LIST OF MEMBERS.

- ALFRED BAKER, M.A., Professor of Mathematics, University of Toronto, Toronto, Canada.
- ARTHUR LATHAM BAKER, C.E., Ph.D., Professor of Mathematics, Stevens School, Hoboken, N. J.

MARCUS BAKER, U. S. Geological Survey, Washington, D.C.

- JAMES MARCUS BANDY, B.A., M.A., Professor of Mathematics and Engineering, Trinity College, N. C.
- EDGAR WALES BASS, Professor of Mathematics, U. S. Military Academy, West Point, N. Y.
- WOOSTER WOODRUFF BEMAN, B.A., M.A., Member of the London Mathematical Society, Professor of Mathe-matics, University of Michigan, Ann Arbor, Mich.
- R. DANIEL BOHANNAN, B.Sc., C.E., E.M., Professor of Mathematics and Astronomy, Ohio State University, Columbus, Ohio.
- CHARLES AUGUSTUS BORST, M.A., Assistant in Astronomy, Johns Hopkins University, Baltimore, Md.
- EDWARD ALBERT BOWSER, C.E., LL.D., Professor of Mathematics, Rutgers College, New Brunswick, N. J.
- JOHN MILTON BROOKS, B.A., Instructor in Mathematics, College of New Jersey, Princeton, N. J.
- ABRAM ROGERS BULLIS, B.Sc., B.C.E., Macedon, Wayne Co., N. Y.
- WILLIAM ELWOOD BYERLY, Ph.D., Professor of Mathematics, Harvard University, Cambridge; Mass.
- WILLIAM CAIN, C.E., Professor of Mathematics and Engineering, University of North Carolina, Chapel Hill, N. C.
- CHARLES HENRY CHANDLER, M.A., Professor of Mathematics, Ripon College, Ripon, Wis. ALEXANDER SMYTH CHRISTIE, LL.M., Chief of Tidal Division,
- U. S. Coast and Geodetic Survey, Washington, D. C.
- JOHN EMORY CLARK, M.A., Professor of Mathematics, Yale University, New Haven, Conn.
- FRANK NELSON COLE, Ph.D., Assistant Professor of Mathematics, University of Michigan, Ann Arbor, Mich.

- EDWIN SCHOFIELD CRAWLEY, B.Sc., Assistant Professor of Mathematics, University of Pennsylvania, Philadelphia, Pa.
- J. L. CROSS, B.A., Professor of Mathematics, Tulane University, New Orleans, La.
- ARCHIBALD LAMONT DANIELS, Sc.D., Member of the London Mathematical Society, Professor of Mathematics and Physics, University of Vermont, Burlington, Vt.
- JOHN EUGENE DAVIES, M.A., M.D., LL.D., Professor of Physics, University of Wisconsin, Madison, Wis.
- ELLERY WILLIAM DAVIS, B.Sc., Ph.D., Professor of Mathematics and Astronomy, University of South Carolina, Columbia, S. C.
- NATHANIEL FRENCH DAVIS, M.A., Professor of Pure Mathematics, Brown University, Providence, R. I.
- IRA MITCHELL DE LONG, M.A., Protessor of Mathematics, University of Colorado, Boulder, Colo.
- FLETCHER DURELL, Ph.D., Professor of Mathematics, Dickinson College, Carlisle, Pa.
- WILLIAM PITT DURFEE, Ph.D., Professor of Mathematics, Hobart College, Geneva, N. Y.
- WILLIAM HOLDING ECHOLS, JR., B.Sc., C.E. University of Virginia, Director and Professor of Engineering, Missouri School of Mines, Rolla, Mo.
- HENRY TURNER EDDY, M.A., C.E., Ph.D., President Rose Polytechnic Institute, Terre Haute, Ind.
- WILLIAM SNYDER EICHELBERGER, B.A., Tutor in Mathematics and Assistant in Astronomy, Wesleyan University, Middletown, Conn.
- ACHSAH MOUNT ELV, B.A., Professor of Mathematics, Vassar College, Poughkeepsie, N. Y.
- WILLIAM COLE ESTY, LL.D., Professor of Mathematics and Astronomy, Amherst College, Amherst, Mass.
- ASHER BENTON EVANS, M.A., Principal Lockport Union School, Lockport, N. Y.
- DAVID PARKS FACKLER, M.A., President Actuarial Society of America, Consulting Actuary, 20 Nassau Street, New York, N. Y.
- JOHN CHARLES FIELDS, Ph.D. Johns Hopkins, Professor of Mathematics, Allegheny College, Meadville, Pa.
- HENRY BURCHARD FINE, B.A., M.A., Ph.D. Leipsic, Professor of Mathematics, Princeton College, Princeton, N. J.
- BENJAMIN F. FINKEL, M.Sc., Superintendent of Schools,
- North Lewisburg, Champaign Co., Ohio. THOMAS SCOTT FISKE, M.A., Ph.D., Instructor in Mathematics, Columbia College, New York, N. Y.
- CHARLES SUMNER FOWLER, B.A., Instructor in Mathematics, Cornell University, Ithaca, N. Y.

- JOHN RAYMOND FRENCH, B.A., M.A., LL.D., Professor of Mathematics, Dean of the College of Liberal Arts, Syracuse University, Syracuse, N.Y.
- ARTHUR BOWES FRIZELL, Tutor in Mathematics, Massachusetts Institute of Technology, Boston, Mass.
- GEORGE HOUGHTON GILMAN, M.A., 1507 Broadway, New York, N. Y.
- JOHN CADENHEAD GLASHAN, School Inspector, Ottawa, Canada.
- JASPER TILLEROUS GOODWIN, LL.B., M.A., Adjunct Professor of Mathematics, Columbia College, New York, N. Y.
- WILLIAM CURNS LAWRENCE GORTON, B.A., Ph.D., Associate Professor of Mathematics and Astronomy, Woman's College of Baltimore, Baltimore, Md.
- RUFUS LOT GREEN, B.Sc., M.A., Professor of Pure Mathematics, Indiana University, Bloomington, Ind. George Bruce Halsted, M.A., Ph.D., Professor of Mathe-
- matics, University of Texas, Austin, Tex.
- ARTHUR SHERBURNE HARDY, M.A., Ph.D, Professor of Mathematics, Dartmouth College, Hanover, N. H.
- JAMES HARKNESS; M.A. Cambridge and London, Associate in Mathematics, Bryn Mawr College, Bryn Mawr, Pa.
- MARK WALROD HARRINGTON, M.A., Professor of Astronomy and Meteorology, Director of the Observatory, University of Michigan, Ann Arbor, Mich.
- JAMES NORRIS HART, C.E., Professor of Mathematics, Maine State College, Orono, Me.
- Mellen Woodman Haskell, Ph.D., Assistant Professor of Mathematics, University of California, Berkeley, Cal.
- ARTHUR STAFFORD HATHAWAY, B.Sc., Assistant Professor of Mathematics, Cornell University, Ithaca, N. Y.
- JOHN FILLMORE HAYFORD, C.E., U. S. Coast and Geodetic Survey Office, Washington, D. C.
- WILLIAM EPHRAIM HEAL, 1005 Spencer Avenue, Marion, Ind.
- JOEL EVANS HENDRICKS, M.A., formerly Editor of the Analyst, 1400 Court Avenue, Des Moines, Iowa.
- DANIEL WEBSTER HERING, C.E., Professor of Physics, University of the City of New York, New York, N. Y.
- WALLER HOLLADAY, B.Sc., C.E., E.M., Professor of Mathematics in the Cooper Institute, Equitable Life Assurance Society, 120 Broadway, New York, N. Y.
- SHEPPARD HOMANS, Ex-President Actuarial Society of America, President Provident Savings Life Assurance Society, 29 Broadway, New York, N. Y.
- NOEL CHARLES MINCHIN HOME, Mutual Life Insurance Company of New York, 32 Nassau Street, New York, N. Y.

- WILLIAM HOOVER, M.A., Ph.D., Member of the London Mathematical Society, Professor of Mathematics, Ohio University, Athens, Ohio.
- CHARLES SUMMER HOWE, Ph.D., Professor of Mathematics and Astronomy, Case School of Applied Science, Cleveland, Ohio.
- HERBERT ALONZO HOWE, M.A., Sc.D., Director of the Chamberlin Observatory, Chamberlin Observatory, University Park, Colo.
- LORRAIN SHERMAN HULBURT, B.A., M.A., Professor of Mathematics and Astronomy, University of South Dakota, Vermillion, South Dakota.
- WILLIAM J. HUSSY, B.Sc., Instructor in Mathematics, University of Michigan, Ann Arbor, Mich.
- EDWARD WYLLYS HYDE, C.E., Professor of Mathematics, University of Cincinnati, Cincinnati, Ohio.
- OSCAR BROWN IRELAND, M.A., Councillor of the Actuarial Society of America, Actuary Massachusetts Mutual Life Insurance Company, Springfield, Mass.
- HAROLD JACOBY, B.A., F.R.A.S., Instructor in Astronomy, Columbia College, New York, N. Y.
- WILLIAM JOHN JAMES, M.A., Instructor in Mathematics, Wesleyan University, Middletown, Conn.
- WILLIAM WOOLSEY JOHNSON, M.A., Member of the London Mathematical Society, Professor of Mathematics in the U. S. Naval Academy, Annapolis, Md.
- GEORGE WILLIAM JONES, M.A., Assistant Professor of Mathematics, Cornell University, Ithaca, N. Y.
- CHARLES HALLETTE JUDSON, LL.D., Professor of Mathematics, Furman University, Greenville, S. C.
- E. OTIS KENDALL, LL.D., Vice-Provost and Professor of Mathematics, University of Pennsylvania, Philadelphia, Pa.
- JEFFERSON ENGEL KERSHNER, Ph.D., Professor of Mathematics, Franklin and Marshall College, Lancaster City, Pa.
- RODNEY GLENTWORTH KIMBALL, M.A., Ph.D., Professor of Applied Mathematics and Engineering, Brooklyn Polytechnic Institute, Brooklyn, N. Y.
- SAMUEL JABEZ KIRKWOOD, Ph.D., LL.D., Professor of Mathematics and Astronomy, University of Wooster, Wooster, Ohio.
- HENRY LEFAVOUR, Ph.D., Professor of Physics, Williams College, Williamstown, Mass.
- GUSTAVE LEGRAS, B.Sc., Tutor in Mathematics, College of the City of New York, New York, N. Y.
- CHARLTON THOMAS LEWIS, Ph. D., 34 Nassau Street, New York, N. Y.

- GEORGE LILLY, M.A., Ph.D., LL.D., President Washington Agricultural College and School of Science, Pullman, Washington.
- FRANK HERBERT LOUD, B.A., Professor of Mathematics, Colorado College, Colorado Springs, Colo.
- JAMES LEE LOVE, M.A., Instructor in Mathematics, Harvard University, Cambridge, Mass.
- HENRY THOMAS JEFFERSON LUDWIG, M.A., Professor of Mathematics, Physics, and Astronomy, North Carolina College, Mt. Pleasant, N. C.
- ALEXANDER MACFARLANE, M.A., Sc.D., LL.D., Professor of
- Physics, University of Texas, Austin, Tex. JAMES MACLAY, C.E., Tutor in Mathematics, Columbia College, New York, N. Y.
- WILLIAM FRANCIS MAGIE, Ph.D. Berlin, Professor of Physics, College of New Jersey, Princeton, N. J.
- JOSEPH LYBRAND MARKLEY, Ph.D., Instructor in Mathematics, University of Michigan, Ann Arbor, Mich.
- ARTEMAS MARTIN, M.A., Ph.D., LL.D., Member of the London Mathematical Society, Member of the Mathematical Society of France, Editor of the Mathematical Magazine, U. S. Coast and Geodetic Survey Office, Washington, D. C.
- IVA EVERARD MARTIN, B.A., Professor of Mathematics, Royal Military College, Kingston, Canada.
- JAMES WEIR MASON, M.A., Professor of Pure Mathematics, College of the City of New York, New York, N.Y.
- WILLIAM MCCABE, LL.B., F.I.A., Councillor of the Actuarial Society of America, Actuary North American Life Life Assurance Company, Toronto, Canada.
- EMORY MCCLINTOCK, M.A., Ph.D., LL.D., F.I.A., Member of the London Mathematical Society, Vice-president of the Actuarial Society of America, Actuary Mutual Life Insurance Company of New York, 32 Nassau Street, New York, N. Y.
- ALEXANDER HIRAM MCDOUGALL, B.A., Mathematical Master in the Collegiate Institute, Ottawa, Canada.
- JAMES MCMAHON, M.A., Assistant Professor of Mathematics, Cornell University, Ithaca, N.Y.
- MALCOLM MCNEILL, Ph.D., Professor of Mathematics and Astronomy, Lake Forest University, Lake Forest, Ill.
- GEORGE BENJAMIN MERRIMAN, M.A., Professor of Mathematics and Astronomy, Rutgers College, New Brunswick, N. J.
- MANSFIELD MERRIMAN, C.E., Ph.D., Professor of Civil Engineering, Lehigh University, Bethlehem, Pa.
- HIRAM JOHN MESSENGER, JR., Litt.B., Ph.D., New York. N. Ý.

- BLOOMFIELD JACKSON MILLER, Treasurer of the Actuarial Society of America, Actuary Mutual Benefit Life Insurance Company, 752 Broad Street, Newark, N. J.
- EPHRAIM MILLER, M.A., Professor of Mathematics and Astronomy, Kansas State University, Lawrence, Kansas.
- WILLIAM ALBION MOODY, M.A., Professor of Mathematics, Bowdoin College, Brunswick, Me.
- ELIAKIM HASTINGS MOORE, B.A., Ph.D., Assistant Professor of Mathematics, Northwestern University, Evanston, Ill.
- SIDNEY TURNER MORELAND, M.A., C.E., Professor of Natural Philosophy, Washington and Lee University, Lexington, Va.
- FRANK MORLEV, M.A. Cambridge, Professor of Mathematics, Haverford College, Pa.
- DANIEL ALEXANDER MURRAY, B.A., Associate Professor of Mathematics, University of the City of New York, New York, N. Y.
- JAMES C. NAGLE, B.Sc., Associate Professor of Civil Engineering and Physics, Agricultural and Mechanical College of Texas, College Station, Tex.
- ALEXANDER LOCKHART NELSON, M.A., Professor of Mathematics, Washington and Lee University, Lexington, Va.
- ALFRED BRIERLY NELSON, M.A., M.D. University of Pennsylvania, Professor of Mathematics, Centre College, Danville, Ky.
- JAMES WILLIAM NICHOLSON, M.A., President and Professor of Mathematics, Louisiana State University and Agricultural and Mechanical College, Baton Rouge, La.
- FRANCIS EUGENE NIPHER, M.A., Professor of Physics, Washington University, St. Louis, Mo.
- JAMES EDWARD OLIVER, M.A. Harvard, Professor of Mathematics, Cornell University, Ithaca, N. Y.
- GEORGE A. OSBORNE, B.Sc., Professor of Mathematics, Massachusetts Institute of Technology, Boston, Mass.
- JAMES MORRIS PAGE, M.A., Ph.D., Cobham, Va. THOMAS WAVERLY PALMER, M.A., Professor of Mathematics,

University of Alabama, University, Ala.

- EDWARD PEARCE, B.A., Providence, R. I. WILLIAM GUY PECK, Ph.D., LL.D., Professor of Higher Mathematics and Astronomy in the School of Arts, and of Mechanics in the School of Mines, Columbia College, New York, N. Y.
- BENJAMIN OSGOOD PEIRCE, Ph.D. Leipzig, Hollis Professor of Mathematics and Natural Philosophy, Harvard University, Cambridge, Mass.

- P. H. PHILBRICK, Chief Engineer of the Kansas City, Watkins and Gulf Railway, Lake Charles, La.
- GEORGE WILLIAM PHILLIPS, B.A. Harvard, Councillor of the Actuarial Society of America, Actuary Equitable Life Assurance Society, 120 Broadway, New York, N.Y.
- ISRAEL CORIELL PIERSON, M.A., Ph.D., Secretary of the Actuarial Society of America, Actuary Washington Life Insurance Company of New York, 21 Cortlandt Street, New York, N. Y.
- CHARLES LANE POOR, B.Sc., M.Sc., Instructor in Mathematics, Johns Hopkins University, Baltimore, Md.
- MICHAEL IDVORSKY PUPIN, B.A., Ph.D. Berlin, Instructor in Mathematical Physics, Columbia College, New York, N. Y.
- CHARLES PURYEAR, Professor, Agricultural and Mechanical College of Texas, College Station, Tex.
- KENDRICK SOLOMON PUTNAM, M.A., City Chamberlain, Rome, N. Y.
- JOHN KROM REES, M.A., E.M., Professor of Geodesy and Practical Astronomy, Director of the Observatory, Columbia College, New York, N.Y.
- JOHN MINOT RICE, B.Sc., Ph.D., Professor of Mathematics in the U.S. Navy, Northborough, Mass.
- BENJAMIN HENRY RIPTON, B.A., M.A., Professor of Mathematics, Union College, Schenectady, N.Y.
- WILLIAM LISPENARD ROBB, B.A., Ph.D. Berlin, Professor of Physics, Trinity College, Hartford, Conn.
- CHARLES GREENE ROCKWOOD, JR., M.A., Ph.D., Professor of Mathematics, College of New Jersey, Princeton, N. J.
- HOWELL WILLIAM ST. JOHN, Ph.B., Vice-president of the Actuarial Society of America, Actuary Ætna Life Insurance Company, Hartford, Conn.
- CHARLOTTE ANGAS SCOTT, Sc.D. London, Associate Professor of Mathematics, Bryn Mawr College, Bryn Mawr, Pa.
- GEORGE MARY SEARLE, REV., M.A. Harvard, C.S.P., Professor, Director of the Observatory, Catholic University of America, Washington, D. C.
- SAMUEL WALKER SHATTUCK, B.Sc., C.E., M.A., Professor of Mathematics, University of Illinois, Champaign, Ill.
- RUFUS SHELDON, M.A., Professor of Pure Mathematics, Brooklyn Polytechnic Institute, Brooklyn, N.Y.
- CHARLES SUMNER SLICHTER, M.Sc., Assistant Professor of Mathematics, University of Wisconsin, Madison, Wis.
- EDWIN SUMTER SMITH, Graduate of the University of Virginia, Randolph Macon Academy, Bedford City, Va.
- OTIS DAVID SMITH, M.A., Professor of Mathematics, Alabama Polytechnic Institute, Auburn, Ala.

WILLIAM BENJAMIN SMITH, M.A., Ph.D. Göttingen, Pro-

fessor of Mathematics, Missouri State University, Columbia, Mo.

- ROYALL BASCOM SMITHEY, M.A., Professor of Mathematics, Randolph-Macon College, Ashland, Va.
- THOMAS EDWARD SNOOK, E.M., Architect, 12 Chambers Street, New York, N. Y.
- EDWARD LINCOLN STABLER, M.A., Ph.D., Actuary of the Manhattan Life Insurance Company, 156 Broadway, New York, N.Y.
- CHARLES STEINMETZ, Electrical Engineer, Eickemeyer Dynamo Machine Company, Yonkers, N. Y.
- Moses C. STEVENS, M.A., Professor of Mathematics, Purdue University, Latayette, Ind.
- ORMOND STONE, M.A., Editor of the Annals of Mathematics, Director of the Leander McCormick Observatory and Professor of Practical Astronomy, University of Virginia, University Station, Charlottesville, Va. IRVING STRINGHAM, B.A. Harvard, Ph.D. Johns Hopkins,
- IRVING STRINGHAM, B.A. Harvard, Ph.D. Johns Hopkins, Professor of Mathematics, Dean of the Faculties of Letters and Science, University of California, Berkeley, Cal.
- JOSEPH SWAIN, M.Sc., Associate Professor of Mathematics, Leland Stanford Jr. University, Palo Alto, Cal.
- HENRY TABER, Ph.B. Yale, Ph.D. Johns Hopkins, Member of the London Mathematical Society, Docent in Mathematics, Clark University, Worcester, Mass.
- JOHN TATLOCK, JR., M.A., Assistant Actuary of the Mutual Life Insurance Company of New York, 32 Nassau Street, New York, N. Y.
- JAMES MORFORD TAYLOR, M.A., Professor of Mathematics, Colgate University, Hamilton, Madison Co., N. Y.
- THOMAS ULVAN TAYLOR, C.E., Professor of Applied Mathematics, University of Texas, Austin, Tex.
- HENRY DALLAS THOMPSON, M.A., Sc.D., Tutor in Mathematics, Princeton College, Princeton, N. J.
- WILLIAM MYNN THORNTON, LL.D., Professor of Applied Mathematics and Chairman of the Faculty, University of Virginia, Charlottesville, Va.
- JOHN HOWARD VAN AMRINGE, M.A., Ph.D., L.H.D., Ex-PRESIDENT, Professor of Mathematics, Columbia College, New York, N. Y.
- CHARLES AMBROSE VAN VELZER, Ph.D., Member of the London Mathematical Society, Professor of Mathematics, University of Wisconsin, Madison, Wis.
- JOHN MONROE VAN VLECK, LL.D., Professor of Mathematics and Astronomy, Wesleyan University, Middletown, Conn.
- CHARLES S. VENABLE, LL.D., Professor of Mathematics, University of Virginia, Charlottesville, Va.

- ERNEST ROBERT VON NARDROFF, E.M., Instructor in Physics, Barnard College, New York, N. Y.
- CLARENCE ABIATHAR WALDO, B.A., M.A., Professor of Mathematics, Rose Polytechnic Institute, Terre Haute, Ind.
- CLARENCE DUANE WARNER, B.Sc., Professor of Mathematics and Physics, Massachusetts Agricultural College, Amherst, Mass.
- ARTHUR GORDON WEBSTER, B.A., Ph.D., Docent in Mathematical Physics, Clark University. Worcester, Mass.
- RUFUS WELLS WEEKS, Councillor of the Actuarial Society of America, Actuary New York Life Insurance Company, 346 Broadway, New York, N. Y.
- DANIEL HALSEY WELLS, Ph.B., C.E., Councillor of the Actuarial Society of America, Actuary Connecticut Mutual Life Insurance Company, Hartford, Conn.
- WEBSTER WELLS, B.Sc., Associate Professor of Mathematics, Massachusetts Institute of Technology, Boston, Mass.
- GEORGE ALBERT WENTWORTH, M.A., Professor of Mathematics, Phillips Exeter Academy, Exeter, N. H.
- MARY WATSON WHITNEY, M.A., Professor of Astronomy, Director of the Observatory, Vassar College, Poughkeepsie, N. Y.
- GEORGE LANGFORD WILEY, M.A., East Orange, N. J. FREDERICK NEWTON WILLSON, C.E., Professor of Descriptive Geometry, Stereotomy, and Technical Drawing, John C. Green School of Science, College of New Jersey, Princton, N. J.
- DE VOLSON WOOD, M.A., C.E., Professor of Mechanical Engineering, Stevens Institute of Technology, Hoboken, N. J.
- ROBERT SIMPSON WOODWARD, C.E., Assistant U. S. Coast and Geodetic Survey, Washington D. C.
- THOMAS WILSON DORR WORTHEN, M.A., Associate Professor of Mathematics, Dartmouth College, Hanover, N. H.
- THOMAS WALLACE WRIGHT, M.A., Professor of Applied Mathematics and Physics, Union College, Schenectady, N. Y.
- CHARLES AUGUSTUS YOUNG, Ph.D., LL.D., Professor of Astronomy, College of New Jersey, The Observatory, Princeton, N. J.
- JACOB WILLIAM ALBERT YOUNG, B.A., M.A., Fellow in Mathematics, Clark University, Worcester, Mass.
- GEORGE BRINTON MCCLELLAN ZERR, M.A., Instructor in Mathematics, Staunton Male Academy, Staunton, Va.
- ALEXANDER ZIWET, C.E., Assistant Professor of Mathematics, University of Michigan, Ann Arbor, Mich.