

HISTORIC STRUCTURES REPORT - PART I

EDIS.037

BUILDING NO. 13, BLACK MARIA

403/D-116

EDISON NATIONAL HISTORIC SITE

(ADMINISTRATIVE, HISTORICAL, AND ARCHITECTURAL DATA)

Prepared by Melvin J. Weig, Superintendent,
Norman R. Speiden, Supervisory Museum Curator,
and Norman M. Souder, Architect

Copy No. 2

December 1, 1966

CRBIS# 000725

STATUS OF HISTORIC STRUCTURES REPORT

EDISON
PARK

"BLACK MARIA"

#13

PROJECT: Rehab.

STRUCTURE/BUILDING #

CLASS

AA

MASTER PLAN

PCP

B-12

49,000

PROGRAMMED

1964 Z.Y.

SECTIONS:

Admin.

Called for 8/27/64 11/4/64 Z.Y.
Due 10/12/64
Rec'd 12-5-66

His.

Called for 8/27/64 11/4/64 Z.Y.
Due 10/12/64
Rec'd 12-5-66

Architecture

Called for _____
Due _____
Rec'd 8/25/64

Called for _____
Due _____
Rec'd _____

Called for _____
Due _____
Rec'd _____

DISTRIBUTED

Park _____
EODC 12-5-66
Region _____
WASO _____

REVIEWED

Park _____
EODC _____
Region 12-9-66
WASO _____

AP VED:

Region 12-12-66
WASO _____

N34
N32

Halligan
12/12

Memorandum

DEC 13 1966

To: Director

From: Regional Director, Northeast Region

Subject: Historic Structures Report, Part I, Black Maria, Edison
National Historic Site

Enclosed is one copy of the subject report, consisting of the
Administrative, Historical and Architectural Data Sections.

We recommend that it be approved.

Lemuel A. Garrison

Lemuel A. Garrison

Enclosure

cc:
Chief, D&C, PSC
Supt., Edison
General *✓*
Daily
Area
mrw 12/12/66

REVIEW SHEET

Historic Structures Report - Part I (Admin., Historical and Arch. Data Sections)

BLACK MARIA - Edison NHS

Operations

last

Diagram

OPERATIONS	
✓	Interp. & VS
✓	Mgt. & VP
✓	Interp.
✓	Interp.
	Safety
	Secretary

Report appears entirely adequate for this small rehabilitation project. It is an interesting structure and an interesting report. I recommend that it be approved and that the requirement for a Part II report be waived so that the work may proceed.

12-7-66 J.B. Lukens, Reg. Arch.

Programs

I recommend approval.
Funds OK.

Chris
12/8

Last - Dr. Nelligan

Recommend approval

NT

DEC 6 1966

H30
NER

Memorandum

To: Acting Chief, D&C, PSC
From: Regional Director, Northeast Region
Subject: Historic Structures Report, Part I, Administrative,
Historical, and Architectural Data Sections, Black
Maria, Building No. 13

Enclosed is a copy of the Administrative and Historical Data
sections of the subject report, forwarded to us by Superintendent
Malvin J. Waig on December 1, 1966.

Lemuel A. Garrison

Lemuel A. Garrison

cc:
Superintendent, Edison
General ✓
Daily
Area
mrw 12/5/66



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE



IN REPLY REFER TO:

Edison National Historic Site
P. O. Box 126
Orange, New Jersey 07051

H30

December 1, 1966

Memorandum

To: Regional Director, Northeast Region

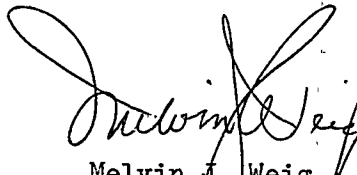
From: Superintendent, Edison

Subject: Historic Structures Report, Part I, Administrative,
Historical, and Architectural Data Sections, Black
Maria, Building No. 13

Enclosed are the original and two copies of the Administrative and Historical Data sections for the subject report. Routing, title, and contents sheets have been provided for the report as a whole, to include the Architectural Data in final assembly, though we are not sure about the currently correct format for the routing sheet.

Just a week or so ago, when discussing this report by telephone with Mr. Golub, he indicated that the Architectural Data had been prepared, but a check of our records indicated that no copy thereof was ever received in this office. We therefore requested Mr. Golub to send us a machine copy, which he promptly did. This copy will be bound in with the Edison file copy of the Administrative and Historical Data, but copies will have to be added to the material being transmitted herewith.

There has been considerable delay in readying the Historical Data, but as you will observe from Supervisory Museum Curator Speiden's submission, the task was a highly complicated one. We commend him for both the thoroughness and the general excellence of his work in this respect.


Melvin J. Weig
Superintendent

In duplicate

Enclosures

Edison National Historic Site
P. O. Box 126
Orange, New Jersey 07051

H30

December 1, 1966

Memorandum

To: Regional Director, Northeast Region
From: Superintendent, Edison
Subject: Historic Structures Report, Part I, Administrative,
Historical, and Architectural Data Sections, Black
Maria, Building No. 13

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(Sgd.) Melvin J. Weig

Melvin J. Weig
Superintendent

In duplicate

Enclosures

MAY 6 1965

HJO-KMA
NER

Memorandum

To: Chief, EODC
From: Regional Director, Northeast Region
Subject: Status of Historic Structures Reports, Miscellaneous Structures

In response to Chief Architect Robert Smith's memorandum of April 23, 1965, below is the status of the several Historic Structures Reports about which he inquired:

✓ 1. Edison - Wood Storage Building

Report not recommended for approval. See memorandum, Regional Director to Superintendent, March 22, 1965.

✓ 2. Edison - Black Maria

Architectural Data Section on hand in Region 8/25/64; Administrative and Historical Sections being prepared by Park (See memorandums Regional Director to Superintendent 8/27/64 and 11/4/64).

✓ 3. Edison - Small Storage Vault, Building #8, Part I
Architectural Data Section on hand in Region 8/26/64. Administrative and Historical Sections being prepared by Park (See memorandums Regional Director to Superintendent 8/31/64 and 11/4/64).

✓ 4. New York City NPS Group - Sagamore Hill

Part I - approved by WAGO 1/8/65

Part II - awaiting approval of WAGO (recommended by Region 4/28/65).

Handwritten notes and signatures:
Nelly
5/4
Nelly
5/4
Substantiated
5/5

Handwritten note:
Posted
5/5

Handwritten note:
Posted

3. Fort Necessity - Mount Washington Tavern

Part I. Recommendation to WASO deferred in order to reconcile recommendations in Architectural Section as to location of offices with those of Superintendent, with resultant revised Administrative Data Section, copy enclosed herewith for your review.

✓ **4. Gettysburg - Meade's Headquarters**

Part I - Approved by WASO 4/11/62

Part II - Architectural Data Section on hand in Region (4/23/65); returned enclosed for revision and resubmission.

Administrative, Historical, Museum and Exhibition Data Sections being prepared in Park (memorandum Regional Chief, Program Coordination to Superintendent 6/17/64)

Inasmuch as the Historic Structures Report, Part I, for the Meade's Headquarters building is unnecessary, all copies of the Architectural Data Section are returned enclosed. As mentioned above, enclosed also are all copies of the Part II Architectural Data Section. Please remove the "approval" sheet and resubmit the Section to this office as suggested in our memorandum of December 9, 1963. We will then follow up with the park to prepare the Administrative and Historical Data Sections at the earliest possible date.

Sgt. Ronald F. Lee

Enclosures

cc:

Assistant Director, Design and Construction
Superintendent, Edison
Superintendent, Fort Necessity
Superintendent, Gettysburg
Superintendent, New York City NPS Group
Mr. Whitcraft

MHNeHlgan/gmf
General
ily
ea



IN REPLY REFER TO:

1130-H

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Eastern Office, Design and Construction
Philadelphia, Pa. - 19106

April 23, 1965

Northeast Region APR 23 1965		Initials and Date
☒	Reg. Director	4/21
☒	Asst. Dir.:	
☒	Asst. Dir.:	4/23
☒	Resource Mgmt. Adv.	
☐	Asst. Dir.:	
☐	Finance & Prop.	
☐	Personnel	
☐	Programs	
☒	Asst. Dir.:	
☐	Inter. & VS	
☐	Land & Water	
☐	Maintenance	
☐	Admin. Coord.	
☐	Res. Mgmt. & VP	
☐	Asst. Reg. Dir.-Co-Act.	
☐	Fed'l Agency Assis.	
☐	NPS Studies	
☐	State Assistance	

Memorandum

To: Regional Director, Northeast Region

From: Chief Architect, EODC

Subject: Historic Structures Reports

In order that restoration and rehabilitation projects for Fiscal Year 1965 may be started and the funds obligated prior to June 30, it is necessary to have the Historic Structures Reports processed.

Sufficient time is required after the approval to have the work under contract and/or day labor forces under schedule before the end of the Fiscal Year in order to obligate the project funds.

In several cases the working drawings and specifications have been completed, but cannot be released for review until approval of the reports are granted.

We find that the following Historic Structures Reports are still awaiting processing in your office:

1. Edison - Wood Storage Building - Part I Report, submitted to your office August 17, 1964. *Arch'l Data Sec. See memo 3/22/65*

2. Edison - Black Maria - Part I Report, submitted August 24, 1964. *Arch'l Data Sec. Edison copy attached - Adv. to Reg. Dir. 8/22/64*

3. Edison - Storage Vault, Building # 8 - Part I Report, submitted August 25, 1964. *Same as above*

4. Sagamore Hill - Part II (Portion) Report, submitted August 7, 1964. *PTI & Arch'l Data Sec. Sub. to WBSO 4/18. Could not process until Part I completed & approved.*

PTI OK 4/18/65 WBSO

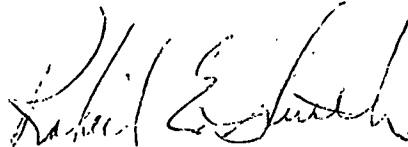
5. Fort Necessity - Mount Washington Tavern, Parts I and II, submitted February 3, 1965 and March 9, 1965 respectively.

*Rev'd Admin. Sec.
- rec'd 4/27/65 in ass.*

- ✓ 6. Gettysburg - Meade's Headquarters, Parts I and II, submitted April 19, 1965 and April 23, 1965 respectively.

*Det. for
correction*

In order to expedite the above projects we would appreciate prompt approval of the reports.



Robert E. Smith

cc:

Assistant Director, Design and Construction
Superintendent, Edison
Superintendent, Fort Necessity
Superintendent, Gettysburg
Superintendent, New York City NPS Group



IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Edison National Historic Site
P. O. Box 126
Orange, New Jersey 07051

November 23, 1964

H30-RHA
NER

Memorandum

To: Regional Director, Northeast Region

From: Superintendent, Edison

Subject: Historic Structures Reports

The following information is submitted in response to your subject memorandum of November 4:

Report

Present Status

Part II (Portion), the
Conservatory, "Glenmont"

Some new information has come to light about the Edison Home construction and repairs which entails more writing than was originally anticipated. The Superintendent is personally working on this with as much expedition as possible. We hope to have the Historical and Administrative Data ready within three or four weeks.

Part I, Pump House (#17),
"Glenmont"

Historical Data is ready in draft and is now in review. We hope to have this in final form with Administrative Data in the next week or two.

Part I, Hose House (#18),
"Glenmont"

Same information as for the Pump House above.

Part I, Black Maria (#13)

Supervisory Museum Curator Speiden has been working fairly steadily on this, especially to determine the site of the original building, with reasonable exactness, from old photographs and plans. He still has to prepare the Historical Data text, however.

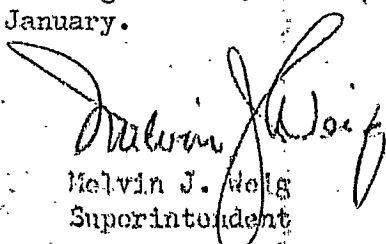
Northeast Region		Initial and Date
NOV 24 1964		
Reg. Director		
Asst. to RD (PA)		
Asst. to RD (Dev. L)		
Executive Sec'y Adv.		
Asst. Dir. Adm.		
Finance & Prop.		
Personnel		
Programs		
Asst. Reg. Dir. Oper.		
Interp. & VS		
Land & Water		
Maintenance		
Master Plan Comm.		
Rec. Mgmt. & VP		
Asst. Reg. Dir. Co-Act		
Fed'l Agency Assis.		
NPS Studies		
State Assistance		

*Posted
JMF*

Part I, Concrete (Small
Storage) Vault (#8)

Work started but not very far along
as yet.

We realize that these reports are overdue and fully understand the urgency involved. Every effort is being made to get them in as quickly as possible consistent with other equally important duties and responsibilities, some of which also have deadlines. We are trying very hard to submit all the listed reports before Christmas except those for Buildings Nos. 13 and 8, which it is hoped may be forthcoming in January.



Melvin J. Weig
Superintendent

In duplicate

H30-EMA
MEM

NOV 4 1964

J. M. Franey
11/4
Posted
Enf

Memorandum

To: Superintendent, Edison
From: Regional Director, Northeast Region
Subject: Historic Structures Reports

Please advise the present status of the Administrative and Historical Data Sections of the following Historic Structures Reports:

<u>Report</u>	<u>Requested</u>	<u>Due Date</u>
✓ Part II (Portion), The Conservatory, "Glenmont"	7/17/64 and 8/6/64	As soon as possible
✓ Part I, Pump House (#17) "Glenmont"	8/17/64	9/30/64
✓ Part I, Boes House (#18) "Glenmont"	8/27/64	10/2/64
✓ Part I, Black Maria (#13)	8/27/64	10/12/64
✓ Part I, Concrete (Small Storage) Vault (#8)	8/31/64	10/9/64

Your prompt reply will be appreciated.

(Sgd.) Ronald V. Lee

✓
Frayney
General
Daily
Area

cc:
Chief, EODC
Mr. Whitcraft

GMFraneay
8/26

Posted
gmf

HR-MA

AUG 27 1964

Memorandum

To: Superintendent, Edison

From: Regional Director, Northeast Region

**Subject: Historic Structures Report, Part I, Architectural
Data Section, "Black Maria", Edison EMS**

**Enclosed is a copy of the Architectural Data Section for the Part I
Historic Structures Report on the "Black Maria".**

**Please prepare the Administrative and Historical Data Sections and
forward three copies to this office by October 12, 1964.**

(Sgd.) Ronald F. Lee

Enclosure

**cc:
Chief, EDC**

**GMFraneay
General ✓
Daily
Area**



IN REPLY REFER TO:

H3Q-H

UNITED STATES
DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

Eastern Office, Design and Construction
Philadelphia, Pa. - 19106

August 24, 1964

Northeast Region		Initial and Date
AUG 25 1964		
☐	Reg. Director	
☐	Asst. to RD (FA)	
☒	Asst. to RD (Dev. t)	9/24/64
☒	Resource Studies Adv.	
☐	Asst. Reg. Dir. Adm.	
☐	Finance & Prop.	
☐	Personnel	
☐	Programs	
☐	Asst. Reg. Dir. Oper.	
☐	Interp. & VS	
☐	Land & Water	
☐	Maintenance	
☐	Rec. & File Coord.	
☐	Res. M. & VP	
☐	Asst. Reg. Dir. Const.	
☐	Rec. Agency Isss.	
☐	Rec. & File	
☐	Spec. Resource	

Memorandum

To: Regional Director, Northeast Region

From: Chief Architect, EODC

Subject: Historic Structures Report, Architectural Data Section
Part I, "Black Maria", Edison

Enclosed for your review and distribution are three copies of the subject report which was recommended by Acting Chief Eugene R. DeSilets this date. A copy has been retained by this office.

Robert E. Smith

By:

Donald F. Benson, Acting

Enclosure

cc:

Assistant Director, Design and Construction
Superintendent, Edison

Name of Area Edison National Historic Site

Melvin J. Weig, Superintendent

Norman R. Speiden, Supervisory Museum Curator

Prepared by: Norman M. Souder, Architect

Date: December 1, 1966

REVIEWED

WASHINGTON SERVICE CENTER, DESIGN AND CONSTRUCTION

Architect _____ Date _____

Engineer _____ Date _____

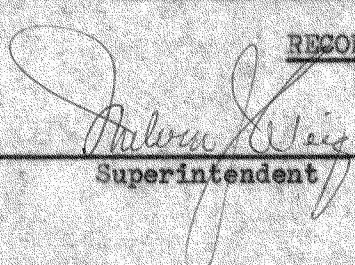
Landscape Architect _____ Date _____

REGIONAL OFFICE

Interpretation _____ Date _____

Operations _____ Date _____

RECOMMENDED



Superintendent

Date December 1, 1966

Regional Director

Date _____

Chief, Washington Planning & Service Center,
Design and Construction

Date _____

Assistant Director, Design and Construction

Date _____

APPROVED

Date _____

HISTORIC STRUCTURES REPORT - PART I
BLACK MARIA, BUILDING NO. 13, LABORATORY UNIT

Prepared by

Melvin J. Weig
Superintendent

Norman R. Speiden
Supervisory Museum Curator

and

Norman M. Souder
Architect

December 1, 1966

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Prepared by Norman M. Souder, Architect, August 1964	1-5

HISTORIC STRUCTURES REPORT - PART I

BLACK MARIA, BUILDING NO. 13

"ADMINISTRATIVE DATA"

Prepared by

Melvin J. Weig
Superintendent

December 1, 1966

Administrative Data

The Black Maria, Building No. 13, at Edison National Historic Site, erected by the Thomas Alva Edison Foundation in 1954, is a generally faithful reproduction of the original structure used by Thomas Alva Edison at his famous West Orange Laboratory as the first motion picture studio in the world. It has tremendous popular historical appeal, and during the summer months serves as a theater where Site visitors may see both old and present day motion picture films and slide shows on the Edison story as a feature of guided Laboratory tours.

In the "Historical Data" section of this report the story of why the original Black Maria came to be erected, how it was used by Thomas Edison and his associates, where it was located, and what structural changes occurred during its relatively short span of existence is told at some length. It is fortunate that this section could be prepared by Supervisory Museum Curator Norman R. Speiden, whose knowledge of perspective and ability to develop working drawings from photographic evidence was of special importance in building the reproduction of the original structure.

The "Architectural Data," prepared by Architect Norman M. Souder, affords an interesting analysis of the structural elements of the buildings, correct in every respect except for the two side doors, which rather than being sliding doors are hinged.

Since Mr. Souder's original examination of the building in connection with his section of the report, certain additional deterioration has developed or has come to light. The tarpaper covering, for instance, shows marked deterioration in a number of places, and a new roof covering also needs to be installed as replacement for the temporary reroofing put on with regular area maintenance funds in 1963. There is also increasing evidence of rot in the wood sheathing and related framing members caused by water leaking in under the tarpaper or as a result of poor flashing protection. Various metal parts besides flashing, such as the chimney pipe, have likewise rusted out and will require replacement.

The full extent of necessary rehabilitation cannot be determined until the existing tarpaper covering has been stripped off. It is therefore recommended that the project be undertaken by day labor under close supervision of Exhibits Specialist (Restoration) Gordie Whittington, now on assignment to the area, and thoroughly familiar with the building.

Construction funds in amount of \$7,500 were originally authorized for this project under PCP B-12, approved July 6, 1964, but \$4,500 of this amount was withdrawn on September 23, 1964, and only the balance of \$3,000 is presently available under Regional Office Allotment 3-80 approved June 29, 1966. This may not be enough money to complete the project in an entirely satisfactory way, but we shall assuredly stretch it to the fullest.

HISTORIC STRUCTURES REPORT - PART I

BLACK MARIA, BUILDING NO. 13

"HISTORICAL DATA"

Prepared by

Norman R. Speiden
Supervisory Museum Curator

November 30, 1966

Historical Data

Building No. 13 at the Edison National Historic Site is a reconstruction of the original "Black Maria." The original building, constructed between December 1892 and February 1893, had become famous within a few years afterward as the world's first motion picture studio. Many models of the "Black Maria" have been made, and at least two full-sized reconstructions built.

This report will concern itself with:

1. What is known about the original building, date of construction and cost - Appendices II and III.
2. The two full scale reconstructions with special emphasis on the one still standing, the location of which is shown as Building No. 13 on the Edison Laboratory Boundary Survey of November 20, 1955, comprising Appendix I.
3. The location of the site of the original building by projection from the earliest known photograph.
Appendix V.

Original "Black Maria":

In his 70-page booklet, "The History of the Kinetograph, Kinetoscope and Kinetophone," published in 1895, William Kennedy Laurie Dickson, after telling of the photographic building which he had constructed in 1889, while Mr. Edison was attending the Paris Exposition, gives the reason for building the "Black Maria."

"The photographic rooms, with their singular completeness of appointment, have been the birth-place and nursery of the kinetoscope; and the more important processes connected with the preparation and development of the film, together with innumerable other mechanical and scientific devices, are still carried on in this department. The exigencies of natural lighting, however, incident to the better "taking" of the subjects and the lack of a suitable theatrical stage, necessitated the construction of a special building, which stands in the centre of that cluster of auxiliary houses which forms the suburbs of the laboratory, and which is of so peculiar an appearance as to challenge the attention of the most superficial observer. It obeys no architectural rules, it embraces no conventional materials and follows no accepted scheme of color. Its shape, if anything so eccentric can be entitled to

that appellation, is an irregular oblong, rising abruptly in the centre, at which point a movable roof is attached, which is easily raised or lowered at the will of a single manipulator. Its color is a grim and forbidding black, enlivened by the dull lustre of myriads of metallic points; its materials are paper, covered with pitch and profusely studded with tin nails. With its great flapping sail-like roof and ebon complexion, it has a weird and semi-nautical appearance, like the unwieldy hulk of a medieval pirate-craft or the air-ship of some swart Afrite, and the uncanny effect is not lessened, when, at an imperceptible signal, the great building swings slowly around upon a graphited centre, presenting any given angle to the rays of the sun and rendering the apparatus independent of diurnal variations. The movable principle of this building is identical with that of our river swinging bridges, the ends being suspended by iron rods from raised centre-posts. This remarkable structure is known as the Kinetographic Theatre, or the "Black Maria," according to the mental cast of its sponsors. Entering, we are confronted by a system of lights and shades so sharply differentiated as to pain the eye, accustomed to the uniform radiance of the outer air."

In the same booklet, W. K. L. Dickson tells of some of the moving pictures made in the "Black Maria" as follows:

- Carmencita, the Spanish Queen of Dancers
- Gayety Girls
- Buffalo Bill (firing rifle)
- Sioux Indian Ghost Dance
- Lasso Thrower
- Corbett and Courtney (prize fight)
- Alcide Capitaine (trapeze act)
- Mexican Knife Duel
- Eugen Sandow, the Modern Hercules
- Fencers
- Boxing Cats
- Sheik Hadji Tahar (acrobat)
- Walten and Slavin - from "1492"
- Japanese Dancers
- Opium Den
- Row in a Chinese Laundry
- Milk White Flag - Hoyt

Stills from many of these movies illustrate the booklet.

The date of building and the cost of construction of the Revolving Photograph Building, as it was officially called, have been given

many times in motion picture literature. Probably the first publication was the February 3, 1900, testimony of Edison's book-keeper, John F. Randolph, who gives the total as \$637.67,² and says that the building was started in December 1892 and finished February 1, 1893.³

Reference to the photograph of ledger page 342, Appendix II, will show that the above cost was taken from the total of this account. The first invoice charged to the account was dated December 9, 1892, (Voucher No. 785) Appendix II, page 2. Mr. Randolph's statement that the structure was completed on February 1, 1893, was possibly from his own knowledge, as the account shows that \$58.57 for small items was charged after that date.

In an article written in 1933, at the request of the Society of Motion Picture Engineers,⁴ W. K. L. Dickson says:

"On my resuming movie work (which I did off and on), I had to do my best to secure attractive subjects for the kinetoscopes. It was only at certain times of the day that I could get such pictures in the studio with its glass roof slid back, so I decided in 1891 to build another studio revolving on wheels to meet the sun at all hours, which some wag later dubbed the 'Black Maria.'* This had a stage at one end, backed by a tunnel to give velvety black effects, and at the other end was a darkroom fitted to change the films.

"The kinetograph camera was fixed on an adjustable table which we could wheel out on rails for focusing close-ups or whole stage effects. The roof was made to fold back to admit the sun after the building had been moved around (Fig. 17). Here we took most of the pictures, although some were made at the old studio and a few in the open."

pages 452 and 453

The footnote on page 453 reads: "Completed on Feb., 1892, at a cost of \$637.67."

Fig. 17 referred to in the above quotation is Photograph No. 3, Appendix III, of this report, and is captioned, "Fig. 17. 'The Black Maria' motion picture studio; designed by Dickson in 1891, completed Feb., 1892." In correspondence between Dickson and the editors of the Journal of the Society of Motion Picture Engineers, his attention was called to the one year's difference in date;

but as Dickson was the author of the article the editors decided to use his recollection of events of 40 years earlier, rather than changing his text to make it agree with the generally accepted date of February 1893.

In the analysis of the cost of building the "Black Maria," Appendix II, are given the details of each invoice for the purchase of materials, such as lumber, hardware, and roofing. We have not yet been able to analyze the monthly charges for labor, although we know that the names and number of hours spent by each workman on the Kinetoscope account were available to John Randolph when he gave his testimony in February 1900. We are still hoping to find these records of the time spent on certain jobs by laboratory workers.

As far back as anyone now living can remember, the world's first motion picture studio has been known as the "Black Maria." In fact the original name, Revolving Photograph Building, had long since been forgotten. A photocopy of an invoice dated April 27, 1893, from New York Roofing Co., Newark, New Jersey, is included in this report, as it shows that the nickname "Black Maria" was used at least as early as three months after the structure was completed (see Appendix II, following page 6).

Richard F. Outcault's sketch of "Interior of Kinetographic Theatre" (Appendix III, Photograph No. 1), shows the camera connected electrically with the motor of a phonograph recording machine, reminding us that Edison, from the beginning of his motion picture experiments, was working on the synchronization of sound with picture. Edison says his object was "to devise an instrument which should do for the eye what the phonograph does for the ear, and that by a combination of the two all motion and sound could be recorded and reproduced simultaneously."

This sketch also shows the camera mounted on a table which runs on a track, so that the camera could be rolled toward the stage for close-ups, and back into the narrow room with the ruby glass window which served as a darkroom for removing exposed film and reloading the camera. This was undoubtedly the first use of a "dolly" in the motion picture industry.

There are only three known photographs of the exterior of the original "Black Maria." In order of date these are Photographs Nos. 2, 3, and 4 of Appendix III. Comparison of these three photographs shows that the "Black Maria" underwent at least two

radical alterations, indicating that the building was itself an experiment, and suggesting that it was modified from time to time as ways of improving its performance were discovered.

The order of our finding of these photographs is in reverse order of the dates on which they were taken, namely, Nos. 4, 3, and 2. Photo No. 4 is the only one for which we have an early glass negative. This picture was much used in biographies of Edison and histories of the motion picture from about 1910. Our negative of Photo No. 3 was copied from W. K. L. Dickson's booklet published in 1895. Our negative of Photo No. 2, the earliest known photograph, was copied from a photographic print found in 1954 in the files turned over to the laboratory by the legal department of Thomas A. Edison, Inc. Of the four men in this picture, two have been identified. It was easy to recognize Fred P. Ott leaning out from the roof opening, and the man standing beside the wire cage holding the fighting cock is thought to have been Fred C. Devonald, who was known to have raised birds and small animals in the laboratory buildings.

On her visit to the Edison National Historic Site, December 1, 1964, Miss Margaret M. Devonald confirmed both identifications. She said that her father, Fred C. Devonald, and Fred Ott had married sisters, and therefore Fred Ott was her uncle. Miss Devonald says she has another photograph of the "Black Maria" with her mother in the picture. She is looking for this photograph so that we can make a copy negative.

Photo No. 3, made by W. K. L. Dickson during the winter of 1894-95, shows eleven men. The only one that has been identified is W. K. L. Dickson, himself. He probably set up the camera but had someone else snap the shutter for him, while he climbed up to the roof opening. He is the one to the left in the group of three, on the far side of the roof opening.

Reconstruction of the "Black Maria":

There were many small models of the "Black Maria" made, the accuracy of their proportions varying with the skill of the artisan.

The "Premiere" of Metro-Goldwyn-Mayer's full length movie, "Edison, the Man," starring Spencer Tracy, was held in the Oranges in May 1940. The reconstruction built for this celebration is shown in Appendix IV, Photograph No. 5. Although it cost about \$3,000.00 to build, the roof could not be opened and the building could not be turned to face the sun. This structure was taken down within a few weeks.

Mr. Charles Edison said that if a reconstruction was to be built he thought it should have all the known features of the original and should be as near as possible to the same size and proportions.

Plans dated November 1, 1950, were drawn by Joseph A. Finegan, the architect for Thomas A. Edison, Inc. These plans were never used, for although they showed the building pivoted in the center so that it could be turned, it seemed to be higher in proportion to its horizontal dimensions than the photographs of the original indicated.

About this time, I mentioned to Mr. Charles Edison that if the two photographs which we then had, that is, Photographs Nos. 3 and 4 of Appendix III, were put on a drawing board, by reversing the rules of perspective, I believed we could ascertain, very nearly, the proportions and size of the original structure. This project, assigned to me by Admiral Harold G. Bowen, then Director of the Thomas Alva Edison Foundation, resulted in three drawings dated September 29, 1952. Photographs of these drawings are given in Appendix IV, Photographs Nos. 6, 7, and 8.

There is not space in this report to give a complete description of the methods used to extract these drawings from the two photographs. The most important elements will be explained in the last section of this report in discussing Photograph No. 11, Appendix V. It should be noted here, however, that while the projections readily revealed the correct proportions of the building, the scale of the projections could only be judged, by projecting, in their true vertical dimensions, the heights of the men, door openings and widths of the strips of tar paper. These estimated heights gave to the building an overall length of 49 feet.

Because both photographs were taken from the same side of the "Black Maria," we actually know nothing about the other side. This is indicated in the plan drawing, Photograph No. 8, by the straight lines on the unphotographed side. When the reconstruction was built, it was made symmetrical on both sides of the longitudinal center line so that the building would, from either side, look like the photographs with which the public was familiar.

When the accounts were analyzed for this report, it was discovered that only one piece of ruby glass, 11 $\frac{1}{2}$ " x 20 $\frac{3}{4}$ ", was purchased from Holbrook Brothers, at a cost of \$.50, (Appendix II, page 4, Voucher No. 34). It then became apparent that the small darkroom window was only on the "visible" side of the building. It may

well be that the doors which show in Photographs Nos. 3 and 4, were also only on the "visible" side.

The three drawings were submitted to Mr. Charles Edison, who decided that the reconstruction should be built from Photograph No. 3. There were several considerations favoring this decision. The frame structures on the ridge of the main roof to support the pulleys for the opening of the smaller roof door would be difficult to maintain, Photograph No. 4. Also, the hinge for this smaller roof door fell at least 18 inches below the ridge of the roof and the photograph did not show what construction supported the ridgepole at this point. Obviously, to enable the roof door to open some sort of gable must have been installed. See Photograph No. 6.

These three drawings were turned over to Frank Grad and Sons, Architects, Newark, New Jersey, who made the structural plans and specifications for the present Building No. 13 at the Edison National Historic Site. The reconstruction of the "Black Maria," as built by August Ramsland, is pictured in Photograph No. 9, taken at the time of its dedication, November 22, 1954.

Certain concessions had to be made, principally on the inside of the building, to its intended use as a motion picture theatre instead of as a studio for the making of movies. As we had only sketches of the interior, these concessions did little violence to our very limited knowledge. A modern 16-mm. projector was installed about where the camera stood in the original building and a projection screen occupied the other end of the room back of what was originally the stage. In front of the screen there is room for about 55 chairs for the audience. In place of the original wood or coal burning stove, electric strip-heaters installed on the roof rafters furnished adequate heat but proved to be too expensive because of the lack of sufficient insulation. Instead of the heavy wooden central frame, resting on the central pivot, from which the two ends of the building were trussed by 1" guy rods, the reconstruction had a framework of heavy steel girders under the hardwood floor. This steel frame added to the weight and also to the cost of Building No. 13.

Although we do not have the total amount paid by the Thomas Alva Edison Foundation for the erection of this building, Mr. Ramsland said that his contract was in excess of \$25,000.

The earliest known photograph of the "Black Maria" (Photograph No. 2) was not found until the structural plans were well on the

way to completion. Even if this picture had been available earlier it showed a building so different in appearance from the two with which the public was familiar that it would not have been used in the reconstruction. The position of the original walls and of the roof door, as shown in this photograph, were afterward added to the side elevation drawing in broken lines (Photograph No. 6).

Location of the Original "Black Maria":

Before the discovery, about January 1954, of Photograph No. 2, the location of the original building was much in doubt. Mr. Charles Edison, who was a little over twelve years old when it was torn down, remembered it as having been just below Building No. 6, on Lakeside Avenue. William A. (Bill) Hayes, who went to work at the Laboratory on March 15, 1895, placed it just back of the front line of the four small Laboratory buildings and about 100 feet from Building No. 4.

The aerial drawing of the Edison Laboratory and Works of the National Phonograph Company, Photograph No. 10, in Appendix V, was copied from the Edison Phonograph Monthly for May 1903.

This drawing shows the "Black Maria" set behind the back line of the four one-story Laboratory buildings. The building shown just to the left of the "Black Maria" was known as the Cement Building. Part of this building shows in Photograph No. 4, and it is shown on some early maps very close to the front line of Building No. 4. The building to the left of the Cement Building, which is almost a copy of Building No. 4, is unknown to any maps or photographs. If, in this sketch, these three buildings were moved toward Lakeside Avenue until the long building coincided with Building No. 4, then the sketch would be fairly correct as to the location of the Cement Building and the "Black Maria." It is reasonable to suppose that the artist who made this view (Photograph No. 10) from the air actually used a photograph of these three buildings and placed all three too far back from Lakeside Avenue, failing to identify Building No. 4, and duplicating it in back of No. 4.

Of the three known photographs of the original "Black Maria" (Photographs Nos. 2, 3, and 4 of Appendix III), the only one showing a building of known location and dimensions is Photograph No. 2. This was the earliest photograph taken but the one most recently discovered.

Photograph No. 11, a print from Negative #6920 which is an 8" x 10" copy of a large drawing made in December 1964, locates the position of the original "Black Maria" with relation to known plan positions of three vertical lines in Photograph No. 2. These three lines are: the center line of the chimney over the present Building No. 6, the east corner of Building No. 5, and the small chimney on the northeast face (yard side) of Building No. 5.

Only the most important steps of this method may be given in the space allotted in this report.

1. Every photograph is, of course, a perspective representation of the points of the object, projected toward the lens of the camera and caught on the plane of the photographic plate or film placed at the focal point of the lens.
2. In a rectangular object having the usual three dimensions, length, width, and height, there are at least three sets of parallel lines, mutually perpendicular to each other. In a photograph (or a perspective drawing) of such an object each set of parallel lines converge toward a point in the plane of the picture which is called the "vanishing point" of that set of parallels. Should the plane of the picture be exactly parallel to any one of these sets of parallel lines, as is often the case with the vertical lines of a building, the vanishing point for this set must be considered to be at an infinite distance above or below the picture.
3. It will be noted that the vertical lines in Photograph No. 11 are slightly convergent toward a vanishing point V_v not shown on the drawing as it was calculated to be about 52 inches above the horizon line V_h . This point V_v was found to be several inches to the left of the vertical line through the center of the photograph, necessitating a slight tilting of the photograph to bring the point V_v on the vertical center line of the photograph.
4. The horizon line V_h was then put on the photograph, perpendicular to this vertical center line of the photograph and at such a height that the horizontal lines of the building were, at this height, parallel to this horizon line, that is, not converging with it either upward or downward.

5. All horizontal lines of a structure, not parallel to the picture plane, have their "vanishing points" somewhere on this "horizon line." Reference to Photograph No. 11 will show that in Building No. 5 the only representatives of the two sets of horizontal parallels are the roof lines, which, when extended to intersect the "horizon line," determine the location of the two vanishing points, V_1 and V_r .
6. This line $V_1 V_r$ serves a dual function. First, as concerns the photograph, it is the intersection of a horizontal plane through the center of the camera lens. Second, as concerns the plan view of the drawing, it is the "picture plane." If we consider the photograph to be revolved 90° around this line so that it is perpendicular to the plane of the drawing then the photograph as viewed from the point S, becomes a true substitute for the actual view of the buildings.
7. It may have been noticed that while we know that the point S is on the vertical center line of the photograph, it has not yet been determined how far point S, in plan view, is from the picture plane $V_1 V_r$.

When it is realized that the line SV_r vanishes in V_r and is therefore one of the set of parallels to the long (NE) side of Building No. 5, and likewise that the line SV_1 is parallel to the short (SE) side of Building No. 5, then as these two sides of the building are at right angles to each other, it will be seen to follow from this that angle $V_1 SV_r$ must also be a right angle.

If the point where the center line of the photograph crosses the horizon line $V_1 V_r$, be called point C then

$$(V_1 C) \times (V_r C) = (SC)^2$$

$$\text{or } 7.4" \times 6.03" = (SC)^2 = 44.622 \text{ sq. inches}$$

$$SC = \sqrt{44.622} = 6.68"$$

(Note: The above measurements are from the large drawing which was to the scale, $1"=20'$)

Another method of locating point S which is entirely graphic, is to describe a semi circle using line $V_1 V_r$

as a diameter. This semicircle will intersect the center line of the photograph at point S.

8. The three vertical lines of the photograph which determine the location of the present Buildings Nos. 5 and 6, namely, the center of the large chimney, the east corner of Building No. 5, and the small chimney on the northeast face of Building No. 5, are now projected from the vertical vanishing point V_v to intersect the horizon line $V_l V_r$. Through these three points, on the horizon line, radiating lines are drawn from point of sight, S. A ground plan of Buildings Nos. 5 and 6 is now drawn to appropriate scale ($1''=20'$) on a sheet of transparent plastic and placed so that the corner of Building No. 5 is over point S and the right angle formed by the two walls coincides with angle $V_l S V_r$. The line $V_l V_r$ is traced on this transparent sheet. Keeping this horizon or picture plane line parallel with the "T" square, the transparent ground plan is pushed away from point S until each of the three determining points comes on its proper radiating line. The three points are then punched through the plastic and the building plan drawn. Any other buildings still standing, such as Buildings Nos. 4 and 21, or whose position with relation to Buildings Nos. 5 and 6 are known, such as the old Building No. 21, may now be plotted to the same scale. Buildings still standing are outlined in red, while green is used to outline buildings no longer standing such as the original "Black Maria" and old Building No. 21.
9. The above process is now repeated for the "Black Maria," whose location on the plan is desired. The center line, the horizon line and the point of sight S, being characteristics of the whole photograph, remain the same. Neither of the two sets of horizontal parallels in the "Black Maria" are parallel to any of the horizontal lines in Building No. 5, so two additional vanishing points must be located for the two sets of horizontal parallels in this building. These vanishing points are not shown on the drawing as the one on the left is about 23 inches from the center line, and their only function is to properly orient the floor plan of the building with relation to the picture plane.

There were only three very short lines in the set of horizontal parallels running across the shorter dimension of the "Black Maria,"

namely, the hip of the open roof, the hinge of the roof door, and the bottom timber supporting the angular buttress.

The right hand vanishing point, as determined by the intersection of these three lines, does not come on the horizon line but about 0.35" above it. This would suggest that the floor of the building was not quite level, but sloped downward toward the camera at an angle of a little less than 3° . The ground seems, in the photograph, to slope in the same direction.

This problem would not occur had the building been on a solid and level foundation, but the "Black Maria," having been supported on a center pivot, might easily have been tilted slightly toward the camera.

While the use of this vanishing point would make a slight change in the orientation of the building, bringing its long side nearer parallel to the picture plane, the distance of the building from Building No. 5 would be changed by less than one foot.

The results of this graphic analysis of the photograph show that if the northeast wall of Buildings Nos. 5 and 6 be extended to a point 143.5 feet from the east corner of Building No. 6, then the center of the turntable of the "Black Maria" would have been 54' from this point at an angle of 90° from the line of the two buildings.

The hypotenuse of this right triangle is therefore 153.3 feet and the acute angle with the building line is $20^{\circ} 37'$. As Building No. 5 is parallel to the Lakeside Avenue property line, whose bearing is given on the survey of November 20, 1955, as $N-48^{\circ} 36'W$ (See Appendix I of this report), the center of the "Black Maria" turntable must therefore have been $S-69^{\circ} 13'E$, 153.3 feet from the east corner of Building No. 6.

The reconstructed "Black Maria," Building No. 13, is approximately 413 feet, $N-32^{\circ} 40'W$, from the center of the original building. I would guess that any error in this location would be less than 5 feet, probably less than 3 feet.

Footnotes

1. The History of the Kinetograph, Kinetoscope, and Kinetophonograph, by William Kennedy Laurie Dickson and Antonia Dickson (Albert Bunn), New York: 1895, pages 19-20
2. United States Circuit Court, Southern District of New York, Complainant's Record: Thomas A. Edison vs American Mutoscope Company and Benjamin F. Keith, Letters Patent No. 589,168, page 161
3. Ibid., page 164
4. Journal of the Society of Motion Picture Engineers, Vol. 21, No. 6, December 1933, pages 452-453
5. Ibid., page 437

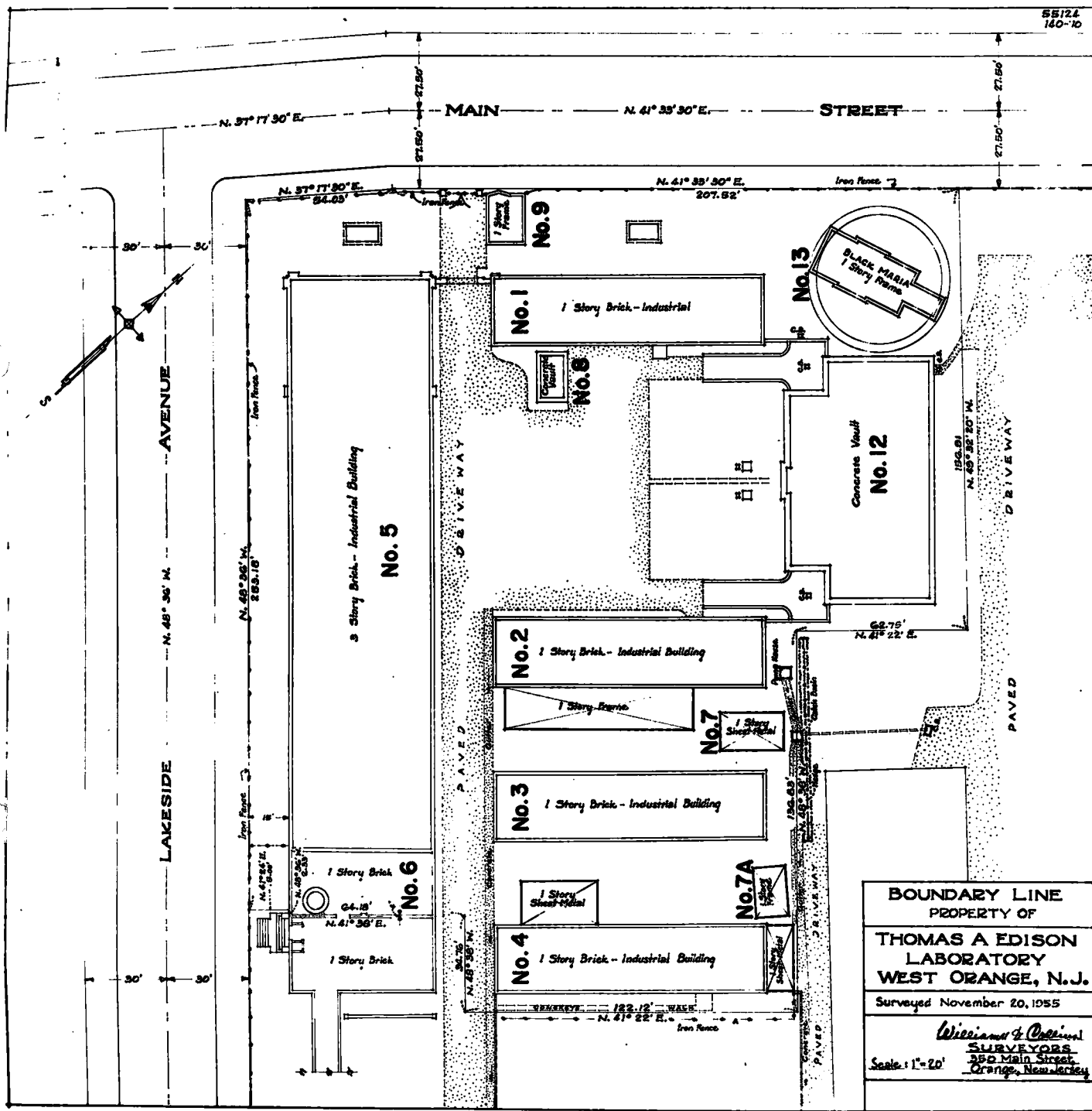
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APPENDIX I

Edison Laboratory Boundary Survey

November 20, 1955

Negative No. 6688



Neg. No. 6688

Appendix I

APPENDIX II

Analysis of Ledger Account

for construction of

Revolving Photograph Building

at a total cost of

\$637.67

Photograph of Page 342

of

Labor & Materials Sub-Ledger No. 6

Account for construction of

Revolving Photograph Building

Negative No. O-1469

342

Revolving Photograph Building

1892

1892

Dec	31	To Petty cash	103	20	Dec	31	By Sundries	105	585
"	31	" Sundries	104	154 04			By Balance		637 67
"	31	"	108	212 46					
1893									
Jan	31	" Petty cash	117	10					
"	31	" Sundries	119	69 38					
"	31	"	121	148 77					
Feb	28	"	130	100					
"	28	"	133	677					
Mar	31	"	141	375					
Apr	30	"	152	996					
"	30	"	155	870					
May	31	" Petty Cash	162	10					
"	31	" Sundries	163	100					
"	31	"	166	27 29					
				643 52					643 52
June	1	To Balance		637 67	1894	Dec	1	By Real Estate + Bldgs	323
									637 67

Brickling Concentrator

Neg No. 0-1469

6971-0

Analysis of Costs of
Building of the Original
Black Maria

Labor & Materials Sub-Ledger No. 6
1890 - June to 1896 - January

Page 342

Revolving Photograph Building

<u>1892</u>		<u>Journal Page</u>			
Dec. 31	To Petty Cash	103		\$.20	
" "	Sundries	104		154.04	Material
" "	By Sundries	105	Credit	-5.85	"
" "	Sundries	108		212.46	Labor
<u>1893</u>					
Jan. 31	Petty Cash	117		.10	
" "	Sundries	119		69.38	Material
" "	Sundries	121		148.77	Labor
Feb. 28	Sundries	130		1.00	Colts Exp.
" "	Sundries	133		6.77	Labor
Mar. 31	Sundries	141		3.75	Material
Apr. 30	Sundries	152		9.96	Material
" "	Sundries	155		8.70	Labor
May 31	Petty Cash	162		.10	
" "	Sundries	163		1.00	Material
" "	Sundries	166		<u>27.29</u>	Labor
June 1	Balance			\$637.67	
<u>1894</u>					
Dec. 1	By Real Estate & Buildings	323	Credit	<u>-637.67</u>	
				\$ 0.00	

Analysis of Vouchers & Invoices for
 Entries in Journal No. 7
 (1892 - Mar. 31 to 1895 - April 30)

<u>1892</u>	<u>Journal Page</u>	<u>Voucher No.</u>		<u>Amount</u>	<u>Voucher Total</u>	<u>Total to Ledger Pg. 342</u>
Dec. 31	103		Petty Cash			.20
Dec. 27		728	Burton & Conover - Lumber			
			20-2"x8"-14' = 373 Spruce	20.25	7.55	
			Sawing		.40	
			Carting		.25	
					<u>8.20</u>	
Dec. 31		730	Colts Express - 6 rolls 1 bag	.75	.75	
		731	Jas. A. Coe & Co. - Hardware			
			106-108 Mulberry St., Newark			
Dec. 10			351 lbs. 1" 80 Refd @ 2.20	7.72		
			9-1" Bolt Ends, 12" Hex Nts)			
			2-1½ " " 15½" " ")	5.00		
Dec. 16			8-15xl Machine Bolts with			
			Hex Head & Hex Nuts	5.00		
					<u>17.72</u>	
		743	William Finlayson-Mason &			
			Builder - Orange			
Dec. 13			Mason 3/4 day	3.00		
			1 Bbl. Portland Cement	3.00		
			Carting	.50		
					<u>6.50</u>	
Dec. 13		766	Maher & Flockhart,			
			Iron Foundry, Newark			
			463 lbs. Furnace Castings			
			@ 3%	15.05	15.05	
Dec. 21		777	180 lbs. Ret'd @ 3%	Cr -5.85	Cr -5.85	

<u>1892</u>	<u>Journal</u> <u>Page</u>	<u>Voucher</u> <u>No.</u>		<u>Amount</u>	<u>Voucher</u> <u>Total</u>	<u>Total to</u> <u>Ledger Pg. 342</u>
Dec. 9		785	Swain & Jones, Lumber, Newark			
			1-2"x10"-12' = 20			
			7-2"x10"-14' = 163			
			1-2"x6"-12' = 12			
			Hemlock 195 ft.			
			@ \$15.00	2.93		
			2-2"x10"-18' = 60			
			2-2"x10"-20' = 67			
			6-2"x6"-20' = 120			
			Hemlock 247 ft.			
			@ \$16.00	3.95		
			2-6"x6"-18' = 108			
			1-6"x12"-22' = 132			
			1-6"x12"-26' = 156			
			4-6"x12"-28' = 672			
			Spruce 1068 ft.			
			@ \$22.25	23.76		
			9-3"x4"-14' = 126			
			5-3"x4"-12' = 60			
			Spruce 186 ft.			
			@ 20.25	3.77		
			Sawing 3"x4"	.23		
			1-10"x12"-22' = 220 ft.			
			@ 3 1/4	7.15		
			Planing 2"x6" Hem to 1 1/2"	.33		
			Invoice Total	42.12		

<u>1892</u>	<u>Journal</u> <u>Page</u>	<u>Voucher</u> <u>No.</u>	<u>Amount</u>	<u>Voucher</u> <u>Total</u>	<u>Total to</u> <u>Ledger Pg. 342</u>
Dec. 12		Swain & Jones, Lumber, Newark 554 ft. 1in. No. 3 N.C. flooring @ \$20.00	11.08		
		28-2"x4"-10' = 187 9-2"x4"-12' = 72 Hem. 259 ft. @ \$15.00	3.89		
		2-2"x10"-18 = 60 ft. Hem. @ \$16.00	.96		
		1966 ft. 1/2"x10" Comm. Pld. Pine @ \$17.00	33.42		
		Invoice Total	49.35	91.47	
	787	John G. Tait & Co., Newark & N.Y. 7 Rolls "C" Carbonized Felt \$1.75 (Sells Carbonized Slating Felt) 15# Tin Caps @ .08 15# Nails @ .06	12.25 1.20 .90		
				14.35	
Dec. 31	104	Total Material for Dec. 1892			154.04
Dec. 31	105	Credit " " " "			Cr. -5.85
Dec. 31	108	Total Labor " " "			212.46

<u>1893</u>	<u>Journal</u> <u>Page</u>	<u>Voucher</u> <u>No.</u>		<u>Amount</u>	<u>Voucher</u> <u>Total</u>	<u>Total to</u> <u>Ledger Pg. 342</u>
Jan. 12		7	Burton & Conover, Lumber, Orange 290 ft. ½ Pine assd \$27.00 Carting	7.83 .25	8.08	
Jan. 4		23	Edison Phonograph Works Forging bolts as per verbal instructions of your Mr. J. Ott Labor 24-¼ hrs. @ .90	21.83		
Jan. 24			Forging Bolts per verbal order Labor B&H 8-½ hrs.	7.65	29.48	
Jan. 30		34	Holbrook Brothers 1 Ruby (glass) 11-¼"x20-¾"	.50	.50	
Jan. 12		36	Howarth Bros. 6-½ lbs. Stove Pipe .10 2 elbows .20	.65 .40	1.05	
Jan. 23		42	John N. Lindsley 4 Sash Bolts	.20	.20	

<u>1893</u>	<u>Journal Page</u>	<u>Voucher No.</u>		<u>Amount</u>	<u>Voucher Total</u>	<u>Total to Ledger Pg. 342</u>
Jan. 3		64	Swain & Jones, Lumber, Newark 349 ft. 5/8x10 Pine Pld @ \$17.00	5.93		
			2-6x12-15 = 180 Yel Pine @ 3-1/4"	5.85		
			3-6x10-15' = 225 ft.			
			4-4x10-10' = 133 ft.			
			1-4x10-16' = 53 ft.			
			Spruce 411 ft. \$22.25	9.15		
			1-3x4-14' = 14 ft.			
			Spruce @ \$20.25	.28		
					21.21	
Rec'd Jan. 18		66	John G. Tait & Co. 4 Rolls "C" Carbonized Stringed Felt			
			300 ft. to Roll @ \$1.75	7.00		
			12" Tin Caps .08	.96		
			15" Barbed Roofing			
			Nails .06	.90		
					8.86	
Jan. 31	117		Petty Cash for Jan. 1893			.10
Jan. 31	119		Total Material for Jan. 1893			69.38
Jan. 31	121		Total Labor for Jan. 1893			148.77
. 17		81	Colt's Express 1/17/93 4 rolls, 1 bag	1.00		
					1.00	
Feb. 28	130		Total Material for Feb. 1893			1.00
Feb. 28	133		Total Labor for Feb. 1893			6.77

<u>1893</u>	<u>Journal</u> <u>Page</u>	<u>Voucher</u> <u>No.</u>		<u>Amount</u>	<u>Voucher</u> <u>Total</u>	<u>Total to</u> <u>Ledger Pg. 342</u>
Dec. 14 (1892)		259	Bell & Conover 1 Bbl. Alsens Cartage	3.25 .50	3.75	
Mar. 31	140		Total Material for Mar. 1893			3.75
Apr. 27		259	New York Roofing Co., To roofing "Black Maria" at Laboratory, Orange, N.J. 8x18 = 144 ft. @ 4-½ 8x14½ = 116 ft. @ 3	6.48 3.48	9.96	
Apr. 30	152		Total Material for Apr. 1893			9.96
Apr. 30	155		" Labor for " "			8.70
May 12		313	John N. Lindsley 1 Wall Brush	1.00	1.00	
May 31	162		Total Petty Cash for May 1893			.10
" "	163		" Material " " "			1.00
" "	166		" Labor " " "			27.29
						637.67
			Total Material	233.28	233.28	
			Total Labor		403.99	
			" Petty Cash		.40	
						637.67

Photocopy of Invoice of

April 27, 1893
(See Voucher #259)

Earliest Known Use of the Name

"Black Maria"

E. H. KIDDER, PRESIDENT.
M. F. WYMAN, Vice President.
H. G. HOMER, SECRETARY.

—*TELEPHONE NO. 678.*—

ESTABLISHED 1860.
INCORPORATED 1873

Newark, N. J., Apr. 17 1893
Mr. W. A. Edison

WHOLESALE DEALERS IN

Roofing x Materials,

Two and Three-Ply Roofing Felt,

Sackett's Water-Proof Sheeting,
Building Paper, Foundry
Facings, &c.

CHAS. L. PITTS, TREASURER AND GEN'L MANAGER.
JOHN CONDON, SUPERINTENDENT,
W. W. SCHOUER, SALES AGENT.

To New York Roofing Co., Dr.

—GENERAL ROOFING—

Water Tight Floors, Vault, Covering, Insulating Stone Paving and Brick Walls.

ESSEX ARTIFICIAL STONE FOR PAVING WALKS, DRIVEWAYS, FLOORS, CELLARS, &c.

WOODBIDGE FOUNDRY FACING MILLS.

Office and Storehouse, 15 to 19 Division St. opp. M. & E. R. R. Depot.

To roofing "Plato Maria" at Laboratory
Orange, N.J.

8 x 18 = 144 ft.

8 x 14 1/2 = 116 "

@ 4/8

6 48

" 2 "

3 48

Revolving Photo. Building
Charles Whitney

9 96

Order #9815

APPENDIX III

Photographs of Original

Black Maria

Photographs Nos. 1-4

from the

Edison National Historic Site

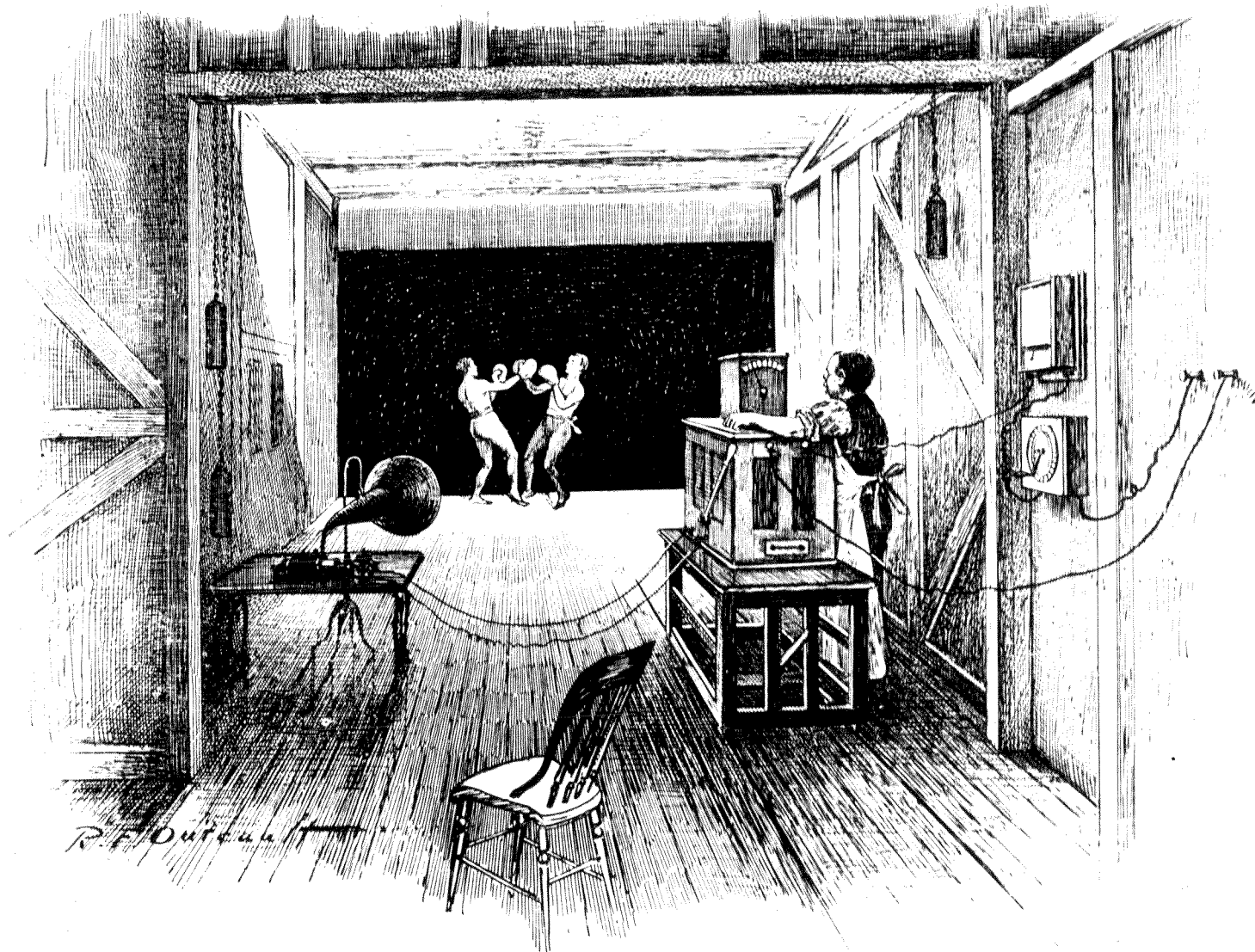
Archives

PHOTOGRAPH NO. 1

Sketch by Richard F. Outcault of
Interior of Kinetographic Theatre

Published in the Electrical World
June 16, 1894, page 801

Negative No. 6572A



INTERIOR OF KINETOGRAPHIC THEATRE.

Neg. No. 6572 A

Photo No. 1

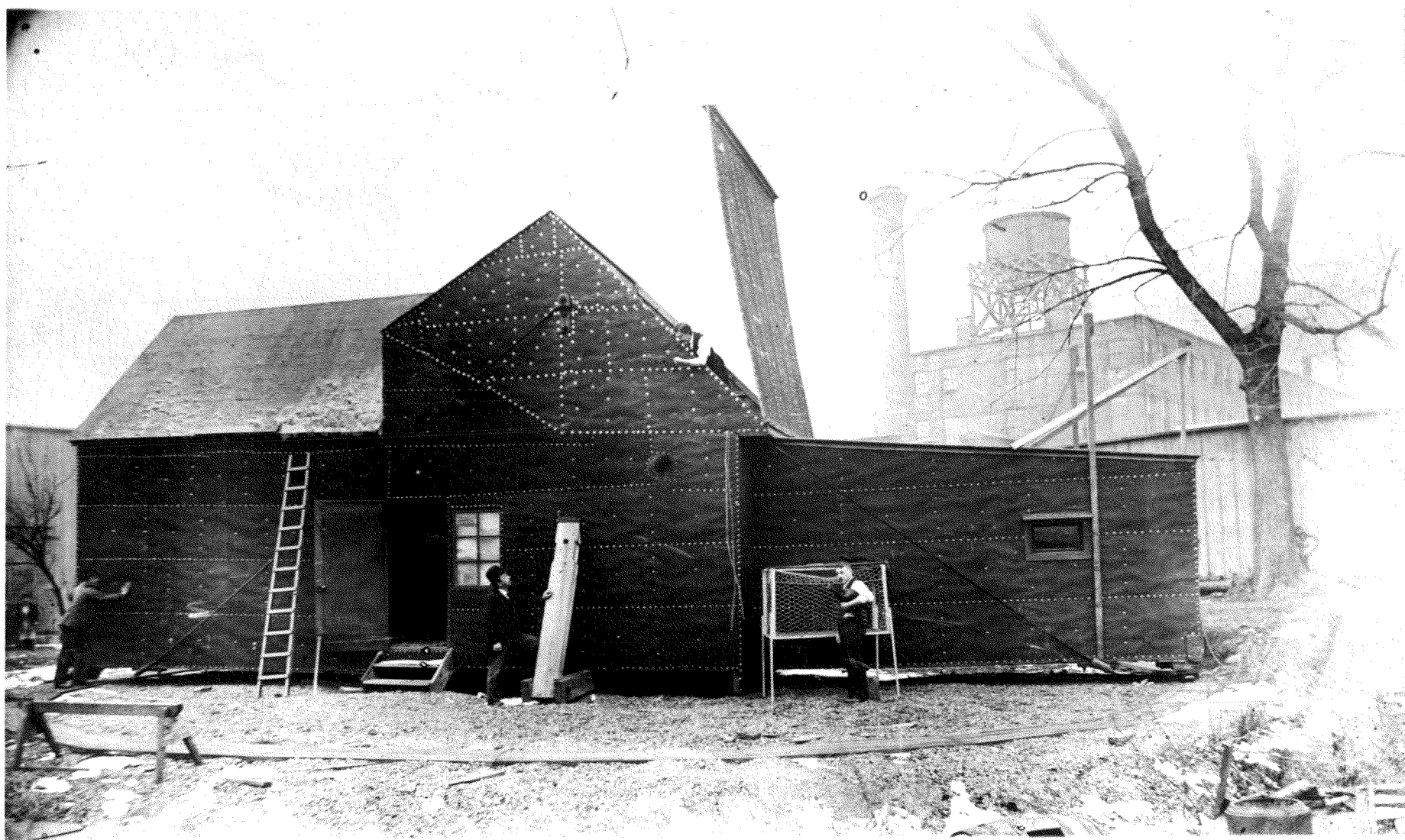
11 61 72

PHOTOGRAPH NO. 2

Earliest known photograph of the
"Black Maria," probably by W. K. L. Dickson
during the winter of 1893-94

A sketch from this photograph was published
in the Century Magazine, June 1894, and
in the Electrical World, June 16, 1894, pg. 800

Negative No. 6570



Neg. No. 6570

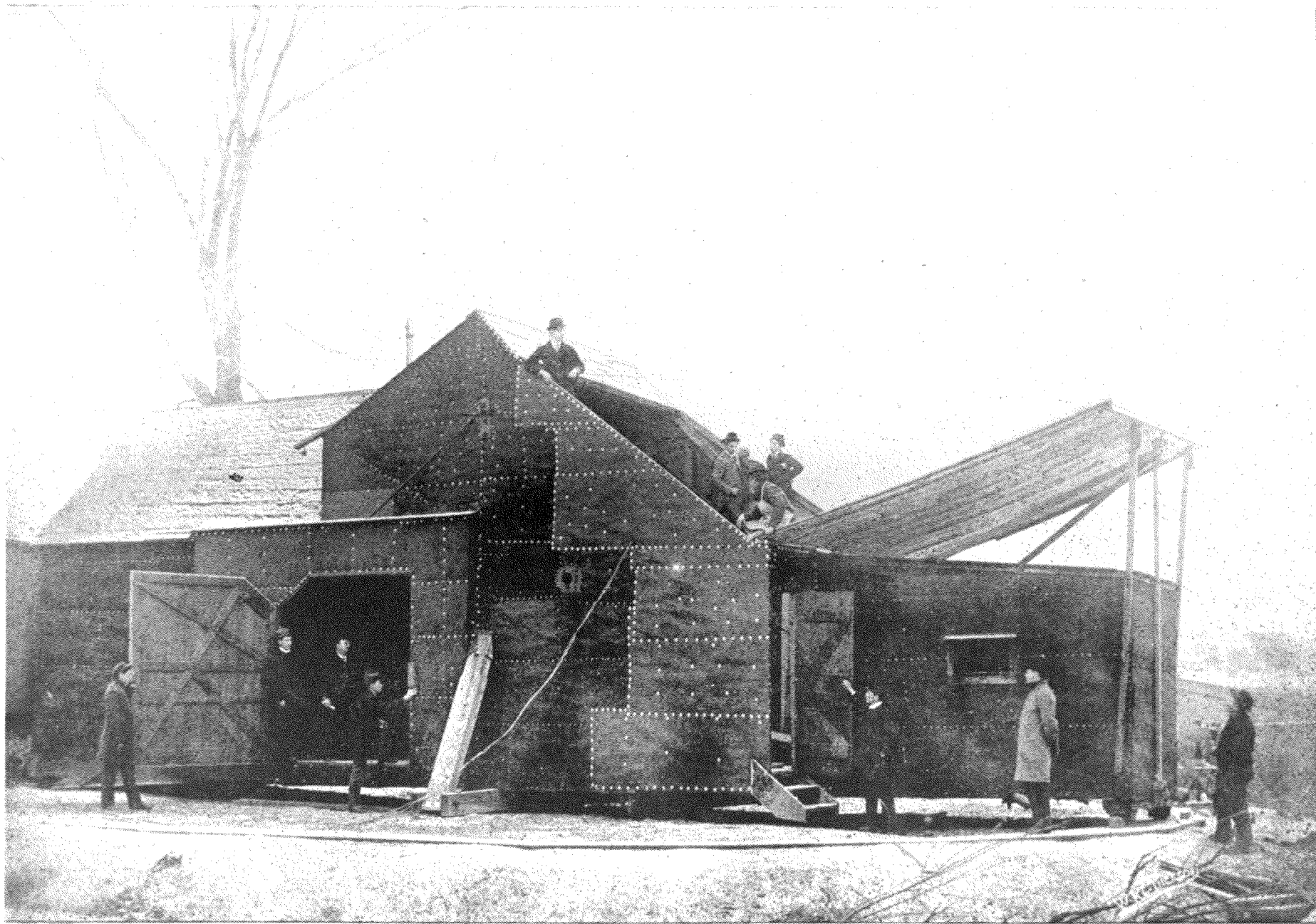
Photo No. 2

PHOTOGRAPH NO. 3

"Black Maria" as it appeared in the
winter of 1894-95

Photo by W. K. L. Dickson, from page 5,
"History of the Kinetograph, Kinetoscope and
Kinetophonograph," by W. K. L. Dickson and
Antonia Dickson, 1895, Albert Bunn, New York

Negative No. 6543



THE KINETOGRAPHIC THEATRE AT EDISON'S LABORATORY.

Neg No. 6543

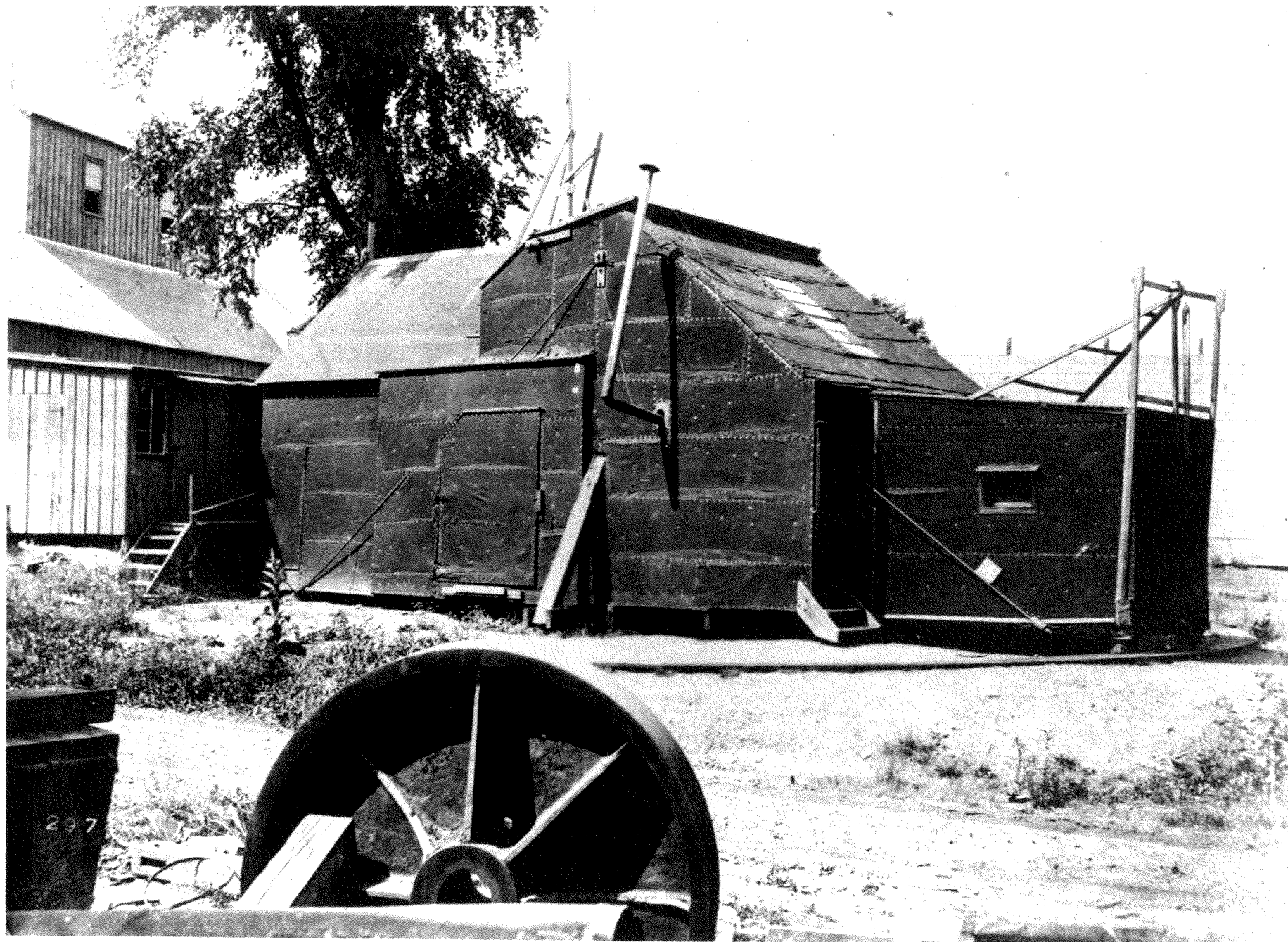
Photo No. 3

PHOTOGRAPH NO. 4

"Black Maria" as it appeared
shortly before it was torn down

Probably taken by William L. Jamison
summer of 1903

Negative No. 2974B



Neg. No. 2974 B

Photo No. 4

APPENDIX IV

Photographs of and
Drawings for
Reconstructions of the

"Black Maria"

Photographs Nos. 5 to 9

PHOTOGRAPH NO. 5

Reconstruction of "Black Maria"
for
Premiere of M-G-M movie

"Edison the Man"

May 15, 1940

Photo by Joseph S. Wheelan

Negative No. 6285



Neg. No. 6285
GZ 85

Photo No. 3
Photo No. 5

PHOTOGRAPH NO. 6

Drawing of
Side Elevation of "Black Maria"

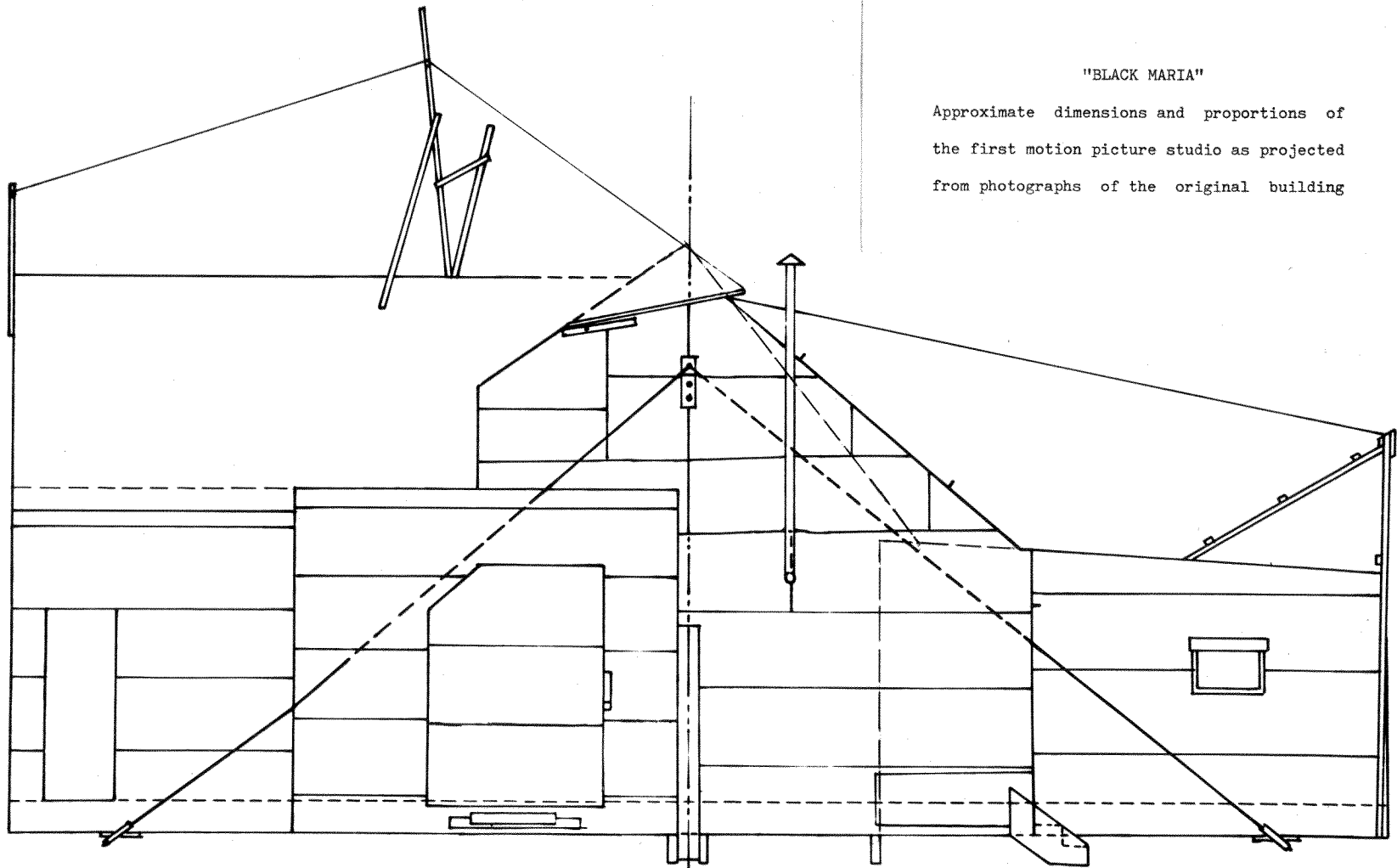
Projected from Photographs
Nos. 3 & 4

by N. R. Speiden
Sept. 29, 1952

Negative No. 6929-1

"BLACK MARIA"

Approximate dimensions and proportions of
the first motion picture studio as projected
from photographs of the original building



SCALE IN FEET

Neg. No. 6929-1

Photo No. 6

Neg 6929-1

PHOTOGRAPH NO. 7

Drawing of
End Elevations of "Black Maria"

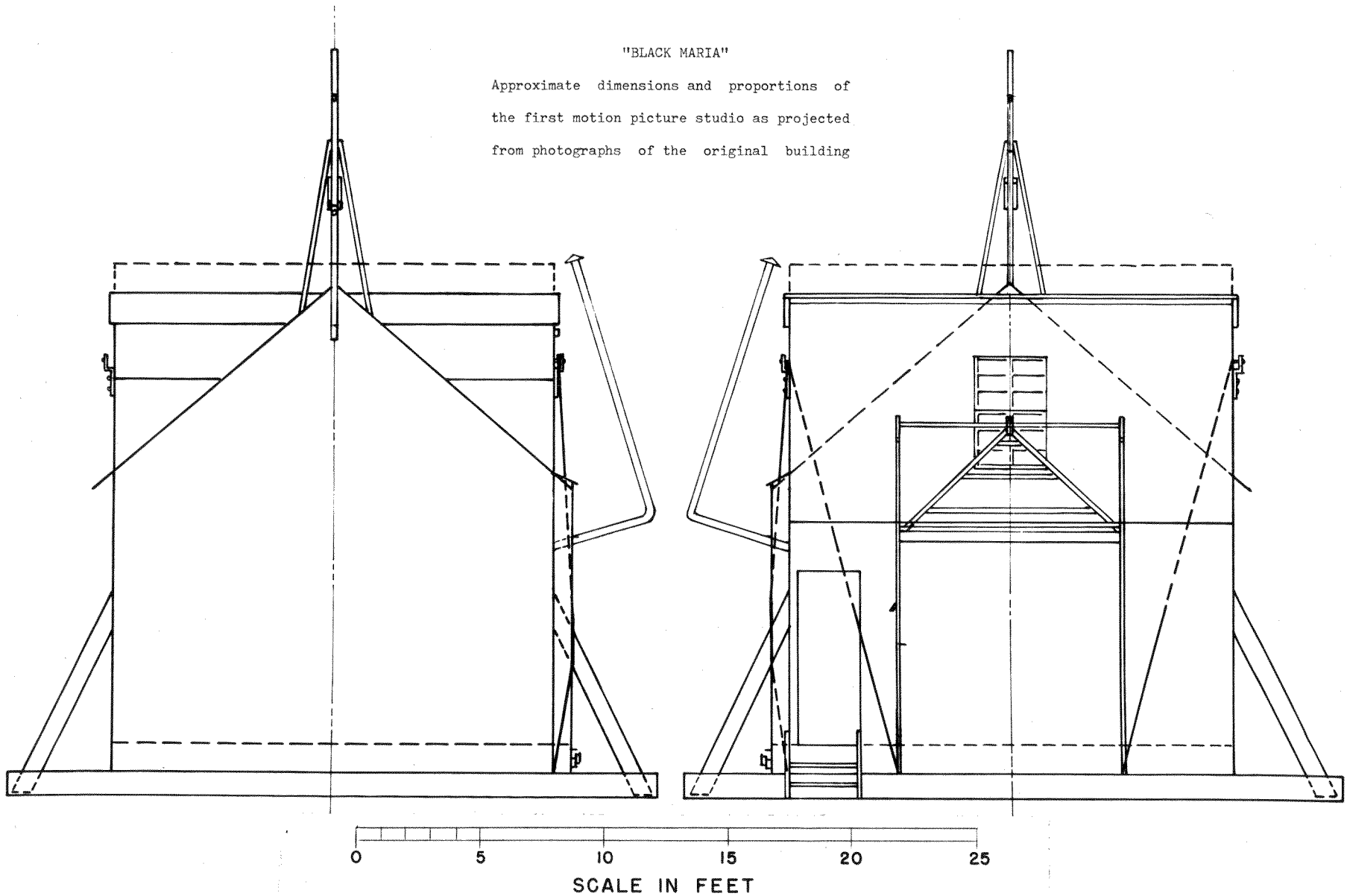
Projected from Photographs
Nos. 3 & 4

by N. R. Speiden
Sept. 29, 1952

Negative No. 6929-2

"BLACK MARIA"

Approximate dimensions and proportions of
the first motion picture studio as projected
from photographs of the original building



Neg. No. 6929-2

Photo No. 7

Neg 6929-2

PHOTOGRAPH NO. 8

Drawing of
Floor Plan of "Black Maria"

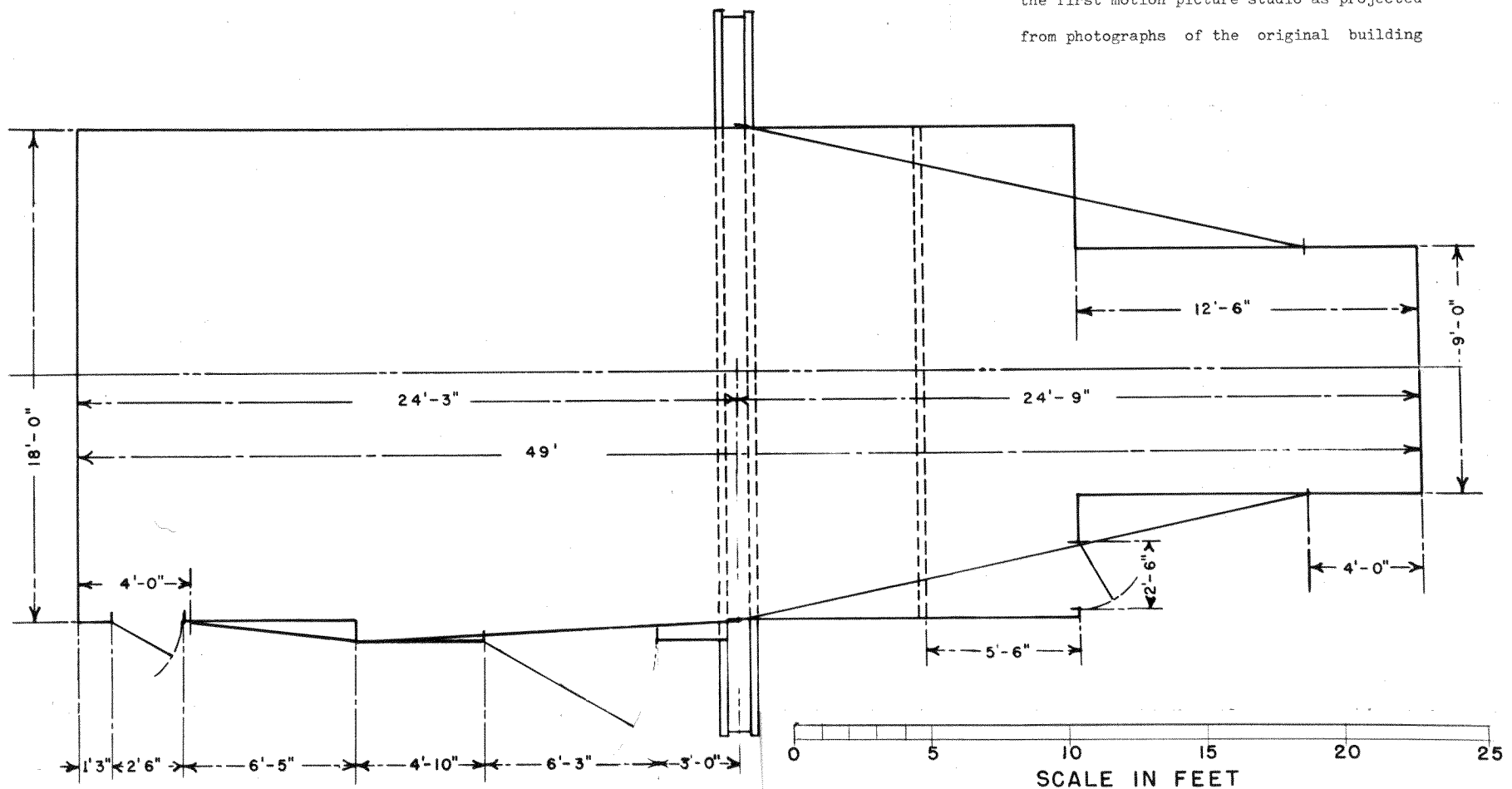
Projected from Photographs
Nos. 3 & 4

by N. R. Speiden
Sept. 29, 1952

Negative No. 6929-3

"BLACK MARIA"

Approximate dimensions and proportions of
the first motion picture studio as projected
from photographs of the original building



Neg. No. 6929-3

Photo No. 8

Neg 6929-3

PHOTOGRAPH NO. 9

Building No. 13
Edison National Historic Site

Reconstruction of the "Black Maria"
World's First Motion Picture Studio
built for the
Thomas Alva Edison Foundation
from plans by
Frank Grad & Sons, Architects, Newark, N. J.
August Ramsland, Builder

Photo taken at time of Dedication Ceremony
September 22, 1954

Negative No. 6647
(Copy of Neg. O-944)



Neg. No. 6647

Photo No. 9

APPENDIX V

Location of the Original
"Black Maria"

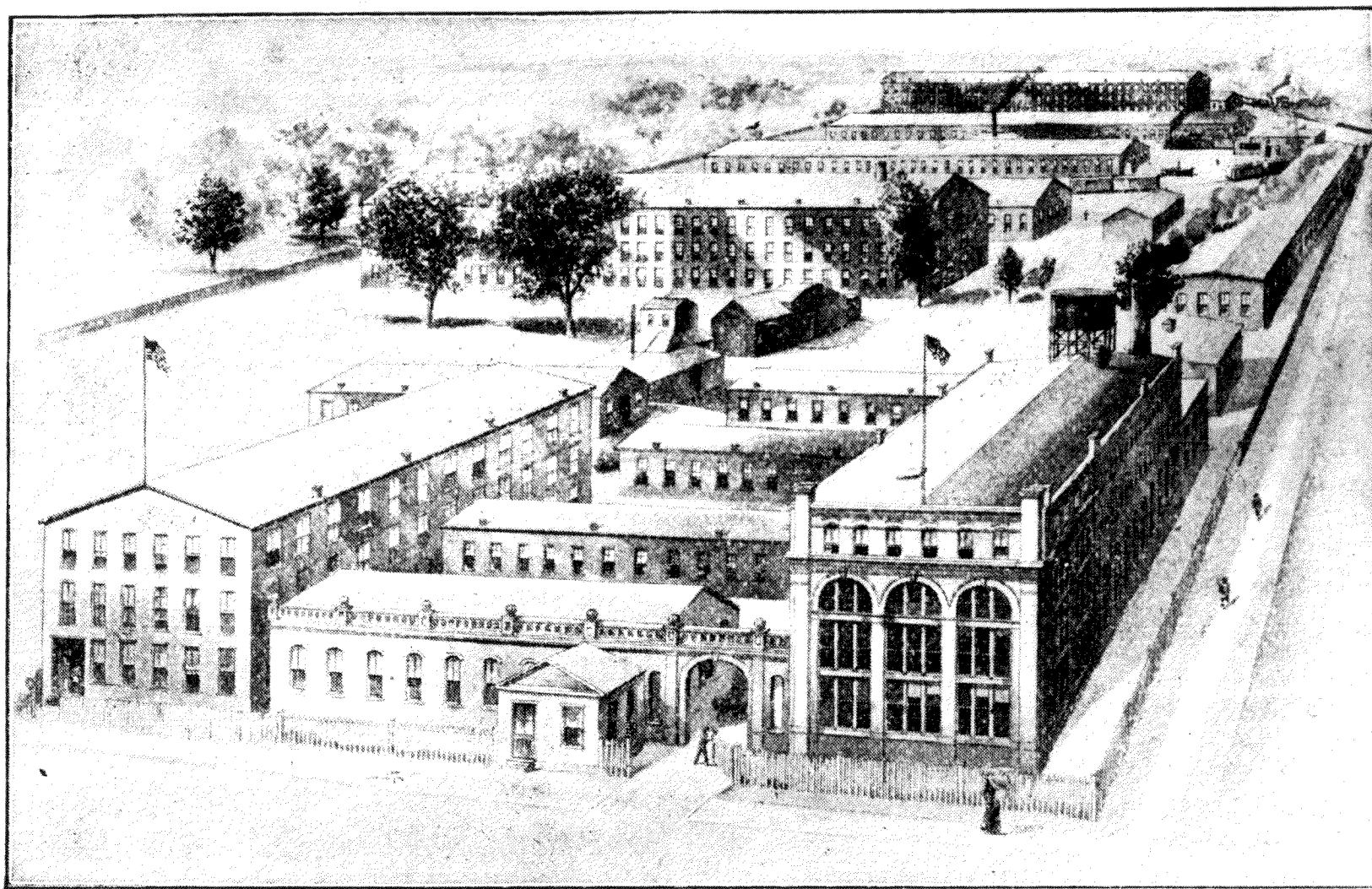
Photographs Nos. 10 & 11

PHOTOGRAPH NO. 10

Aerial Drawing of
Edison Laboratory and
Works of the National Phonograph Co.,
Orange, N. J.

Copied from Edison Phonograph Monthly
May 1903, page 14

Negative No. 6630



Edison Laboratory and Works of the National Phonograph Co., Orange, N J.

Neg. No. 6630

Photo No. 10

6630

PHOTOGRAPH NO. 11

Drawing showing location of
The Original "Black Maria"
by projection from

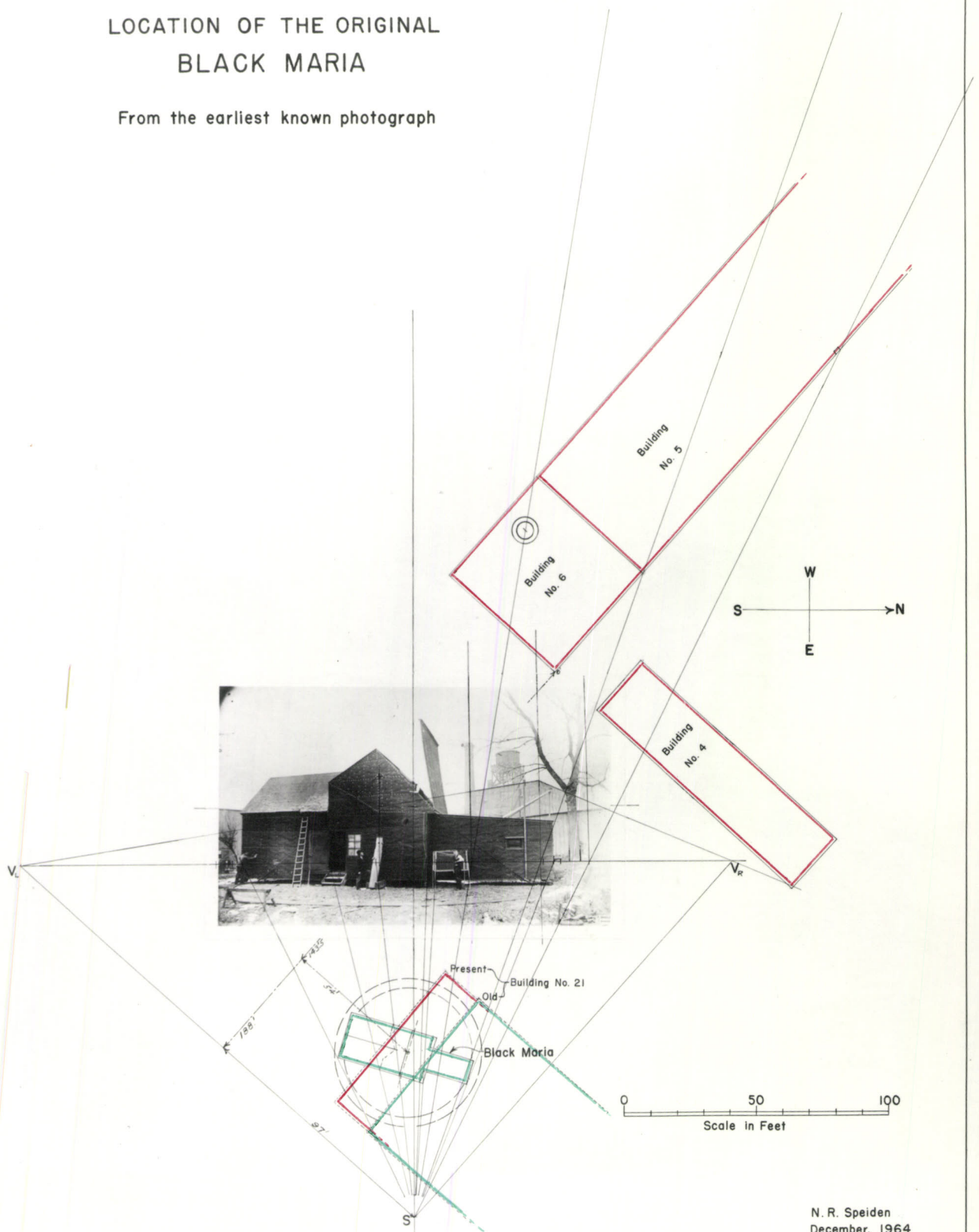
The earliest known photograph
(Photograph No. 2)
(Neg. No. 6570)

Drawn by Norman R. Speiden
December, 1964

Negative No. 6920

LOCATION OF THE ORIGINAL BLACK MARIA

From the earliest known photograph



Neg. No. 6920

Photo No. 11

HISTORIC STRUCTURES REPORT

PART I

ARCHITECTURAL DATA SECTION

ON

"BLACK MARIA"

Edison National Historic Site

Prepared by
Norman M. Souder
Architect
August 1964

for

United States Department of the Interior, National Park Service
Eastern Office, Design and Construction
Division of Architecture

HISTORIC STRUCTURES REPORT

PART I

ARCHITECTURAL DATA SECTION

ON

"BLACK MARIA"

Edison National Historic Site

A P P R O V A L S H E E T

RECOMMENDED

Superintendent

Date _____

Eugene F. Whittle

Chief, EODC, Acting

Date 8/24/64

Regional Director, Northeast Region

Date _____

APPROVED

Director

Date _____

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I. FOREWORD

The "Black Maria" is the name given to the first motion picture studio. The present "Black Maria," a replica of the Edison structure was erected in 1954 near the main street front of the Edison Laboratories. The original building, situated in the middle of the laboratory complex, was begun in December 1892 and the first movie was started there on February 1, 1893.

It is unlike any other building. It does not belong to an architectural period or order. The studio as designed by Edison was purely functional and no effort was made to dress it up.

The "Black Maria" derived its name from the black tar paper which covered the walls and roof. It was unique in that it pivoted to follow the sun, which was the strongest light available at that time for the making of motion pictures. A roof section was arranged on a system of pulleys which opened to illuminate the interior.

The present "Black Maria" functions as a theater for showing Edison's life and early films to tour groups visiting the Park.

Deterioration of the sheathing is evident. Repairs

to the building are indicated.

Acknowledgement is given for the cooperation of
Superintendent Weig and the Park staff and of Exhibits
Specialist Gordie Whittington.

Norman M. Souder
Architect
August 1964

II. EXISTING CONDITIONS - EXTERIOR

A. General Description

The "Black Maria" is a one story frame structure, balanced on a pivot to permit it to be turned to follow the sun. The extreme corners of the building are fitted with iron dolly wheels which run on a circular wood plank track. The central pivot is constructed of steel and concrete.

B. Walls and Roof

The walls are constructed of diagonal sheathing, covered with black roofing paper. The paper was applied with roofing nails and metal caps. The roof is similarly constructed.

The long slope of the roof, opposite the stage end of the building, is constructed as a huge door which opens and closes by a system of exposed weights and pulleys. In the present use of the building the large roof door has been fixed in the closed position.

C. Doors

The doors on either side of the building are sliding doors, covered on the exterior with the same black roofing paper as the walls and roof.

The smaller door to the "Black Maria" is a board and batten type.

D. Steps

The steps to each of the three doors are simple plank treads on plank carriages. The original steps had to be removable in order to allow the building to rotate on the track.

E. Windows

The only two windows in the building are single small three light, top hinged sash, on opposite sides of the flat roof wing of the building.

F. Smoke Stack

A slender tin smoke pipe extends out of the side wall of the building and extends above the roof at an angle.

The original building was heated by a stove. The present heating system is a series of electric heaters located on the underside of the roof.

G. Track

The large circular track on which the building was turned is three planks wide and laid in short sections on plank ties to form the circle.

ILLUSTRATION NO. 1

The replica of the original "Black Maria," the world's first motion picture studio. Note the wood plank tracks upon which this unusual building turned. The original siding was black tar paper applied as shown in the photograph.

Photo: Unknown

Copy Neg. No. EODC 4863

