

GILBERT SANDFORD VERNAM COLLECTION

Introduction

The Gilbert Sandford Vernam Collection includes material from the years 1912-1926. It consists of 7 folders arranged in one document box. The collection was donated to the George C. Marshall Research Library in 1969 by Mr. Vernam's daughter, Mrs. Per W. Nielssen of New Jersey. Mr. Vernam worked for American Telephone and Telegraph and was instrumental in enciphering and deciphering machines, especially the Morkrum Set.

A name index to the diaries follows the container list. Vernam often referred to individuals by last name only and no attempts were made to provide the full names.

The complexity of the subject matter, Vernam's incomplete entries, and the various acronyms and abbreviations used make the diaries difficult to comprehend except by individuals who are very knowledgeable of the subject matter.

Researchers are not permitted to obtain photocopies of the diaries.

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Scope and Content Note

The Gilbert Sandford Vernam Collection contains some random notes (1919), an incomplete copy of an abstract of a speech by H. H. Timbers on "Printing Telegraphy" (1919), blueprints of Multiple Test Set for No. 1 Common Battery Central Offices and No. 1 Lamp Multiple Test Circuit (1912). Also included is a copy of the Manual for the Solution of Military Ciphers by Parker Hitt (1918). The major part of the collection consists of three diaries of Gilbert Sandford Vernam encompassing 1918, 1919, and 1922-26. Work orders are found in the "Memoranda" sections of the diaries. The diaries contain brief notes and often mentions personages only by last name. The abstract and/or the Manual may be of particular interest. The 1918, and 1919 diaries are one volume each. The years 1920, 1921 are not included in the diaries. The years 1922-26 are found in one volume. The 1918 volume deals primarily with the Morkrum Deciphering, Enciphering Set which may be of special interest.

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Biographical Sketch

Gilbert S. Vernam is best known as an inventor. Holder of sixty-five patents in the field of communication, he made large contributions to the science of cryptography and to the present day world-wide telegraph communications systems.

He was born in Brooklyn, New York, on April 4, 1890. His parents were William R. and Eloise S. (Draper) Vernam. Gilbert A. Draper, his maternal grandfather, served as a Lt. Col. in the Union Army during the War between the States. After attending public schools in Brooklyn and graduating from Manuel Training High School, Vernam enrolled in Worcester Polytechnic Institute for his advanced studies. He graduated from that institution in 1914 with the degree of Bachelor of Science.

On July 1, he began his career in the engineering department of the American Telephone and Telegraph Company, but was soon transferred to the department of development and research. His first patent was taken out on July 22, 1919, for an improvement in secret signaling systems, and American Telephone and Telegraph was the assignee. His first forty-two patents were taken out while in the employ of this company between 1919 and 1929. Patents continued to be assigned to A.T.&T. until 1932, even though Mr. Vernam had taken a position with International Communications Laboratories in 1929, and remained there until 1932 when he joined the engineering department of the Postal Telegraph Cable Company. This firm later merged with the Western Union Telegraph Company, and Mr. Vernam worked in its department of development and research from 1943 until his retirement in August 1959. Patent number forty-three was assigned to the International Communications Laboratories, and patents numbering from forty-four through sixty-two were divided between the American Telephone and Telegraph Company, Postal Cable, and International Communications Laboratories. His last three patents were assigned to Western Union Telegraph Company--sixty-three through sixty-five. During his forty-five years of employment by these four giant companies of the communications industry, Mr. Vernam, in addition to developing his own inventions, assisted in the discovery and development of other new devices, traveled around the country supervising the installation of new telegraphic equipment, and prepared a manual describing the operation of new pieces of equipment for technical and Signal Corps use. During these years, most of the great advances in communications were made.

While with the American Telephone and Telegraph Company, he invented a technique for using printer equipment to encipher and decipher messages automatically. This method has been widely used by the armed forces. He played an important role in the development of the TWX and teletype systems. For Postal Telegraph, he developed an automatic concentrator and supervised the development of the semi-automatic torn-tape relay system and its installation in a number of switching centers, for his own company, the Army Signal Corps and the United States Navy. In later years, Mr. Vernam worked on development of push-button switching systems for the United States Air Force.

His many patents relating to improvements in switching systems have helped make possible the world-wide teletype communicating systems of today, and his secrecy inventions alone make him a leader in cryptography. Other inventions have to do with telegraph repeaters, transmission problems and a variety of subjects, all in some way relating to the science of electrical communications.

On September 29, 1915, in Brooklyn, New York, Gilbert Sandford Vernam married Alline L. Eno, daughter of John T. and Isabella B. (Ayers) Eno. Mr. and Mrs. Vernam became the parents of one daughter, Ruth, an artist and a graduate of Pratt Institute, who is now Mrs. Per W. Nielsen and the mother of three children--Lynne Elizabeth, Kim Gilbert, and Leslie Vivien Nielsen.

Mr. Vernam died on February 7, 1960.

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Container List

<u>Folder</u>	<u>Description</u>
1 of 7	Notes. December 1919 and No Date. (2)
2 of 7	SPEECH. "Printing Telegraphy" by H. H. Timbers. Abstract of talk given before Patent Departments of A.T.&T. Company and Western Electric Company at a luncheon on November 19, 1919. (11)
3 of 7	BLUEPRINTS. New York Telephone Company, Long Island Division. Multiple Test Set for No. 1 Common Battery Central Offices. September 9, 1912. No. 1 Lamp Multiple Test Circuit. December 31, 1912. (2)
4 of 7	BOOK. Manual for the Solution of Military Ciphers. By Parker, Hitt. 1918. (1)
5 of 7	DIARY - 1918. Concerns mainly the Morkum Set. 1918. (1)
6 of 7	DIARY - 1919. Largely deals with Patents. 1919. (1)
7 of 7	DIARY - 1922-1926. Largely deals with Patents, Work Orders, Nelson's Encyclopedia. 1922-1926. (1)

VERNAM (GILBERT SANDFORD) COLLECTION

Name Index
Diary, 1918

Andrews, A. W.	Stevenson
Bell, J.A.	Tregarden, Captain
Bellard	Wilson, Colonel of General Staff
Benjamin, of Western Union	
Branson	
Campbell, G.A.	
Carty, Colonel	
Crehore, Dr.	
Davidson, J., Jr.	
Dowd	
Dixon, A.F.	
Drake, A.W.	
Emmons, of Western Union	
Evans, Major	
Foch	
Fowler, Captain	
Gheradi	
Hudson, E.A.	
Hudson, G.E.	
Krum	
Manborgne, Major	
McCorkey, H.	
Morehouse	
Morton	
Palmer, of Western Electric Company "Patent Department)	
Parker, R.D.	
Philips, Lieutenant of Navy Department	
Post, A.W.	
Rainey, P.M.	
Rhodes of G.E.H. office	
Rose of Patent Department	
Slazmaw, Brigadier General	
Squier, General	

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Name Index
Diary, 1919

Andrews, A.W.	Lammers, Miss
Ballard	Locke
Basconi	Manborgne, Lieutenant Colonel
Bell, J.H.	Martin, W.S.
Bienraux	McCloud
Brigham, Mrs.	McMurray
Carty, J.J.	Megger
Clement, A.W.	Morehouse
Clokey	Morkrum
Conover	O'Donnell
Craft, E.B.	O'Leary
Craft, W.M.	Parker, R.D.
Davies	Pierce
Davidson, J., Jr.	Post, A.W.
Drake, A.W.	Potts
Elias, A.B.	Rainey
Fabyan, Colonel	Reber, Colonel
Foch	Rhodes, W.A.
Folk	Rugh, H.O.
Friedland	Rutherford
Gherardi	Shirley, S.W.
Gordon of Western Electric Co.	Shuler
Hamilton, B.P.	Smith, Professor H.B.
Hanck.	Thompson
Harper	Truesdale, Colonel
Haskell	Van Dyke
Hudson, E.A.	Von Nostitz
Jay, Major	Watson
Jewett	Wolfe, R.W.
Kerr	Whitehead, Lieutenant
Kleinschmidt	Zenn
Krum	
Kuhn, J.J.	

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Name Index
Diary, 1922-26

Anderson, E.	Evans, Major of Signal Corps
Anderson, G.T.	Fell
Austin, G.M.	Foch
Ballard	Folk
Bancroft	Free, DR.E.E.
Basconi	Friechman, Captain
Bell, J.H.	Friedman
Bellows	Fuller, C.H.
Benjamin	Gardener, C.H.
Blackwell	Gherardi
Bloom	Gibbon
Borgman	Hall
Branson	Hamilton, B.P.
Burkholder	Haskell
Burns, E.C.	Haslow
Carty, J.J.	Herrington,
Cattoje, Joe	Hirschfield, Professor
Childress	Holshaw
Clarke, A.B.	Houston, David F.
Connors, W.W.	Hunt
Cory	Jay
Craft	Johnson T.H. of Western Electric Co.
Cummings	Kendall
Davidson, J., Jr.	Kenner, A.
Davies	Kirandel
Deardorft	Kirkwood
Dee	Kittredge
Delfo, E.D.	Koons, Judge (President, Bell Telephone Co)
Desmond	Koontz
Dingman	Kreider
Dixon	Kurtz
Drake, A.W.	Lamess, Miss
Emerson	Locke
Engis, L.L.	Manning, S.R.

1922-26, continued

Mathis	Watson, E.F.
Maylort	White, F.W.
McCann	Whitefield, H.B.
McCarthy, C.J.	Whiting, D.F.
McCutcheon	Williams, R.D.
McGlove	Williams, S.B.
McMurray	Wilmer
Meyer, A.A.	Wolf, R.W.
Mayer, D.C.	Young
Miller, K.W.	
Mitler, R.A.	
Morehouse, L.F.	
Murray, Donald	
Nelson, E.L.	
Nicely, R.N.	
Parker, R.D.	
Patterson	
Perry, D.B.	
Phelps	
Pierce	
Pillioid	
Pruessman	
Roberts, C.C.	
Robinson, Nils A.	
Rogan	
Sandleburg, E.S.	
Seibel	
Sfee	
Shackleton	
Shanck, R.B.	
Sheppard	
Stevens, J.B.	
Stevenson, F.A.	
Swanson, A.D. of Illinois Bell	
Swezey	
Tweedy	
Van Dyke	
Wagner	
Warren, H.S.	