Guide to the Charles Adler, Jr. Collection

NMAH.AC.0351
Don Darroch
1990

The present system of lights, which often holds up main traffic needlessly by automatically stopping traffic on the main highways at times when there is no machine wishing to cross the intersection, is a source of protest against Baltimore drivers.
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Collection Overview

Repository: Archives Center, National Museum of American History
Title: Charles Adler, Jr. Collection
Identifier: NMAH.AC.0351
Date: 1899 - 1980
Extent: 6 Cubic feet (; 15 boxes)
Creator: Adler, Charles, Jr., 1899-1980 (engineer, inventor)
Language: English
Summary: The collection contains correspondence, news clippings, photographs, patents, and printed materials documenting the inventive career of Charles Adler, Jr. Adler is best known for his development of the first traffic actuated signal light in 1928.

Administrative Information

Acquisition Information
This collection was donated by Charles Adler, Jr.'s daughter, Mrs. Amalie Adler Ascher on September 15, 1989.

Processing Information
Processed by Don Darroch, volunteer, and Robert S. Harding, archivist, 1990.

Preferred Citation

Restrictions
The collection is open for research.

Conditions Governing Use
Collection items available for reproduction, but the Archives Center makes no guarantees concerning intellectual rights. Archives Center cost-recovery and use fees may apply when requesting reproductions.
Biographical / Historical

Charles Adler, Jr. (1899-1980), a professional engineer and inventor was a life-long resident of Baltimore, Maryland. He began his career as an inventor at age 14, receiving a patent on an electric automotive brake. After attending Johns Hopkins University, he served briefly in the Army during World War I and worked at several jobs before being associated in 1919 with the Maryland and Pennsylvania Railroad, where he developed a series of safety devices. In 1928 he developed and installed in Baltimore the first traffic actuated signal light. In 1937 he became a consultant to the Baltimore and Ohio Railroad, continuing to invent safety and signal devices for automobiles, trains and aircraft. He was granted over sixty United States patents. He was a licensed pilot and a member of numerous professional engineering societies. From 1953-1959, Adler served on the Maryland State Aviation Commission and he was a member of the Maryland Traffic Safety Commission from 1952 until his death in 1980.

Scope and Contents

The collection contains biographical information about Adler and his career. Materials relating to his professional activities include newspaper clippings, photographs and other memorabilia; his published writings include articles in periodicals and newspapers. In addition, there are patent applications, royalty receipts and correspondence, as well as lengthy descriptions of various safety devices Adler invented. Many photographs are not captioned, including images of devices Adler invented, as well as images of aircraft, automobiles, and trains. There are portraits of family members, Adler, and his associates.

Arrangement

The collection is arranged into six series.

Series 1, Biographical Material, 1899-1980
Series 2, Scrapbooks and Clippings, 1920-1989
Series 3, Correspondence, 1928-1975
Series 4, Patents and Inventions, 1929-1980
Series 5, Photographs and Scrapbooks, circa 1920-1930
Series 6, Publications, 1952-1980

Physical Characteristics and Technical Requirements

Gloves must be worn when handling unprotected photographs and negatives.

Names and Subject Terms

This collection is indexed in the online catalog of the Smithsonian Institution under the following terms:
Subjects:
Aeronautics and state -- 20th century
Engineers -- 1920-1980
Inventions -- 20th century
Inventors -- 20th century
Railroads -- 20th century
Traffic engineering -- 20th century
Traffic signs and signals -- 1920-1980

Types of Materials:
Clippings -- 20th century
Correspondence -- 20th century
Patent applications
Photographs -- 20th century
Receipts -- 20th century

Geographic Names:
Baltimore (Md.) -- 20th century
### Container Listing

#### Series 1: Biographical Material, 1899-1980

<table>
<thead>
<tr>
<th>Box 1, Folder 1</th>
<th>Birth certificate (copies), 1899 June 16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Box 1, Folder 2</td>
<td>&quot;The Brownie,&quot; Park School Yearbook, 1917, 1914</td>
</tr>
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<td>Box 1, Folder 3</td>
<td>Honorable discharge from United States Army, 1918 December</td>
</tr>
<tr>
<td>Box 1, Folder 4</td>
<td>Marriage certificate, 1925 June 10</td>
</tr>
<tr>
<td>Box 1, Folder 5</td>
<td>Personal recognition statements and testimonials honoring Adler, 1941 - 1976</td>
</tr>
<tr>
<td>Box 1, Folder 6</td>
<td>Pilot's flight log; certificate of recordation, pilot certificate #171609; pilot certificate and ratings with limitations; medical certificate, student and private pilot, 1945, 1949, 1946, 1947</td>
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<tr>
<td>Box 1, Folder 7</td>
<td>Memoirs and other reminiscences by Charles Adler, Jr., 1968 - 1980</td>
</tr>
<tr>
<td>Box 1, Folder 8</td>
<td>Address books, 1969 - 1971</td>
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<tr>
<td>Box 1, Folder 9</td>
<td><em>Illuminating Engineering Society Directory</em> (Maryland Section), 1971 - 1972</td>
</tr>
<tr>
<td>Box 1, Folder 10</td>
<td>State of Maryland professional engineer certificate, 1981 June 30</td>
</tr>
<tr>
<td>Box 1, Folder 11</td>
<td>Harry Adler, last will and testament, 30 January 1970</td>
</tr>
<tr>
<td>Box 1, Folder 12</td>
<td>&quot;Adler's Album&quot; (by Charles Adler, Jr.), undated</td>
</tr>
<tr>
<td>Box 1, Folder 13</td>
<td>Biographical sketches and obituaries on Adler, list of inventions</td>
</tr>
<tr>
<td>Box 1, Folder 14</td>
<td>Metal plaques and license tags, undated</td>
</tr>
<tr>
<td>Box 1, Folder 15</td>
<td>Miscellaneous ephemera, undated</td>
</tr>
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Series 2: Scrapbooks and Clippings, 1920 - 1989

Box 2, Folder 1  
Clippings from newspapers and trade journals on Adler's invention of automobile traffic warning system for railroad grade crossings (also photos of the device); correspondence with individuals in railroad industry, 1920 - 1924

Box 2A, Folder 1  
Handwritten notes, diagrams and news clippings on devices to control automatically the speed of cars approaching railroad crossings and other dangers through magnets imbedded in highway which would act on devices in cars to control speed, 1924 - 1927

Box 2A, Folder 2  
News clippings, 1925

Box 2, Folder 2  
News clippings, correspondence and photos on traffic signal actuated by sound of horn, 1926 - 1928

Box 3, Folder 1  
News clippings, handwritten notes and correspondence on sonic traffic light control, 1927 - 1928

Box 3, Folder 2  
News clippings, photographs on sonic traffic light, 1928 - 1929

Box 3A, Folder 1  
News clippings, sonic and other traffic lights, 1928 - 1930

Box 3A, Folder 2  
News clippings, double filament traffic signal and devices, 1930 - 1939

Box 3B  
News clippings, traffic lights for color blind, 1931 - 1932

Box 4  
News clippings, articles by Charles Adler on a variety of subjects, 1932 - 1978

Box 4  
News clippings, "Adler's Album" a column which was a regular feature in the Baltimore Beacon, 1973 - 1974

Box 4, Folder 1  
Unmounted clippings from newspapers and magazines on a variety of Adler's inventions and activities, 1928 - 1970

Box 4, Folder 2  
Unmounted newspaper and magazine clippings on Adler and his work, 1971 - 1989

Box 4, Folder 3  
Unmounted clippings on Adler and his work, undated

Box 5A, Folder 1-7  
News clippings on inventions, correspondence, and advertisements, 1939 - 1946

Box 5A, Folder 8-11  
News clippings, aircraft inventions; columns by Walter Winchell, Dorothy Kilgallen, and Earl Wilson, 1947 - 1951

Box 5B, Folder 1-2  
News clippings, Walter Winchell, Cholly Knickerbocker columns and visit of King Carol (of Romania), 1952 - 1954

Box 5B, Folder 1-2  
News clippings, "Adler's Album" column from Baltimore Beacon. Correspondence and photo prints honoring Adler, 1974 - 1977
Series 3: Correspondence, 1928 - 1975

Box 6, Folder 1  Correspondence, 1928 - 1943
Box 6, Folder 2  Correspondence, 1954 - 1963
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Box 6, Folder 4  Institute of Traffic Engineers, 1965 - 1971
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Box 6, Folder 6  Royalty statements, Union Switch and Signal to Adler, 1936 - 1952
Box 6, Folder 7  Grimes Manufacturing to Adler, 1949 - 1969

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Series 4: Patents and Inventions, 1917 - 1980

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Box 7, Folder 2  Disabled diverter, 1971 - 1972
Box 7, Folder 3  Landing indicator, 1930 - 1942
Box 7, Folder 4  Spaceometer, 1918 - 1955
Box 7, Folder 5  Spaceometer, 1956 - 1963
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Box 7, Folder 7  Spaceometer, 1967 - 1977
Box 8, Folder 8  Aircraft tail light, 1940 - 1957
Box 8, Folder 9  Various aircraft lights, 1929 - 1955
Box 8, Folder 10 Various aircraft lights, 1956 - 1978
Box 9, Folder 11 Aircraft collision avoidance, 1941 - 1963
Box 9, Folder 12 Aircraft collision avoidance, 1965 - 1980
Box 9, Folder 13 Aircraft collision avoidance Grimes Manufacturing Company, 1950 - 1960
Box 9, Folder 14 Aircraft lights, Grimes Manufacturing Company, 1965 - 1971
Box 10, Folder 15 Other aircraft patents, 1940 - 1974
Box 10, Folder 16 Automotive traffic control, 1925 - 1935
Box 10, Folder 17 Automotive traffic control, 1936 - 1955
Box 10, Folder 18 Automotive traffic control, 1956 - 1975
Box 11, Folder 19 Automotive devices, other, 1919 - 1979
Box 11, Folder 20 Railroad and other, 1917 - 1980
Box 11, Folder 21 Assignment of patents to United States Government, 1945 - 1973
Box 11, Folder 19 US Patent, 1,300,094, electrical brake, 1919 April 8
Box 11, Folder 20 US Patent, 1,394,264, crossing signals, 1921 October 18
Box 11, Folder 20 US Patent, 1,638,793, automatic time controls (railroad), 1927 August 9
Box 10, Folder 16 US Patent, 1,705,323, highway signal systems, 1929 March 12
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<th>Folder</th>
<th>Patent Number</th>
<th>Invention Description</th>
<th>Date</th>
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<tbody>
<tr>
<td>Box 11, Folder 20</td>
<td>US Patent, 1,889,725, signal lamps</td>
<td>1932 November 29</td>
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<tr>
<td>Box 10, Folder 16</td>
<td>US Patent, 1,919,874, traffic signals</td>
<td>1933 July 25</td>
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<tr>
<td>Box 11, Folder 20</td>
<td>US Patent, 1,978,334, signals</td>
<td>1934 October 23</td>
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<td>Box 11, Folder 20</td>
<td>US Patent, 1,981,577, signals</td>
<td>1934 November 20</td>
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<td>Box 10, Folder 16</td>
<td>US Patent, 1,995,816, traffic signals</td>
<td>1935 March 26</td>
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<tr>
<td>Box 10, Folder 16</td>
<td>US Patent, 2,015,612, traffic signals</td>
<td>1935 September 24</td>
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<td>Box 11, Folder 20</td>
<td>US Patent, 2,029,211, signals</td>
<td>1936 January 28</td>
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<tr>
<td>Box 10, Folder 16</td>
<td>US Patent, 2,121,276, signals</td>
<td>1938 June 21</td>
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<tr>
<td>Box 10, Folder 15</td>
<td>US Patent, 2,212,490, airplanes</td>
<td>1940 August 27</td>
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<td>Box 8, Folder 9</td>
<td>US Patent, 2,316,751, landing indicators</td>
<td>1943 April 20</td>
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<td>Box 8, Folder 9</td>
<td>US Patent, 2,311,921, flasher switches</td>
<td>1943 February 23</td>
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<tr>
<td>Box 9, Folder 11</td>
<td>US Patent, 22,497 (reissue), signal lamps</td>
<td>1944 June 20</td>
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<td>Box 10, Folder 15</td>
<td>US Patent, 2,353,380, flight indicators</td>
<td>1944 July 11</td>
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<td>Box 9, Folder 11</td>
<td>US Patent, 2365038, signals</td>
<td>1944 December 12</td>
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<td>Box 8, Folder 10</td>
<td>US Patent, 2,365,504, reflector lamps</td>
<td>1944 December 19</td>
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<td>Box 8, Folder 9</td>
<td>US Patent, 2,447,302, position lights</td>
<td>1948 August 17</td>
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<td>Box 11, Folder 19</td>
<td>US Patent, 2,556,052, diverter lighting system</td>
<td>1951 June 5</td>
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<tr>
<td>Box 8, Folder 9</td>
<td>US Patent, 2,605,384, aircraft position lamp</td>
<td>1952 July 29</td>
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<td>Box 8, Folder 9</td>
<td>US Patent, 2,881,307, undulating aircraft light</td>
<td>1959 April 7</td>
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<tr>
<td>Box 9, Folder 11</td>
<td>US Patent, 2,832,059, airplane external lighting</td>
<td>1958 April 22</td>
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<td>Box 9, Folder 11</td>
<td>US Patent, 2,938,192, beacon lights</td>
<td>1960 May 24</td>
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<td>Box 9, Folder 11</td>
<td>US Patent, 3,183,480, anticollision lights (aircraft)</td>
<td>1965 May 11</td>
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<td>Box 9, Folder 11</td>
<td>US Patent, 3,619,597, aircraft beacon</td>
<td>1971 November 9</td>
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<td>Box 10, Folder 16</td>
<td>US Patent, 85,143 (design), traffic signal facing</td>
<td>1931 September 22</td>
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<td>Box 10, Folder 16</td>
<td>US Patent, 92,055 (design), signal cover glass</td>
<td>1934 April 24</td>
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<tr>
<td>Box 10, Folder 16</td>
<td>US Patent, 108,773 (design), signal cover glass</td>
<td>1938 March 15</td>
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Box 11, Folder 20 Canadian Patent, 224,361, railway crossing signals, 1922 October 3

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## Series 5: Photographs and Scrapbooks, circa 1920s-1930s

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<th>Box/Folder</th>
<th>Description</th>
<th>Image(s)</th>
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<tbody>
<tr>
<td>Box 12, Folder 1</td>
<td>Early Adler family and school photo prints</td>
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</tr>
<tr>
<td>Box 12, Folder 2</td>
<td>Portraits of Charles Adler and others</td>
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</tr>
<tr>
<td>Box 12, Folder 3</td>
<td>Aircraft</td>
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<tr>
<td>Box 12A, Folder 1</td>
<td>Automotive, classic cars</td>
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</tr>
<tr>
<td>Box 12A, Folder 2</td>
<td>Automotive, other</td>
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<tr>
<td>Box 13, Folder 6</td>
<td>Railroad</td>
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<tr>
<td>Box 13, Folder 8</td>
<td>Miscellaneous photo negatives</td>
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</tr>
<tr>
<td>Box 13, Folder 7</td>
<td>Unidentified devices</td>
<td></td>
</tr>
</tbody>
</table>

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Box 14: Institute of Traffic Engineers and other transportation publications, 1952 - 1980

Box 15: Congressional Record and other legislative publications, and miscellaneous publications, 1957 - 1975

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