



Institute Archives and Special Collections
Building 14N-118

77 Massachusetts Avenue
Cambridge, MA 02139-4307

<http://libraries.mit.edu/archives>

Phone 617.253.5136
Fax 617.258.7305
Email mithistory@mt.edu

CHARLES FAYETTE TAYLOR, 1894-1996

Papers, 1917-1990

Manuscript Collection - MC 71

43 boxes

Accession number: 77-25, 77-118, 78-142, 90-35, 91-44, 92-33

Partially processed: February 1981

By: Roland Madany and Rowland Aertker

ACCESS

There are no restrictions on access to the papers.

COPYRIGHT

Requests for permission to publish material from the collection should be directed to the head of the Institute Archives and Special Collections.

BIOGRAPHICAL NOTE

Charles Fayette Taylor was born in New York City in 1894. He enrolled in the Sheffield Scientific School at Yale in 1912 and received the bachelor's degree in mechanical engineering in 1915. During World War I Taylor first served as a civilian inspector of aircraft material for the U.S. Signal Corps. After three months he was appointed Ensign in the Naval Reserve Corps and placed in charge of the Navy's Aeronautical Engine Laboratory in Washington, D.C., a position he held for the duration of the war. In 1919 Taylor resigned from active service to return to Yale, and in 1920 he was awarded the master's degree in mechanical engineering.

From 1920 to 1923, Taylor was the civilian engineer in charge of the U.S. Army's Air Service Laboratory at McCook Airfield in Dayton, Ohio. There he supervised numerous engine endurance tests, aircraft flight tests, and fuel anti-knock tests. Taylor next went to work for the Wright Aeronautical Corporation. He was in charge of airplane engine design and development from 1923 to 1926, when the Wright Corporation was developing the air-cooled "Whirlwind" engine used on the historic flights of Lindbergh, Byrd, and Chamberlain.

In 1926 Taylor began his long association with MIT. He was first employed by the Institute as an associate professor of aeronautical engineering. By 1929 he had been promoted to professor and made acting head of the course in aeronautical engineering. He was formally placed in charge of the course in 1931 and continued in that position for the next two years.

In 1933 Taylor left the aeronautical engineering department to become professor of mechanical engineering and director of the new Sloan Automotive Laboratories, a position he held until his retirement in 1960. While he was director of the Sloan Laboratories, Taylor was active in basic research on the internal combustion engine, for both the airplane and the automobile. His studies included experiments on detonation, combustion, fuel composition, friction, air capacity, piston/valve ratios, high speed diesel engines, and engine thermodynamics. Throughout his career at MIT Taylor was teacher as well as researcher. He taught undergraduate courses, conducted graduate seminars, and supervised theses in aeronautical, chemical, and mechanical engineering. With his brother, Edward Story Taylor, who also taught at the Institute and directed its Gas Turbine Laboratory, he co-authored the text *The Internal Combustion Engine* (1938, revised 1961). In 1960 C. F. Taylor published another text, *The Internal Combustion Engine in Theory and Practice*.

During this period, Taylor's activity was not limited to MIT. He traveled frequently as a guest lecturer to universities in Europe, the Orient, and South America. He was an instructor at the Swiss Federal Institute of Technology in 1949, the Danish Technical Institute in 1960, and Cambridge University in 1962. As a Fulbright Scholar, he lectured at Delft Technical Institute, Holland, in 1955, and at the University of the Republic of Uruguay in 1965. While at MIT Taylor also served as consultant to several engine manufacturers, among them the Ethyl Corporation, General Electric, Ingersoll Rand, Westinghouse, and the Wright Aeronautical Corporation.

Upon his retirement, Taylor became a professional artist. He is most noted for his work in metal sculpture, but he also produced paintings, etchings, and wall pieces. He had works commissioned by civic groups and companies and exhibited at galleries throughout the Northeast and in Florida.

Charles Fayette Taylor died June 22, 1996.

PROVENANCE NOTE

The material contained in boxes 1 to 34 was transferred to the Institute Archives in 1977 by Charles Fayette Taylor. The processing of this portion of the collection was funded by a grant from the National Endowment for the Humanities. Material received at a later date is unprocessed.

SCOPE AND CONTENT NOTE

The Charles Fayette Taylor Papers document his work as a researcher and teacher at MIT and as a consultant to government and industry. The papers fall into three broad categories: correspondence, teaching materials, and a technical reprint file. The latter makes up the largest part of the collection.

The correspondence file (1 linear foot) reflects Taylor's consulting activity with industry, his government committee work, and his travel and foreign lectures. The correspondence documents Taylor's service as a consultant to the Imperial Navy of Japan in 1931, General Electric in 1951-1953, Wiggins Airways in 1953, the Worthington Corporation in 1954-1955, Westinghouse in 1960, the Thiokol Chemical Corporation in 1961, and Ingersoll Rand in 1961-1965. It also includes minutes and correspondence which evidence Taylor's work as a member of the National Advisory Committee for Aeronautics (NACA) Committee on Power Plants for Aircraft from 1937 to 1942. Travel and foreign lecture tours are reflected in correspondence and itineraries, and, in the case of his 1949 visit to Belgium, by the text of his lecture to the Belgian Society of Mechanical Engineers. The correspondence file also includes material concerning Taylor's textbook *The Internal Combustion Engine*.

Taylor's teaching career, which spanned the years 1926-1960, is documented by approximately two linear feet of class-related material. This consists of manuscript lecture notes, reading lists, problem sets, quizzes, and class rosters, as well as material concerning theses which Taylor supervised.

The largest part of the collection is Taylor's technical reprint file (37.5 linear feet), an extensive compilation of early research literature on the internal combustion engine. The file was begun during the years 1920-1923 while Taylor was working at the Army's Air Service Laboratory in Dayton, Ohio. He continued to maintain and add to the file through his engineering career. When he became director of the Sloan Automotive Laboratory in

1933, the file was moved to the laboratory where it was used by all members of the Sloan staff.

The technical file consists of reprints and technical reports arranged by subject and classified using a numerical code devised by Taylor. It was accompanied by a card index which has been microfilmed and is located in folders 4/46-47. The index is arranged in the same way as the material itself, utilizing the same numerical classification scheme, but in addition, it includes citations to reprints which do not appear in the technical file. For details of the classification, see Appendix.

When preparing a lecture or article, Taylor often pulled items from the technical file and placed them in folders arranged by subject or author, sometimes combining them with additional material. Two such files were found in the Taylor papers. Because both of these files contain added material which never received a subject classification by Taylor, they have not been integrated into the numerically coded file. Thus, in order to consult all the material on a single topic, it is necessary to search both the numerically classified file (boxes 5-29) and the smaller subject and author files (boxes 30-34).

The Taylor papers also included a collection of glass slides (box 41) which Taylor used for lectures and book illustrations. These were classified by the same numerical scheme used for the technical file. The slides have been photocopied, and the copies are in folders 4/48 to 4/51. Separated from the collection was a group of National Advisory Committee for Aeronautics (NACA) technical reports, which are available in the Aeronautics and Astronautics Library at MIT.

Materials in boxes 36-43 consist primarily of files documenting Taylor's commissions for and exhibitions of his sculptures; writings, lectures, and notes about the history of aviation, mechanical engineering, and automobiles, including research at MIT's Sloan Automotive Laboratory from 1929 to 1988. Included are two oral history interviews: one conducted in 1976 by Barton Hacker, and one conducted in 1990 by Eugene Covert.

SERIES DESCRIPTIONS

The Charles Fayette Taylor Papers (boxes 1-34) are arranged in three series, reflecting the original order of the material: I. Correspondence, II. Lecture Notes and Class Materials, and III. Technical File.

I. Correspondence (Box 1)

Professional correspondence, travel itineraries, and committee minutes, 1917-1973, arranged alphabetically.

II. Lecture Notes and Class Materials (Boxes 1-4)

Lecture notes, class rosters, reading lists, problem sets, quizzes, thesis topics, and other class handouts, 1932-1960, arranged in the following four subseries:

- A. Lecture notes. Alphabetical by subject.
- B. Class material. Numerical by MIT class number.
- C. Class materials. Alphabetical by subject.
- D. Thesis topics and material. Chronological.

III. Technical File (Boxes 4-34)

Reprints, technical reports, card index, and glass slides, arranged in the following five subseries:

- A. Card index.
On microfilm; in order by numerical subject classification (see Appendix).
- B. Glass slides.
Photocopied; in order by numerical subject classification.
- B. Reprints.
By numerical subject classification.
- D. Alphabetical by subject.
- E. Reprints.
Alphabetical by author.

Materials in boxes 35 to 43 are not included in these series.

Box	Folder	Contents	(O) = Oversize
		SERIES I. CORRESPONDENCE	
1	1	American Art Foundation, 1956	
1	2	Belgium and Switzerland, 1948-51	
1	2a	Belgian Society of Mechanical Engineers - Lecture, 1949	
1	3	Bonamy, Stanley E., October 1973	
1	4	Civil Air Patrol, 1942-44	
1	5	Club and society memberships, 1935-44	
1	5	Delft, Holland, 1955-576	
1	7	Engine data requests, 1965-67	
1	8	Fulbright grant, 1952-58	
1	9	General Electric, 1951-53	
1	10	Greece and Denmark trip, 1959-61	
1	11	Health, Education, and Welfare (U.S. Department of), 1963	
1	12	Ingrewoll Rand, Financial Time Records, 1961-65	
1	13-14	<i>The Internal Combustion Enginer</i> , 1958	
1	15-18	International Textbook Company, 1947-63	
1	19	Japan, 1931-52	
1	20	Lessels, Inc., 1955	
1	21	London paper, September 1951	
1	22	Mailing addresses, 1937-48	
1	23	MIT appointments, 1925-56	
1	24	National Advisory Committee for Aeronautics, 1937-42, 1948	
1	25	Property, 1950	

Box	Folder	Contents	(O) = Oversize
1	26	Reaction motors, 1961	
1	27	Ragowski, Westinghouse Award, 1966-67	
1	28	Rolls-Royce, 1962-63	
1	29	Russia, 1942	
1	30	Scholastic and teaching achievements, 1917, 1937-50	
1	31	Scott, C. F., and Young, J. F. "Design Engineering"	
1	32	Taylor and Tsai paper, 1954-55	
1	33	Teacher's Oath, 1935-36	
1	34	Westinghouse, 1960	
1	35	Wiggins Airways, 1953-54	
1	36	Wisconsin, University of, 1949-50	
1	37	Worthington Corporation, 1954-65	

SERIES II. LECTURE NOTES AND CLASS MATERIALS

A. Lecture Notes

1	38	Accessories - Exhaust and Control Systems	
1	39	Air Cycle	
1	40	Auxiliaries	
1	41	Balance	
1	42	Ball and Roller Bearings	
1	43-44	Capacity, Air - 4-stroke	
1	45	Carburetors	
1	46	Carburetor Problems	
2	1	Clearances, Limits, etc.	

Box	Folder	Contents	(O) = Oversize
2	2-3	Combustion	
2	4	Combustion, Compression Ignition	
2	5	Combustion, Spark Ignition	
2	6	Combustion, Richardo's book	
2	7	C.E.T.	
2	8	Compressor Design	
2	9-10	Connecting Rods	
2	11-12	Cooling	
2	13	Cooling Radiator Design, Radiator Problems	
2	14-15	Crankcase Design	
2	16	Crankshaft	
2	17-18	Cylinder Design	
2	19	Cylinder, Number and Arrangement	
2	20	Cylinder, Testing Air-Cooled Cylinders	
2	21	Design - Introduction	
2	22	Detonation	
2	23	Diesel Data - 2.805	
2	24	Distribution	
2	25	Engines, Compression Ignition	
2	26-29	Engines, Data	
2	30	Engines, Future Development	
2	31	Engines, Choice of Types: Evaluation of Engine Performance	
2	32	Engines, Types	

Box	Folder	Contents	(O) = Oversize
2	33	E.S.M.W.T. - 2.077, 2.078	
2	34	Fastenings, Bolts, etc.	
2	35	Fluid Machines	
2	36	Friction	
2	37	Fuels	
2	38-39	Fuel - Air Cycle	
2	40	Fuel - Air Medium	
2	41	Fuel, Automotive - 10.79	
2	42	Fuels Systems	
2	43	Gears	
2	44	Generators, Similitude	
2	45-46	Heat losses	
2	47	Ignition	
2	48	Indicator Card, construction of	
2	49	Indicator Diagrams	
2	50	Intercoolers	
2	51	Introduction	
2	52	Lubrication Bearings	
2	53	Manufacturing, Industry Figures	
2	54	Materials	
2	55	Materials, Fatigue	
2	56	Mixture Requirements	
2	57	Oil	

Box	Folder	Contents	(O) = Oversize
2	58-59	Performance	
2	60	Performance Calculations in Aircraft Engine Design	
2	61	Performance Estimates, 4-stroke	
2	62	Perfrmance Estimates, 2-stroke	
3	1	Piston Design	
3	2	Supercharger Design and Problems	
3	3	Supercharger Drive	
3	4-5	Supercharging	
3	6	Supercharging and Superchargers	
3	7-9	Turbine, Gas	
3	10	Two stroke Cycle	
3	11	Valves	
3	12-13	Valve Gear, Cams	
3	14	Valve Springs	
3	15	Variables, Control of	
3	16	Vibration, Crankshaft	
3	17	Vibration, Mounting	
3	18	Vibration, Suddenly applied	
3	19	Wear	
B. Class Materials, by Class Number			
3	20	2.40 Eppes Spring, 1947	
3	21	2.612 Course descriptions	
3	22	2.612 Quiz	

Box	Folder	Contents	(O) = Oversize
3	23	2.68	
3	24	2.79 E.S.T. Grades, Spring 1941	
3	25	2.79 2.791, 2.801 E.S.T. Grades, 1941-42	
3	26	2.79 Spring and Summer, 1947	
3	27	2.791 Lectures, special by Taylor	
3	28	2.791 Quiz 11/30/55	
3	29	2.792 october 1946	
3	30-31	2.792 Spring term, 1947	
3	32	2.792 Summer term, 1947	
3	33	2.792 1961	
3	34	2.794 (after July 1945)	
3	35	2.794 Summer 1947	
3	36	2.7941 1946-47	
3	37	2.796 Problems	
3	38	2.796 July - October 1945	
3	39	2.796 October - January 1946-47	
3	40-41	2.796 Spring term, 1947	
3	42	2.797 Problems, October 1948	
3	43	2.797 Roster, marks, etc. 1952-53	
3	44	2.797 Quiz, combustion	
3	45	2.797 Quiz, cycles	
3	46	2.797 Quiz, similitude	
3	47	2.798 EDT 233, ND 219	

Box	Folder	Contents	(O) = Oversize
3	48	2.798 Roster, records, 1952-53	
3	49	2.80 T January 1952	
3	50	2.802 Lectures on history	
3	51	2.802 Lectures May 1951 - February 1952	
3	52-57	2.81 Summer School, 1952-54	
3	58	10.93 Automotive Fuels	
C. Class Materials, by Subject			
3	59	Acceleration Bibliography, 1931	
3	60	Altitude Correction Curves, bibliography, etc. 16.83	
3	61	Atmosphere Correction Curves, Humidity Chart 16.83	
3	62	Bore-Stroke Ratio	
3	63	Carburetion Bibliography, 1935	
3	64	Carburetion Design	
3	65	Characteristics of Combat-Type Airplane Engines	
3	66	Combustion Bibliography, 1934-36	
3	67	Compression Ignition Engines, 1936	
3	68	Crankshaft Design	
3	69	Detonation Bibliography, 1934	
3	70	Distillation Curves for Various Air-Fuel Ratios	
3	71	Distribution Bibliography, 1931	
3	72	Engines, Aircraft Specifications, 1935	
3	73	Engines, Radial, Diameter of, 1935	
3	74	Engines, Radial, Weight, 1933	

Box	Folder	Contents	(O) = Oversize
3	75	Engines, Specifications	
3	76	Engine Curves, Weight and Piston Speed, 1935	
3	77	Fin Dimensions	
3	78	Friction Pumping	
3	79	Fuel-Air Cycles	
3	80	Fuels, Aviation	
3	81	Fuel and Oil Consumption	
3	82	Fuel Injection with Spark Ignition Bibliography, 1936	
3	83	Fuel Volatility	
3	84	Gas Turbine Lab	
4	1	Gears, Spur	
4	2	Ignition Bibliography, 1927	
4	3	Laboratory - 2.791, 1939	
4	4	Lubrication Bibliography, 1929	
4	5	Master Connecting Rod Dimensions	
4	6	Materials, List of, 1934	
4	7	Materials, 1937	
4	8	Metals used in Engine Construction, 1941-42	
4	9	Oil, Lubricating, Viscosity Temperature Curves and Fuel Distillation Curves	
4	10	Radiator Curves	
4	11	Radiator Problems	
4	12	Rational Means for Selection of the Ratio of L/D for Poppet Valves	

Box	Folder	Contents	(O) = Oversize
4	13	Relative Load Capacities (to be used with “Crankshaft”)	
4	14	Spark Plug	
4	15	Stresses in Machines engaged in Cyclic Operations	
4	16	Supercharger Design	
4	17	Supercharging Problems	
4	18	Temperature - Energy Curve	
4	19	Thermodynamic Charts	
4	20	Thermodynamic Properties	
4	21	Thermodynamic Properties, Correct Mixtures	
4	22	Thermodynamic Properties, Instruction Sheets	
4	23	Thermodynamic Properties, Lean Mixtures	
4	24	Torsional Frequency of a Continuous Circular Shaft	
4	25	Two Stroke Bibliography	
4	26	Valve Area Ratio to Piston Area	
4	27	Valve Gear	
4	28	Valve Springs	
4	29	Valve Timing Bibliography, 1934	
4	30	Valves, Means for Selecting L/D	
4	31	Vibration Notes	
		Wright Service School Lectures:	
4	32	Coordinating Engine Design and Production, Problems of	
4	33	Engineering Aspects of Cyclone G-200 Single Row Series Engine	
4	34	Two-Speed Supercharger Drives	

Box	Folder	Contents	(O) = Oversize
D. Thesis Topics and Materials			
4	35	Before 1940	
4	36	1941-42	
4	37	1943	
4	38	1944	
4	39	1945-46	
4	40	Theses Rules and Regulations	
4	41	Thesis Material	
4	42	Thesis Subject: Ozone in Diesel Engines	
4	43	Thesis Topics, miscellaneous	
4	44	Research Problems for Theses	
4	45	Doctors' Exams	
SERIES III. TECHNICAL FILE			
Note: See Appendix for explanation of numerical subject classification.			
A. Index			
4	46-47	Card index on microfilm, two copies	
B. Glass Slides, by Numerical Subject Classification			
4	48	9.5 - 43C	
4	49	43C - 62	
4	50	62 - 103	
4	51	103-125	

Box**Contents**

(O) = Oversize

C. Reprints, by Numerical Subject Classification

5	1.1 - 10.68
6	10.7 - 20.0
7	21.0 - 29.3
8	30.0 - 41.0
9	42.5 - 43 A/C
10	43 A/D - 43 A/M
11	43 A/M - 43 A/R
12	43 A/S - 43 B/C
13	43 B/D - 43 C/F
14	43 C/G - 43.3
15	44.1 - 44.91
16	45.1 - 55.52
17	55.53 - 56.2
18	16.32 - 60.3
19	60.4 - 64.3
20	65.1 - 73.0
21	74.0 - 74.98
22	76.0 - 80.7
23	81.0 - 85.27
24	86.0 - 102.1
25	101.6 - 110.5
26	111.0 - 115.5
27	116.1 - 121.1
28	121.2 - 124.21
29	124.22 - 132.0

Box	Folder	Contents	(R) = Restricted; (O) = Oversize
		D. Reprints, by Subject	
30	1	Ablation	
30	2	Acoustics	
30	3	Air Pollution	
30	4	Altitude Performance	
30	5	Arcs	
30	6	Biomechanics	
30	7	Blast Waves	
30	8	Chemical Kinetics and Energy Transfer	
30	9	Combustion	
30	10	Combustion Instability	
30	11	Combustion in Practical Flowing Systems	
30	12	Combustion Propagation Through Solid Materials	
30	13	Combustion References	
30	14	Combustion in Rocket Engines	
30	15	Combustion Instability in Rocket Engines	
30	16	Combustion Supersonic	
30	17	Desalination	
30	18	Detonation	
30	19-23	Detonation and Octane Requirements	
30	24	Detonation, Electromagnetic	
30	25	Detonation Initiation	
30	26	Detonation Stability	

Box	Folder	Contents	(R) = Restricted; (O) = Oversize
30	27	Detonation Waves	
30	28	Detonation Waves, Structure	
31	1	Diesel Combustion and Injection of Fuels	
31	2	Diffusion	
31	3	Droplet Burning	
31	4	Dust Comets	
31	5	Electric and Magnetic Fields	
31	6-7	Engine Data (4-stroke)	
31	8	Engineering	
31	9	Flames, general	
31	10	Flames, Diffusion	
31	11	Flames, Laminar	
31	12	Flames, Turbulent	
31	13	Fluid Flow	
31	14-15	Four-Stroke Air Capacity	
31	16-17	Free Piston Engines	
31	18	Friction, Wear, Lubrication	
31	19	Fuels and Combustion	
31	20	Furnaces	
31	21	Gas Flow	
31	22	Heat Conduction, Rarefied Gases	
31	23-27	Heat Transfer	
32	1	Heat Transfer: Combined Free and Forced Convection	

Box	Folder	Contents	(R) = Restricted; (O) = Oversize
32	2	Heat Transfer: Forced Convection	
32	3	Heat Transfer: Free Convection	
32	4	Heat Transfer: Gasses	
32	5	Heat Transfer: Heat and Mass Transfer	
32	6	Heterogeneous Combustion: Boundary Layer Combustion	
32	7	Heterogeneous Combustion: Fundamentals of Gas-Solid Reaction Kinetics	
32	8	Heterogeneous Combustion: Nucleation and Condensation	
32	9	Ignition	
32	10	Ionization in Flames	
32	11	Ionized Gas, Confinement	
32	12	Instrumentation	
32	13	Interferometers	
32	14	Langmuir Probe	
32	15	Magnetogasdynamic	
32	16	Magnetohydrodynamic	
32	17	Mass Transfer	
32	18-19	Miniature Engines	
32	20	Mixing	
32	21	Non-English Papers	
32	22	Oil Spills	
32	23	Performance Data	
32	24	Plasma	
32	25	Plumes	

Box	Folder	Contents	(R) = Restricted; (O) = Oversize
32	26	Radiation from Practical Flames	
32	27	Radiative Transfer	
32	28	Rapid Compression	
32	29	Rapidly Applied Loads	
32	30	Relaxation	
32	31	Schlieren Systems	
32	32	Shock Tubes	
32	33	Shock Waves	
32	34-36	Similar Engines	
32	37	Smoke	
32	38	Solar Energy	
33	1-3	Sound Velocity	
33	4	Step Shocks	
33	5	Stratified Charge Engines	
33	6-8	Supercharging	
33	9	Trends in Cars and Engines	
33	10	Turbines and Compressors	
33	11	Turbulence	
33	12-13	Two-stroke	
33	14	Vapor Bubbles	
33	15	Vapor - Fuel	
33	16	Vapor - Water	
33	17	Vibration	

Box	Folder	Contents	(R) = Restricted; (O) = Oversize
33	18	Wakes	
33	19	Waves	
33	20	Wave Propagation	
E. Reprints, by Author			
33	21	Agnew, J. T., Infrared Combustion Studies	
33	22	Barber, Reynolds, Tierney, Elimination of Combustion Knock	
33	23	Beckers, A., MTZ	
33	24	de Boisblane, D. R., Measurement of Detonation	
33	25	Deublein, O., Analytical Studies of Knocking	
33	26	Doring, W., The Detonation Process in Gases	
33	27	Downs, P., and Wheeler, R. W., Recent Developments in "Knock" Research	
33	28	Draper, C. S., Combustion	
33	29	Egerton, A., Ignition of Methane-Air Mixtures by Rapid Compression	
33	30	Fenning, R. W., Air-Hydrogen Explosions in Closed Vessels	
33	31	Gill, Harlkeroad thesis, original data	
33	32	Gill, Harkleroad thesis, M.S., 1946	
33	33	Gray and Yoffe, Effect of Inert Diluents	
33	34	Hawthorne, Weddell, and Hottel	
33	35	Heron and Felt, Mechanical Octane Numbers	
33	36	Hottel and Williams, H ₂ O ₂ Chain Reaction Scheme	
33	37	Johnson, Crellin, Carhart, Ignition Studies Isomeric Hexanes	

Box	Folder	Contents	(R) = Restricted; (O) = Oversize
34	1	King, R. O., and Gill, E.W.R., Effect of Electrified Sand on Ignition	
34	2-7	King, R. O., et al, The Oxidation, Ignition, and Detonation of Fuel Vapors and Gases, parts 1-30	
34	8	Lafitte, É. Freling thesis	
34	9	Levedahl and Howard, Two-stage Autoignition of Some Hydrocarbons	
34	10	Levedahl and Sargent, thesis	
34	11	Livengood, Comment on Paper by Beckers and Levedahl	
34	12	Livengood, J. C., and Wu, P. C., Correlation of Autoignition Phenomena in Internal Combustion Engines...	
34	13	Livengood, J. C., Discussion of Paper by Levedahl	
34	14	Livengood, J. C., and Wu, P. C., Discussion of Paper by Chen, Beck, Uyehara, and Myers	
34	15	Livengood, J. C., S.A.E. discussion of DuPont Paper	
34	16	Livengood, J. C., and Leary, Autoignition by Rapid Compression	
34	17	Lovell, W. G., Knocking Characteristics of Hydrocarbons	
34	18	MacPherson, J. H., thesis	
34	19	MIT - Ethyl Corp., Annual Report no. 2 (1949)	
34	20-24	Milliken, W. F., and Whitcomb, D. W., Research in Automobile Stability and Control	
34	25	Miscellaneous Abstracts	
34	26	NACA Report on RC Machine no. I	
34	27	Oster, E. A., Interference Filter for Cool Flame Detecting	
34	28	Peletier, et al, Motored Autoignition Tests	
34	29	Reitzer, B. J., and Lamb, G. G., Pre flame Oxidation and Detonation of Cyclopentane...	

Box	Folder	Contents	(R) = Restricted; (O) = Oversize
34	30	Rogener, H., Detonative Combustion	
34	31	Schmidt, F.A.F., Report on Fundamental Research	
34	32	Society of Motion Picture and Television Engineers, Publications	
34	33	Stein, T. W., Decomposition of H ₂ O ₂ Vapor	
34	34	Symposium on Antiknock High Octane Fuels	
34	35	Teichmann, H., RC Machine Tests	
34	36	Time Effects thesis	
34	37	Walcutt, C., Autoignition Studies in C.F.R.	
34	38	Sheeler, R. W., and Downs, O., Knock in I.C. engines	
34	39	Yokely, C. R., Propane in Motored Engines	
35	1	Biographical	
35	2	Correspondence, 1971-1989	
35	3	Lectures (Depart. of Transportation) - 1975	
35	4	Automotive History, Compiled 1961-71	
35	5	Ignition Data, 1974-75	
35	6	Racing Engines, 1967-68	
35	7	Resistance & Traction Information, 1963-65	
35	8	Writings: "Assessment of Engine Losses Due to Friction and Lubricant Limitations" (Dept. of Transportation Report, 1981)	
35	9	<i>The Internal Combustion Engine in Theory and Practice</i> (Manuscript Revisions, 1985) Vol. I	
35	10	<i>The Internal Combustion Engine in Theory and Practice</i> (Manuscript Revisions, 1985) Vol. II - 1/2	
35	11	<i>The Internal Combustion Engine in Theory and Practice</i> (Manuscript Revisions, 1985) Vol. II - 2/2	

Box	Folder	Contents	(R) = Restricted; (O) = Oversize
35	12	<i>I.C.E.</i> Book (DATA, 1985) - 1/5	
35	13	<i>I.C.E.</i> Book (DATA, 1985) - 2/5	
35	14	<i>I.C.E.</i> Book (DATA, 1985) - 3/5	
35	15	<i>I.C.E.</i> Book (DATA, 1985) - 4/5	
35	16	<i>I.C.E.</i> Book (DATA, 1985) - 5/5	
		Biographical materials, 1912-1988	
36	1	Art biography of Charles Fayette Taylor (to 1979), 1979	
39(O)		Diplomas and certificates, 1912-1988	
36	2	Interview, C. F. Taylor (talking to Barton Hacker), 1976	
36	3	Pilot's flight logs, C. F. Taylor, 1936-1941	
		MIT-related materials, 1950-1989	
36	4	Bibliography of research on internal combustion engines at MIT (1929-1987), 1987	
36	5	Faculty Club exhibitions, 1956-1961	
36	6	Sloan Laboratory program, 1989	
36	7	Sloan Laboratory research, correspondence regarding, 1950-1988	
36	8-9	Sloan Laboratory research (1929-1965), notes, 1987	
		Exhibitions and commissioned art (not at MIT), 1952-1986	
36	10	Boston Arts Festival, 1954-1957	
36	11	Bristol Museum (Bristol, R.I.), 1968	
36	12	Brockton Art Center (Brockton, Mass.), 1971	
36	13	Brookline Hospital (Brookline, Mass.), 1968	
36	14	Brookline Library (Brookline, Mass.), 1960-1966	

Box	Folder	Contents	(R) = Restricted; (O) = Oversize
		Exhibitions and commissioned art (not at MIT), 1952-1986 (cont.)	
36	15	Brookline Town Hall (Brookline, Mass.), 1974	
36	16	Cambridge Art Association (Cambridge, Mass.), 1957-1976	
36	17	Carlisle Gallery (Carlisle, Mass.), 1964	
36	18	City Bank and Trust (Boston, Mass.), 1968	
36	19	Commissions, 1967-1983	
36	20	Copley Society (Boston, Mass.), 1978-1979	
36	21	Cordell Engineering (Everett, Mass.), 1981	
36	22	Courtiss, Eugene (sculpture for medical office), 1972-1973	
36	23	Denver Art Museum (Denver, Colo.), 1972-1979	
36	24	Eastern Gas Associates (Boston, Mass.), 1966-1972	
36	25	Exhibitions, 1959-1974	
36	26	Exhibit labels, n.d.	
36	27	Fitchburg Art Museum (Fitchburg, Mass.), 1968-1971	
36	28	Foster Hall Collection (Pittsburgh, Pa.), 1981	
36	29	Gloucester Temple (Gloucester, Mass.), 1972	
36	30	Gorton Corporation (Gloucester, Mass.), 1971	
36	31	Granite Savings Bank (Gloucester, Mass.), 1970-1982	
36	32	Group shows, 1977	
36	33	Harrington commission for sculpture (Melrose, Mass.), 1982	
36	34	Harvard Trust Co. (Cambridge, Mass.), 1974	
36	35	Hearthstone Insurance Co. (Boston, Mass.), 1967-1968	
36	36	Hingham Public Library (Hingham, Mass.), 1974	

Box	Folder	Contents	(R) = Restricted; (O) = Oversize
		Exhibitions and commissioned art (not at MIT), 1952-1986 (cont.)	
36	37	Horizon Gallery (Rockport, Mass.), 1965-1971	
36	38	Mary Harriman Gallery (Boston, Mass.), 1964	
36	39	Mill Reef Club (Antigua, West Indies), 1977	
36	40	Naples Art Gallery (Naples-on-the-Gulf, Fla.), 1972-1973	
36	41	New England Sculptors' Association (Cambridge, Mass.), 1963	
36	42	Nuclear Metals, Inc. (Concord, Mass.), 1978-1979	
36	43	Peabody Furniture Co. (Boston, Mass.), 1966	
36	44	Prudential Center (Boston, Mass.), 1967-1969	
36	45	Prudential Center (Boston, Mass.), "Cat-tails" sculpture, 1962	
36	46	Reitman, Robert (Cleveland, Ohio), 1975-1977	
36	47	Rockport Art Association (Rockport, Mass.), 1960-1968	
36	48	Scituate Arts Festival, 1973	
39(O)		Scrapbooks of photographs and press clippings regarding C. F. Taylor's art, 1952-1969	
40(O)		Scrapbooks of photographs and press clippings regarding C. F. Taylor's art, 1967-1986	
36	49	Sheraton Center Hotel (New York, N.Y.), 1980	
36	50	Sheraton Tampa Motor Inn (Tampa, Fla.), 1963-1972	
36	51	Temple Israel (Boston, Mass.), 1977	
36	52	Thomas Crane Public Library (Quincy, Mass.), 1971-1973	
36	53	Weeden Gallery (Boston, Mass.), 1967-1968	
36	54	Weston Garden Club (Weston, Mass.), 1968	
36	55	William Underwood Co. (Westwood, Mass.), 1980	

Box	Folder	Contents	(R) = Restricted; (O) = Oversize
		General subject files, 1926-1990	
36	56	Airships, n.d.	
36	57	Air history, First Flight Society, 1979-1981	
36	58	Artistic techniques, 1940-1959	
36	59	Art names and addresses, n.d.	
36	60	Aviation history, correspondence, 1926-1972	
36	61	Aviation history, correspondence, 1929-1986	
41		Aviation history (microfilm materials), n.d.	
36	62	Balance design, 1968	
36	63	Boston Visual Artists Union, 1973-1976	
36	64	Children's art, n.d.	
36	65	Color schemes, n.d.	
36	66	Correspondence, general, 1953-1979	
36	67	Correspondence, general, 1980-1990	
36	68	"Famous Flight" prints, correspondence, 1934-1938	
36	69	Flying licenses and bills of sale, 1941-1956	
36	70	Garber, Paul, comments on C. F. Taylor's manuscript on engines, n.d.	
36	71	Historical notes about art, 1972	
36	72	Human power machines, correspondence, 1981	
36	73	Lee, Regina (artists' representative), 1975-1976	
36	74	Letters of appreciation regarding art, 1973-1977	
36	75	Materials, correspondence and notes, 1964-1970	

Box	Folder	Contents	(R) = Restricted; (O) = Oversize
General subject files, 1926-1990 (cont.)			
36	76	National Honorary Mechanical Engineering Fraternity (Pi Tau Sigma), 1953	
36	77	New England Sculptors' Association, 1973-1978	
36	78	Patents, copies of patents, and conception sketches, 1926-1964	
37	1	Photographic services, 1972	
37	2	Press clippings and art memorabilia, 1954-1971	
37	3	Supplies, correspondence regarding, 1967	
37	4	Transport planes (1918-1938), correspondence, 1987	
Sketches and plans for works of art, 1958-1986			
37	5	Abstract drawings, 1973-1974	
37	6	Architectural drawings, 1963	
37	7	Boats, n.d.	
37	8	Calligraphy, n.d.	
37	9	Candelabra, 1972	
37	10	Cartons, n.d.	
37	11	Cat-tails, 1969	
39(O)		Chatham piece (sculpture), 1981	
37	12	Galaxies, n.d.	
37	13	Figures, n.d.	
37	14	Fountains, 1971	
37	15	Insects and spiders, n.d.	
37	16	Landscape, 1966	
37	17	"Mary Powell" steamboat, 1977	

Box	Folder	Contents	(R) = Restricted; (O) = Oversize
Sketches and plans for works of art, 1958-1986 (cont.)			
37	18	Micro-photographic sketches, 1976	
37	19	Musicians and music, n.d.	
37	20	Plexiglass sculpture, n.d.	
37	21	Railroads, n.d.	
37	22	Screens, 1969	
37	23	Sculpture sketches, 1958-1966	
37	24	Sundials and weathervanes, 1973-1986	
37	25	"Terra Incognita" (sculpture), 1972-1974	
38	1	"Upward Bound" (sculpture), 1968-1974	
38	2	Waterwheels, n.d.	
Writings and lectures, 1956-1990			
38	3	Air history lectures (transparencies to illustrate early 20th century aviation), n.d.	
38	4	Automotive history, lecture materials, 1974	
38	5	"Aviation reminiscences," lecture, 1988	
38	6	Aviation: The Creative Ideas, by Oliver Stewart (reviewed by C. F. Taylor), 1966	
38	7	"The Emerging Era, 1926-1939," lecture on history of aeronautics, 1989	
38	8	History of mechanical engineering (1900-1917), lecture, 1980	
38	9	History of technology lectures, 1990	
41		Internal combustion engines (glass slides, 3 1/2" x 4", to illustrate lectures on the history of internal combustion engines), n.d.	
38	10	"Notes on the Langley Memoirs," lecture, 1989	

Box	Folder	Contents	(R) = Restricted; (O) = Oversize
Writings and lectures, 1956-1990 (cont.)			
38	11	"Personal Experiences in Engineering," talk, 1977	
38	12	"A Semester at Delft Technical Institute," draft, 1990	
38	13	"Size Effects," notes, lecture outline, and reference materials, 1956-1975	
38	14	"Size Effects," lecture, 1978	
38	15	Photographs, 1950s	
38		Oral history transcript, Eugene Covert and C. F. Taylor, 1990	
39(O)		Diplomas and certificates, 1912-1988	
39(O)		Scrapbooks of photographs and press clippings regarding C. F. Taylor's art, 1952-1969	
39(O)		Chatham piece (sculpture), 1981	
40(O)		Scrapbooks of photographs and press clippings regarding C. F. Taylor's art, 1967-1986	
41		Aviation history lecture, 1977 (microfilm of four images used in lecture)	
41		Internal combustion engines (glass slides, 3 1/2" x 4", to illustrate lectures on the history of internal combustion engines), n.d.	
42(R)		Oral history transcript, Barton Hacker and C. F. Taylor, 1976, Master and edit version not for use (use copy in box 36)	
43		5 cassette tapes (plus copy of each) of Covert/Taylor oral history, 1990 (transcript in box 38)	
43		1 cassette tape of April 6, 1977, lecture, History of Aviation	

APPENDIX: Numerical Subject Classification Outline

- 1 Acceleration see also: Carburetion, Fuels, Volatility
 - 1.2 Engines
 - 1.3 General
- 2 Accessories see also: Generators, Starters
- 3 Acoustics see also: Mufflers, Instruments (Sound Measuring)
- 4 Accidents see: Safety
- 5 Aerodynamics
 - 5.1 Automobiles
 - 5.2 General
 - 5.5 Airplanes
 - 5.51 Design
 - 5.52 Miscellaneous
 - 5.53 Proprietary
 - 6.2 Air, properties of see: Atmosphere, properties of
 - 6.3 Air, resistance to
- 7 Air pollution see 96.5
- 8 Analysis, Dimensional
 - 8.5 Mathematical
- 9 Atmosphere, effect on engine performance
 - 9.1 Altitude effects
 - 9.11 C.I. Engines
 - 9.12 Curtiss Tests
 - 9.13 Humidity
 - 9.14 Sea-level correction
 - 9.15 Temperature
 - 9.2 Properties of
- 10 Automobiles, vehicles
 - 10.0 Air Conditioning
 - 10.1 Body
 - 10.2 Chassis

- 10.21 Axles
- 10.22 Drives
- 10.23 Frames
- 10.24 General
- 10.25 Steering Gears
- 10.26 Clutches
- 10.27 Lighting
- 10.28 Electrical Systems
- 10.3 Finish
- 10.4 General
 - 10.41 Trends in design
 - 10.42 Unconventional vehicles
- 10.5 Miscellaneous
 - 10.51 Ground Effect Machines
 - 10.52 Trucks, Buses, Tractors
- 10.6 Performance
 - 10.61 Acceleration
 - 10.62 Economics
 - 10.63 Fuel Consumption
 - 10.64 General
 - 10.65 Gradability
 - 10.66 Roadability
 - 10.67 Unusual Conditions
 - 10.68 Vehicles Resistance
 - 10.69 Roads
- 10.7 Proprietary
- 10.8 Specifications
- 10.9 Suspension
 - 10.91 Automobiles
 - 10.92 Tanks
 - 10.93 Trucks

10.95 Weight and Weight Distribution

10.99 Batteries

- 11 Bearings, Theory and Experiment
 - 11.0 General
 - 11.1 Anti-friction
 - 11.2 Journal
 - 11.3 Loads
- 12 Bibliography
- 13 Bailers
- 14 Brakes
- 15 Cams
- 16 Capacity, Air
 - 16.0 General
 - 16.1 Dynamics of
 - 16.2 Heat Transfer
 - 16.3 Fuel-Air Ratio
 - 16.4 Gulp Factor
 - 16.5 Valve Timing Effects
 - 16.6 Exhaust Valves and Exhaust Systems
 - 16.7 Bore-Stroke Ratio
 - 16.8 Inlet Pipe Dynamics
- 18 Carburetion
 - 18.1 Altitude Effects
 - 18.2 General
 - 18.3 Of Heavy Fuels
 - 18.4 Icing
- 19 Carburetors
 - 19.0 Gas
 - 19.1 Mixtures
 - 19.2 Proprietary
 - 19.3 Specification

	19.4 Theory and Experiment
20	Cleaners, Air
21	Cleaners, Oil
22	Cleaners, Fuel
23	Clutches
24	Combustion
	24.1 Chamber Design
	24.2 In Bombs
	24.3 In C.I. Engines
	24.4 In S.I. Engines
	24.5 Temperature of
	24.6 Theory
	24.61 Surface Ignitions
	24.7 Spectroscopic Studies
	24.8 In Steady Flow Systems
	24.9 In Dual Fuel Systems
25	Compression Ratio
26	Compressors, Air
	26.0 Centrifugal
	26.1 Free Piston
	26.2 Axial Flow
	26.3 Miscellaneous
	26.4 Rotary Displacement
	26.5 Piston Type
	26.6 Theory and Experiment
27	Consultants
29	Control
	29.1 Of Engines
	29.2 Mechanism
	29.3 Theory
30	Coolants

- 31 Cooling and Heat Transfer
 - 31.1 Cooling
 - 31.11 Engines, General
 - 31.12 Cylinders
 - 31.13 Cowling -Drag and Thrust
 - 31.14 Finned Surfaces
 - 31.15 Flat Surfaces
 - 31.2 Liquid
 - 31.3 Oil
 - 31.4 Steam
 - 31.7 Theory and Experiment
 - 31.8 Internal
- 32 Corrosion, in Engines
 - 32.5 Costs of Operations
- 34 Crankcase
 - 34.5 Ventilation
- 35 Crankshaft
- 37 Cylinders
 - 37.1 Design
 - 37.2 Size
 - 37.3 Temperature
- 38 Deposits, Engine
 - 38.5 Design
 - 38.6 Design and Development
- 39 Detonation
 - 39.1 C.I.Engine
 - 39.2 General
 - 39.3 Measurent
 - 39.4 History and Bibliography
 - 39.5 Octane Requirements and Knock-Limited
 - 39.6 Damage

- 41 Distribution
 - 42.5 Education
- 43 Efficiency
 - 43.1 Thermal
 - 43.2 Energy Conversion of
 - 43.3 Energy Fuel Conservation
- 43A Engines, Aircraft, Proprietary
 - S.I., Aero
 - General
 - Alfaro
 - Allison
 - Argus
 - Armstrong Siddeley
 - BMW
 - Bristol
 - Centaurus
 - Performance
 - Chrysler
 - Clark
 - Continental
 - Cummins
 - DeHavilland
 - Ford
 - Franklin
 - Jack E Heintz Engines
 - Jameson
 - Junkers
 - Lycoming
 - McCulloch
 - Mathis
 - Mercedes-Benz

Monaco
Napier
Packard
Pratt & Whitney
Ranger
Rolls-Royce
Russian Aircraft
Wright
43B Engines, Auto, Bus, Truck, Proprietary
Buick
Cadillac
Chevrolet
Chrysler
Continental
Dodge
Edsel
Fiat
Ford
General Motors
Industrial
International
Jaguar
Juuher Aero
Lincoln
Mercedes
Mercury
Miscellaneous
Miscellaneous Foreign
Miscellaneous Two-Stroke
Nash
Nordberg

Oldsmobile
Packard
Plymouth
Pontiac
Studebaker
Waukesha
White
Willys
Wisconsin
43C Engines, C.I., Proprietary
A.E.C.
Admiralty
Alco
Buda
Caterpillar
Commer
Continental
Cooper-Bessemer
Crossley
Cummins
Curtiss-Wright
Deutz
Enterprise
Fairbanks-Morse
G. M.
Goetaverken
Hallett
Hercules
Industrial
International Harvester
Lancia

Lima-Hami 1ton
Lister
M.A.N.
Mack- Lanova
Maybach
McLaren-Ricardo
Mirrlees
Mitsubishi
M.W.M.
Napi er
National
Nakazaki
Nohab
Nordburg
Onan
Packard
Panhard
Perkins
Petter
Polar
Rolls-Royce
Russell
Sulzer
Sun-Doxford
Universal Atlas Cement
Victor
Volkswagen
Waukesha
43D Statistics
44 Engines (General)
44.1 Compound

- 44.15 Free Piston
- 44.2 C.I.
 - 44.21 Dual Fuel
 - 44.2 3 General
- 44.3 General
 - 44.31 Small Engines
 - 44.35 Locomotives
- 44.4 Racing
 - 44.41 Simulation
- 44.5 S.I.
 - 44.51 Test Engines
- 44.6 Unconventional
 - 44.61 Crankless
 - 44.611 Wankel
 - 44.62 Hot Air
 - 44.625 Hybrid
 - 44.63 Miscellaneous
 - 44.64 Solid Fuel
 - 44.65 Steam
- 44.7 Miniature
- 44.8 Expansion
- 44.9 Rankine Cycle
 - 44.91 Brayton Cycle
- 45 Exhaust
 - 45.1 Analysis
 - 45.2 Back Pressure
 - 45.3 Poisoning
 - 45.4 Systems
 - 45.5 Temperatures
 - 45.6 Thrust and Energy Rec.
 - 45.61 Ejectors

- 45.7 Water Condensation
- 45.8 Dynamics
- 45.9 Process
- 46 Fans
- 47 Fastenings
- 48.1 Filters
- 49 Finish, Surface
- 50 Fire
- 51 Fluids, Flow of
 - 51.0 General
 - 51.1 Subsonic
 - 51.2 Supersonic
 - 51.3 Shock Tube Flow
- 52 Flywheels
- 54 Friction
 - 54.1 Engines
 - 54.11 Accessory
 - 54.12 General
 - 54.13 Mechanical
 - 54.14 Motoring
 - 54.15 Pumping
 - 54.2 Vehicles
 - 54.3 Journal Bearings
 - 54.4 General Theory and Experiment
- 55 Fuels, Applications
 - 55.1 Effect on Efficiency and Power
 - 55.2 C.I. Engines
 - 55.21 Gaseous
 - 55.22 Miscellaneous
 - 55.23 Petroleum
 - 55.24 Theory and Experiment

- 55.3 Gas Turbines
- 55.4 Rockets
- 55.5 S. I. Engines
 - 55.51 Gaseous
 - 55.52 Miscellaneous
 - 55.53 Petroleum, Heavy
 - 55.54 Petroleum, Light
 - 55.55 Theory and Experiment
- 55.6 General
- 55.7 Systems
- 55.9 Properties (General)
 - 55.91 Alcohol
 - 55.92 Gaseous
 - 55.93 Miscellaneous
 - 55.94 Petroleum
 - 55.95 Pure Compounds
 - 55.96 Solid
 - 55.97 Specifications
 - 55.971 C.I. Fuels
 - 55.972 General
 - 55.973 S.I. Fuels
 - 55.98 Surveys of Commercial
 - 55.99 Testing
- 56 Fuels, Properties (Specific)
 - 56.1 Additives
 - 56.12 Gasoline
 - 56.2 Anti-Knock Agents
 - 56.3 Consumption Properties
 - 56.31 General
 - 56.32 Knock Qualities
 - 56.33 Ignition Quality

- 56.34 Pre-Ignition Quality
- 56.4 Knock Rating Methods
- 56.5 Ignition Quality Rating Methods
- 56.6 Physical
 - 56.61 Heating Value
 - 56.62 Miscellaneous
 - 56.63 Volatility
 - 56.631 Acceleration
 - 56.632 Distribution
 - 56.633 General
 - 56.634 Starting
 - 56.635 Vapor Lock
- 56.7 Stability, Corrosiveness
 - 56.75 Reference
- 56.8 Refining
- 56.9 Resources and Supply
- 57 Gaskets
- 58 Gears
- 59 Generators
 - 59.5 Guidance, Advice to Engineers
 - 59.6 Governors
- 60 Heat
 - 60.1 Balance
 - 60.2 Combustion
 - 60.3 Loss, Direct
 - 60.4 Specific
 - 60.5 Transfer
 - 60.6 Exchangers
 - 60.7 Pumps
 - 60.8 Treatment of Materials
- 61 Heaters

- 61.5 Heating
- 62 History
 - 62.0 General
 - 62.1 Aero
 - 62.2 Auto
 - 62.3 Diesel
- 63 Highways
 - 63.5 Hydraulic Systems
- 64 Ignition
 - 64.1 Systems
 - 64.2 Theory and Experiment
 - 64.3 Agents
- 65 Index
 - 65.1 Slides, Reports, Films
 - 65.2 Aviation
 - 65.3 CAA
 - 65.4 NACA
 - 65.5 SAE
 - 65.6 Miscellaneous
- 66 Indicator Diagrams
- 67 Indicators, Engine
 - 67.1 Averaging
 - 67.2 Miscellaneous
 - 67.3 Single Cycle
- 68 Induction
- 69 Induction Systems
 - 69.3 Industry, Automotive
 - 69.5 Inertia, moment of
- 70 Injection ,Fuel
 - 70.1 C.I. Engines
 - 70.2 Mechanics of

- 70.3 S.I. Engines
- 70.4 Systems
- 70.5 Nozzles
- 72 Injection, Water
- 73 Installation, Engine
- 74 Instruments
 - 74.0 Theory and Experiment
 - 74.01 Accelerometers
 - 74.0 2 Engine, General
 - 74.1 Flow Measuring
 - 74.2 Fuel-Air Meters
 - 74.3 Fuel Quality
 - 74.31 Humidity Measuring
 - 74.35 Miscellaneous
 - 74.4 Length Measuring
 - 74.5 Oscillographs
 - 74.6 Pressure
 - 74.7 Recorders
 - 74.71 Transducers
 - 74.75 Speed Measuring (and Stroboscopes)
 - 74.8 Temperature
 - 74.9 Torque Meters
 - 74.91 Vibration-Measuring
 - 74.92 Aeronautical
 - 74.93 Position Measuring
 - 74.94 Detonation Measuring
 - 4.95 Sound Measuring
 - 74.96 Strain Measuring
 - 74.97 Smoke Meters
 - 74.98 Exhaust Pollution Measurement
- 76 Intercooling and Aftercooling

- 78 Laboratories, Engine
 - 78.1 Equipment
 - 78.2 Procedure
 - 78.3 Sloan Lab
 - 78.4 Commercial Test
 - 78.5 Locomotive-Diesel
 - 78.6 Instruction
- 79 Lubricants
 - 79.0 Consumption
 - 79.1 Dilution
 - 79.2 Extreme Pressure
 - 79.3 General
 - 79.35 Testing
 - 79.4 Reclaiming
 - 79.5 Stability and Corrosion
 - 79.6 Viscosity
 - 79.7 Oiliness (Anti-Wear)
 - 79.8 Effect of Addition Agents
 - 79.9 Preparation, Refining
 - 79.95 Grease
 - 79.96 Foaming
 - 79.97 Special Types
- 80 Lubrication
 - 80.0 Engines
 - 80.1 Journal Bearings
 - 80.2 Systems
 - 80.3 Basic Theory and Experiment
 - 80.4 General
 - 80.5 Piston and Rings
 - 80.6 Ball and Roller Bearings
 - 80.7 Gears

- 81 Magnetos
- 82 Maintenance
 - 82.1 Aircraft
 - 82.2 Automotive Engines, S.I.
 - 82.3 Compression Ignition Engines
 - 82.4 CFR Engines
- 84 Manufacturing
 - 84.1 Airplane Engines
 - 84.2 Machine Tools
 - 84.3 Testing and Inspection
 - 84.4 Parts
 - 84.5 Tractors
 - 84.6 Tanks
 - 84.7 Trucks, Autos
 - 84.8 Marine, R.R., Diesels
 - 84.9 Miscellaneous
- 85 Materials
 - 85.00 General
 - 85.01 Aluminum
 - 85.02 Beryllium
 - 85.03 Bronzes
 - 85.04 Chromium
 - 85.05 Conductivity and Other Thermal Properties
 - 85.06 Corrosion
 - 85.065 Duralumin
 - 85.07 Engine Parts
 - 85.08 General Properties
 - 85.09 Hardness
 - 85.10 Iron
 - 85.11 Lead
 - 85.12 Light Alloys

- 85.13 Magnesium
- 85.14 Miscellaneous
- 85.15 Monel
- 85.16 Mica
- 85.17 Nickel
- 85.18 Plastics
- 85.19 Preparation
- 85.20 Protective Coatings
- 85.21 Rubber
 - 85.210 Natural Rubber
 - 85.211 Synthetic Rubber
- 85.22 Steel
- 85.23 Test and Inspection
- 85.24 Tungsten
- 85.25 Wood
- 85.26 Heat Resisting
- 85.27 Titanium
- 86 Mixture
- 87 Mufflers
- 88 Nomenclature
 - 88.5 Noise
- 89 Nuclear Power
- 91 Operation of Engines
- 93 Performance, Engine
 - 93.1 General
 - 93.2 Statistics
 - 93.3 Maps
 - 93.4 Calculated
- 94 Pins
- 95 Pistons
 - 95.0 Design

- 95.1 Friction
- 95.2 Temperature
- 95.3 Theory and Experiment
- 96 Plugs, Spark
 - 96.5 Pollution
 - 96.6 Pollution, Design Factors
 - 96.7 Pollution, Fuel Factors
 - 96.8 Pollution Operating Factors
 - 96.9 Pollution Modeling
- 97 Preignition
- 98 Producers, Gas
- 99 Propellers
 - 99.0 Control
 - 99.1 General
 - 99.2 Mechanical Design
 - 99.3 Performance
 - 99.5 Vibration
 - 99.6 Water
 - 99.7 Air
- 100 Propulsion, Jet
 - 100.1 General
- 101 Pumps
 - 101.2 Fuel
 - 101.3 Fuel Injection
 - 101.4 General
 - 101.5 Oil
 - 101.6 Water
- 102 Radiators
 - 102.1 Coolant
 - 102.2 General
 - 102.3 Oil

- 102.5 Reciprocating Machinery
- 103 Rods, Connecting
- 104 Rings, Piston
- 105 Safety
 - 105.1 Aircraft
 - 105.2 Auto
 - 105.3 General
- 106 Schools, Diesel
- 108 Screw Threads
- 109 Shafts, Flexible
 - 109.5 Similitude
 - 109.51 Engines
 - 109.52 Miscellaneous
- 110 Springs
 - 110.5 Standards
- 111 Starters
- 112 Starting
- 113 Steam Power Plants
- 114 Strength of Materials
 - 114.0 General
 - 114.1 Elasticity
 - 114.2 Fatigue
 - 114.3 Creep
 - 114.4 Hardenability
 - 114.5 Stresses in Engine Parts
 - 114.6 Stress Analysis Expt.
- 115 Superchargers
 - 115.1 Centrifugal
 - 115.2 General Theory G Expt.
 - 115.3 Roots
 - 115.4 Cabin

- 115.5 Exhaust-driven
- 115.6 Comprex
- 116 Supercharging
 - 116.1 Aero Engines
 - 116.2 Diesel Engines
 - 116.3 General
 - 116.4 Cabin
 - 116.5 Auto, Bus, and Truck
 - 116.8 Symbols
 - 116.9 Techniques, Laboratory
- 117 Testing
 - 117.1 Aero
 - 117.2 Auto
 - 117.3 Deisel
 - 117.4 General
 - 117.5 Power Recovery
- 118 Thermodynamics and Heat
 - 118.0 Cycles
 - 118.1 Fuel-Air Mixtures
 - 118.2 General
 - 118.3 Real vs. Equivalent Cycles
- 119 Thermostats
 - 119.5 Tires
 - 119.7 Traction
- 120 Transmissions
 - 120.1 Automatic
 - 120.2 Gear
 - 120.21 Electric
 - 120.22 Friction Type
 - 120.3 General
 - 120.4 Torque Converters and Fluid Drive

- 120.41 Buick
- 120.42 Chevrolet
- 120.43 Chrysler-Plymouth
- 120.44 European
- 120.45 Ford-Mercury
- 120.46 Hydramatic
- 120.47 Studebaker-Packard
- 120.48 Trucks and R.R.
- 120.5 Hydrostatic
- 121 Turbines
 - 121.0 General
 - 121.1 Exhaust
 - 121.2 Gas
 - 121.3 Steam
 - 121.4 Aircraft Gas
- 122 Turbulence
 - 122.1 Air Stream
 - 122.2 Engine Cylinders
- 123 Two-Stroke Cycle
 - 123.1 General
 - 123.2 Scavenging Efficiency
 - 123.3 Exhaust Dynamics
 - 123.4 Supercharging
 - 123.5 Pollution Control
- 124 Valves
 - 124.1 Miscellaneous
 - 124.2 Poppet
 - 124.21 Flow
 - 124.22 Mechanics and Design
 - 124.23 Miscellaneous
 - 124.3 Sleeve

- 124.31 Flow
- 124.4 Temperature
- 125 Valve Mechanisms
- 126 Valve Seats
- 127 Valve Timing
- 128 Vapor Lock
- 129 Vibration
 - 129.1 Airplane
 - 129.2 Automobile
 - 129.3 Engine
 - 129.4 Crankshaft
 - 129.5 Measurement
 - 129.6 Miscellaneous
 - 129.8 Theory
- 129A Water, Properties of
- 130 Wear
 - 130.1 Basic Theory
 - 130.2 Engine
 - 130.3 Measurement
- 131 Welding and Soldering
- 132 Wind Power
- 133 Work
 - 133.1 Work Study