.			
263.	5,264,877	Nov-93	Hussey			
264.	5,306,917	Apr-94	Black et al.			
265.	5,353,378	Oct-94	Hoffman et al.			
266.	5,359,370	Oct-94	Mugnier			
267.	5,359,444	Oct-94	Piosenka et al.			
268.	5,367,345	Nov-94	da Silva			

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269.	5,379,464	Jan-95	Schleger et al.			
270.	5,382,986	Jan-95	Black et al.			
271.	5,394,005	Feb-95	Brown et al.			
272.	5,452,026	Sep-95	Marcy, III			
273.	5,452,480	Sep-95	Ryden			
274.	5,455,637	Oct-95	Kallman et al.			
275.	5,455,640	Oct-95	Gertsikov			
276.	5,457,751	Oct-95	Such			
277.	5,463,428	Oct-95	Lipton et al.			
278.	5,475,798	Dec-95	Handlos			
279.	5,500,532	Mar-96	Kozicki			
280.	5,510,961	Apr-96	Peng			
281.	5,513,384	Apr-96	Brennan et al.			
282.	5,519,781	May-96	Kurkurudza			
283.	5,533,130	Jul-96	Staton			
284.	5,541,641	Jul-96	Shimada			
285.	5,581,090	Dec-96	Goudjil			
286.	5,585,871	Dec.-96	Linden			
287.	5,589,398	Dec-96	Krause et al.			
288.	5,590,417	Dec-96	Rydbeck			
289.	5,606,743	Feb-97	Vogt et al.			
290.	5,608,808	Mar-97	da Silva			
291.	5,634,201	May-97	Mooring			
292.	5,671,035	Sep-97	Barnes			
293.	5,686,727	Nov-97	Reenstra et al.			
294.	5,694,475	Dec-97	Boyden			
295.	5,715,323	Feb-98	Walker			
296.	5,737,436	Apr-98	Boyden et al.			
297.	5,777,715	Jul-98	Kruegle et al.			
298.	5,790,311	Aug-98	Togino			

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299.	5,818,381	Oct-98	Williams			
300.	5,819,183	Oct-98	Voroba et al.			
301.	5,835,185	Nov-98	Kallman et al.			
302.	5,900,720	May-99	Kallman et al.			
303.	5,903,395	May-99	Rallison et al.			
304.	5,923,398	Jul-99	Goldman			
305.	5,941,837	Aug-99	Amano et al.			
306.	5,946,071	Aug-99	Feldman			
307.	5,949,516	Sep-99	McCurdy			
308.	5,966,746	Oct-99	Reedy et al.			
309.	5,980,037	Nov-99	Conway			
310.	5,988,812	Nov-99	Wingate			
311.	5,991,085	Nov-99	Rallison et al.			
312.	5,992,996	Nov-99	Sawyer			
313.	5,995,592	Nov-99	Shirai et al.			
314.	6,091,546	Jul-00	Spitzer			
315.	6,010,216	Jan-00	Jesiek			
316.	6,013,919	Jan-00	Schneider et al.			
317.	6,028,627	Feb-00	Helmsderfer			
318.	6,046,455	Apr-00	Ribi et al.			
319.	6,060,321	May-00	Hovorka			
320.	6,061,580	May-00	Altschul et al.			
321.	6,091,546	Jul-00	Spitzer			
322.	6,091,832	Jul-00	Shurman et al.			
323.	6,115,177	Sep-00	Vossler			
324.	6,132,681	Oct-00	Faran et al.			
325.	6,145,983	Nov-00	Schiffer			
326.	6,154,552	Nov-00	Koroljow et al.			
327.	6,176,576 B1	Jan-01	Green et al.			
328.	6,225,897 B1	May-01	Doyle et al.			

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329.	6,231,181 B1	May-01	Swab			
330.	6,236,969 B1	May-01	Ruppert et al.			
331.	6,243,578 B1	Jun-01	Koike			
332.	6,259,367 B1	Jul-01	Klein			
333.	6,270,466 B1	Aug-01	Weinstein et al.			
334.	6,292,213 B1	Sep-01	Jones			
335.	6,292,685 B1	Sep-01	Pompei			
336.	6,301,050 B1	Oct-01	DeLeon			
337.	6,301,367 B1	Oct-01	Boyden et al.			
338.	6,307,526 B1	Oct-01	Mann			
339.	6,311,155 B1	Oct-01	Vaudrey et al.			
340.	6,343,858 B1	Feb-02	Zelman			
341.	6,346,929 B1	Feb-02	Fukushima et al.			
342.	6,349,001 B1	Feb-02	Spitzer			
343.	6,349,422 B1	Feb-02	Schleger et al.			
344.	6,409,335 B1	Jun-02	Lipawsky			
345.	6,409,338 B1	Jun-02	Jewell			
346.	6,426,719 B1	Jul-02	Nagareda et al.			
347.	6,431,705 B1	Aug-02	Linden			
348.	6,474,816 B2	Nov-02	Butler et al.			
349.	6,478,736 B1	Nov-02	Mault			
350.	6,506,142 B2	Jan-03	Itoh et al.			
351.	6,511,175 B2	Jan-03	Hay et al.			
352.	6,513,532 B2	Feb-03	Mault et al.			
353.	6,517,203 B1	Feb-03	Blum et al.			
354.	6,539,336 B1	Mar-03	Vock et al.			
355.	6,542,081 B2	Apr-03	Torch			
356.	6,546,101 B1	Apr-03	Murray et al.			
357.	6,554,763 B1	Apr-03	Amano et al.			
358.	6,582,075 B1	Jun-03	Swab et al.			

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359.	6,619,799 B1	Sep-03	Blum et al.			
360.	6,629,076 B1	Sep-03	Haken			
361.	6,678,381 B1	Jan-04	Manabe			
362.	6,717,737 B1	Apr-04	Haglund			
363.	6,729,726 B2	May-04	Miller et al.			
364.	6,736,759 B1	May-04	Stubbs et al.			
365.	6,764,194 B1	Jul-04	Cooper			
366.	6,769,767 B2	Aug-04	Swab et al.			
367.	6,771,423 B2	Aug-04	Geist			
368.	6,788,309 B1	Sep-04	Swan et al.			
369.	6,792,401 B1	Sep-04	Nigro et al.			
370.	6,816,314 B2	Nov-04	Shimizu et al.			
371.	6,824,265 B1	Nov-04	Harper			
372.	6,857,741 B2	Feb-05	Blum et al.			
373.	6,871,951 B2	Mar-05	Blum et al.			
374.	6,879,930 B2	Apr-05	Sinclair et al.			
375.	6,912,386 B1	Jun-05	Himberg et al.			
376.	6,929,365 B2	Aug-05	Swab et al.			
377.	6,932,090 B1	Aug-05	Reschke et al.			
378.	6,947,219 B1	Sep-05	Ou			
379.	7,004,582 B2	Feb-06	Jannard et al.			
380.	7,013,009 B2	Mar-06	Warren			
381.	7,023,594 B2	Apr-06	Blum et al.			
382.	7,030,902 B2	Apr-06	Jacobs			
383.	7,031,667 B2	Apr-06	Horiguchi			
384.	7,033,025 B2	Apr-06	Winterbotham			
385.	7,059,717 B2	Jun-06	Bloch			
386.	7,073,905 B2	Jul-06	Da Pra'			
387.	7,079,876 B2	Jul-06	Levy			
388.	7,123,215 B2	Oct-06	Nakada			

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389.	7,192,136 B2	Mar-07	Howell et al.			
390.	7,255,437 B2	Aug-07	Howell et al.			
391.	7,265,358 B2	Sep-07	Fontaine			
392.	7,274,292 B2	Sep-07	Velhal et al.			
393.	7,289,767 B2	Oct-07	Lai			
394.	7,312,699 B2	Dec-07	Chornenky			
395.	7,331,666 B2	Feb-08	Swab et al.			
396.	7,376,238 B1	May-08	Rivas et al.			
397.	7,380,936 B2	Jun-08	Howell et al.			
398.	7,401,918 B2	Jul-08	Howell et al.			
399.	7,405,801 B2	Jul-08	Jacobs			
400.	7,429,965 B2	Sep-08	Weiner			
401.	7,430,299 B2	Sep-08	Armstrong et al.			
402.	7,438,409 B2	Oct-08	Jordan			
403.	7,438,410 B1	Oct-08	Howell et al.			
404.	7,445,332 B2	Nov-08	Jannard et al.			
405.	7,481,531 B2	Jan-09	Howell et al.			
406.	7,500,746 B2	Mar-09	Howell et al.			
407.	7,500,747 B2	Mar-09	Howell et al.			
408.	7,512,414 B2	Mar-09	Jannard et al.			
409.	7,517,083 B2	Apr-09	Blum et al.			
410.	7,527,374 B2	May-09	Chou			
411.	7,543,934 B2	Jun-09	Howell et al.			
412.	7,581,833 B2	Sep-09	Howell et al.			
413.	7,621,634 B2	Nov-09	Howell et al.			
414.	7,648,236 B1	Jan-10	Dobson			
415.	7,677,723 B2	Mar-10	Howell et al.			
416.	7,760,898 B2	Jul-10	Howell et al.			
417.	7,771,046 B2	Aug-10	Howell et al.			
418.	7,787,647 B2	Aug-10	Hagen et al.			

Examiner	Date Considered
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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /J.L./

Form 1449 (Modified) Information Disclosure Statement By Applicant (Use Several Sheets if Necessary)	Atty. Docket No.	IPVCP003X1C4X1C2
	Application No.:	Not Yet Assigned
	Applicant	HOWELL et al.
	Filing Date	Filed Herewith
	Group	Not Yet Assigned
		Page 15 of 17

419.	7,792,552 B2	Sep-10	Thomas et al.			
420.	7,801,570 B2	Sep-10	Cheung et al.			
421.	7,806,525 B2	Oct-10	Howell et al.			
422.	7,922,321 B2	Apr-11	Howell et al.			
423.	7,976,159 B2	Jul-11	Jacobs et al.			
424.	8,009,849 B2	Aug-11	Enzmann			
425.	8,109,629 B2	Feb-12	Howell et al.			
426.	8,142,015 B2	Mar-12	Paolino			
427.	8,174,569 B2	May-12	Tanijiri et al.			
428.	8,175,886 B2	May-12	Odinak			
429.	8,251,875 B2	Aug-12	Ellis et al.			
430.	8,337,013 B2	Dec-12	Howell et al.			
431.	8,430,507 B2	Apr-13	Howell et al.			
432.	8,434,863 B2	May-13	Howell et al.			
433.	8,465,151 B2	Jun-13	Howell et al.			
434.	8,485,661 B2	Jul-13	Yoo et al.			
435.	8,500,271 B2	Aug-13	Howell et al.			
436.	8,571,241 B2	Oct-13	Larsen			
437.	8,582,789 B2	Nov-13	Cheung et al.			
438.	8,620,208 B2	Dec-13	Slotznick			
439.	8,626,246 B2	Jan-14	Shostak			
440.	8,770,742 B2	Jul-14	Howell et al.			
441.	8,849,185 B2	Sep-14	Cheung et al.			
442.	8,905,542 B2	Dec-14	Howell et al.			
443.	9,033,493 B2	May-15	Howell et al.			
444.	9,183,351 B2	Nov-15	Shusterman			
445.	9,244,292 B2	Jan-16	Swab et al.			
446.	9,369,814 B2	Jun-16	Victorian et al.			
447.	9,400,390 B2	Jul-16	Osterhout et al.			
448.	9,405,135 B2	Aug-16	Sweis et al.			

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	Application No.:	Not Yet Assigned
	Applicant	HOWELL et al.
	Filing Date	Filed Herewith
	Group	Not Yet Assigned
		Page 16 of 17

	449.	9,488,520 B2	Nov-16	Howell et al.			
	450.	9,547,184 B2	Jan-17	Howell et al.			
	451.	9,690,121 B2	Jun-17	Howell et al.			
	452.	9,922,236 B2	Mar-18	Moore et al.			
	453.	10,042,186 B2	Aug-18	Chao et al.			
	454.	10,060,790 B2	Aug-18	Howell et al.			
	455.	10,061,144 B2	Aug-18	Howell et al.			
	456.	10,310,296 B2	Jun-19	Howell et al.			
	457.	10,345,625 B2	Jul-19	Howell et al.			
	458.	10,359,311 B2	Jul-19	Howell et al.			
	459.	10,515,623 B1	Dec-19	Grizzel			
	460.	10,539,459 B2	Jan-20	Howell et al.			
	461.	10,624,790 B2	Apr-20	Chao et al.			
	462.	10,571,715 B2	Feb-20	Rizzo, III et al.			
	463.	10,777,048 B2	Sep-20	Howell et al.			
	464.	10,802,582 B1	Oct-20	Clements			
	465.	10,964,190 B2	Mar-21	Peyrard			
	466.	11,042,045 B2	Jun-21	Chao et al.			
	467.	11,069,358 B1	Jul-21	Harper			
	468.	11,086,147 B2	Aug-21	Howell et al.			
	469.	11,204,512 B2	Dec-21	Howell et al.			
	470.	11,243,416 B2	Feb-22	Howell et al.			
	471.	11,326,941 B2	May-22	Howell et al.			
	472.	11,480,802 B1	Oct-22	Tombelli			
	473.	11,513,371 B2	Nov-22	Howell et al.			
	474.	11,536,988 B2	Dec-22	Howell et al.			
	475.	11,630,331 B2	Apr-23	Howell et al.			
	476.	11,644,361 B2	May-23	Howell et al.			
	477.	11,644,693 B2	May-23	Howell et al.			
	478.	11,721,183 B2	Aug-23	Howell et al.			

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	Application No.:	Not Yet Assigned
	Applicant	HOWELL et al.
	Filing Date	Filed Herewith
	Group	Not Yet Assigned
		Page 17 of 17

	479.	11,733,549 B2	Aug-23	Howell et al.			
	480.	11,762,224 B2	Sep-23	Howell et al.			
	481.	11,803,069 B2	Oct-23	Howell et al.			
	482.	11,829,518 B2	Nov-23	Howell et al.			
	483.	DES. 369,167	Apr-96	Hanson et al.			
Foreign Documents							
							Translation
Init.		Document No.	Date	Country	Class	Subclass	Yes No
Other Documents (Including Author, Title, Date, Pertinent Pages, etc.)							
	A						
	B						
	C						

Examiner	/JIE LEI/	Date Considered	05/15/2024
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PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	1	"18594662"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 09:39 AM
L1	1	"18597874"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/15 08:33 AM
L2	5	"18375893"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/15 08:34 AM
L3	3	"20240036361"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY,	OR	ON	ON	2024/05/15 08:34 AM

L4	3	"18144557"	CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/14 09:42 AM
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L5	33	(Artificial Intelligence) More like doc: US-20240036361-A1 Text: (US-9690121-B2 OR US-9033493-B2 OR US-20170146829-A1 OR US-20170131575- A1 OR US- 20100309426-A1 OR US-20210364827-A9 OR US-20190187492- A1 OR US-8465151-B2 OR US-11762224-B2 OR US-20090296044- A1 OR US- 20210364828-A1 OR US-8109629-B2 OR US-20230408850-A1 OR US-20130201440- A1 OR US-11733549- B2 OR US- 20070046887-A1 OR US-10330956-B2 OR US-20220260859-A1 OR US-20120133885- A1 OR US-11086147- B2).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2024/05/15 08:35 AM
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