

**CONCORDANCE - United States to International Patent Classification**

U.S.			IPC			U.S.			IPC			U.S.			IPC		
Subclass	Subclass	Notation	Subclass	Subclass	Notation	Subclass	Subclass	Notation	Subclass	Subclass	Notation	Subclass	Subclass	Notation	Subclass	Subclass	Notation
<b>U.S. CLASS 148--Con.</b>																	
518	C 25 D	7/00	615-618	C 21 D	5/04	54	C 06 B	31/46		B 60 B	9/00	378R	B 21 D	53/30			
	C 25 D	9/00	619	C 21 D	6/00	55	C 06 B	31/38	5-18	B 60 B	15/04		B 60 B	3/04			
519-524	C 21 D	9/08	620-624	C 21 D	8/00	56	C 06 B	31/42		B 60 B	15/20		B 60 C	15/02			
519-528	C 22 F		621	C 21 D	6/00	57	C 06 B	31/40		B 60 B	9/00	378W	B 21 D	53/26			
519	C 21 D	8/10	622-624	C 21 D	6/02	58	C 06 B	31/34	19	B 60 B	19/02	379.3-380	B 60 B	21/10			
520	C 21 D	9/50	625	C 21 D	10/00	59	C 06 B	31/36	20-39	B 60 B	9/00		B 60 C	15/02			
522	C 22 F	1/10	626-627	C 21 D	1/00	60	C 06 B	31/30	40-52	B 60 B	9/10	381.3-381.6	B 60 B	21/02			
523	C 22 F	1/04	628	C 21 D	1/773	61	C 06 B	31/02	53-68	B 60 B	9/18		B 60 C	15/02			
524	C 21 D	9/50	629	C 21 D	3/04	62	C 06 B	31/12	69-86	B 60 B	9/04		B 60 C	15/06			
525-526	C 21 D	1/09		C 21 D	3/08	63	C 06 B	31/22	87-112	B 60 B	9/08	382-383	B 60 B	21/10			
526	C 21 D	9/52	630	C 21 D	1/53	64	C 06 B	31/24	151	B 60 C	1/00		B 60 C	15/02			
527-534	C 21 D		631-632	C 21 D	1/46	65	C 06 B	31/26		B 60 C		384-414	B 60 C	25/00			
527	C 22 F	1/10		C 21 D	1/607	66	C 06 B	31/20	152	B 60 C	17/00		B 60 C	5/16			
528	B 23 K	35/28	633-635	C 21 D	1/613	67	C 06 B	31/14	152.1	B 60 C	19/00		B 60 C	7/24			
529	C 21 D	9/50	636-638	C 21 D	1/58	68	C 06 B	31/28		B 60 C	19/08	415-426	B 60 C	23/10			
530	C 21 D	8/02		C 21 D	1/60	69	C 06 B	31/16	153	B 60 C	23/18		B 60 C	29/00			
531	C 23 C	2/12	639-641	C 21 D	1/68	70	C 06 B	31/08	154	B 60 C	19/00	427	B 60 C	23/10			
532	B 32 B	15/01		C 21 D	6/00	71	C 06 B	31/10	154.1	B 60 C	19/00		B 60 C	29/00			
533	C 23 C	2/28		C 21 D	8/00	72	C 06 B	31/04		F 16 F	15/32		B 60 C	29/06			
534	C 21 D	8/02	642	C 21 D	1/08	73	C 06 B	31/06	154.2	B 60 C	11/24	428	B 60 C	23/10			
535-539	C 22 F			C 21 D	1/52	74	C 06 B	47/04	155-166	B 60 C	5/00		B 60 C	29/00			
535	C 22 F	1/04	643-654	C 21 D	8/00	75	C 06 B	29/00	167-184	B 60 C	11/00	429	B 60 C	23/10			
536	C 22 F	1/08	655-664	C 21 D	6/00	76	C 06 B	29/22		B 60 C	27/00		B 60 C	29/00			
537-542	C 21 D		665	C 22 F	1/16	77	C 06 B	29/02		B 60 C	7/22		B 60 C	29/06			
537	C 21 D	1/70		C 22 F		78	C 06 B	29/16		B 60 C	9/00	430-431	B 60 C	23/10			
538	B 22 D	17/00	666-667	C 22 F	1/06	79	C 06 B	29/20	185	B 60 C	27/00		B 60 C	29/00			
539	B 22 D	13/02	668-673	C 22 F	1/18	80	C 06 B	29/18		B 60 C	7/22	450	B 60 C	5/00			
540	C 21 D	1/84	674-677	C 22 F	1/10	81	C 06 B	29/14		B 60 C	9/00	451	B 60 C	9/00			
541-542	C 21 D	8/02	678	C 22 F	1/14	82	C 06 B	29/12	185.1	B 60 C	27/00		D 02 G	3/48			
543-545	C 21 D	5/00	679-687	C 22 F	1/08	83	C 06 B	29/08		B 60 C	27/06	452	B 60 C	19/00			
546-548	C 21 D		688-704	C 22 F	1/04	84	C 06 B	29/10		B 60 C	7/22		B 60 C	5/01			
546	C 21 D	8/04	705	C 22 F	1/16	85	C 06 B	29/04		B 60 C	9/00	453	B 60 C	3/00			
547	C 21 D	8/02	706	C 22 F	1/12	86	C 06 B	29/06		B 62 D	55/20		B 60 C	3/02			
548	C 21 D	6/00	707-714	C 22 F	1/16	87	C 06 B	27/00		B 62 D	55/24	454	B 60 C	19/00			
549-552	C 22 F	1/04				88	C 06 B	25/00	186-207	B 60 C	27/00		B 60 C	3/00			
553-554	C 22 F	1/08	<b>U.S. CLASS 149</b>			89	C 06 B	25/36		B 60 C	7/22		B 60 C	3/04			
555-556	C 22 F	1/10	<b>EXPLOSIVE AND THERMIC</b>			90	C 06 B	25/40		B 60 C	9/00		B 60 C	5/00			
557	C 21 C		<b>COMPOSITIONS OR</b>			91	C 06 B	25/38	208-209.1	B 60 C	11/00	455-456	B 60 C	19/00			
	C 22 C	14/00	<b>CHARGES</b>			92	C 06 B	25/34		B 60 C	27/00		B 60 C	3/06			
	C 22 F		1	C 06 B	47/00	93	C 06 B	25/32	209.11-209.13	B 60 C	11/00		B 60 C	5/00			
558	C 21 D	10/00	2	C 06 B	45/00	94	C 06 B	25/28		B 60 C	11/03	457	B 60 C	19/00			
559-564	C 21 D		3	C 06 B	45/18	95	C 06 B	25/30		B 60 C	27/00		B 60 C	3/08			
559-578	C 22 F		4	C 06 B	45/36	96	C 06 B	25/18	209.14	B 60 C	11/00		B 60 C	5/00			
559	C 21 D	9/00	5	C 06 B	45/30	97	C 06 B	25/24		B 60 C	27/00	458	B 60 C	9/00			
560	C 22 C	43/00	6	C 06 B	45/32	98	C 06 B	25/26	209.15	B 60 C	11/00		B 60 C	9/12			
561	C 22 C	45/10	7-8	C 06 B	45/34	99	C 06 B	25/22		B 60 C	11/03	500	B 60 C	19/00			
562	C 22 F	1/10	9	C 06 B	45/20	100	C 06 B	25/20		B 60 C	27/00		B 60 C	5/02			
563	C 22 F	1/00	10	C 06 B	45/28	101	C 06 B	25/10	209.16	B 60 C	11/00	501	B 60 C	19/00			
564	C 22 F	1/04	11	C 06 B	45/22	102	C 06 B	25/12		B 60 C	11/01		B 60 C	5/00			
565-567	C 21 D	1/00	12	C 06 B	45/24	103	C 06 B	25/16		B 60 C	27/00		B 60 C	5/02			
568-569	C 21 D	1/04	13	C 06 B	45/26	104	C 06 B	25/14	209.17	B 60 C	11/00	502	B 29 C	73/16			
	C 21 D	1/10	14	C 06 B	45/12	105	C 06 B	25/04		B 60 C	11/117		B 60 C	19/12			
568	C 21 D	9/52	15	C 06 B	45/14	106	C 06 B	25/06		B 60 C	27/00	503-507	B 29 C	73/16			
	C 21 D	9/60	16	C 06 B	45/16	107	C 06 B	25/08	209.18-209.19	B 60 C	11/00		B 29 C	73/22			
569	C 21 D	9/04	17	C 06 B	45/04	108	C 06 B	25/02		B 60 C	11/13		B 60 C	19/12			
	C 21 D	9/06	18	C 06 B	45/06	108.2-109.6	D 03 D	23/00		B 60 C	27/00	508	B 29 C	73/18			
570-571	C 21 D	9/08	19.1-19.93	C 06 B	45/10				209.2	B 60 C	11/00		B 60 C	23/00			
570	C 21 D	1/00								B 60 C	11/03		B 60 C	23/10			
571-575	C 21 D	1/04							209.21-209.27	B 60 C	27/00	509	B 29 C	73/18			
	C 21 D	1/10								B 60 C	11/00		B 60 C	19/12			
572	C 21 D	9/28								B 60 C	11/13		B 60 C	23/00			
	C 21 D	9/36								B 60 C	27/00		B 60 C	23/10			
573	C 21 D	9/22	23	C 06 B	41/00	100	A 45 C	1/02	209.28-209.3	B 60 C	11/00	510	B 60 C	19/12			
	C 21 D	9/24	24	C 06 B	41/02		A 45 C	3/06		B 60 C	11/03		B 60 C	23/00			
574	H 05 B	6/02	25	C 06 B	41/10	101-102	A 45 C	13/18		B 60 C	27/00		B 60 C	5/02			
576	C 21 D	9/52	26	C 06 B	41/08	103-105	A 45 C	13/08	209.4-209.5	B 60 C	1/00		B 60 C	5/12			
	C 21 D	9/62	27	C 06 B	41/04		A 45 C	3/08		B 60 C	11/00	511	B 60 C	5/02			
577-578	C 21 D	6/04	28	C 06 B	41/06	106	A 45 C	13/40		B 60 C	27/00	512	B 60 C	5/02			
577	C 22 F	1/04	29	C 06 B	39/00		A 45 C	15/00	209.6	B 60 C	1/00		B 60 C	5/08			
579	C 21 D	8/02	30	C 06 B	39/06	107-110	A 45 C	13/26		B 60 C	11/00	513	B 60 C	19/00			
	C 21 D		31	C 06 B	39/02		A 45 C	13/30		B 60 C	11/02		B 60 C	5/00			
580	C 21 D	9/02	32	C 06 B	39/04	111	A 45 C	1/08		B 60 C	27/00	514-515	B 60 C	19/00			
581-585	C 21 D	9/04	33	C 06 B	37/00	112-117	A 45 C	1/02	209.7	B 60 C	1/00		B 60 C	19/04			
	C 21 D	9/06	34	C 06 B	37/02		A 45 C	3/06		B 60 C							

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U.S. Subclass	IPC Subclass	IPC Notation	U.S. Subclass	IPC Subclass	IPC Notation	U.S. Subclass	IPC Subclass	IPC Notation	U.S. Subclass	IPC Subclass	IPC Notation	U.S. Subclass	IPC Subclass	IPC Notation
<b>U.S. CLASS 152--Con.</b>														
525	B 60 C	13 / 00		B 65 C		95	B 29 B	17 / 00		G 03 D	15 / 04		B 31 F	
	B 60 C	5 / 00	61	A 41 G	1 / 00		B 29 C	73 / 00	158	B 65 H	69 / 02	205-206	B 31 F	1 / 22
526	B 60 C	9 / 00		A 41 G			B 32 B		159	B 31 F	5 / 00	207	B 31 F	1 / 22
527	B 60 C	9 / 00		B 44 C			B 60 C	11 / 00		G 03 D	15 / 04		B 31 F	1 / 32
	D 02 G	3 / 48		B 44 D		96	B 29 C	73 / 00	160	A 61 F	13 / 15	208	B 31 F	1 / 22
528-536	B 60 C	9 / 00	62	B 29 C	65 / 00		B 29 D	30 / 54		B 29 C	65 / 00	209	B 29 C	59 / 04
537	B 60 C	1 / 00		B 32 B	37 / 00		B 32 B			B 32 B	37 / 00		B 31 F	1 / 07
	B 60 C	9 / 00		B 32 B	38 / 00		B 60 C	11 / 00		C 09 J			B 31 F	
538	B 60 C	9 / 00		B 43 K		97	B 29 C	73 / 00	161	A 61 F	13 / 15	210	B 31 F	1 / 20
539-540	B 60 C	15 / 00		B 43 L		98	B 29 C	73 / 00		B 32 B		211	B 31 F	1 / 00
541-542	B 60 C	15 / 06		B 44 D	2 / 00		B 32 B	43 / 00		B 65 H	81 / 00	212	B 29 C	51 / 16
543	B 60 C	15 / 06	62.2	A 61 F	13 / 15	99-100	B 32 B	17 / 00	162	B 29 C	53 / 80		B 65 C	
	B 60 C	5 / 16		B 27 N	3 / 00		B 32 B	17 / 10		B 31 C		213	B 29 D	22 / 00
544	B 60 C	15 / 00		B 31 D			C 03 C	27 / 00	163	A 61 F	13 / 15		B 65 C	
	B 60 C	15 / 024		B 32 B	17 / 00		G 02 B			B 29 C	65 / 00	214	B 29 D	7 / 00
545	B 60 C	15 / 00		D 21 J		101-107	G 02 C	7 / 00		B 32 B	37 / 00		B 32 B	38 / 18
	B 60 C	15 / 05	62.4-62.6	B 27 N	3 / 00		B 29 C	65 / 00	164-165	C 09 J		215	B 65 C	3 / 16
546	B 60 C	13 / 00		B 31 D			B 32 B	17 / 00		B 29 C	65 / 00		B 65 C	
	B 60 C	15 / 00		B 32 B	17 / 00		B 32 B	37 / 00	166	B 29 C	70 / 52	216	B 32 B	3 / 04
	B 60 C	15 / 06		D 04 H	13 / 00		C 03 C	27 / 00		B 32 B		217-218	B 29 C	53 / 00
547	B 60 C	1 / 00		D 21 J		108	B 60 J	1 / 00		B 32 B		219-220	B 31 F	
	B 60 C	15 / 00	62.8	B 27 N	3 / 00		E 06 B	3 / 00	167	D 04 H	3 / 16		B 44 C	3 / 08
548	B 60 C	9 / 02		B 31 D			E 06 B	5 / 00	168	A 43 D	43 / 06		B 44 C	5 / 04
549	B 60 C	9 / 00		B 32 B	17 / 00		E 06 B	7 / 00		D 04 H		221	B 31 F	
550	B 60 C	9 / 00		B 32 B	5 / 26	109	C 03 C	27 / 00	169	B 29 C	53 / 80		B 60 J	10 / 00
	B 60 C	9 / 02		D 21 J			E 06 B	3 / 24		B 31 C		222	B 27 D	1 / 08
551	B 60 C	15 / 00	63	B 44 C	3 / 12	110.1-111	B 29 C	35 / 00		B 65 H	81 / 00		B 31 F	
	B 60 C	9 / 00		B 44 C		112-113	B 29 C		170	B 29 D	22 / 00		B 32 B	27 / 00
	B 60 C	9 / 02	64	B 29 C	65 / 00		B 29 D	30 / 02		B 31 C		223	B 29 C	53 / 06
552-554	B 60 C	15 / 00		B 29 C	65 / 02	114	B 29 D	30 / 66		B 65 H	81 / 00		B 31 F	
	B 60 C	9 / 00		B 32 B	37 / 00	115	B 29 C	73 / 16	171	B 29 C	53 / 58		B 29 C	
555	B 60 C	13 / 00		B 32 B	38 / 00	116	B 29 B	17 / 00		B 31 C		224	B 31 C	51 / 14
	B 60 C	17 / 00	65	E 06 B	9 / 26	117	B 29 D	30 / 00		B 65 H	81 / 00		B 31 F	
	B 60 C	9 / 00	66	A 41 H	37 / 00	118	B 29 C	69 / 00	172	B 29 C	70 / 86	226-227	A 61 F	13 / 15
556-557	B 60 C	9 / 00		A 44 B	19 / 00		B 29 C			B 31 C			B 31 F	
558	B 60 C	9 / 04	67	B 44 C			B 29 D	22 / 00		B 65 H	81 / 00	228-229	B 29 C	65 / 00
559	B 60 C	9 / 00		B 44 D		119	B 29 B	15 / 02	173	B 29 C	53 / 58		B 29 C	
560	B 60 C	9 / 04		B 44 F	1 / 00		B 29 C			B 31 C			B 32 B	37 / 00
	B 60 C	9 / 08		C 09 K	11 / 00	120-121	B 60 C	29 / 00		B 65 H	81 / 00	230	B 44 C	1 / 165
561	B 60 C	9 / 04		H 01 J	9 / 227	122	B 29 C	65 / 00	174	B 29 C	69 / 00	231	B 29 B	
	B 60 C	9 / 09	68	C 14 B	1 / 02	123	B 29 D	30 / 00		B 31 C			D 44 C	1 / 17
562-563	B 60 C	9 / 00		C 14 B	15 / 00	124	B 60 C	9 / 14		B 65 H	81 / 00		D 06 N	7 / 00
564-565	B 60 C	1 / 00	69	B 65 B	7 / 00		B 60 C	9 / 16	175	B 29 C	53 / 80	232	B 29 C	37 / 00
	B 60 C	9 / 02	70	A 41 B	13 / 04	125	B 29 C			B 31 C			B 44 C	
				A 41 H			B 29 D	30 / 06		B 65 H	81 / 00	233-235	B 44 C	1 / 17
				B 32 B	3 / 00	126-127	B 29 D	30 / 58	176-179	B 32 B	29 / 02		B 44 C	
				B 65 B	11 / 00	128.1-130.7	B 29 D	30 / 08		B 32 B	5 / 00	236-237	B 44 C	1 / 175
			71	E 04 B	2 / 00	131-132	B 29 D	30 / 32	180-181	D 04 H	3 / 08		B 44 C	
				E 04 F	13 / 00	133-134	B 29 D	30 / 16	182	B 29 C	65 / 00	238	B 44 C	1 / 17
			72	A 46 D	1 / 00	135	B 29 D	30 / 32		B 32 B	37 / 00		B 44 C	
				B 32 B	5 / 00	136	B 29 D	30 / 48		C 09 J			B 65 C	9 / 18
1	B 31 B	1 / 60		D 05 C	15 / 00	137-138	F 16 G	1 / 00	183	B 31 F	1 / 12	239-241	B 44 C	1 / 17
39	B 29 C	65 / 00	73.1-73.2	B 29 C	65 / 00	139-142	F 16 G	5 / 00	184	B 31 C	1 / 00		B 44 C	
	B 32 B	37 / 00		B 29 C	65 / 08	143	B 29 C	53 / 58		B 31 C		242	B 29 B	
	B 29 C	65 / 00		B 32 B	37 / 00		B 31 C			B 65 H	81 / 00		B 32 B	27 / 00
40	B 32 B	1 / 00	73.3	B 29 C	65 / 00	144	B 29 D	23 / 18	185	B 31 C			B 32 B	37 / 24
	B 32 B	29 / 00		B 32 B	37 / 00		B 31 C			B 65 H	81 / 00	243	B 29 B	
	B 32 B	37 / 00		B 32 B	38 / 00	145	A 63 B	39 / 00		H 01 F	41 / 12		B 29 C	47 / 06
41	B 29 C	65 / 00	73.4	B 29 C	65 / 00		A 63 B	41 / 00	186	B 29 D	22 / 00	244.11-246	B 29 C	47 / 00
	B 32 B	29 / 00		B 29 C	65 / 08		B 29 C	65 / 00		B 31 C		247	B 29 C	65 / 00
	B 32 B	37 / 00		B 32 B	37 / 00		B 29 D			B 65 H	81 / 00		B 32 B	37 / 00
42	B 32 B	3 / 18	73.5	B 29 C	65 / 06		B 32 B	37 / 00	187-188	B 29 C	63 / 10		B 32 B	38 / 10
43	B 32 B	5 / 20	73.6-74	B 29 C	65 / 00	146	A 63 B	39 / 00		B 31 C			C 09 J	
44-45	B 29 C	65 / 00		B 32 B	37 / 00		A 63 B	41 / 00		B 65 H	81 / 00	248	B 29 C	65 / 00
	B 32 B	29 / 00	75	B 29 C	65 / 00	147	A 63 B	39 / 00	189	B 29 C	53 / 58		B 31 D	1 / 02
	B 32 B	37 / 00		B 32 B	37 / 00		A 63 B	41 / 00		B 31 C			B 32 B	37 / 00
46	B 32 B	3 / 24		G 01 M	1 / 00		B 29 C	65 / 00		B 65 H	81 / 00		B 32 B	38 / 10
47	H 01 B	13 / 00	76	D 21 H	23 / 00		B 29 D		190	B 31 C	3 / 00		C 09 J	
48	H 01 B	13 / 00		D 21 H	27 / 06		B 32 B	37 / 00		B 31 C		249	B 29 C	65 / 00
	H 01 B	17 / 34	77-79	B 29 C	65 / 00	148	B 32 B			B 65 H	81 / 00		B 32 B	37 / 00
	B 21 F	15 / 02		B 32 B	3 / 00		D 03 D		191	B 29 C	70 / 34		B 32 B	38 / 10
49	H 01 R	3 / 00		B 32 B	37 / 00		D 04 H	13 / 00		B 31 C			C 09 J	
	H 01 R	4 / 00		B 32 B	5 / 00	149	B 29 C	47 / 02		B 65 H	81 / 00	250-275.7	B 29 C	65 / 00
	H 01 R	43 / 00		B 32 B	5 / 18		B 32 B		192	B 29 C	65 / 00		B 32 B	37 / 00
	H 02 G	1 / 14	80	B 29 C	65 / 00		D 03 D			B 31 C			B 32 B	38 / 04
50	H 01 B	13 / 00	81	A 63 B	37 / 02		F 16 L	11 / 08		B 65 H	81 / 00	276	A 61 F	13 / 15
51	H 01 B	13 / 06		A 63 B	39 / 00	150	C 25 D		193	B 29 C	69 / 00		B 29 C	65 / 00
	H 01 B	13 / 22		B 32 B	1 / 06		H 05 K	3 / 46		B 31 C			B 32 B	37 / 00
	H 01 B	7 / 02	82	B 29 C	65 / 00	151	B 41 J	2 / 16		B 65 H	81 / 00		C 09 J	
52	H 01 B	13 / 10		B 29 C	65 / 02		C 25 D		194	B 31 C		277	B 29 C	65 / 00
	H 01 B	13 / 26		B 32 B	37 / 00	152	B 29 C	65 / 00		B 65 H	81 / 00		B 32 B	37 / 00
53-56	H 01 B	13 / 06	83-87	B 44 D	5 / 00		B 32 B	37 / 00		F 16 J	15 / 20		B 32 B	38 / 14
	H 01 B	13 / 26		B 29 C	65 / 00		C 09 J		195	B 29 C	53 / 78		B 41 M	
57	A 01 N	1 / 00		B 32 B	37 / 00	153-154	B 29 C	65 / 00		B 31 C		278	B 05 B	
	A 01 N	3 / 00	88	D 03 D	47 / 50		B 32 B	37 / 00		B 65 H	81 / 00		B	