

# CASUALTY ACTUARIAL SOCIETY

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## 1931 YEAR BOOK

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Officers, Council and Committees

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*(Corrected to February 1, 1931)*

Printed for the Society by  
GLOBE PRINTING COMPANY, Inc.  
38 LIBERTY STREET  
NEW YORK CITY

No. 10



# CASUALTY ACTUARIAL SOCIETY

NOVEMBER 21, 1930

## THE COUNCIL

<i>*Officers:</i>	THOMAS F. TARBELL.....	<i>President</i>
	ROY A. WHEELER.....	<i>Vice-President</i>
	WINFIELD W. GREENE.....	<i>Vice-President</i>
	RICHARD FONDILLER.....	<i>Secretary-Treasurer</i>
	ROBERT J. MCMANUS.....	<i>Editor</i>
	WILLIAM BREIBY.....	<i>Librarian</i>

<i>†Ex-Presidents:</i>	SANFORD B. PERKINS.....	1932
	GEORGE D. MOORE.....	1934

<i>†Ex-Vice-Presidents:</i>	SYDNEY D. PINNEY.....	1934
	PAUL DORWEILER.....	1934

<i>†Elected:</i>	WILLIAM F. ROEBER.....	1931
	LEON S. SENIOR.....	1931
	ARNETTE R. LAWRENCE.....	1931
	EDWIN W. KOPF.....	1932
	JAMES W. GLOVER.....	1932
	JOSEPH LINDER.....	1932
	WILLIAM LESLIE.....	1933
	FRANK R. MULLANEY.....	1933
	HARMON T. BARBER.....	1933

\*Terms expire at the annual meeting in November, 1931.

†Terms expire at the annual meeting in November of the year given.

**COMMITTEE ON ADMISSIONS**SANFORD B. PERKINS, *Chairman*

LEON S. SENIOR

GEORGE D. MOORE

G. F. MICHELbacher

SYDNEY D. PINNEY

**AUDITING COMMITTEE**WILLIAM M. CORCORAN, *Chairman*

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WINFIELD W. GREENE

**EDITORIAL COMMITTEE**ROBERT J. McMANUS, *Chairman, ex-officio***ASSISTANT EDITORS**

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ARTHUR N. MATTHEWS

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ROY A. WHEELER

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ALBERT W. WHITNEY

THOMAS F. TARBELL

ROY A. WHEELER

CHARLES G. SMITH

PAUL DORWEILER

RICHARD M. PENNOCK

## MEMBERSHIP OF THE SOCIETY, NOVEMBER 21, 1930

## FELLOWS

Those marked (†) were Charter Members at date of organization, November 7, 1914.

Those marked (\*) have been admitted as Fellows upon examination by the Society.

Date Admitted	
*Nov. 21, 1930	Ainley, John W., The Travelers Insurance Co., 700 Main Street, Hartford, Conn.
May 23, 1924	Bailey, William B., Economist, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
*Nov. 20, 1924	Barber, Harmon T., Assistant Actuary, Casualty Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
†	Benjamin, Roland, Treasurer, Fidelity & Deposit Co., Baltimore, Md.
†	Black, S. Bruce, President, Liberty Mutual Insurance Co., Park Square Building, Boston, Mass.
Apr. 20, 1917	Blanchard, Ralph H., Professor of Insurance, School of Business, Columbia University, New York.
May 24, 1921	Bond, Edward J., Jr., First Vice-President, Maryland Casualty Co., Baltimore, Md.
May 19, 1915	Bradshaw, Thomas, Vice-President and General Manager, Massey-Harris Co., Limited, 915 King St., Toronto, Canada; President, North American Life Assurance Co. of Canada, Toronto, Canada.
†	Breiby, William, Consulting Actuary, Fackler & Breiby, 25 Church St., New York.
*Nov. 18, 1927	Brown, F. Stuart, Chief Accountant, Fireman's Fund Indemnity Company, 60 John St., New York.
Oct. 22, 1915	Brown, Herbert D., Chief of U. S. Efficiency Bureau, 408 Winder Building, 17th and F Sts., N. W., Washington, D. C.
Oct. 22, 1915	Brown, William H., Second Vice-President and Secretary, Columbian National Life Insurance Co., 77 Franklin St., Boston, Mass.
June 5, 1925	Brosmith, William, Vice-President and General Counsel, The Travelers Insurance Co. and The Travelers Indemnity Co., 700 Main St., Hartford, Conn.
†	Buck, George B., Consulting Actuary for Pension Funds, 25 Spruce St., New York.
May 26, 1916	Bucklin, Walter S., President, National Shawmut Bank, 40 Water St., Boston, Mass.
†	Budlong, W. A., Superintendent of Claims, Commercial Travelers Mutual Accident Association, Utica, N. Y.
Apr. 20, 1917	Burhop, William H., Secretary, Employers Mutual Liability Insurance Co., Wausau, Wis.

## FELLOWS

Date Admitted	
*Nov. 23, 1928	Burling, William H., The Travelers Insurance Co., 700 Main St., Hartford, Conn.
Feb. 19, 1915	Burns, F. Highlands, President, Maryland Casualty Co., Baltimore, Md.
*Nov. 19, 1929	Cahill, James M., The Travelers Insurance Co., 700 Main St., Hartford, Conn.
†	Cammack, Edmund E., Vice-President and Actuary, Aetna Life Insurance Co., Hartford, Conn.
*Nov. 21, 1930	Carlson, Thomas O., National Bureau of Casualty and Surety Underwriters, 1 Park Ave., New York.
†	Carpenter, Raymond V., Actuary, Metropolitan Life Insurance Co., 1 Madison Ave., New York.
*Nov. 15, 1918	Coates, Barrett N., Coates and Herfurth, Consulting Actuaries, 114 Sansome St., San Francisco, Calif.
*Nov. 17, 1922	Coates, Clarence S., Federal California Underwriters, Insurance Center Building, San Francisco, Calif.
Oct. 27, 1916	Cogswell, Edmund S., Second Deputy Commissioner of Insurance, State House, Boston, Mass.
Feb. 19, 1915	Collins, Henry, Manager and Attorney, Ocean Accident & Guarantee Corporation and President, Columbia Casualty Co., 1 Park Ave., New York.
*Nov. 23, 1928	Comstock, W. Phillips, Executive Representative, Continental Casualty Co., 75 Fulton St., New York.
†	Copeland, John A., Consulting Actuary, Candler Building, Atlanta, Ga.
*Nov. 18, 1925	Corcoran, William M., Office of S. H. and Lee J. Wolfe, Consulting Actuaries, 165 Broadway, New York.
†	Cowles, Walter G., Vice-President, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
†	Craig, James D., Actuary, Metropolitan Life Insurance Co., 1 Madison Ave., New York.
*Nov. 19, 1926	Crane, Howard G., Comptroller, General Reinsurance Corporation, 80 John St., New York.
*Nov. 18, 1927	Davis, Evelyn M., Partner in the firm of Woodward, Fondiller & Ryan, Consulting Actuaries, 75 Fulton St., New York.
†	Dawson, Alfred B., Miles M. Dawson & Son, Inc., 36 W. 44th St., New York.
†	Dawson, Miles M., Consulting Actuary and Counsellor at Law, 36 W. 44th St., New York.
†	DeKay, Eckford C., President, Industrial Service Corporation, 84 William St., New York.
†	Dearth, Elmer H., Detroit Athletic Club, Box 38, Detroit, Mich.
*Nov. 17, 1920	Dorweiler, Paul, Actuary, Accident and Liability Department, Aetna Life Insurance Co., Hartford, Conn.
May 19, 1915	Dunlap, Earl O., Assistant Actuary, Metropolitan Life Insurance Co., 1 Madison Ave., New York.
†	Egbert, Lester D., Director, Brown, Crosby & Co., Inc., Insurance Brokers, 96 Wall St., New York.
*Nov. 17, 1922	Elston, James S., Assistant Actuary, Life Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
†	Epsteen, Saul R., 418 U. S. National Bank Building, Denver, Colo.

## FELLOWS

Date Admitted	
†	Fackler, Edward B., Consulting Actuary, Fackler & Breiby, 25 Church St., New York.
†	Fallow, Everett S., Actuary, Accident Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
†	Farrer, Henry, Indemnity Insurance Company of North America, 1600 Parkway, Philadelphia, Pa.
Feb. 19, 1915	Fellows, Claude W., President, Associated Indemnity Corporation, Associated Fire & Marine Insurance Co., Associated Insurance Fund, Inc., Associated Insurance Building, 332 Pine St., San Francisco, Calif.
Feb. 19, 1915	Flanigan, James E., Agency Manager, Bankers Life Co., 225 Broadway, New York.
†	Flynn, Benedict D., Vice-President and Actuary, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
Feb. 19, 1915	Fondiller, Richard, Woodward, Fondiller & Ryan, Consulting Actuaries, 75 Fulton St., New York.
†	Forbes, Charles S., Treasurer, Smyth, Sanford and Gerard, Inc., Insurance Brokers, 68 William St., New York; President, Service Mutual Liability Insurance Co., Park Square Building, Boston, Mass.
Nov. 19, 1929	Foster, R. Leighton, Superintendent of Insurance, Province of Ontario, Parliament Building, Toronto, Canada.
May 26, 1916	Frankel, Lee K., Second Vice-President, Metropolitan Life Insurance Co., 1 Madison Ave., New York.
†	Franklin, Charles H., Secretary, Continental Casualty Co., 910 South Michigan Ave., Chicago, Ill.
*Nov. 18, 1927	Fredrickson, Carl H., Actuary, Canadian Automobile and Casualty Underwriters Association, 330 Bay St., Toronto, Canada.
Feb. 25, 1916	Froggatt, Joseph, President, Joseph Froggatt & Co., Insurance Accountants, 74 Trinity Place, New York.
†	Furze, Harry, Treasurer, Globe Indemnity Co., Washington Park, Newark, N. J.
Feb. 19, 1915	Garrison, Fred S., Secretary, The Travelers Indemnity Co., 700 Main St., Hartford, Conn.
*Nov. 20, 1924	Ginsburgh, Harold J., Assistant Secretary, American Mutual Liability Insurance Co., 142 Berkeley St., Boston, Mass.
*Nov. 21, 1930	Glenn, J. Bryan, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
May 19, 1915	Glover, James W., President, Teachers Insurance and Annuity Association of America, 522 Fifth Ave., New York.
†	Goodwin, Edward S., Goodwin-Beach & Co., Stock Brokers, 64 Pearl St., Hartford, Conn.
†	Gould, William H., Consulting Actuary, 75 Fulton St., New York.
*Nov. 19, 1926	Graham, Charles M., Assistant Actuary, State Insurance Fund, 432 Fourth Ave., New York.
Oct. 22, 1915	Graham, George, Vice-President, Central States Life Insurance Co., 3663 Lindell Blvd., St. Louis, Mo.
Oct. 22, 1915	Graham, Thompson B., Assistant Secretary, Metropolitan Life Insurance Co., 1 Madison Ave., New York.
†	Graham, William J., Vice-President, Equitable Life Assurance Society, 393 Seventh Ave., New York.

## FELLOWS

Date Admitted	
May 25, 1923	Granville, William A., Director of Publications, Washington National Insurance Co., 1607 Howard St., Chicago, Ill.
Nov. 19, 1929	Gray, V. Evan, Barrister-at-law, Sterling Tower, 372 Bay St., Toronto, Canada.
†	Greene, Winfield W., Vice-President and Secretary, General Alliance Corporation and General Reinsurance Corporation, 80 John St., New York.
†	Hamilton, Robert C. L., Comptroller, Hartford Accident & Indemnity Co., Hartford, Conn.
†	Hammond, H. Pierson, Actuary, Life Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
†	Hansen, Carl M., President, International Reinsurance Corporation, Pacific Finance Bldg., Los Angeles, Calif.
Oct. 27, 1916	Hardy, Edward R., Assistant Manager, New York Fire Insurance Exchange, 85 John St., New York.
Oct. 22, 1915	Hatch, Leonard W., Member, State Industrial Board, 80 Centre St., New York.
*Nov. 19, 1926	Haugh, Charles J., Jr., Assistant Actuary, National Bureau of Casualty & Surety Underwriters, 1 Park Ave., New York.
Nov. 17, 1920	Heath, Charles E., Vice-President and Secretary, Standard Surety & Casualty Company of New York, 80 John St., New York.
Nov. 21, 1919	Henderson, Robert, Vice-President and Actuary, Equitable Life Assurance Society, 393 Seventh Ave., New York.
May 17, 1922	Heron, David, Secretary and Chief Statistician, London Guarantee & Accident Co., Ltd., 20 Lincoln's Inn Fields, London, W. C. 2, England.
†	Hillas, Robert J., (Retired) 2 Whippany Road, Morristown, N. J.
Nov. 15, 1918	Hinsdale, Frank W., Secretary, Workmen's Compensation Board, Vancouver, B. C., Canada.
May 23, 1924	Hobbs, Clarence W., Special Representative of the National Convention of Insurance Commissioners, National Council on Compensation Insurance, 151 Fifth Ave., New York.
Nov. 19, 1926	Hodges, Charles E., President, American Mutual Liability Insurance Co., Allied American Mutual Automobile Insurance Co., American Policyholders' Insurance Co., 142 Berkeley St., Boston, Mass.
Oct. 22, 1915	Hodgkins, Lemuel G., Secretary, Massachusetts Protective Association and Massachusetts Protective Life Assurance Co., Worcester, Mass.
†	Hoffman, Frederick L., Consulting Statistician, Prudential Insurance Co.; Research Consultant, Babson Institute, Wellesley Hills, Mass.; Director of Research, Aviation Business Bureau, Inc., 72 Wall St., New York.
Oct. 22, 1915	Holland, Charles H., President, Independence Indemnity Co., Independence Building, Philadelphia, Pa.
†	Hughes, Charles, Auditor and Actuary, New York Insurance Department, 80 Centre St., New York.



## FELLOWS

Date Admitted	
Nov. 19, 1929	Hull, Robert S., Supervising Accountant, Woodward, Fondiller & Ryan, Consulting Actuaries, 75 Fulton St., New York.
†	Hunt, Burritt A., Assistant Secretary, Accident and Liability Department, Aetna Life Insurance Co., Hartford, Conn.
†	Hunter, Arthur, Second Vice-President and Chief Actuary, New York Life Insurance Co., 51 Madison Ave., New York.
Nov. 18, 1921	Hutcheson, William A., Second Vice-President and Actuary, Mutual Life Insurance Co., 32 Nassau St., New York.
Feb. 25, 1916	Jackson, Charles W., Actuary, Postal Life Insurance Co., 511 Fifth Ave., New York.
*Nov. 19, 1929	Jackson, Henry H., Actuary, National Life Insurance Co., Montpelier, Vt.
May 19, 1915	Johnson, William C., Vice-President, Massachusetts Protective Association and Massachusetts Protective Life Assurance Co., Worcester, Mass.
Nov. 23, 1928	Jones, F. Robertson, General Manager, Association of Casualty and Surety Executives; and Secretary-Treasurer, Workmen's Compensation Publicity Bureau, Bureau of Personal Accident and Health Underwriters, International Association of Casualty and Surety Underwriters and Committee of Nine on "Financial Responsibility for Automobile Accidents," 1 Park Ave., New York.
*Nov. 19, 1926	Kelton, William H., Assistant Actuary, Life Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
†	King, Walter I., Vice-President, Connecticut General Life Insurance Co., 55 Elm St., Hartford, Conn.
*Nov. 21, 1919	Kirkpatrick, A. Loomis, W. A. Alexander & Co., Insurance Brokers, 134 So. La Salle St., Chicago, Ill.
†	Kopf, Edwin W., Assistant Statistician, Metropolitan Life Insurance Co., 1 Madison Ave., New York.
Nov. 23, 1928	Kulp, Clarence A., Professor of Insurance, University of Pennsylvania, Logan Hall, 36th St. and Woodland Ave., Philadelphia, Pa.
Feb. 19, 1915	Laird, John M., Vice-President, Connecticut General Life Insurance Co., 55 Elm St., Hartford, Conn.
Nov. 17, 1922	Lawrence, Arnette R., Special Deputy Commissioner of Banking and Insurance, 1203 Military Park Building, 60 Park Place, Newark, N. J.
†	Leal, James R., Vice-President and Secretary, Interstate Life and Accident Co., Interstate Building, 540 McCallie Ave., Chattanooga, Tenn.
†	Leslie, William, Associate General Manager, National Bureau of Casualty & Surety Underwriters, 1 Park Ave., New York.
*Nov. 20, 1924	Linder, Joseph, Partner in the firm of Woodward, Fondiller & Ryan, Consulting Actuaries, 75 Fulton St., New York.
Nov. 18, 1921	Little, James F., Second Vice-President and Associate Actuary, Prudential Insurance Co., Newark, N. J.
Nov. 23, 1928	Lunt, Edward C., Vice-President, Great American Indemnity Co., 1 Liberty St., New York.
Feb. 19, 1915	Maddrill, James D., Consulting Actuary, 351 West 42nd St., New York.
†	Magoun, William N., General Manager, Massachusetts Rating and Inspection Bureau, 89 Broad St., Boston, Mass.

## FELLOWS

Date Admitted	
*Nov. 23, 1928	Marshall, Ralph M., National Council on Compensation Insurance, 151 Fifth Ave., New York.
*Nov. 18, 1927	Masterson, Norton E., Actuary, Hardware Mutual Casualty Co., Stevens Point, Wis.
*Nov. 19, 1926	Matthews, Arthur N., The Travelers Insurance Co., 700 Main St., Hartford, Conn.
May 19, 1915	Maycrink, Emma C., Examiner, New York Insurance Department, 80 Centre St., New York.
*Nov. 16, 1923	McClurg, D. Ralph, Secretary and Treasurer, National Equity Life Insurance Co., Little Rock, Ark.
May 23, 1919	McDougald, Alfred, Ellerslie, Beddington Gardens, Wallington Surrey, England.
*Oct. 31, 1917	McManus, Robert J., Statistician, Casualty Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
Feb. 19, 1915	Mead, Franklin B., Executive Vice-President, The Lincoln National Life Insurance Co., Fort Wayne, Ind.
Apr. 20, 1917	Meltzer, Marcus, Statistician, National Bureau of Casualty and Surety Underwriters, 1 Park Ave., New York.
†	Michelbacher, Gustav F., Vice-President and Secretary, Great American Indemnity Co., 1 Liberty St., New York.
†	Miller, David W., Assistant Treasurer, S. W. Strauss & Co., Investment Bonds, 565 Fifth Ave., New York.
†	Milligan, Samuel, Third Vice-President, Metropolitan Life Insurance Co., 1 Madison Ave., New York.
†	Mitchell, James F., Assistant U. S. Manager, General Accident Fire and Life Assurance Corporation, Ltd., 414 Walnut St., Philadelphia, Pa.
†	Moir, Henry, President, United States Life Insurance Co., 156 Fifth Ave., New York.
*Nov. 18, 1921	Montgomery, Victor, Secretary and General Manager, Pacific Employers Insurance Co., 928 So. Figuerva St., Los Angeles, Calif.
Nov. 19, 1926	Mooney, William L., Vice-President, Aetna Life Insurance Co., Hartford, Conn.
†	Moore, George D., Comptroller, Standard Surety & Casualty Company of New York, 80 John St., New York.
†	Morrison, James, Secretary-Treasurer, Independence Indemnity Co., Independence Building, Philadelphia, Pa.
†	Mowbray, Albert H., Consulting Actuary, 806 San Luis Road, Berkeley, Calif.
May 20, 1918	Mudgett, Bruce D., Professor of Economics, University of Minnesota, Minneapolis, Minn.
*Nov. 17, 1920	Mueller, Louis H., President, Varney Air Lines, Inc., 310 Balboa Building, San Francisco, Calif.
†	Mullaney, Frank R., Secretary, American Mutual Liability Insurance Co., and American Policyholders' Insurance Co., 142 Berkeley St., Boston, Mass.

## FELLOWS

Date Admitted	
May 28, 1920	Murphy, Ray D., Vice-President Equitable Life Assurance Society, 393 Seventh Ave., New York.
†	Nicholas, Lewis A., Assistant Secretary, Fidelity & Casualty Co., 92 Liberty St., New York.
†	Olifiers, Edward, Consulting Actuary, P. O. Box 1218, Rio de Janeiro, Brazil.
Nov. 18, 1927	O'Neill, Frank J., President, Royal Indemnity Co. and Eagle Indemnity Co., 150 William St., New York.
†	Orr, Robert K., President, Wolverine Insurance Co., Lansing, Mich.
†	Otis, Stanley L., Counsellor at Law, 110 William St., New York.
*Nov. 21, 1919	Outwater, Olive E., Assistant Actuary, Benefit Association of Railway Employees, 901 Montrose Ave., Chicago, Ill.
Nov. 19, 1926	Page, Bertrand A., Vice-President, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
*Nov. 18, 1921	Perkins, Sanford B., Assistant Secretary, Compensation and Liability Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
Nov. 15, 1918	Perry, W. T., Deputy Manager, Ocean Accident and Guarantee Corporation, 36 Moorgate, London, E. C. 2, England.
*Nov. 21, 1930	Perryman, Francis S., Actuary and Assistant Secretary, Royal Indemnity Co., 150 William St., New York.
Nov. 19, 1926	Phillips, Jesse S., President, Great American Indemnity Co., 1 Liberty St., New York.
*Nov. 17, 1922	Pinney, Sydney D., Associate Actuary, Casualty Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
May 13, 1927	Reid, A. Duncan, President and General Manager, Globe Indemnity Co., Washington Park, Newark, N. J.
†	Remington, Charles H., Insurance Counselor and Advisor, Suite 1801-1805, French Building, 551 Fifth Ave., New York.
May 23, 1919	Richardson, Frederick, U. S. Manager and Director, General Accident Fire and Life Assurance Corporation, 414 Walnut St., Philadelphia, Pa.
*Nov. 19, 1926	Richter, Otto C., American Telephone & Telegraph Co., 195 Broadway, New York.
May 24, 1921	Riegel, Robert, Professor of Statistics and Insurance, University of Buffalo, Buffalo, N. Y.
*Nov. 16, 1923	Roeber, William F., General Manager, National Council on Compensation Insurance, 151 Fifth Ave., New York.
†	Rubinow, Isaac M., Secretary, Independent Order of B'nai B'rith, 40 Electric Bldg., Cincinnati, O.
†	Scheitlin, E., Assistant Treasurer, Globe Indemnity Co., Washington Park, Newark, N. J.
†	Senior, Leon S., General Manager, Compensation Inspection Rating Board, 370 Seventh Ave., New York.
*Nov. 19, 1929	Skelding, Albert Z., Assistant Actuary, National Council on Compensation Insurance, 151 Fifth Ave., New York.
*Nov. 19, 1929	Skillings, Edward S., Associate Actuary, Woodward, Fondiller & Ryan, Consulting Actuaries, 75 Fulton St., New York.

## FELLOWS

Date Admitted	
Apr. 20, 1917	Smith, Charles G., Manager, State Insurance Fund, 432 Fourth Ave., New York.
Nov. 18, 1927	Stone, Edward C., U. S. Manager, Employers' Liability Assurance Corporation, Limited, and President, American Employers' Insurance Company, 110 Milk St., Boston, Mass.
Feb. 25, 1916	Strong, Wendell M., Associate Actuary, Mutual Life Insurance Co., 32 Nassau St., New York.
Oct. 22, 1915	Strong, William Richard, No. 4 "Sheringham," Cotham Road, Kew, Victoria, Australia.
†	Sullivan, Robert J., Vice-President, The Travelers Insurance Co., and The Travelers Indemnity Co., 700 Main St., Hartford, Conn.
*Nov. 17, 1920	Tarbell, Thomas F., Actuary, Casualty Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
†	Thompson, John S., Vice-President and Mathematician, Mutual Benefit Life Insurance Co., 300 Broadway, Newark, N. J.
Nov. 18, 1921	Toja, Guido, Director General, Istituto Nazionale Delle Assicurazioni, Rome, Italy
†	Train, John L., Secretary and General Manager, Utica Mutual Insurance Co., 185 Genessee St., Utica, N. Y.
Nov. 17, 1922	Traversi, Antonio T., Consulting Actuary and Accountant, Barrack House, 16 Barrack St., Sydney, Australia.
*Nov. 23, 1928	Valerius, N. M., Accident & Liability Department, Aetna Life Insurance Co., Hartford, Conn.
*Nov. 21, 1919	Van Tuyl, Hiram O., Actuary, Constitution Indemnity Company of Philadelphia, Independence Building, Philadelphia, Pa.
*Nov. 17, 1920	Waite, Alan W., Chief Underwriter, Accident and Liability Department, Aetna Life Insurance Co., Hartford, Conn.
*Nov. 18, 1925	Warren, Lloyd A. H., Professor of Mathematics, University of Manitoba, 64 Niagara St., Winnipeg, Manitoba, Canada.
May 23, 1919	Welch, Archibald, A., President, Phoenix Mutual Life Insurance Co., Hartford, Conn.
Nov. 19, 1926	Wheeler, Roy A., Vice-President and Actuary, Liberty Mutual Insurance Co., Park Square Building, Boston, Mass.
†	Whitney, Albert W., Associate General Manager and Actuary, National Bureau of Casualty & Surety Underwriters, 1 Park Ave., New York.
†	Wolfe, Lee J., Consulting Actuary, 165 Broadway, New York.
May 24, 1921	Wood, Arthur B., Vice-President and Actuary, Sun Life Assurance Company of Canada, Montreal, Canada.
*Nov. 17, 1920	Young, Charles N., Manager, Safety Engineering Department, Constitution Indemnity Company of Philadelphia, Independence Building, Philadelphia, Pa.

## ASSOCIATES

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Those marked (\*) have been enrolled as Associates upon examination by the Society.

Those marked (1) or (2) have passed Part I or Part II of the Fellowship Examination.

Date Enrolled	
May 23, 1924	Acker, Milton, Manager, Compensation and Liability Department, National Bureau of Casualty and Surety Underwriters, 1 Park Ave., New York.
*Nov. 15, 1918	Ackerman, Saul B., Associate Professor of Insurance, New York University, 90 Trinity Place, New York.
April 5, 1928	Allen, Austin F., Vice-President, Texas Employers Insurance Association and Employers Casualty Co., Dallas, Texas.
*Nov. 15, 1918	Ankers, Robert E., Secretary and Treasurer, Continental Life Insurance Co., District National Bank Building, Washington, D. C.
(1)*Nov.21,1930	Archibald, A. Edward, Associate Actuary, Woodward, Fondiller & Ryan, Consulting Actuaries, 75 Fulton St., New York.
(1)*Nov.16,1923	Ault, Gilbert E., Associate Actuary, Woodward, Fondiller & Ryan, Consulting Actuaries, 75 Fulton St., New York.
(1)*Nov.17,1922	Barter, John L., Superintendent, Liability Department, Pacific Department, Hartford Accident & Indemnity Co., 720 California St., San Francisco, Calif.
(1)*Nov.23,1928	Bateman, Arthur E., Liberty Mutual Insurance Company, Park Square Building, Boston, Mass.
(1)*Nov.19,1926	Batho, Elgin R., Assistant Actuary, Ontario Equitable Life & Accident Insurance Co., Waterloo, Ontario, Canada.
*Nov. 18, 1925	Bittel, W. Harold, Peoria Life Insurance Co., 410 Main St., Peoria, Ill.
Nov. 17, 1920	Black, Nellis C., Superintendent Statistical Division, Maryland Casualty Co., Baltimore, Md.
*Nov. 23, 1928	Bower, Perry S., Great West Life Assurance Company, Winnipeg, Manitoba, Canada.
Nov. 15, 1918	Brooks, LeRoy, Statistician, U. S. Fidelity & Guaranty Co., Baltimore, Md.
Nov. 20, 1924	Broughton, Thomas W., General Superintendent, Zurich General Accident and Liability Insurance Co., Eastern Department, 80 John Street, New York.
*Nov. 15, 1918	Brunquell, Helmuth G., Assistant Actuary, The Northwestern Mutual Life Insurance Co., Milwaukee, Wis.
*Oct. 22, 1915	Buffler, Louis, Manager and Secretary, Employers Mutual Insurance Co., 2 Lafayette St., New York.
*Nov. 20, 1924	Bugbee, James M., Maryland Casualty Co., Baltimore, Md.
March 31, 1920	Burt, Margaret A., Office of George B. Buck, Consulting Actuary, 25 Spruce St., New York.
Nov. 17, 1922	Cavanaugh, Leo D., Vice-President and Actuary, Federal Life Insurance Co., 166 N. Michigan Blvd., Chicago, Ill.

## ASSOCIATES

Date Enrolled	
*Nov. 18, 1927	Chen, S. T., Actuarial Department, China United Assurance Society, 34 Bubbling Road, Shanghai, China.
*Nov. 18, 1927	Conrod, Stuart F., Actuary, Western Empire Life Insurance Co., Somerset Block, Winnipeg, Canada.
*Nov. 18, 1921	Constable, William J., Lumbermen's Mutual Casualty Co., 260 Tremont St., Boston, Mass.
May 23, 1929	Cowee, George A., Vice-President, Liberty Mutual Insurance Co., Park Square Building, Boston, Mass.
(1)*Nov.19,1926	Davies, E. Alfred, Budget Supervisor, Liberty Mutual Insurance Co., Park Square Building, Boston, Mass.
*Nov. 18, 1925	Davis, Malvin E., Assistant Actuary, Metropolitan Life Insurance Co., 1 Madison Ave., New York.
May 25, 1923	Economidy, Harilaus E., Treasurer, American Indemnity Co., Texas Indemnity Insurance Co., American Fire & Marine Insurance Co., Galveston, Texas.
June 5, 1925	Eger, Frank A., Comptroller, Insurance Company of North America and Affiliated Companies, 1600 Arch St., Philadelphia, Pa.
Nov. 15, 1918	Egli, Wilfred H., Assistant Manager, Zurich General Accident & Liability Insurance Co., Ltd., 175 West Jackson Blvd., Chicago, Ill.
*Nov. 23, 1928	Faith, Edward L., Missouri State Life Insurance Co., 1501 Locust St., St. Louis, Mo.
*Nov. 16, 1923	Fitz, L. Leroy, 29 Claridge Court, Montclair, N. J.
(1)*Nov.18,1927	Fitzgerald, A. H., Assistant Actuary, The Prudential Insurance Company of America, Newark, N. J.
*Nov. 16, 1923	Fleming, Frank A., Actuary, American Mutual Alliance, 60 East 42nd St., New York.
May 23, 1919	Fletcher, Nicholas, Assistant to Commissioner and Secretary, Workmen's Compensation Board, Winnipeg, Manitoba, Canada.
Nov. 20, 1924	Froberg, John, Superintendent, California Inspection Rating Bureau, 216 Pine St., San Francisco, Calif.
(1)*Nov.19,1926	Fuller, Gardner V., Assistant Secretary, National Council on Compensation Insurance, 151 Fifth Ave., New York.
(1)*Nov.19,1929	Furnivall, Maurice L., Accident Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
March 21, 1930	Gallon, Richard W., Vice-President, New Amsterdam Casualty Co., 227 St. Paul St., Baltimore, Md.
*Nov. 17, 1922	Gibson, Joseph P., Jr., General Manager, Excess Underwriters, Inc., 75 Fulton St., New York.
*Nov. 16, 1923	Gildea, James F., The Travelers Insurance Co., 700 Main Street, Hartford, Conn.
*Nov. 21, 1930	Goddard, Russell P., The Travelers Insurance Co., 700 Main St., Hartford, Conn.
Nov. 19, 1929	Gordon, Harold R., Executive Secretary, Health & Accident Underwriters Conference, 330 South Wells St., Chicago, Ill.
*Nov. 18, 1927	Green, Walter C., Office of Coates and Herfurth, Consulting Actuaries, 114 Sansome St., San Francisco, Calif.
*Nov. 18, 1921	Haggard, Robert E., Superintendent, Permanent Disability Rating Department, Industrial Accident Commission, State Building, San Francisco, Calif.

## ASSOCIATES

Date Enrolled	
*Nov. 17, 1922	Hall, Hartwell L., Assistant Actuary, Connecticut Insurance Department, Hartford, Conn.
Nov. 20, 1924	Hall, Leslie L., Secretary-Treasurer, National Bureau of Casualty & Surety Underwriters, 1 Park Ave., New York. (Deceased, March 8, 1931.)
(2)*Nov.18,1925	Hall, William D., Motor City Agency, United Artists Building, 154 Bagley Ave., Detroit, Mich.
(1)*Mar.25,1924	Hart, Ward Van Buren, Assistant Actuary, Connecticut General Life Insurance Co., Hartford, Conn.
Nov. 21, 1919	Haydon, George F., General Manager, Wisconsin Compensation Rating & Inspection Bureau, 312 East Wisconsin Ave., Milwaukee, Wis.
Nov. 17, 1927	Hipp, Grady H., Actuary, New York State Insurance Fund, 432 Fourth Ave., New York.
*Oct. 31, 1917	Jackson, Edward T., Statistician, General Accident Fire & Life Assurance Corporation, 421 Walnut St., Philadelphia, Pa.
Nov. 19, 1929	Jacobs, Carl N., President, Hardware Mutual Casualty Co., Stevens Point, Wis.
(1)*Nov.18,1927	Jamison, Dorothy M., Assistant Actuary, George Washington Life Insurance Co., 1014 Kanawha St., Charleston, W. Va.
(2)*Nov.18,1921	Jensen, Edward S., Actuary, Great Republic Life Insurance Co., 8th and Spring Sts., Los Angeles, Calif.
Nov. 21, 1930	Jones, H. Lloyd, Comptroller, London Guarantee & Accident Co., 90 Maiden Lane, New York.
*Nov. 21, 1919	Jones, Loring D., Assistant Manager, State Insurance Fund, 432 Fourth Ave., New York.
*Nov. 17, 1922	Kirk, Carl L., Actuary, Zurich General Accident & Liability Insurance Co., 431 Insurance Exchange, Chicago, Ill.
*Nov. 19, 1926	Kormes, Mark, Assistant Actuary, Compensation Inspection Rating Board, 370 Seventh Ave., New York.
May 9, 1930	Lange, John R., Chief Actuary, Wisconsin Insurance Department, Madison, Wis.
*Nov. 23, 1928	Lipkind, Saul S., Reliance Life Insurance Company, Pittsburgh, Pa.
*Nov. 18, 1925	Malmuth, Jacob, Examiner, New York Insurance Department, 80 Centre St., New York.
Mar. 24, 1927	Marsh, Charles V. R., Comptroller and Assistant Treasurer, Fidelity & Deposit Co. and American Bonding Co., Baltimore, Md.
(1)*Oct. 27, 1916	McClure, Laurence H., Assistant Sales Manager, Electrical Division, Colt's Patent Fire Arms Manufacturing Co., Hartford, Conn.
*Nov. 17, 1922	McIver, Rosswell A., Actuary, Washington National Insurance Co., 1607 Howard St., Chicago, Ill.
*Nov. 19, 1926	Merkle, Mrs. Grace G., The Maccabees, 5057 Woodward Ave., Detroit, Mich.
(1)*Nov.17,1922	Michener, Samuel M., Assistant Actuary, Columbus Mutual Life Insurance Co., 580 East Broad St., Columbus, Ohio.
(1)*Nov.21,1930	Miller, John H., Associate Actuary, Woodward, Fondiller & Ryan, Consulting Actuaries, 75 Fulton St., New York.
*Nov. 19, 1926	Milne, John L., Actuary, Presbyterian Ministers' Fund for Life Insurance, 1805-7 Walnut St., Philadelphia, Pa.

## ASSOCIATES

Date Enrolled	
Nov. 17, 1922	Montgomery, John C., Secretary and Assistant Treasurer, Bankers Indemnity Insurance Co., 31 Clinton St., Newark, N. J.
May 25, 1923	Moore, Joseph P., President, North American Accident Insurance Co., 455 Craig St., W., Montreal, Canada.
(*)Nov.21,1919	Mothersill, Roland V., Secretary, Anchor Casualty Co., Anchor Insurance Building, St. Paul, Minn.
*Nov. 19, 1929	Muller, Fritz, Prokurist, "Agrippina" Lebensversicherungsbank Aktiengesellschaft, Berlin, W. 30 Motzstr. 3, Germany.
(*)Oct. 27,1916	Newell, William, Assistant Secretary, Sun Indemnity Co., 55 Fifth Ave., New York.
*Nov. 23, 1928	Newhall, Karl, Group Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
*Nov. 18, 1925	Nicholson, Earl H., Assistant to Executive Vice-President, Inter-Southern Life Insurance Co., Louisville, Ky.
May 23, 1919	Otto, Walter E., Secretary and Treasurer, Michigan Mutual Liability Co., 1209 Washington Blvd., Detroit, Mich.
*Nov. 19, 1926	Overholser, Donald M., Moody's Investors Service, 65 Broadway, New York.
Nov. 20, 1924	Pennock, Richard M., Actuary, Pennsylvania Manufacturers Association Casualty Insurance Co., Finance Building, Philadelphia, Pa.
Nov. 19, 1929	Phillips, John H., Secretary-Actuary, Minnesota Compensation Insurance Board, State Capitol, St. Paul, Minn.
*Nov. 17, 1920	Pike, Morris, Actuary, Unity Life & Accident Insurance Association, Syracuse, N. Y.
Mar. 24, 1927	Piper, John W., Superintendent of Statistical Department, Hartford Accident & Indemnity Co., 690 Asylum Ave., Hartford, Conn.
(*)Nov.23,1928	Piper, Kenneth B., Associate Actuary, Woodward, Fondiller & Ryan, Consulting Actuaries, 75 Fulton Street, New York.
*Nov. 18, 1927	Poissant, William A., The Travelers Insurance Co., 700 Main Street, Hartford, Conn.
(*)Nov.17,1922	Poorman, William F., Actuary, Central Life Assurance Society, Fifth and Grand Aves., Des Moines, Iowa.
(*)Nov. 17, 1922	Powell, John M., President, The Loyal Protective Insurance Co., Boston, Mass.
*Nov. 18, 1925	Prenner, Myron R., Actuary, Department of Insurance, Bismarck, N. D.
*Nov. 23, 1928	Pruitt, Dudley M., Actuary, Pennsylvania Indemnity Corporation, Atlantic Building, Philadelphia, Pa.
*Nov. 15, 1918	Raywid, Joseph, President, Joseph Raywid & Co., Inc., 90 William St., New York.
Nov. 19, 1929	Richardson, Harry F., Secretary-Treasurer, National Council on Compensation Insurance, 151 Fifth Ave., New York.
*Nov. 21, 1919	Robbins, Rainard B., Vice-President-Actuary, Union Labor Life Insurance Co., Machinists Building, Mount Vernon Place, Washington, D. C.
*Nov. 18, 1927	Sarason, Harry M., Missouri State Life Insurance Co., St. Louis, Mo.
Nov. 16, 1923	Sawyer, Arthur, Globe Indemnity Co., Washington Park, Newark, N. J.
*Nov. 20, 1930	Sevilla, Exequiel S., Insurance Examiner, Manila, Philippine Islands.



## ASSOCIATES

Date Enrolled	
(1)*Nov.20,1924	Sheppard, Norris E., University of Toronto, Toronto, Canada.
Nov. 15, 1918	Sibley, John L., Assistant Secretary, United States Casualty Co., 80 Maiden Lane, New York.
(1)*Nov.19,1929	Silverman, David, Office of Woodward, Fondiller & Ryan, Consulting Actuaries, 75 Fulton St., New York.
*Nov. 21, 1930	Sinnott, Robert V., Hartford Accident & Indemnity Co., 690 Asylum Ave., Hartford, Conn.
(1)*May 9, 1930	Smick, Jack J., National Council on Compensation Insurance, 151 Fifth Ave., New York.
*Nov. 18, 1921	Smith, Arthur G., Assistant General Manager and Actuary, Compensation Inspection Rating Board, 370 Seventh Ave., New York.
(1)*Nov.19,1926	Somerville, William F., St. Paul Mercury Indemnity Co., St. Paul, Minn.
*Nov. 18, 1925	Sommer, Armand, Manager, Accident and Health Department, Southern Surety Company of New York, 111 John St., New York.
*Nov. 18, 1927	Speers, Alexander A., Actuary, Michigan Life Insurance Co., Detroit, Mich.
*Nov. 15, 1918	Spencer, Harold S., Aetna Life Insurance Co., Hartford, Conn.
Nov. 20, 1924	Stellwagen, Herbert P., Assistant Vice-President, Indemnity Insurance Company of North America, 1600 Arch Street, Philadelphia, Pa.
*Nov. 16, 1923	Stoke, Kendrick, Michigan Mutual Liability Insurance Co., 1209 Washington Blvd., Detroit, Mich.
*Nov. 21, 1930	Sullivan, Walter F., Associated Indemnity Corporation, 332 Pine St., San Francisco, Calif.
(1)*Nov.19,1929	Taheny, John J., Assistant Vice-President and Attorney, Associated Indemnity Corporation, 332 Pine St., San Francisco, Calif.
Mar. 23, 1921	Thompson, Arthur E., Chief Statistician, Globe Indemnity Co., Washington Park, Newark, N. J.
(1)*Nov.21,1919	Trench, Frederick H., Manager, Underwriting Department, Utica Mutual Insurance Co., 185 Genesee St., Utica, N.Y.
(1)*Nov.20,1924	Uhl, M. Elizabeth, National Bureau of Casualty & Surety Underwriters, 1 Park Ave., New York.
*Nov. 21, 1919	Voogt, Walter G., Comptroller and Assistant Treasurer, Associated Indemnity Corporation, 332 Pine St., San Francisco, Calif.
(1)*Oct. 27, 1916	Waite, Harry V., Statistician, The Travelers Fire Insurance Co., 700 Main St., Hartford, Conn.
May 23, 1919	Warren, Charles S., Comptroller, Lloyds Casualty Co., 75 Maiden Lane, New York.
Nov. 18, 1925	Washburn, James H., Consulting Actuary, 2004 West End Ave., Nashville, Tenn.
(1)*Nov.18,1921	Waters, Leland L., Secretary-Treasurer, National Accident Insurance Co., Lincoln, Neb.
Nov. 17, 1920	Watson, J. J., Resident Vice-President, American Indemnity Co., Texas Indemnity Insurance Co. and American Fire & Marine Insurance Co., 1307 Kirby Building, Dallas, Texas.
*Nov. 18, 1921	Welch, Eugene R., Associated Indemnity Corporation, 332 Pine St., San Francisco, Calif.

## ASSOCIATES

Date Enrolled	
*Nov. 19, 1926	Welch, George P., Vice-President, J. Murray Walker & Co., Inc., Shawmut National Bank Building, Boston, Mass.
*Nov. 18, 1925	Wellman, Alexander C., Vice-President and Actuary, Protective Life Insurance Co., Birmingham, Ala.
*Nov. 21, 1930	Wells, Walter I., Office of Woodward, Fondiller & Ryan, Consulting Actuaries, 75 Fulton Street, New York.
Mar. 21, 1929	Wheeler, Charles A., Chief Examiner of Casualty Companies, New York Insurance Department, 80 Centre St., New York.
*Nov. 18, 1927	Whitbread, Frank G., Great West Life Assurance Co., Winnipeg, Manitoba, Canada.
Sept. 17, 1919	Williams, John F., Vice-President, Illinois Life Insurance Co., 1212 Lake Shore Drive, Chicago, Ill.
*Oct. 22, 1915	Williamson, William R., Assistant Actuary, Life Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
( <sup>1</sup> )*Nov.19,1929	Wittick, Herbert E., Standard Accident Insurance Co., 640 Temple Ave., Detroit, Mich.
*Oct. 22, 1915	Wood, Donald M., Childs & Wood, General Agents, Independence Indemnity Co., 175 W. Jackson Blvd., Chicago, Ill.
*Nov. 18, 1927	Wood, Milton J., Life Actuarial Department, The Travelers Insurance Co., 700 Main St., Hartford, Conn.
*Oct. 22, 1915	Woodman, Charles E., Assistant Manager, Ocean Accident & Guarantee Corporation, 1 Park Ave., New York.
*Nov. 18, 1925	Woolery, James M., Assistant Actuary, Inter-Southern Life Insurance Co., Louisville, Ky.
*Nov. 17, 1922	Young, Floyd E., Assistant Secretary and Actuary, National Fidelity Life Insurance Co., National Fidelity Life Building, Kansas City, Mo.

## SCHEDULE OF MEMBERSHIP, NOVEMBER 21, 1930

	Fellows	Associates	Total
Membership, November 19, 1929.....	175	124	299
Additions:			
By election.....	0	3	3
By examination.....	4	8	12
	179	135	314
Deductions:			
By death.....	2	1	3
By withdrawal.....	2	1	3
By transfers from Associate to Fellow.	..	4	4
Membership, November 21, 1930.....	175	129	304

# EX-PRESIDENTS AND EX-VICE-PRESIDENTS

## EX-PRESIDENTS

	Term
I. M. RUBINOW.....	1914-1916
JAMES D. CRAIG.....	1916-1918
*JOSEPH H. WOODWARD.....	1918-1919
BENEDICT D. FLYNN.....	1919-1920
ALBERT H. MOWBRAY.....	1920-1922
*HARWOOD E. RYAN.....	1922-1923
WILLIAM LESLIE.....	1923-1924
G. F. MICHELbacher.....	1924-1926
SANFORD B. PERKINS .....	1926-1928
GEORGE D. MOORE. ....	1928-1930

## EX-VICE-PRESIDENTS

	Term
LEON S. SENIOR.....	1920-1922
EDMUND E. CAMMACK .....	1922-1924
RALPH H. BLANCHARD.....	1924-1926
SYDNEY D. PINNEY.....	1928-1930
PAUL DORWEILER.....	1928-1930

\*Deceased

## DECEASED MEMBERS

All of the following were Fellows with the exception of those marked \* who were Associates.

Date of Death	
Feb. 10, 1920	*Baxter, Don. A., Deputy Insurance Commissioner, Michigan Insurance Department, Lansing, Mich.
Feb. 4, 1920	Case, Gordon, Office of F. J. Haight, Consulting Actuary, Indianapolis, Ind.
July 23, 1921	Conway, Charles T., Vice-President, Liberty Mutual Insurance Co., Boston, Mass.
Jan. 20, 1922	Craig, James McIntosh, Actuary, Metropolitan Life Insurance Co., New York.
Sept. 2, 1921	Crum, Frederick S., Assistant Statistician, Prudential Insurance Co., Newark, N. J.
Jan. 18, 1929	Deutschberger, Samuel, Actuary, New York Insurance Department, New York.
July 9, 1922	Downey, Ezekiel Hinton, Compensation Actuary, Pennsylvania Insurance Department, Harrisburg, Pa.
Oct. 30, 1924	Fackler, David Parks, Consulting Actuary, New York.
Aug. 22, 1925	Gaty, Theodore E., Vice-President and Secretary, Fidelity & Casualty Co., New York.
Mar. 10, 1924	Hookstadt, Carl, Expert, U. S. Bureau of Labor Statistics, Washington, D. C.
Feb. 11, 1928	Kearney, Thomas P., Manager, State Compensation Insurance Fund, Denver, Col.
Oct. 15, 1918	Kime, Virgil Morrison, Actuary, Casualty Departments, The Travelers Insurance Co., Hartford, Conn.
Dec. 9, 1927	Landis, Abb, Consulting Actuary, Nashville, Tenn.
Dec. 20, 1920	*Lubin, Harry, Assistant Actuary, State Industrial Commission, New York.
Aug. 20, 1915	Montgomery, William J., State Actuary, Boston, Mass.
Dec. 19, 1929	Morris, Edward Bontecou, Actuary, Life Department, The Travelers Insurance Co., Hartford, Conn.
July 24, 1915	Phelps, Edward B., Editor, The American Underwriter, New York.
July 30, 1921	Reiter, Charles Grant, Assistant Actuary, Metropolitan Life Insurance Co., New York.
Nov. 2, 1930	Ryan, Harwood Eldridge, Consulting Actuary, New York.
Feb. 26, 1921	Saxton, Arthur F., Chief Examiner of Casualty Companies, New York Insurance Department, New York.
May 9, 1920	Stone, John T., President, Maryland Casualty Co., Baltimore, Md.
June 11, 1930	*Wilkinson, Albert Edward, Actuary, Standard Accident Insurance Co., Detroit, Mich.
Dec. 31, 1927	Wolfe, S. Herbert, Consulting Actuary, New York.
May 15, 1928	Woodward, Joseph H., Consulting Actuary, New York.
Oct. 23, 1927	Young, William, Actuary, New York Life Insurance Co., New York.

## STUDENTS

### Part I and Part II Passed

The following candidates have been successful in completing the examinations for Associate but have not yet been enrolled as Associates of the Society by reason of the terms of examination rule 4 which reads: "Upon the candidate having passed both Parts I and II he will be enrolled as an Associate, provided he presents evidence of at least one year experience in actuarial, accounting or statistical work in casualty insurance offices or in the teaching of casualty insurance science at a recognized college or university, or other evidence of his knowledge of actuarial, accounting or statistical work as is satisfactory to the Council." Upon the completion of the requirements of the Council in respect to each of these candidates they will be enrolled as Associates:

BAKER, ROBERT W., 400 Assiniborni Ave., Winnipeg, Manitoba, Canada.

BATHO, BRUCE, The Franklin Life Insurance Company, Springfield, Ill.

BRERETON, C. R., 130 Ruby St., Winnipeg, Manitoba, Canada.

CHODORCOFF, WILLIAM, 324 Church Ave., Winnipeg, Manitoba, Canada.

CRIMMINS, JOSEPH, Metropolitan Life Insurance Company, 1 Madison Ave., New York.

FELDMAN, ISRAEL, 686 Albert St., Ottawa, Ontario, Canada.

FOOTE, JEAN VIVIAN, Sparling Hall, Wesley College, Winnipeg, Manitoba, Canada.

GODDARD, DAVID G., The Travelers Insurance Company, Hartford, Conn.

HIBBARD, DONALD L., 517 Beacon St., Boston, Mass.

JONES, CHARLES H., Metropolitan Life Insurance Company, 1 Madison Ave., New York.

KWASHA, HERMAN, The Travelers Insurance Company, Hartford, Conn.

LAIRD, W. DARRELL, 345 Waterloo St., Winnipeg, Manitoba, Canada.

LEARSON, RICHARD J., John Hancock Mutual Life Insurance Co., 197 Clarendon St., Boston, Mass.

LEHANE, LEO J., Central Life Insurance Company, Chicago, Ill.

LOADMAN, ARTHUR E., 665 Elgin Ave., Winnipeg, Manitoba, Canada.

MACKEEN, HAROLD E., The Travelers Insurance Company, Hartford, Conn.

MUTH, A. F., Actuarial Department, London Life Insurance Company, London, Canada.

ORLOFF, CONRAD, Assistant Actuary, Pyramid Life Insurance Company, Security Bldg., Kansas City, Mo.

PRASOW, ROSE, Actuarial Department, Confederation Life Association, Toronto, Ontario, Canada.

ROOD, HENRY F., The Travelers Insurance Company, Hartford, Conn.

SCHWARTZ, RICHARD T., Actuarial Department, New York Life Insurance Co., 51 Madison Ave., New York.

SHPPELLER, S. I., 791 Selkirk Ave., Winnipeg, Manitoba, Canada.

SUTHERLAND, HENRY M., Actuarial Department, Sun Life Assurance Co., Montreal, Canada.

THOMPSON, EMERSON W., The Travelers Insurance Company, Hartford, Conn.

WALL, DEAN, Actuarial Department, Missouri State Life Insurance Co., St. Louis, Mo.

YATES, J. ARNOLD, The Travelers Insurance Company, Hartford, Conn.

The following candidates for the grade of Associate have passed one of the two parts of the examination, during the last three years:

### Part I only

ARTHUR, CHARLES R., University of Manitoba, Winnipeg, Manitoba, Canada.  
 BARRON, JAMES, JR., General Reinsurance Corporation, 80 John St., New York.  
 BERKELEY, ERNEST T., Employers Liability Assurance Corp., 110 Milk St., Boston, Mass.  
 BURHANS, C. H., Standard Accident Insurance Company, 640 Temple Ave., Detroit, Mich.  
 DAVIS, MARJORIE, Constitution Indemnity Company, Philadelphia, Pa.  
 DRUCKER, ABRAHAM, 303 West 42nd Street, New York.  
 DUNBAR, WILLIAM A., General Reinsurance Corporation, 80 John St., New York.  
 GATELY, JOHN J., General Reinsurance Corporation, 80 John St., New York.  
 HART, AGNES S., 448 Rosedale Ave., Winnipeg, Manitoba, Canada.  
 ISAAC, WILLIAM J., Northwestern National Life Insurance Company, 430 Oak St., Minneapolis, Minn.  
 LAING, CHARLES B., Ordinary Actuarial Department, Prudential Insurance Company, Newark, N. J.  
 MILLS, JOHN A., Chief Statistician, (American) Lumbermen's Mutual Casualty Company, Mutual Insurance Bldg., Chicago, Ill.  
 WARD, ROBERT G., Columbian National Life Insurance Company, 77 Franklin St., Boston, Mass.  
 WOODWARD, BARBARA H., National Bureau of Casualty and Surety Underwriters, 1 Park Ave., New York.

### Part II only

BERMAN, ALFRED, 270 Atlantic Ave., Winnipeg, Manitoba, Canada.  
 CAMERON, F. R., Woodward, Fondiller & Ryan, 75 Fulton St., New York.  
 CAMPBELL, KENNETH M., Actuarial Department, The Imperial Life Assurance Co., 20 Victoria St., Toronto, Ontario, Canada.  
 CHESTER, GEORGE D., The Travelers Insurance Company, Hartford, Conn.  
 DIGIULIO, LOUIS, The Travelers Insurance Company, Hartford, Conn.  
 GUTHRIE, JOHN A., 1018 Jessie Ave., Winnipeg, Manitoba, Canada.  
 HUNTON, T. F., Assistant Actuary, Canadian Automobile and Casualty Underwriters Association, 330 Bay St., Toronto, Canada.  
 MESSINGER, L. W., Missouri State Life Insurance Co., St. Louis, Mo.

# CONSTITUTION

(AS AMENDED NOVEMBER 23, 1928)

## ARTICLE I.—*Name.*

This organization shall be called the CASUALTY ACTUARIAL SOCIETY.

## ARTICLE II.—*Object.*

The object of the Society shall be the promotion of actuarial and statistical science as applied to the problems of casualty and social insurance by means of personal intercourse, the presentation and discussion of appropriate papers, the collection of a library and such other means as may be found desirable.

The Society shall take no partisan attitude, by resolution or otherwise, upon any question relating to casualty or social insurance.

## ARTICLE III.—*Membership.*

The membership of the Society shall be composed of two classes, Fellows and Associates. Fellows only shall be eligible to office or have the right to vote.

The Fellows of the Society shall be the present members and those who may be duly admitted to Fellowship as hereinafter provided. Any Associate of the Society may apply to the Council for admission to Fellowship. If the application shall be approved by the Council with not more than three negative votes the Associate shall become a Fellow on passing such final examination as the Council may prescribe. Otherwise no one shall be admitted as a Fellow unless recommended by a duly called meeting of the Council with not more than three negative votes followed by a three-fourths ballot of the Fellows present and voting at a meeting of the Society.

Any person may, upon nomination to the Council by two Fellows of the Society and approval by the Council of such nomination with not more than one negative vote, become enrolled as an Associate of the Society, provided that he shall pass such examination as the Council may prescribe. Such examination may be waived in the case of a candidate who for a period of not less than two years has been in responsible charge of the statistical or actuarial department of a casualty insurance organization or has had such other practical experience in casualty or social insurance as in the opinion of the Council renders him qualified for Associateship.

## ARTICLE IV.—*Officers and Council.*

The officers of the Society shall be a President, two Vice-Presidents, a Secretary-Treasurer, an Editor, and a Librarian. The Council shall be composed of the active officers, nine other Fellows and, during the four years following the expiration of their terms of office, the ex-Presidents and ex-Vice-Presidents. The Council shall fill vacancies occasioned by death or resignation of any officer or other member of the Council, such appointees to serve until the next annual meeting of the Society.

## CONSTITUTION

ARTICLE V.—*Election of Officers and Council.*

The President, Vice-Presidents, and the Secretary-Treasurer shall be elected by a majority ballot at the annual meeting for the term of one year and three members of the Council shall, in a similar manner, be annually elected to serve for three years. The President and Vice-Presidents shall not be eligible for the same office for more than two consecutive years nor shall any retiring member of the Council be eligible for re-election at the same meeting.

The Editor and the Librarian shall be elected annually by the Council at the Council meeting preceding the annual meeting of the Society. They shall be subject to confirmation by majority ballot of the Society at the annual meeting.

The terms of the officers shall begin at the close of the meeting at which they are elected except that the retiring Editor shall retain the powers and duties of office so long as may be necessary to complete the then current issue of *Proceedings*.

ARTICLE VI.—*Duties of Officers and Council.*

The duties of the officers shall be such as usually appertain to their respective offices or may be specified in the by-laws. The duties of the Council shall be to pass upon candidates for membership, to decide upon papers offered for reading at the meetings, to supervise the examination of candidates and prescribe fees therefor, to call meetings, and, in general, through the appointment of committees and otherwise, to manage the affairs of the Society.

ARTICLE VII.—*Meetings.*

There shall be an annual meeting of the Society on such date in the month of November as may be fixed by the Council in each year, but other meetings may be called by the Council from time to time and shall be called by the President at any time upon the written request of ten Fellows. At least two weeks' notice of all meetings shall be given by the Secretary.

ARTICLE VIII.—*Quorum.*

Seven members of the Council shall constitute a quorum. Twenty Fellows of the Society shall constitute a quorum.

ARTICLE IX.—*Expulsion or Suspension of Members.*

Except for non-payment of dues no member of the Society shall be expelled or suspended save upon action by the Council with not more than three negative votes followed by a three-fourths ballot of the Fellows present and voting at a meeting of the Society.

ARTICLE X.—*Amendments.*

This constitution may be amended by an affirmative vote of two-thirds of the Fellows present at any meeting held at least one month after notice of such proposed amendment shall have been sent to each Fellow by the Secretary.



## BY-LAWS

(As AMENDED MAY 21, 1926)

### ARTICLE I.—*Order of Business.*

At a meeting of the Society the following order of business shall be observed unless the Society votes otherwise for the time being:

1. Calling of the roll.
2. Address or remarks by the President.
3. Minutes of the last meeting.
4. Report by the Council on business transacted by it since the last meeting of the Society.
5. New membership.
6. Reports of officers and committees.
7. Election of officers and Council (at annual meetings only).
8. Unfinished business.
9. New business.
10. Reading of papers.
11. Discussion of papers.

### ARTICLE II.—*Council Meetings.*

Meetings of the Council shall be called whenever the President or three members of the Council so request, but not without sending notice to each member of the Council seven or more days before the time appointed. Such notice shall state the objects intended to be brought before the meeting, and should other matter be passed upon, any member of the Council shall have the right to re-open the question at the next meeting.

### ARTICLE III.—*Duties of Officers.*

The President, or, in his absence, one of the Vice-Presidents, shall preside at meetings of the Society and of the Council. At the Society meetings the presiding officer shall vote only in case of a tie, but at the Council meetings he may vote in all cases.

The Secretary-Treasurer shall keep a full and accurate record of the proceedings at the meetings of the Society and of the Council, send out calls for the said meetings, and, with the approval of the President and Council, carry on the correspondence of the Society. Subject to the direction of the Council, he shall have immediate charge of the office and archives of the Society.

## BY-LAWS

The Secretary-Treasurer shall also send out calls for annual dues and acknowledge receipt of same; pay all bills approved by the President for expenditures authorized by the Council of the Society; keep a detailed account of all receipts and expenditures, and present an abstract of the same at the annual meetings, after it has been audited by a committee of the Council.

The Editor shall, under the general supervision of the Council, have charge of all matters connected with editing and printing the Society's publications. The *Proceedings* shall contain only the proceedings of the meetings, original papers or reviews written by members, discussions on said papers and other matter expressly authorized by the Council.

The Librarian shall, under the general supervision of the Council, have charge of the books, pamphlets, manuscripts and other literary or scientific material collected by the Society.

ARTICLE IV.—*Dues.*

The dues shall be ten dollars for Fellows payable upon entrance and at each annual meeting thereafter, except in the case of Fellows not residing in the United States, Canada, or Mexico, who shall pay five dollars at the time stated. The dues shall be five dollars for Associates payable upon entrance and each annual meeting thereafter until five such payments in all shall have been made; beginning with the sixth annual meeting after the admission of an Associate as such the dues of any Associate heretofore or hereafter admitted shall be the same as those of a Fellow. The payment of dues will be waived in the case of Fellows or Associates who have attained the age of seventy years.

It shall be the duty of the Secretary-Treasurer to notify by mail any Fellow or Associate whose dues may be six months in arrears, and to accompany such notice by a copy of this article. If such Fellow or Associate shall fail to pay his dues within three months from the date of mailing such notice, his name shall be stricken from the rolls, and he shall thereupon cease to be a Fellow or Associate of the Society. He may, however, be reinstated by vote of the Council, and upon payment of arrears of dues.

ARTICLE V.—*Designation by Initials.*

Fellows of the Society are authorized to append to their names the initials F. C. A. S.; and Associates are authorized to append to their names the initials A. C. A. S.

ARTICLE VI.—*Amendments.*

These by-laws may be amended by an affirmative vote of two-thirds of the Fellows present at any meeting held at least one month after notice of the proposed amendment shall have been sent to each Fellow by the Secretary.

## EXAMINATION REQUIREMENTS

## SYLLABUS OF EXAMINATIONS

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SUBJECTS

ASSOCIATESHIP: (*Part I: Sections 1 to 4; Part II: Sections 5 to 8*)

*Section 1. Advanced algebra*

*Section 2. Compound interest and annuities certain*

*Section 3. Descriptive and analytical statistics*

*Section 4. Elements of accounting, including double-entry bookkeeping*

*Section 5. Finite differences*

*Section 6. Differential and integral calculus*

*Section 7. Probabilities*

*Section 8. Elements of the theory of life contingencies; life annuities; life assurances*

FELLOWSHIP: (*Part I: Sections 9 to 12; Part II: Sections 13 to 16*)

*Section 9. Policy forms and underwriting practice in casualty insurance*

*Section 10. Investments of insurance companies*

*Section 11. Insurance law and legislation*

*Section 12. Economics of insurance*

*Section 13. Calculation of premiums and reserves for casualty (including social) insurance*

*Section 14. Advanced practical problems in casualty (including social) insurance statistics*

*Section 15. Advanced problems and practical methods of casualty insurance accounting*

*Section 16. Advanced problems in underwriting, administrative and service elements of casualty (including social) insurance*

To assist students in preparation for the examinations, Recommendations for Study have been prepared. This lists the texts, readings and technical material which must be mastered by the candidates. Text books are loaned to candidates by the Society.

## EXAMINATION REQUIREMENTS

RULES REGARDING EXAMINATIONS FOR  
ADMISSION TO THE SOCIETY

(AS AMENDED NOVEMBER 20, 1930)

The Council adopted the following rules providing for the examination system of the Society:

1. Examinations will be held on the last Wednesday and Thursday during the month of May in each year in such cities as will be convenient for three or more candidates.

2. Application for admission to examination should be made on the Society's blank form, which may be obtained from the Secretary-Treasurer. No applications will be considered unless received before the fifteenth day of March preceding the dates of examination.

3. A fee of \$5.00 will be charged for admission to examination. This fee is the same whether the candidate sits for one or two parts and is payable for each year in which the candidate presents himself. Examination fees are payable to the Secretary-Treasurer and must be in his hands before the fifteenth day of March preceding the dates of examination.

4. The examination for Associateship consists of two parts. No candidate will be permitted to present himself for Part II unless he has previously passed in Part I or takes Parts I and II in the same year. If a candidate takes both parts in the same year and passes in one and fails in the other, he will be given credit for the part passed. Upon the candidate having passed both Parts I and II he will be enrolled as an Associate, provided he presents evidence of at least one year experience in actuarial, accounting or statistical work in casualty insurance offices or in the teaching of casualty insurance science at a recognized college or university, or other evidence of his knowledge of actuarial, accounting or statistical work as is satisfactory to the Council.\*

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\* Candidates who have had no insurance experience, or whose experience is limited exclusively to life insurance companies, or who have not had one year of casualty insurance experience, will not be enrolled as Associates after passing Parts I and II, until they have had one year of casualty insurance experience; however, candidates not having one year of casualty insurance experience may, in accordance with a ruling of the Committee on Admissions, be enrolled as Associates upon passing the examination for Fellowship Part I.

## EXAMINATION REQUIREMENTS

5. In the case of applicants in the following classes, the Council may, upon receipt of satisfactory evidence that applicants are within the terms of this rule, waive the passing of both Parts I and II of the Associateship Examination. Such applicants may become Associates upon passing Part I of the Fellowship Examination, and may be admitted as Fellows by examination, provided they subsequently pass Part II of the Fellowship Examination.

- (a) Casualty insurance men not less than thirty years of age who have been in the business a number of years and who have attained responsible actuarial, statistical, accounting or semi-executive positions.\*
- (b) Fellows and Associates by examination of the Actuarial Society of America or of the American Institute of Actuaries.

6. The examination for Fellowship is divided into two parts. No candidate will be permitted to present himself for Part II unless he has previously passed in Part I or takes Parts I and II in the same year. If a candidate takes both parts in the same year and passes in one and fails in the other, he will be given credit for the part passed.

7. As an alternative to the passing of Part II of the Fellowship examination, a candidate may elect to present an original thesis on an approved subject relating to casualty or social insurance. Candidates electing this alternative should communicate with the Secretary-Treasurer as to the approval of the subject chosen. All theses must be in the hands of the Secretary-Treasurer before the last Thursday in May of the year in which they are to be considered. Where Part I of the Fellowship examination is not taken during the same year, no examination fee will be required in connection with the presentation of a thesis. All theses submitted are, if accepted, to be the property of the Society and may, with the approval of the Council, be printed in the *Proceedings*.

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\* In support of the candidate's claim that he is within the terms of this rule, he should attach to his application a letter from each of the nominators signing his application. These letters should state the fact of the candidate's experience which appear to entitle the candidate to the benefit of this rule.

# 1930 EXAMINATIONS OF THE SOCIETY

MAY 28 AND 29, 1930

## EXAMINATION COMMITTEE

JOSEPH LINDER - - CHAIRMAN

IN CHARGE OF  
ASSOCIATESHIP EXAMINATIONS  
NORTON E. MASTERTON, CHAIRMAN  
ARTHUR N. MATTHEWS  
ALBERT Z. SKELDING

IN CHARGE OF  
FELLOWSHIP EXAMINATIONS  
CHARLES J. HAUGH, CHAIRMAN  
HAROLD J. GINSBURGH  
EVELYN M. DAVIS

## EXAMINATION FOR ADMISSION AS ASSOCIATE

### PART I

1. (a) A special committee of 6 members is to be chosen from a certain district comprising 14 counties. How many ways can such a committee be chosen if not more than two are selected from each county?  
(b) Solve:  $2^{2x+8} + 1 = 32(2^x)$
2. Solve the equations  
(a)  $\frac{x+3}{x+4} - \frac{x+4}{x+5} = \frac{x+5}{x+6} - \frac{x+6}{x+7}$   
(b)  $\sqrt{x^2 + 2x - 4} + 2x^2 = 18 - 4x$
3. (a) In how many ways can seven ladies and four gentlemen arrange a game of tennis, each side to consist of one lady and one gentleman?  
(b) How many subcommittees, each containing five members, of whom at least three shall be Democrats, can be formed from a committee of eight Democrats and five Republicans?
4. The 2nd, 3rd and 4th terms in the expansion of  $(x + y)^n$  are 240, 720 and 1080 respectively; find  $x$ ,  $y$ ,  $n$ .
5. An injured man received an award of 218.4 weeks payable at the rate of \$20 per week. Having been paid 66.67 weeks he requests an advance of \$1000 to be deducted from the end of the award.

## 1930 EXAMINATIONS OF THE SOCIETY

(a) How many weeks should be deducted?

(b) What is the interest charge?

Consider interest at  $3\frac{1}{2}\%$

Given:

The present value of \$1 per week at  $3\frac{1}{2}\%$  is as follows:

$$97 \text{ weeks} = 93.9221$$

$$98 \text{ weeks} = 94.8594$$

$$151 \text{ weeks} = 143.6553$$

$$152 \text{ weeks} = 144.5596$$

6. (a) A man borrows \$600 and the bill is renewed every six months at an increase of  $18\%$ . What time will elapse before it reaches \$6,000?

$$\text{Given } \log 118 = 2.071882$$

(b) A non-interest bearing note for \$750 due in four months, was discounted at the bank. The proceeds of the note were \$738.75. What was the bank's discount rate?

7. (a) Find the compound amount of \$239.54 convertible annually for 6 years at  $5\%$  interest.
- (b) How long would it take for a sum to double itself at  $5\%$ , convertible annually?

8. A 6 per cent \$5,000 bond due in twenty years with semi-annual coupons was bought to yield  $5\%$  per annum payable semi-annually. What is:

(a) The premium per dollar if redeemed at par?

(b) The purchase price of the bond if it is redeemed at par?

$$\text{Given: } a_{\overline{40}|} \text{ at } 2.5\% = 25.10278.$$

9. Find the amount of an annuity of \$1,200 per year paid in four quarterly installments of \$300 for seven years if the effective interest rate is  $5\%$ .

$$\text{Given: } (1.05)^7 = 1.40710$$

$$(1.05)^{\frac{1}{4}} = 1.01227$$

10. (a) Define mean, median and mode and state the advantages and disadvantages of each as a statistical measure.
- (b) Define Direct Correlation, Inverse Correlation, Skewness, Dispersion.

## 1930 EXAMINATIONS OF THE SOCIETY

11. (a) State the principle of least squares.  
 (b) A weight moving under a certain force was observed at the end of each second  $t$  to have passed over a distance  $s$  from the beginning. The results of the observations were:

$t$	1	2	3	4	5	6	7	8
$s$	0.3	1.1	2.2	3.8	6.4	9.0	12.0	16.0

Find the straight line of closest fit by the method of least squares.

12. (a) Enumerate briefly the principal methods for comparing the frequency distribution of two or more groups of data.  
 (b) Enumerate briefly the principal methods for comparing changes between two or more variables.
13. The results of an examination are shown in the following table:

Mark.....	3.0	3.5	4.0	4.5	5.0	5.5
Frequency...	1	5	9	11	7	3

Compute the standard deviation.

14. (a) What is the fundamental accounting equation? Name three each of the following classes of accounts applicable to a casualty insurance company: asset, liability, income and expense.  
 (b) Fowler and Grant are partners in a wholesale drygoods business. Fowler, the senior partner, agrees to retire, accepting for his interest \$8,000 cash and five notes of \$2,000 each, without interest, maturing at two-month-intervals, commencing six months hence. The following Balance Sheet is prepared prior to paying Fowler off:

BALANCE SHEET OF FOWLER AND GRANT  
DECEMBER 31, 1929

Assets		Liabilities and Capital	
Cash.....	\$12,000.00	Notes payable.....	\$15,500.00
Notes receivable.	10,000.00	Accounts payable..	11,000.00
Accounts " .	24,000.00	Fowler capital.....	17,000.00
Merchandise. ...	10,000.00	Grant capital.....	15,000.00
Fixtures.....	2,500.00		
	<u>\$58,500.00</u>		<u>\$58,500.00</u>

Show the entry or entries necessary when paying Fowler off.



## 1930 EXAMINATIONS OF THE SOCIETY

15. The following is a Trial Balance of the XL Club, as of December 31, 1929

	Debit	Credit
Cash.....	\$ 20,552.00	
Office expenses.....	4,825.00	
Library expense.....	1,240.00	
Library.....	25,000.00	
Building.....	150,000.00	
Furniture.....	32,000.00	
Interest from investments....		\$ 4,100.00
Investments.....	74,000.00	
Mortgage payable.....		60,000.00
Interest on mortgage.....	1,500.00	
Fines levied.....		50.00
Dues receivable.....	12,000.00	
Dues for 1929.....		21,600.00
Salaries.....	7,200.00	
Publication.....	4,500.00	
Surplus.....		247,067.00
	\$332,817.00	\$332,817.00

Interest accrued on the investments held amounted to \$500 as of December 31, 1929. Depreciation on the furniture for the year amounted to \$2,000. Of the \$12,000 Dues Receivable, it is estimated that \$1,200 cannot be collected; the directors decide that this amount shall be written off.

- (a) Make journal entries to reflect the accrued interest, depreciation and loss from bad debts.
  - (b) Show an adjusted trial balance after the above adjustment entries have been posted to the ledger.
16. Prepare a balance sheet and profit and loss statement from the above adjusted trial balance.

## PART II

1. (a) Find the slope of the tangent to the curve

$$y = e^x + x^{3/2} \text{ at the point } x = 0.$$

- (b) If  $y = x^x$ , find  $\frac{d^2 y}{d x^2}$

## 1930 EXAMINATIONS OF THE SOCIETY

2. (a) Find the value of  $\int \frac{dx}{2x^2 + x - 15}$

(b) Evaluate  $\int_0^1 \frac{dx}{\sqrt{3-2x}}$

3. Find the most economical dimensions of an open rectangular box with square base which is to contain 400 cubic feet, if the base costs \$.50 per square foot and the sides \$.30 per square foot.

4. In a certain curve, the height varies as the square of the horizontal distance,  $x$ , from a certain point and 15 at  $x = 2$ . Find the area under the curve from  $x = 1$  to  $x = 10$ .

5. (a) Find by the method of finite differences the sum of  $n$  terms of the series—

$$1 + 6 + 15 + 28 + \text{etc.}$$

- (b) Find the general term of the series

$$2 + 7 + 14 + 29 + 58 + \dots$$

6. (a) Obtain a formula for expressing  $u_{x+n}$  in terms of  $u_x$  and its successive differences.

- (b) Given  $u_0 = 89,685$ ,  $u_1 = 88,994$ ,  $u_2 = 88,294$  and  $u_3 = 87,585$ , find the value of  $u_4$ .

7. Demonstrate Lagrange's theorem of Interpolation; and by means of the formula find the probability that a person aged 53 will live a year, having given

Probability that a person age 50 will live a year = .98428
" " " " " 51 " " " " = .98335
" " " " " 54 " " " " = .98008
" " " " " 55 " " " " = .97877

8. (a) What is meant by probability of an event happening and how is it denoted mathematically?
- (b) In a certain competition the odds are 7 to 3 against one competitor  $A$ , 11 to 5 against  $B$ , and 13 to 7 against  $C$ . What is the chance that one of the three wins?

## 1930 EXAMINATIONS OF THE SOCIETY

9. A cylindrical saucepan 8 inches in diameter has a circular hole in the bottom, centrally placed, 1 inch in diameter. A coin of 2 inches diameter is thrown in. Find the chance of its falling clear of the hole.
10. (a) A box contains five discs colored red, white, blue, black and green, respectively. Five discs are drawn successively, each being replaced before the next draw. Find the probability of drawing the red disc exactly three times.  
 (b) Two boxes contain 8 and 11 numbered tickets, respectively. In the first box there are three odd numbers and the second there are seven odd numbers. What is the chance of drawing an even number by a random draw from one of the boxes?
11. (a) The chance that  $A$  can solve a certain problem is  $2/3$ . The chance that  $B$  can solve it is  $5/12$ . What is the probability that the problem will be solved when they both try.  
 (b) A person is allowed to draw two bills from a purse containing four twenty dollar bills and four one dollar bills. What is the value of his expectation?
12. (a) If four whole numbers taken at random are multiplied together, what is the probability that the last digit in the product is 1, 3, 7 or 9?  
 (b) In a bag there are five white and four black balls. If they are drawn out one by one, what is the chance that the first will be white, the second black and so on alternately?
13. Explain why it is incorrect to write  $\epsilon | q_x \times \epsilon | q_y$  and derive the correct formula for  $\epsilon | q_{xy}$  in terms of  $\epsilon | q_x$ ,  $\epsilon | q_y$  and  $\epsilon | q_{xy}$ .
14. (a) Define  $l_x$ ,  $L_x$ ,  $q_x$ ,  $m_x$  and  $\mu_x$  and explain the different meanings of the last three symbols.

## 1930 EXAMINATIONS OF THE SOCIETY

- (b) What is the present value of a pure endowment of \$1,000 to be paid in ten years to a person now aged 21?

$$\text{Given: } V^{10} = .70892$$

$$l_{31} = 84721$$

$$l_{21} = 91914$$

15. Distinguish between *Aggregate* and *Ultimate* mortality tables. It is proposed to produce a mortality table based on the death rates experienced on lives disabled by accident and the table is to be used in setting up Workmen's Compensation reserves on permanently and totally disabled employees. If the mortality is relatively heavy in the early durations after injury which form of table would you use? Why?
16. A widow aged  $x$  years is entitled to receive \$20 per week until death or until \$7,500 shall have been paid. She wishes to receive \$1,000 in immediate cash and have the weekly payments modified. Assuming that the pension is equivalent to \$1,040 per annum payable continuously and that there is available a table showing values of  $\bar{N}_x$  and  $D_x$ , show how you would compute
- the date when payments of \$20 per week should recommence, if no pension is given until the loan is repaid,
  - the date when payments of \$20 per week should cease, assuming the loan not repaid until the outstanding payments just cover it,
  - the reduced weekly pension if payments were to run for the same length of time as though no loan were made.

**EXAMINATION FOR ADMISSION AS FELLOW****PART I**

- Discuss four types of accident and health policies outlining the classification and description of the protection offered under these contracts.
- A bank carries a policy insuring against robbery in the sum of \$50,000 applicable to money and securities and extending coverage for a period of one year from January 1, 1930. At

## 1930 EXAMINATIONS OF THE SOCIETY

10 a. m., February 3, 1930 a robbery occurs resulting in a loss of \$25,000 in money and \$50,000 in securities. At 1 p. m., of the same day and before the carrier has had notice of the first loss, a second robbery is perpetrated resulting in a loss of \$1,500 in securities.

- (a) For what amount is the carrier liable in connection with each of these losses? Explain.
  - (b) If, subsequent to the adjustment of these losses, the carrier recovers total salvage in the amount of \$14,000 representing \$13,500 securities lost in the first robbery and \$500 securities lost in the second robbery, what is the net cost to the carrier of the two losses? Explain.
3. Name and describe five kinds of surety bonds. On which of these would you waive collateral security. Why?
4. (a) When \$50 deductible automobile property damage is written for excess limits how is the additional premium for the higher limit computed? Why?
- (b) On June 1, an assured takes out an automobile public liability policy to expire December 31 of that year. On June 15, the company issues revised collision rates and on July 1, the assured requests collision coverage to expire concurrently with the original policy. Should the premium be computed on a pro rata or on a short rate basis? On the basis of the rates in effect prior to June 15 or of the revised rates? Give reasons for your answers.
5. (a) Give the principal items of the insuring clauses of the following policy contracts:  
Sprinkler leakage.  
Mercantile safe burglary.
- (b) Describe the coverage extended under the following forms of Boiler and Machinery insurance:  
Consequential loss.  
Power interruption.
6. (a) Can a New York casualty company invest in the stock of other insurance companies? What limitations are there

## 1930 EXAMINATIONS OF THE SOCIETY

as to a New York casualty company investing in the stock of a company which itself owns insurance stock?

- (b) How do you regard real estate and mortgages on real estate as an investment for a casualty insurance company?
7. Compare the laws of New York as to legal investment requirements for life and casualty companies.
  8. A casualty company starts business with a capital of \$500,000 and a like amount of paid-in surplus. Describe the investment program you would advise during the first two years, giving reasons for your statements.
  9. What standard provisions for liability policies are required under the New York Law?
  10. Describe the principal features of the New York Motor Vehicle Financial Responsibility Law. What changes or additions did it make necessary in insurance procedure? Contrast with the Massachusetts Motor Vehicle Liability Insurance Law.
  11. Discuss the extent to which state rate regulation is generally applicable to the following lines of insurance:
    - (a) Workmen's compensation.
    - (b) Automobile public and property damage liability.
    - (c) Burglary, robbery and theft.
    - (d) Accident and health.
  12. (a) Distinguish between contracts of indemnity against liability and those of indemnity against loss. Under which class does the standard workmen's compensation policy fall? The Massachusetts Motor Vehicle statutory liability policy? Give reasons for assignment.  
(b) What elements are ordinarily necessary to constitute a valid written contract of insurance?
  13. Describe three ways of meeting risk which may be carried on by
    - (a) A man living in isolation, and
    - (b) By a man living in society.

## 1930 EXAMINATIONS OF THE SOCIETY

14. Discuss the following quotation:  
"The conservational activities of insurance may turn out to be as important an instrument in the organization of our life as its present distributive activities."
15. Discuss a proposal for compulsory insurance against unemployment, pointing out what the essential features of such a plan might be, and how it might be administered by the state and by private companies.
16. What are the advantages of casualty insurance to society?

## PART II

1. Explain how the compensation rate-making method has been changed recently by the study of experience by size of risk:
  - (a) As to expense.
  - (b) As to pure premium or loss cost.
2. Compare the current systems of reporting workmen's compensation experience in
  - (a) New York.
  - (b) Pennsylvania.
3. Discuss the relative merits of developing automobile rates on
  - (1) Loss Cost Basis (Policy Year).
  - (2) Loss Ratio Basis (Calendar Year).
4. In the preparation of the annual statement, what items are "non-ledger" or "inventory" accounts? Describe in detail the sources of these figures.
5. Outline the salient features of the rate-making method used by the National Council on Compensation Insurance.
6. Explain how to compute the unearned premium reserve in workmen's compensation. Give three reasons for requiring a company to set aside such a reserve.
7. Discuss the feasibility of establishing expense ratios by line of insurance for an individual state.

## 1930 EXAMINATIONS OF THE SOCIETY

8. How would you establish rates for unemployment insurance?
9. You have available the annual statements of a company for the last four years. What investigation would you make to determine whether or not the company was establishing adequate loss reserves?
10. Discuss a proposal to include in workmen's compensation rate-making an allowance for banking and investment income. Outline briefly a method by which this might be done.
11. It is proposed to issue workmen's compensation policies with a deductible average clause providing "In consideration of a reduced rate the assured agrees to pay the first \$50 of each loss incurred during the term of this policy."
  - (a) How would you determine the amount of reduction to which the rate would be subject?
  - (b) What effect would you expect such a form of policy to have upon accident prevention work on the part of the assured?
  - (c) What general criticism can you offer of such a plan?
12. In preparing the annual statement of a company which of the following items of expense would you include in the Investment Exhibit? Give reasons.
  - Taxes on building owned and occupied by the company
  - Franchise tax.
  - Salary of an employee whose duties relate wholly to investments
  - Federal income tax.
13. A risk carries a 30 per cent charge on its workmen's compensation coverage. If you were offered this risk, what investigation would you make as an underwriter to determine whether to accept or reject. Give reasons.
14. The problem presents itself to a casualty company operating over the entire country of decentralizing underwriting and claim authority, with certain attendant statistical and accounting functions. On what would you base your



## 1930 EXAMINATIONS OF THE SOCIETY

decision? If you decided against decentralization, what would you do to insure close cooperation and avoidance of difficulties due to delay over great distances? If you decided in favor of decentralization, what controls would you set up?

15. How would you determine the amount of reserve to be carried in the annual statement of a long established company for "incurred but unreported losses" for fidelity and surety?
16. Draw up specifications for an inspection report on
  - (a) A truck fleet risk (all coverages).
  - (b) An O. L. and T. liability risk.
  - (c) A workmen's compensation risk.
  - (d) A mercantile open stock burglary risk.

# PAPERS IN THE PROCEEDINGS

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## NUMBER 1

PP. 76

- Scientific Methods of Computing Compensation Rates.** I. M. Rubinow.  
**How Extensive a Payroll Exposure is Necessary to Give a Dependable Pure Premium.** Albert H. Mowbray.  
**Valuation of the Death Benefits Provided by the New York Compensation Law.** Winfield W. Greene.

## VOLUME I

## NUMBER 2

PP. 130

- Workmen's Compensation Claim Reserves.** Miles M. Dawson.  
**Workmen's Compensation Reserves.** Joseph H. Woodward.  
**A Method Proposed for the Calculation of Liability and Workmen's Compensation Claim Reserves.** Benedict D. Flynn.  
**The Essential Factors in the Computation of the Cost of Workmen's Compensation.** W. N. Magoun.

## VOLUME I

## NUMBER 3

PP. 109

- Schedule Rating in Compensation Insurance.** I. M. Rubinow.  
**Development, Application and Effect of Schedule Rating in Liability and Compensation Insurance.** Carl M. Hansen.  
**The Effect of Schedule and Experience Rating on Workmen's Compensation Risks in New York.** Leon S. Senior.  
**Schedule Rating Considered from an Actuarial Point of View.** Albert H. Mowbray.  
**Notes on the Theory of Schedule Rating.** Albert W. Whitney.  
**Schedule Rating of Permanent Injuries.** G. F. Michelbacher.  
**Division of Payroll.** Eckford C. DeKay.  
**Liability Loss Reserves.** I. M. Rubinow.

## VOLUME II

## NUMBER 4

PP. 186

- The Classification of Industries for Workmen's Compensation Insurance.** E. H. Downey.  
**Schedule Rating by Formula.** Charles S. Forbes.  
**Inspection and Schedule Rating for Coal Mine Insurance.** Herbert M. Wilson.  
**Accident and Health Insurance from an Actuarial Viewpoint.** Walter I. King.  
**Rating Permanent Disabilities in Combination.** G. F. Michelbacher.  
**Note on the Application of Recent Mathematical-Statistical Methods to Coal Mine Accidents, With Special Reference to Catastrophes in Coal Mines in the United States.** Arne Fisher.  
**Burglary Insurance Statistics.** Fred S. Garrison.  
**A System of Analyzing Workmen's Compensation Business by Means of Perforated Cards.** Edmund E. Cammack.

## PAPERS IN THE PROCEEDINGS

Tables for Computing the Present Value of Death Benefits Arising Under the New York Workmen's Compensation Law. Richard Fondiller.

A New Graphic Method of Using the Normal Probability Curve. Buckner Speed.

The Determination of Pure Premiums for Minor Classifications on Which the Experience Data is Insufficient for Direct Estimate. Albert H. Mowbray.

Liability and Workmen's Compensation Loss Reserve. Robert K. Orr.

## VOLUME II

## NUMBER 5

PP. 148

Mortality from External Causes Among Industrial Policyholders of the Metropolitan Life Insurance Company, 1911-1914. Louis I. Dublin.

Analysis of the Cost of 10,307 Accidents Arising Under the New York Workmen's Compensation Law. Joseph H. Woodward.

Statistics Necessary for Computing Net Compensation Rates. Edward Olifiers.

The Compensation Cost of Occupational Disease. James D. Maddrill.

Work of the Statistical Committee of the Bureau of Personal Accident and Health Underwriters. Benedict D. Flynn.

American Methods of Compensating Permanent Partial Disabilities. I. M. Rubinow.

Cost Accounting in Casualty Insurance. Claude E. Scattergood.

## VOLUME II

## NUMBER 6

PP. 196

The Relation Between Private and Social Insurance. I. M. Rubinow.

Should the Compensation Premium Reflect the Experience of the Individual Risk? Winfield W. Greene.

The Experience Rating of Workmen's Compensation Risks. Joseph H. Woodward.

Valuation of Pension Funds, With Special Reference to the Work of the New York City Pension Commission. George B. Buck.

A Preliminary Test of the Coal Mine Rating Schedule of the Associated Companies. E. H. Downey.

Outline of a Method for Determining Basic Pure Premiums. Arne Fisher.

Some Distinctive Features of Steam Boiler Underwriting, and Their Bearing Upon the Formulation of Premium Rates. Frank M. Fitch.

On the Relation of Accident Frequency to Business Activity. A. H. Mowbray and S. B. Black, D. S. Beyer co-operating.

Office Practice in the Valuation of Compensation Losses. Richard Fondiller.

A Study of Workmen's Compensation Schedule W and the Problems Incident Thereto. Edward S. Goodwin.

## VOLUME III

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