

WIPO



PCT/TCO/SS/III/9
ENGLISH ONLY
DATE: July 4, 1972

WORLD INTELLECTUAL PROPERTY ORGANIZATION UNITED INTERNATIONAL BUREAUX FOR THE PROTECTION OF INTELLECTUAL PROPERTY GENEVA

PATENT COOPERATION TREATY

INTERIM COMMITTEE FOR TECHNICAL COOPERATION STANDING SUBCOMMITTEE

Third Session, Geneva, October 2 to 5, 1972

REPORT ON THE CITATION OF NON-PATENT LITERATURE

prepared by the International Bureau

1. The Standing Subcommittee of the PCT Interim Committee for Technical Cooperation in its meeting of December 1971, invited the International Bureau to "collect or establish statistics, based on sample batches of limited numbers of searched or examined patent documents pertaining to different fields of technology (distinguishing "old" and "recent" fields), concerning the number of citations in respect of each of them of non-patent literature items and their proportion to the number of citations of published patent documents" (see paragraph 25 of document PCT/TCO/SS/I/17).
2. To aid the International Bureau in the collection of such statistics, the United States Patent Office submitted a report, a copy of which is annexed, of a study of references cited during the prosecution of applications in that Office.
3. To date no other Office has offered further information on such subject. In order to be able to prepare a useful study in this matter, the International Bureau would appreciate receiving from any of the other prospective PCT Authorities information on any recently undertaken studies on citation statistics and in particular, citation statistics from different technological fields. Any general comments on the comparability of their citation statistics with the findings of the annexed study would also be welcomed.
4. The International Bureau will first attempt to collect all readily available statistics. Should the collection effort produce sufficient material to establish a study which meets the needs of the Committee, no further queries may be necessary. However, if the initial collection effort is unproductive and the Committee feels that such a study should be further pursued, the International Bureau will attempt to collect these statistics for establishing the study either through questionnaires or through contact with the sources of such information as are available to the staff of the International Bureau.
5. The Committee is invited to advise the International Bureau on the direction such a study should take.



**U.S. DEPARTMENT OF COMMERCE
Patent Office**

Address Only: COMMISSIONER OF PATENTS
Washington, D.C. 20231

March 14, 1972

Mr. Claus Pfanner
Senior Counsellor
Head of the Industrial
Property Division
World Intellectual Property Organization
32, Chemin des Colombettes
1211 Geneva 20, Switzerland

Dear Mr. Pfanner:

At the last meeting of PCT/TCO/SS I indicated that we were finishing up an analysis of the results of a study on references cited in the prosecution of applications in our Office. I promised to forward the results.

The sample consisted of 23005 applications which received a first action during a period of slightly more than three months in 1971. All first actions recorded during this period were reviewed. If no references were cited or if the classification of the application could not be reasonably assigned from the references cited the application was not further considered.

Information was gathered and analyzed on all the references cited in these first actions. The attached sheets show the types of analyses made.

Attachments A, B and C show, graphically, the distribution by date of publication of U. S. patents, other patents and non-patent literature respectively. Attachment D shows, graphically, the percentage distribution of non-U. S. patents by issuing country. It should be noted that, under our law, for certain purposes the effective date of a U. S. patent is the date of filing. This may explain in part the high peak for U. S. patents in 1969 and 1970 compared with earlier peaks for non-U. S. patents and non-patent literature.

Attachments E, F, G, and H show, numerically, the number of U. S. patents by date of publication, the number of non-U. S. patents by issuing country and date of publication and the number of non-patent literature articles by date of publication, at the Office level, art level, Group level and Art Unit level respectively. Attachments F, G and H are representative. Data for the Electrical and Mechanical Arts, similar to attachment F, is available. Also data for each of the 15 Groups, and each of the 98 Art Units, similar to attachments G and H respectively, is available.

Data of the type shown in attachments E and F expressed in percentage form is shown on attachments I and J. Attachment J, again, is representative of the three major art areas.

The distribution by Class (U.S. Patent Classification) of all cited U. S. patents is shown on attachment K. This also shows the number and percentage of cited U. S. patents published prior to 1920. It can be seen that for some classes the pre-1920 patents are relatively heavily cited. Attachment K is merely representative; data for the other 258 classes is also available.

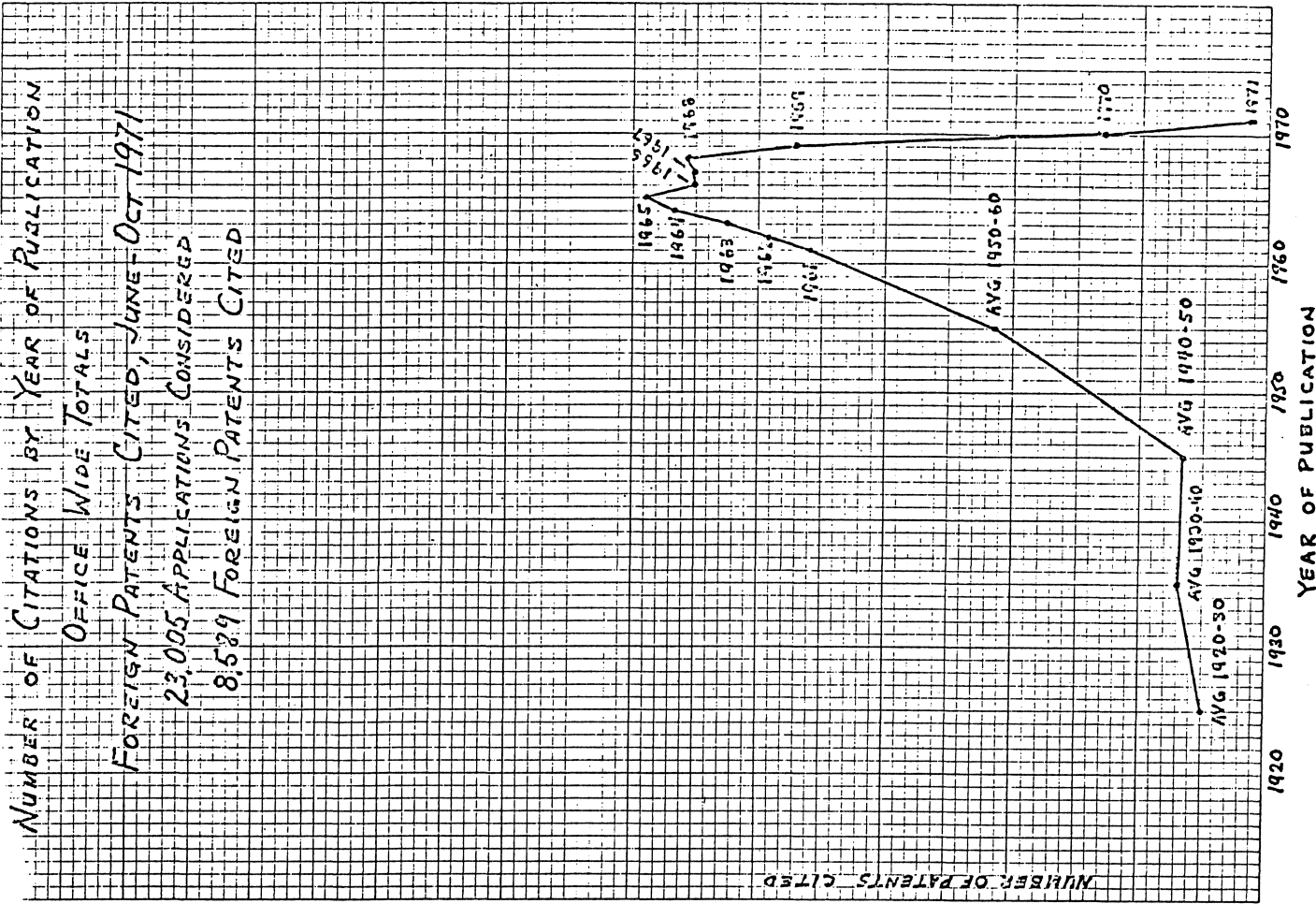
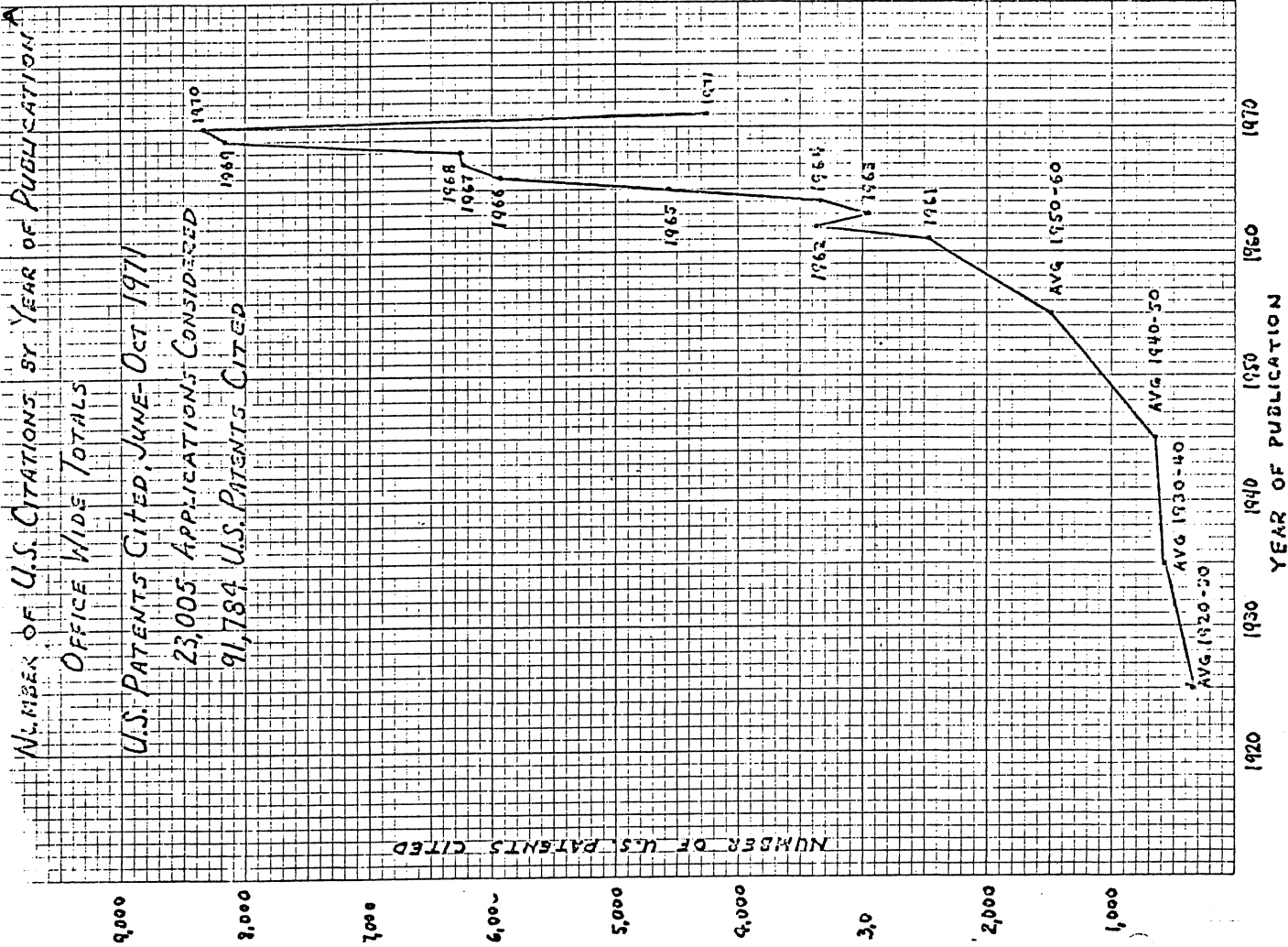
Attachments L and M show comparisons of the latest study with a similar study conducted in 1970 and a related one conducted in 1963. The 1963 study can not be directly compared to the other two since it was based on data taken from issued patents and therefore does not reflect the citation pattern on applications abandoned after first action. Further for the patents studied it includes all citations subsequent to the first actions.

Sincerely,

A handwritten signature in dark ink, appearing to read "Richard A. Spencer".

Richard A. Spencer
Deputy Assistant Commissioner
for Search Systems Development

enclosure



EUGENE DIETZEN CO.
MADE IN U. S. A.

NO. 341-10 DIETZEN GRAPH PAPER
10 X 10 PER INCH

NUMBER OF CITATIONS BY YEAR OF PUBLICATION

OFFICE WIDE TOTALS

NON-PATENT LITERATURE CITED, JUNE-OCT. 1971

23,005 APPLICATIONS CONSIDERED

3,359 NPL CITATIONS

300

250

200

150

100

50

NUMBER OF CITATIONS

1920 1930 1940 1950 1960 1970

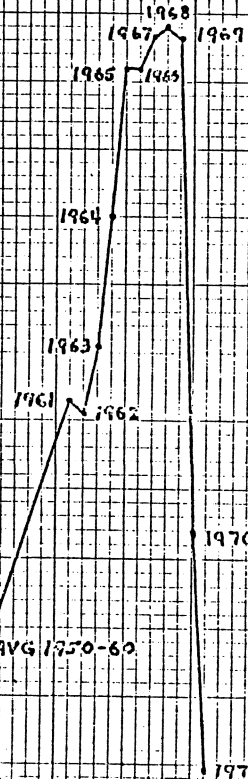
AVG 1920-30

AVG 1930-40

AVG 1940-50

AVG 1950-60

1971



FOREIGN CITATION PERCENTAGES

PATENTS CITED, JUNE-OCT. 1971

40

35

30

25

20

15

10

5

PERCENT

GB-38.71%

FR-19.29%

DT-13.97%

CA-6.53%

CH-4.10%

IT-3.52%

AU-3.32%

NG-2.22%

NI-1.75%

BE-1.42%

JA-1.53%

SU-1.15%

OE-1.07%

OTHER-0.87%

CS-2.24%

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COUNTRY

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page 7
DOCUMENTATION CITATION SURVEY
References Cited, June 1971 - Oct 1971

OFFICE WIDE TOTALS

1. 500 Forms considered
2. 501 Forms citing foreign patents
3. 502 Forms citing NPL

NUMBER	PERCENT
23,005	
5,142	22.3%
2,245	9.6%

4. US patents cited

Number per age group	up to 1920	1921 - 1930	1931 - 1940	1941 - 1950	1951 - 1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
	5,218	3,320	5,938	6,316	15,087	2,400	3,362	2,958	3,332	4,580	5,922	6,223	6,257	8,190	6,319	4,252

91,784	88.5%
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5. Foreign patents cited

Number per country	GB	FR	DE	IT	CA	JP	BE	CH	SE	DK	NO	FI	PL	PT	ES	GR	IL	IN	RU	US	Other
	3,322	1,658	1,200	308	286	561	142	93	353	190	22	132	100								

NOTE: Items 5A and 5B may not correspond exactly due to clerical errors.

8,589	8.3%
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5B.

Number per age group	up to 1920	1921 - 1930	1931 - 1940	1941 - 1950	1951 - 1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
	615	512	710	630	2,125	359	391	426	1,67	409	450	450	495	369	132	16

6. Non-patent literature cited

Number per age group	up to 1920	1921 - 1930	1931 - 1940	1941 - 1950	1951 - 1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
	112	53	83	215	684	157	153	178	225	280	279	292	295	291	109	23

3,359	3.2%
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7. Number Science Abstracts cited
8. Number Chemical Abstracts cited
9. Number References cited

103,732	4.5
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DOCUMENTATION CITATION SURVEY
References Cited, June 1971 - Oct 1971

CHEMICAL ARTS

1. 500 Forms considered
2. 501 Forms citing foreign patents
3. 502 Forms citing NPL

NUMBER	PERCENT
7,432	
1,472	19.8%
1,356	18.3%

4. US patents cited

Number per age group	up to 1920	1921 - 1930	1931 - 1940	1941 - 1950	1951 - 1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
	625	486	1,436	1,790	4,731	851	1,193	993	1,109	1,492	2,152	2,179	2,314	3,025	2,917	1,511

28,804	66.7%
--------	-------

5. Foreign patents cited

Number per country	GB	FR	DE	IT	CA	JP	BE	CH	SE	DK	NO	FI	PL	PT	ES	GR	IL	IN	RU	US	Other
	1,073	288	226	25	80	230	51	6	20	19	4	102	22								

NOTE: Items 5A and 5B may not correspond exactly due to clerical errors.

2,258	6.8%
-------	------

5B.

Number per age group	up to 1920	1921 - 1930	1931 - 1940	1941 - 1950	1951 - 1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
	60	64	120	136	502	99	127	165	163	176	176	183	165	139	49	9

6. Non-patent literature cited

Number per age group	up to 1920	1921 - 1930	1931 - 1940	1941 - 1950	1951 - 1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
	27	43	56	152	491	105	108	118	142	194	185	163	159	143	41	13

2,140	6.5%
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7. Number Science Abstracts cited
8. Number Chemical Abstracts cited
9. Number References cited

33,202

DOCUMENTATION CITATION SURVEY

Data collected from PO 892, "Notice of References Cited," June 1971 - Oct 1971

6

GROUP 110 CLASS SUBCLASSES

- 1. 892 Forms considered
- 2. 892 Forms citing foreign patents
- 3. 892 Forms citing NPL 7.3

NUMBER	PERCENT
1404	
253	18.0
226	16.1

4. US patents cited

4A. Number per age group						
166	up to 1920	155	1961	355	1966	
143	1921 - 1930	189	1962	383	1967	
362	1931 - 1940	162	1963	376	1968	
326	1941 - 1950	209	1964	633	1969	
922	1951 - 1960	249	1965	596	1970	
				306	1971	

5532	89.6
------	------

5. Foreign patents cited

NOTE: Items 5A and 5B may not correspond exactly due to clerical errors.

5A. Number per country								
195	GB	14	AU	2	CH	0	OE	
42	FR	40	CA	5	BE	2	NL	
30	DE	4	NC	1	CS	14	other	
2	IT	9	JA	4	SU			

364	5.8
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5B. Number per age group						
15	up to 1920	8	1961	18	1966	364
8	1921 - 1930	18	1962	21	1967	
26	1931 - 1940	19	1963	32	1968	
22	1941 - 1950	24	1964	37	1969	
80	1951 - 1960	22	1965	13	1970	
					1971	

6. Non-patent Literature cited

6A. Number per age group						
10	up to 1920	12	1961	17	1966	
12	1921 - 1930	12	1962	25	1967	
19	1931 - 1940	21	1963	17	1968	
19	1941 - 1950	20	1964	22	1969	
56	1951 - 1960	19	1965	3	1970	
				1	1971	

285	4.6
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- 7. 0 Number Science Abstracts cited
- 8. 48 Number Chemical Abstracts cited
- 9. Total references cited

6181	44
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Surveyor

DOCUMENTATION CITATION SURVEY

Data collected from PO 892, "Notice of References Cited," June 1971 - Oct 1971

7

ART UNIT 111 CLASS SUBCLASSES

- 1. 892 Forms considered
- 2. 892 Forms citing foreign patents
- 3. 892 Forms citing NPL

NUMBER	PERCENT
250	
33	13.2
50	20.0

4. US patents cited

4A. Number per age group						
12	up to 1920	29	1961	64	1966	
33	1921 - 1930	39	1962	73	1967	
124	1931 - 1940	18	1963	80	1968	
74	1941 - 1950	49	1964	109	1969	
159	1951 - 1960	52	1965	103	1970	
				59	1971	

1077	90.0
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5. Foreign patents cited

NOTE: Items 5A and 5B may not correspond exactly due to clerical errors.

5A. Number per country								
35	GB	1	AU		CH		OE	
4	FR	10	CA		BE	1	NL	
2	DE	2	NC		CS		other	
	IT	1	JA	1	SU			

57	4.7
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5B. Number per age group						
2	up to 1920	1	1961	1	1966	57
1	1921 - 1930	4	1962	2	1967	
4	1931 - 1940	3	1963	3	1968	
5	1941 - 1950	4	1964	6	1969	
14	1951 - 1960	6	1965	1	1970	
					1971	

6. Non-patent Literature cited

6A. Number per age group						
	up to 1920	2	1961	4	1966	
	1921 - 1930	1	1962	9	1967	
8	1931 - 1940	6	1963	4	1968	
4	1941 - 1950	8	1964	7	1969	
4	1951 - 1960	5	1965	1	1970	
					1971	

63	5.2
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- 7. - Number Science Abstracts cited
- 8. - Number Chemical Abstracts cited
- 9. Total references cited

1197	
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Surveyor

Data collected from PO 892, "Notice of References Cited," June 1971 - Oct 1971

ART UNIT CLASS SUBCLASSES

- S92 Forms considered
- S92 Forms citing foreign patents
- S92 Forms citing NPL

Office Wide percentage I

RED - 1970 percentages

NUMBER	PERCENT
23,005	
5,142	22.3% 21.6
2,245	9.8% 8.0

91,784 88.5% 88.2

- US patents cited %

Number per age group	up to 1920	1921 - 1930	1931 - 1940	1941 - 1950	1951 - 1960	1971
5.71	2.71	3.66	3.23	3.63	4.99	4.63
3.62						
6.48						
6.92						
16.36						
						99.99%

- Foreign patents cited % NOTE: Items 5A and 5B may not correspond exactly due to clerical errors

38.77%	CB 3.2	3.32%	AU 4.4	4.10%	CH 1.07	AGE
19.29%	FR 7.8	6.53%	CA 1.2	1.64%	BE 1.74	KL
13.97%	DE 2.2	2.22%	NO .2	.24%	CS 3.1	.87 other
3.58%	IT 1.3	1.53%	JA 1.4	1.16%	SU 100.03%	
1970						

3,589 83 8.0

Number per age group	up to 1920	1921 - 1950	1931 - 1940	1941 - 1950	1951 - 1960	1971
7.42	4.12	4.49	4.89	6.36	5.61	1.18
5.88						
8.16						
7.82						
24.76						
						100.00%

- Non-patent Literature cited %

Number per age group	up to 1920	1921 - 1930	1931 - 1940	1941 - 1950	1951 - 1960	1971
1.25	4.67	4.55	5.30	6.71	8.33	6.8
1.58						
2.47						
6.40						
20.35						
						99.99%

3,359 3.2% 3.8

- Number Science Abstracts cited
- Number Chemical Abstracts cited
- Total references cited

298

103,732

Data collected from PO 892, "Notice of References Cited," June 1971 - Oct 1971

ART UNIT CLASS SUBCLASSES

MECHANICAL ARTS

- S92 Forms considered
- S92 Forms citing foreign patents
- S92 Forms citing NPL

NUMBER	PERCENT
19,176	
2,821	27.7
305	3.0

- US patents cited %

Number per age group	up to 1920	1921 - 1930	1931 - 1940	1941 - 1950	1951 - 1960	1971
9.49	2.57	3.43	3.29	3.33	4.69	3.33
5.41						
8.58						
7.94						
17.72						
						99.95

41,481 88.6

- Foreign patents cited % NOTE: Items 5A and 5B may not correspond exactly due to clerical errors

34.60%	CB 3.4	3.49%	AU 3.0	3.07%	CH 1.3	1.8	OE
22.59%	FR 5.5	5.54%	CA 1.5	1.57%	BE 1.4	1.49	NL
14.57%	DE 3.0	2.22%	NO .3	.33%	CS .3	.31	other
4.75%	IT .2	2.2%	JA 1.1	1.17%	SU 100.04%		
1970							

4,955 15.5

Number per age group	up to 1920	1921 - 1930	1931 - 1940	1941 - 1950	1951 - 1960	1971
10.18	4.23	3.96	3.44	4.81	4.85	.00
7.58						
9.64						
8.56						
25.80						
						99.95

- Non-patent Literature cited %

Number per age group	up to 1920	1921 - 1930	1931 - 1940	1941 - 1950	1951 - 1960	1971
3.10	4.64	2.58	6.45	6.96	7.22	.77
1.55						
3.87						
9.54						
17.80						
						100.05

388 .9

- Number Science Abstracts cited
- Number Chemical Abstracts cited
- Total references cited

46,824

K
DATA COLLECTED FROM PO 892'S
"NOTICE OF REFS CITED"
JUNE - OCT. 1971

Class	U.S. PATENTS HAVING ISSUE DATES PRIOR TO 1922	TOTAL PATENTS CITED	% of citations having issue date prior to 1922	Class	Number	Total Cited	%
2	22	192	1.1	29	56	1337	4.2
3	1	30	3.3	30	35	187	18.7
4	63	307	20.5	31	1	17	5.9
5	19	143	13.3	32	2	52	3.8
6	1	4	25.	33	88	602	14.6
7	5	11	45.6	34	16	143	11.2
8	6	386	1.4	35	42	302	13.9
9	8	123	6.5	36	18	79	22.8
10	7	65	10.8	37	31	145	21.4
11	0	0	0	38	-0-	21	0
12	1	9	11.2	40	56	361	15.5
13	1	34	3.0	43	4	42	9.5
14	7	48	14.6	43	51	275	13.6
15	10	457	15.3	44	4	103	5.9
16	28	157	20.0	46	26	243	10.7
17	4	49	8.3	47	22	99	18.1
18	17	773	2.2	48	5	67	7.5
19	9	79	10.1	49	10	137	2.2
21	4	81	4.9	51	83	755	11.8
23	60	1484	4.1	53	239	2084	11.5
24	78	379	20.3	53	4	122	3.2
25	15	76	19.7	54	1	3	33.3
26	7	71	9.9	55	44	656	6.7
27	10	25	40.0	56	18	294	6.1
28	2	117	1.7	57	11	36	5.6

DOCUMENTATION CITATION SURVEY - MARCH 1971

1963	1970	1971	TOTAL
APPLICATIOINS CONSIDERED	9,071	19,895	23,005
U.S. PATENTS CITED	47,997 (86.5%)	76,658 (82.2%)	91,784 (82.5%)
FOREIGN PATS. CITED	5,074 (9.1%)	6,989 (8.0%)	8,589 (8.3%)
NPL CITED	2,446 (4.4%)	3,216 (3.8%)	3,359 (3.2%)
TOTAL REFS CITED	55,517	86,857	103,732
			246,106

1963 Data - Obtained from the "References Cited" Data of U.S. Patents

Issuing June 6 - Aug 8 1961.

1970 Data - Obtained from PO 892 "NOTICE OF REFERENCES CITED"; June - Oct 1970, first action cases.

1971 Data - Obtained from PO 892, "NOTICE OF REFERENCES CITED"; June - Oct 1971, first action cases

CITATION OF FOREIGN PATENTS

COUNTRY	1963 STUDY (GORECKI)		1970 STUDY (DARSCH-KING)		1971 STUDY (DARSCH-KING)		AVG %
	PATENTS CITED	% of Total Cited	PATENTS CITED	% of Total Cited	PATENTS CITED	% of Total Cited	
GB	2186	43.6	2845	42.0	3322	38.8	41.5
FR	1024	20.5	1370	19.0	1658	19.3	19.8
DT	773	15.4	859	12.3	1200	14.0	13.9
AU	230	4.6	219	3.2	286	3.3	3.7
CH	186	3.7	285	4.1	353	4.1	4.0
IT	166	3.3	207	2.6	308	3.6	3.2
CA	153	3.1	531	7.8	561	6.5	5.8
NC	— *	— *	164	2.3	190	2.2	2.2
NL	32	0.6	— *	— *	150	1.7	1.1
BE	90	1.8	75	1.2	142	1.6	1.5
JA	— *	— *	80	1.3	132	1.5	1.4
SU	— *	— *	86	1.4	100	1.2	1.3
DE	71	1.4	— *	— *	93	1.1	1.2
CS	— *	— *	15	0.2	22	0.2	0.2
OTHER	79	1.6	231	3.7	72	0.9	X
SAMPLE SIZE	5074	99.6	6,989	101.0	8,589	100.0	

* INCLUDED IN OTHER — NOT CONSIDERED FOR FINAL COLUMN