Provost Student Research Awards Report

In the spring of 1987 I received, with the support of Dr. Nicholas Honerkamp, a Provost Student Research Grant at the University of Tennessee at Chattanooga. The title of the grant proposal was "Inventory and Assessment of the Austin-Western Collection". Under Dr. Honerkamp's direction, I would create an inventory of the Austin-Western Company's corporate records. Our plan of work was to begin in the fall semester of 1987 to inventory all company records, films, and photographs and to provide for the storage of more than 200 blueprints that accompanied the records. This was to be accomplished over a fifteen-week period. After a brief assessment of the records, we altered the research strategy and decided to concentrate on the photographs and films because they were most in need of attention.

Submitted to

Associate Provost for Graduate Studies
Faculty Research Committee

By

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Introduction

In the spring of 1987 I received, with the support of Dr. Nick Honerkamp, a Provost Student Research Grant at the University of Tennessee at Chattanooga. The title of the grant proposal was "Inventory and Assessment of the Austin Western Collection" and it was awarded with the understanding that I would, under Dr. Honerkamp's direction, create an inventory of the Austin Western Company's corporate records. Our plan of work was to begin in the fall semester of 1987 to inventory all company records, films, and photographs and to provide for the storage of more than 200 blueprints that accompanied the records. This was to be accomplished over a fifteen week period. After a brief assessment of the records we altered the research strategy and decided to concentrate on the photographs and films because they were most in need of attention.

Company History

In the late 1970's the Baldwin-Hamilton Company made a generous donation of the corporate records of its Austin-Western division to the then Institute of Archaeology. Mr. Robert Johnson, the proprietor of The Museum of Early Technology, was asked to appraise the collection before it came to UTC. In a letter sent to Mr. Henry Rentschler, the president of the Baldwin-Hamilton Company in 1976, Mr. Johnson not only gives his appraisal of the Austin-Western (A-W) collection, but he also gives a history of industrial archaeology and industrial railroading plus a brief company history. He begins by talking about the steam engine in railroading and the interest that has kept it alive. He says industrial archaeology (I.A.) is the "study of sites, structures, artifacts, and processes relating to technology and industry." He believes that more study should be put into I.A., especially in relation to industrial railroading.
and materials-handling. Mr. Johnson makes the very good point in support of I.A. that civil engineering and industrial works often make a lasting mark on the landscape and even become a permanent part of the environment. Mr. Johnson also states that a main purpose of his letter is "to point out the place that the subjects of industrial railroading and the creation of earthworks...stand in relation to industrial archaeology and the history of technology in general." He especially wants to point out the importance of Baldwin-Hamilton's contribution to the Institute.

Mr. Johnson gives some history of A-W as an industrial materials-handling company. From its conception in 1859 as the Austin Manufacturing Company, the company underwent various changes of name and ownership.

1859 - Austin Manufacturing Company (Harvey, Illinois)

1877 - Western Wheeled Scraper Company (Mount Pleasant, Iowa)

1901 - Austin-Western Road Machinery Company (Chicago, Illinois):
Formed to sell the products of both Austin Manufacturing Company and Western Wheeled Scraper Company.

1902 - Western Wheeled Scraper Company purchased the Austin Manufacturing Company

1934 - Western-Austin Company:
Austin-Western Road Machinery Company moved from Chicago to Aurora and the two companies were consolidated

1944 - Austin-Western Company

1951 - Austin-Western Division of Baldwin-Lima-Hamilton Corporation

1965 - Subsidiary of Armour and Company
Once A-W was acquired by Baldwin-Hamilton, its company records were kept in storage. These records include "engineering drawings, tracings, engineering reference material, business correspondence, sales and repair orders, trade literature, and builders photographs and negatives." The collection also includes customer lists, trade catalogues from parts suppliers, a scale-model dump car, and personal files of certain company officials. The scale model dump car, after being stored for several years at UTC, has been lent to the Regional History Museum in Chattanooga. A similar model was donated by the company to the Tennessee Valley Railroad Museum in Chattanooga and is presently on display there.

The categories and estimates of value (as of 1976) are as follows. In Mr. Johnson's letter each category is accompanied by a brief explanation of its contents.
Appraisal

A. File Cabinets: $11,114.00
B. Photographs
   prints: 2,900.50
   photos/negs: 20,607.75
C. Tracings, old series: 3,255.75
D. Miscellaneous: 2,761.50
E. Operator's manuals: 328.50
F. Trade catalogues: 1,584.00
G. Tracings, new series: 2,076.50
H. Patterns: 5,535.00
I. Record books: 1,600.00
J. Sets: 666.95
K. Tracings, H and G series: 1,070.50
L. Miscellaneous #2: 13,139.50

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$66,641.40

Summary of Work

For the first seven weeks of the fifteen allotted for the research period, I viewed 16mm films, some of which were made by the A-W Company and some by the Baldwin-Lima-Hamilton Corporation. These films were made to promote the company's earth moving machinery. The production dates of the films range from the 1920's to the 1970's. They are an example of the documented evolution of an industrial invention. Certain films show one of the earliest graders which was merely a steel blade carried underneath a horse drawn wagon. As the wagon was pulled forward, the angled blade leveled the ground. The later the date on the film, the more efficient the graders become.

The engineers at A-W increased the operator's control over the blade of the grader by adding leaning wheels and independent controls for front and rear wheels. When gasoline engines were invented the engineers designed a grader that was pulled by a
tractor instead of a team of horses. Their next step was to place the engine on the grader itself. The final developments were hydraulic controls and independent driving and steering for all wheels.

Admittedly most ordinary citizens do not express much interest in the history and development of such machines. However, these machines do play a major role in the growth of our society. They helped build the roads and railroads that so dramatically decreased the distance between the east and the west. These machines can still be seen at any new street or highway construction site.

There are over 163 films included in the collection. 117 of them have been catalogued by recording the information on canister labels and on reel labels. Note was also made of their condition. Of these 117 films, 87 were viewed and their contents noted. The remaining 30 films were not viewed because of the shortage of time or because they are not on reels and therefore can not be run through a projector. All of the films that were viewed are from fifteen minutes to one hour long.

For the remaining eight weeks I catalogued and preserved prints and negatives that were found with the A-W collection. Due to the shortage of time that I mentioned above and to the unexpected number of photographic materials that were found, I finished only fifty or sixty percent of this work. There are a good number of both prints and negatives left to be catalogued and preserved. It is vital to preserve these materials because they are so vulnerable to their environment. I noted some damage due to decaying paper and scotch tape that had been in contact with the materials. A number of the prints are cracked and the edges are fraying, either because of handling or changes in temperature and humidity. Likewise, some of the negatives have acquire a patina from their time in storage. These signs of decay are not unexpected as some of these materials date to as early as the 1920's.

In order to protect the prints and negatives that I did catalogue, I placed them in plastic sheets called archival preservers. These preservers, unlike some plastics and paper
will not decay and destroy the materials in them.

For the most part the prints and negatives are of railroad dump cars made by the A-W Road Machinery Company. These cars range in capacity from four to fifty cubic yards and were used to transport earth, ore, and rock. There seemed to be two main types of dump cars. There were those with an angled bottom that was used to empty the cars from underneath and there were those that were dumped to the side. In the side dump models a door on one side would either drop down or lift up while the other side of the car was elevated, making the load slide out. In the same style as the side dump cars were the end dump cars. This model simply had the door at the end of the car instead of on the side.

There are very few pictures of the earth moving equipment that is the subject of the 16mm films. There are approximately 15 prints and 26 negatives that have bulldozers or graders as their subject. There are also some photographs of dump trucks and the similar "Trail cars" being loaded and emptied.

Included in the photograph collection are twenty-one bound books of prints. Many of the prints in these books have been touched-up so that only the rail dump car is visible and the background is blank. This makes it easy to see detail on the cars. The cars are also shown in various operation positions.

There are 2701 prints and 682 negatives that are now in archival preservers in three albums. These three albums are being kept at the Institute of Archeology at UTC. Most of the unbound prints and negatives were in paper mailing envelopes that had some description on the front. These envelopes have been placed with the appropriate prints and negatives in their preservers.

All of the information about the films, photographs, and negatives that were viewed was recorded on inventory forms. The forms provide the materials with accession numbers. By referring to the forms, specifically the numbers and titles on them, one can easily access any film or photographs on a particular subject. All of the inventory forms are in one volume and can be found at the Institute of Archeology.

There are two major portions of the A-W collection that
have yet to be catalogued at all. One of these is what I call
the "paper-work", invoices, orders, parts lists, catalogues,
shipping records, and repair records.

The other portion that has to be catalogued are the blue
prints, tracings (186 of which were stored with the photographs
and have been recorded), and drawings done by company engineers.
Most of the blueprints are protected by canvas and are clamped in
wooden hangers with metal hooks on them. One week of the total
fifteen was used to design steel pipe hanging stands on which the
blueprints have been placed. A diagram of these hangers is
included in this report. Once I finished the diagrams, eight of
the hangers were fabricated by AAPCO Inc., a local industrial
construction firm. Dr. Honerkamp and I then assembled the
hangers and approximately 294 blueprints are hanging on them.

The tracings and drawings are on onion skin paper and
linen. They are included in customer files and are also stored
loose in drawers.

The A-W collection represents a rich source of research not
only for industrial archaeologists, but also for students of
engineering and history. The films and photographs that were
recorded document, in part, the growth of the earth moving and
materials handling industries. They also give some insight into
road and railroad construction techniques. All of these, earth
moving, road, and railroad construction are still important to
the growth and maintenance of society.

END NOTES
1. Letter from Robert L. Johnson, "18, 1976" to Henry A.
   Rentschler

2. R. Johnson letter, ibid.

3. Letter from Ronald L. Martin, October 18, 1976 to Henry A.
   Rentschler.

5. Robert L. Johnson, ibid.

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<td>C</td>
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<td>Two foot nine inch arm of hanger</td>
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<td>D</td>
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<td>L-shaped joint necessary for legs and top of hanger</td>
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