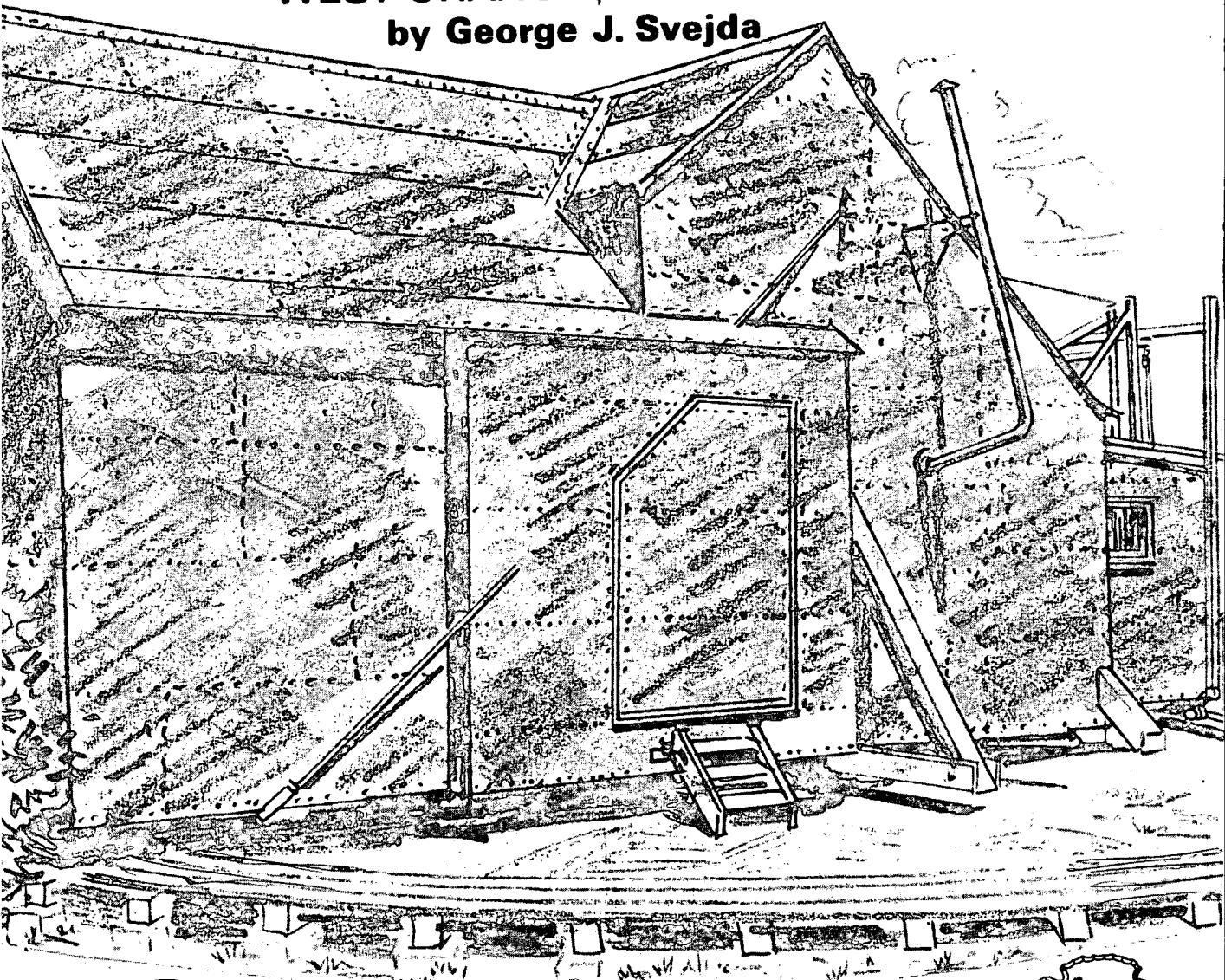


403/D-50

# THE "BLACK MARIA" SITE STUDY Edison National Historic Site

WEST ORANGE, NEW JERSEY

by George J. Svejda



U.S. DEPARTMENT OF THE INTERIOR

DIVISION OF HISTORY

Office Of Archeology And Historic Preservation

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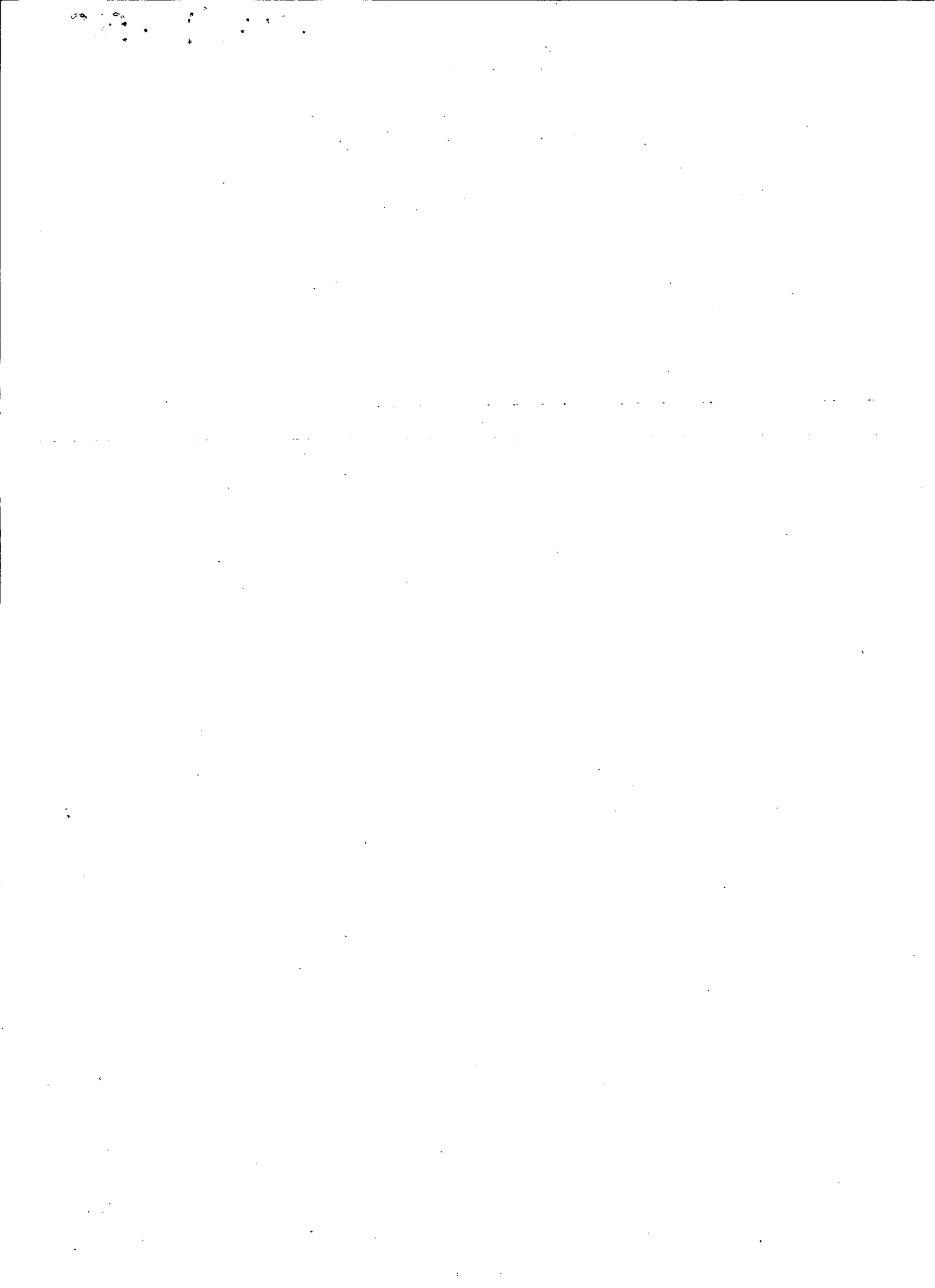
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403/D50

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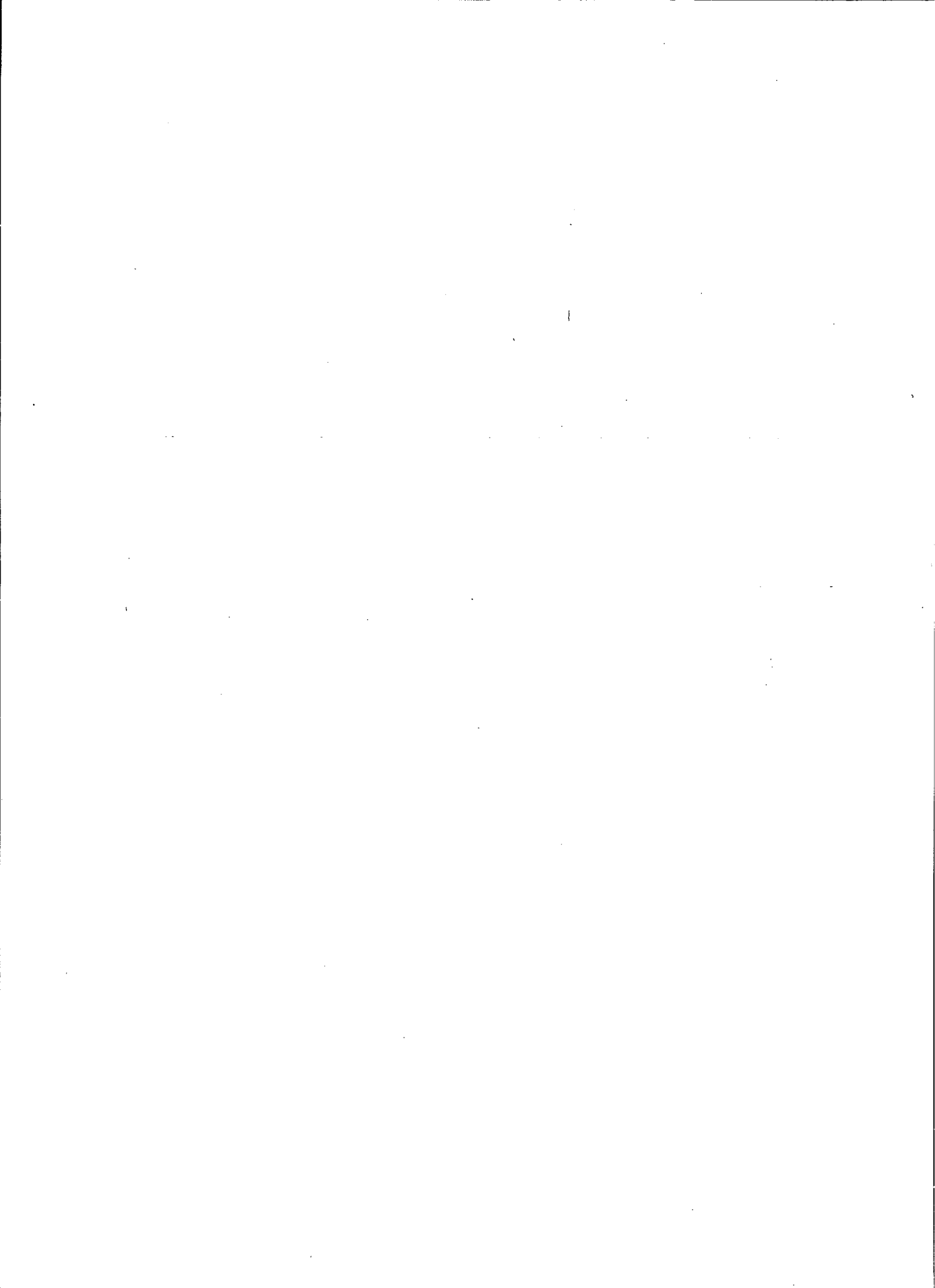
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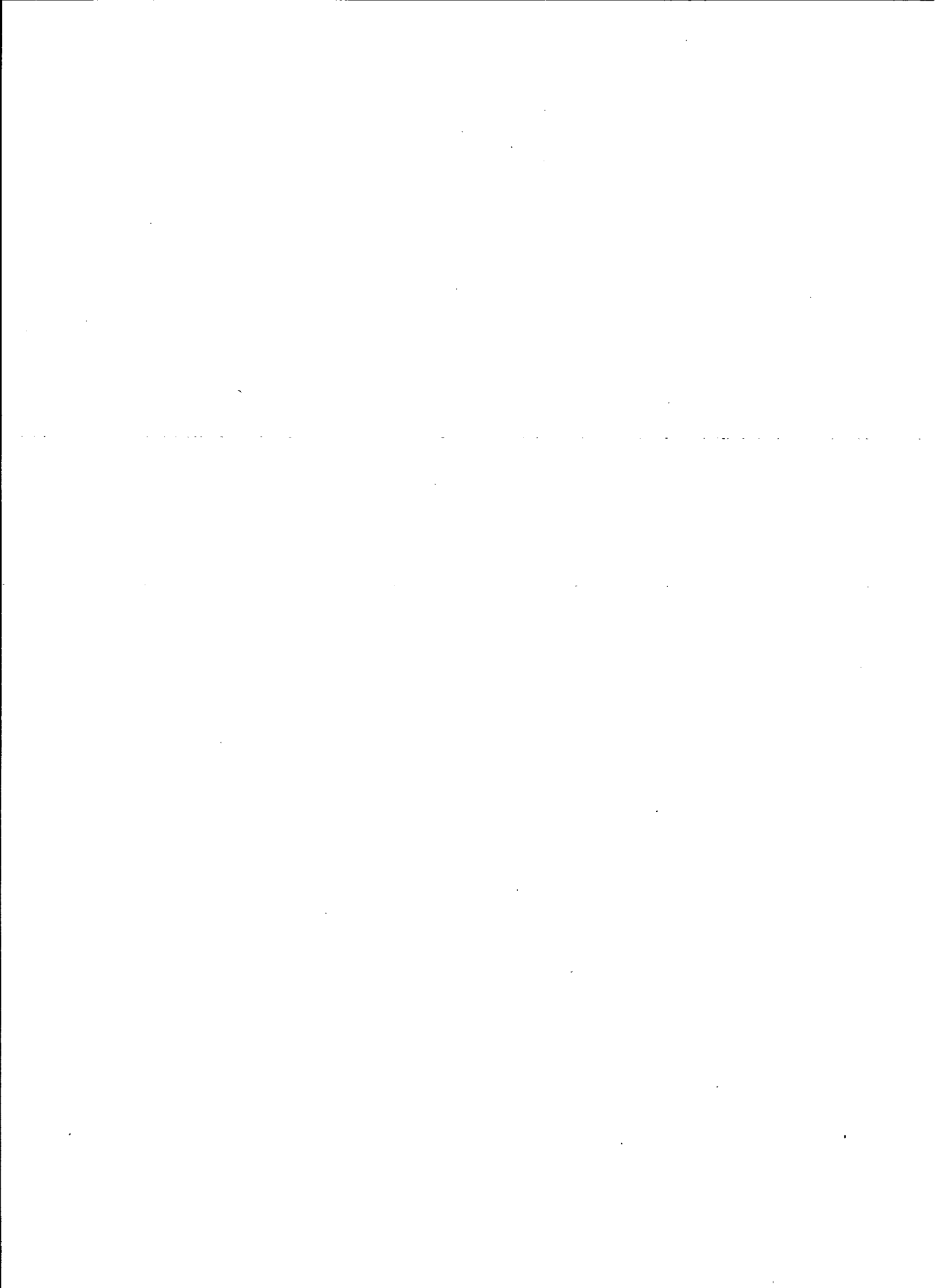
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## INTRODUCTION

This Site Location Study of the "Black Maria," Building No. 13, H-20, Edison National Historic Site, discusses the reasons for the construction of the first original motion picture studio, its physical description, its location, the building of a replica, and finally a proposition for a new location for this replica. The writer is grateful to Superintendent Melvin J. Weig, Supervisory Museum Curator Norman R. Speiden, Museum Curator Harold S. Anderson and Archivist Mrs. Kathleen L. McGuirk of the Edison National Historic Site, for their fine advice and suggestions in preparing this study.

It has been said that the book is the source of knowledge; however, knowledge can also be gathered through experience, as is demonstrated by the example of Thomas A. Edison, whose vision brought him to the construction of the "Black Maria." "Where there is no vision, the people perish," states the Book of Proverbs (29:18). This ideas surely applied to the era of Thomas A. Edison, who built his motion picture studio in 1893, as it applies now to our own age, with its moon shots, social upheavals and unprecedented opportunities. We should think, pray and work in terms of the "whole world" instead of our own back yard. Mankind will then benefit now as it has from the inventions of Thomas A. Edison.





## I. EVENTS LEADING TO THE CONSTRUCTION OF THE "BLACK MARIA"

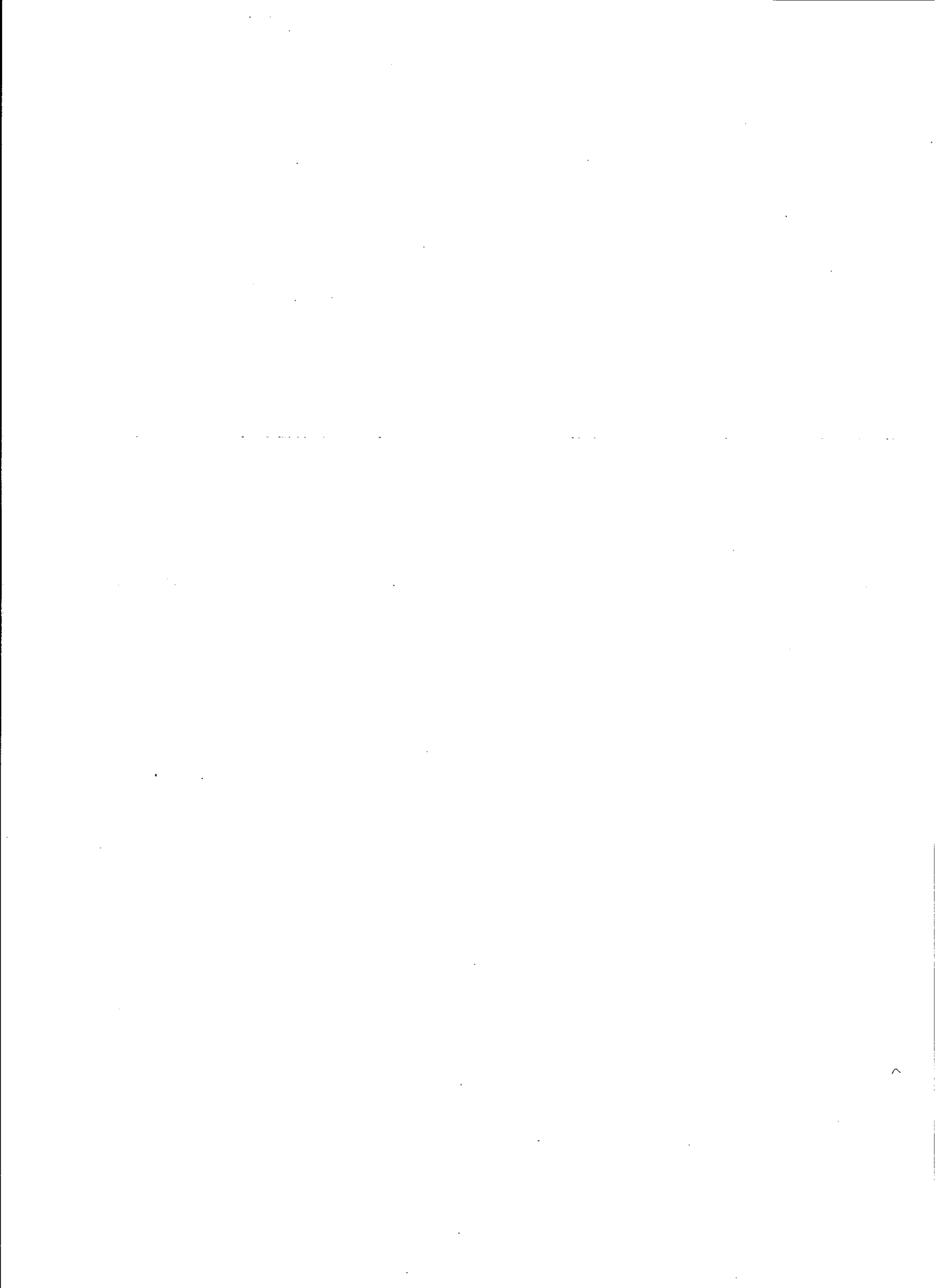
It is generally recognized that Thomas A. Edison and his associates were the first to adapt the motion picture to practical use, when the invention of the photograph by Edison in 1877 led him on to invent the motion picture camera.

The invention of the phonograph pleased Edison so much that he became interested in adding pictures to the recorded sound. It was in 1887 that the idea occurred to Mr. Edison for joining the phonograph with an animated picture device. Knowing that his assistant, W.K. Laurie Dickson, had a special interest in photography, Mr. Edison disclosed his scheme to Dickson.<sup>1</sup> This was during the time when Mr. Edison was erecting his laboratory in West Orange, New Jersey.

In 1887 Edison set Dickson at the task of making motion pictures on what was almost a phonograph cylinder. The appearance of this apparatus has been described in the following terms: "A little drum was coated with photographic emulsion and was put to recording motion under a tiny camera just as the phonographic cylinder coated with

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1. W.K. Laurie Dickson, "A Brief History of the Kinetograph, the Kinetoscope and the Kinetophone," Journal of the Society of Motion Picture Engineers, Vol. 21, No. 6 (December, 1933), p. 437. A letter in Mr. Edison's own handwriting describing his scheme was reproduced in an article written by A. and W.K.L. Dickson, "Edison's Invention of the Kinetophone," The Century Illustrated Monthly Magazine, Vol. 48, No. 2 (June, 1894), p. 206. The letter also appeared in W.K.L. Dickson and Antonia Dickson, History of the Kinetograph, and Kinetophone. (New York: Albert Bunn, 1895), p. 3.



wax records sound under a diaphragm controlled needle."<sup>2</sup>

Shortly afterward Dickson found that, in order to register pictures on the emulsion, the cylinder had to be stopped intermittently. "In time Edison and Dickson contrived to get a cylinder picture-recording camera that did start and stop forty-eight times a second. The little pictures on the cylinders were hardly as large as the end of a dance program lead pencil. They were photographed in spirals around the cylinder, just like the spiral sound wave records of the phonograph."<sup>3</sup>

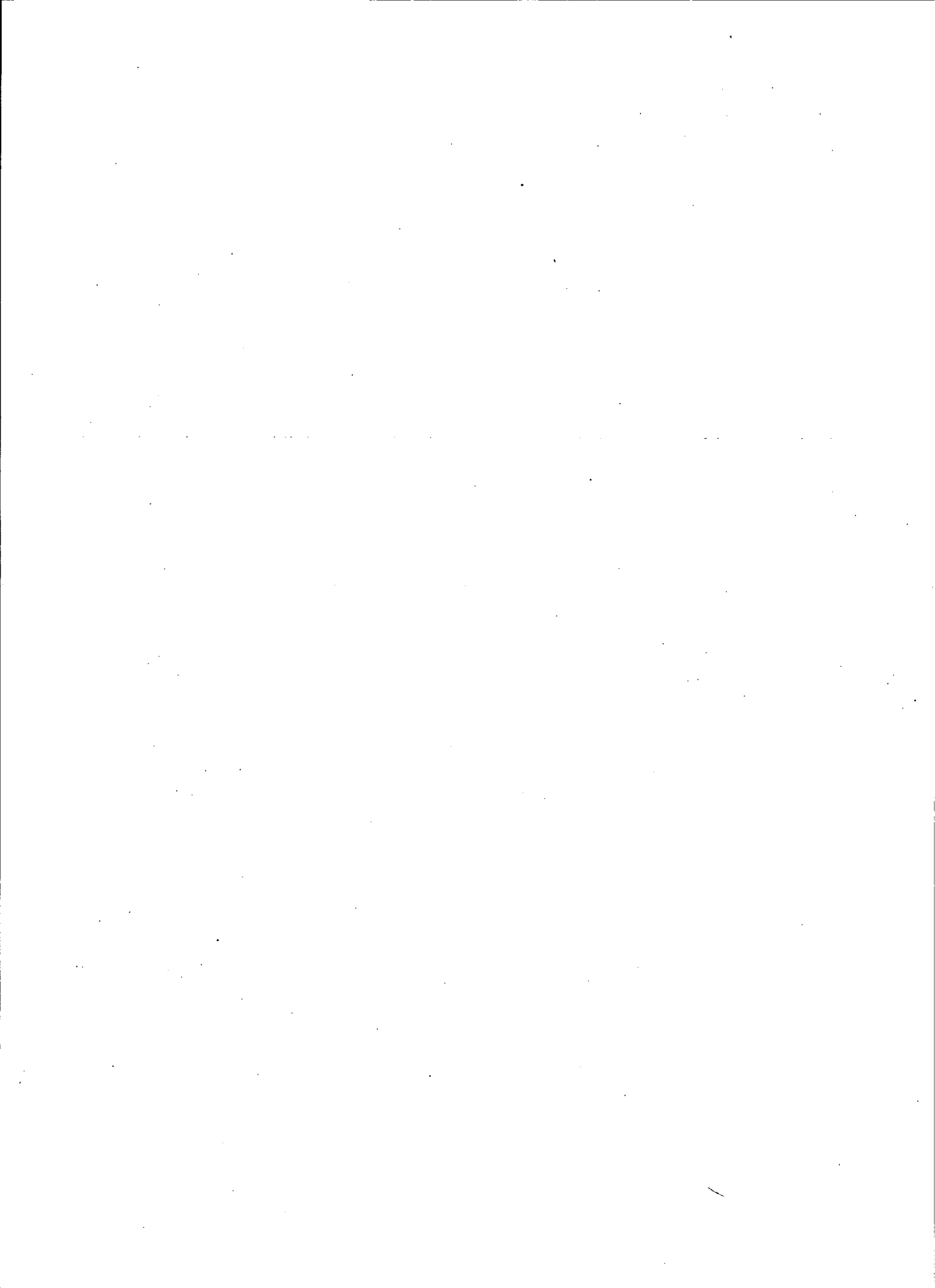
This little motion picture camera, which became the ancestor of all motion picture machines, had many drawbacks, of which perhaps the most important was that a reel could not be reversed, and this fact led Edison to discard it. The situation changed in 1889 when George Eastman sold Edison some of his very first photographic film. Edison, Dickson and their associates immediately resumed their work on the synchronization of the Edison phonograph and kinetograph.<sup>4</sup> During this time Edison on August 3, 1889, left New York on the steamer La Champagne for the Paris Exposition and other places in

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2. Terry Ramsaye, A Million and One Nights. A History of the Motion Picture. (New York: Simon and Schuster, 1964), p. 55.

3. Ibid., p. 56.

4. The word kinetograph or more correctly kinematograph is derived from the Greek kinema, meaning motion, and grapho, meaning to write or describe.



Europe, returning on Sunday morning, October 6, 1889.<sup>5</sup> During the absence of Mr. Edison his principal assistant, Charles Batchelor, was left in charge of the Edison laboratory. It was during this time that Dickson persuaded Mr. Batchelor to erect a special photographic building, which was completed in September of 1889 at a cost of \$516.64.<sup>6</sup> It was also during the absence of Mr. Edison that the Edison motion picture camera, called then the kinetograph, was perfected and shown to Mr. Edison by Dickson on Sunday morning, October 6, 1889, upon Mr. Edison's return from Europe. With this new camera there was connected a device called the kinetoscope, with which to watch the film.<sup>7</sup>

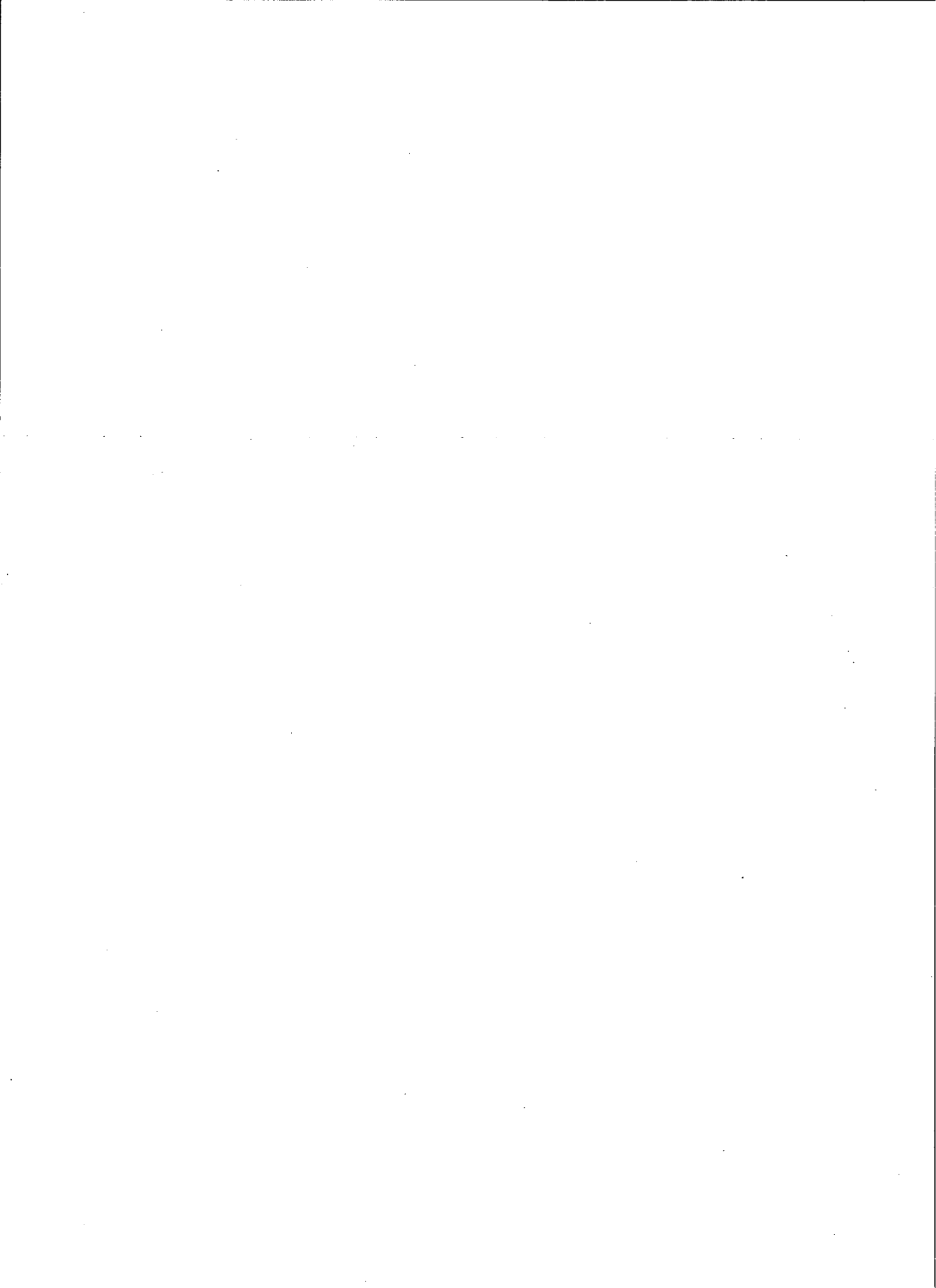
The history of the beginning of the motion picture has been given by Mr. Edison himself. In describing what was to be the first motion picture studio in the world, Mr. Edison also described the circumstances which led to its erection. According to him, "It was in 1890 that we decided that we were far enough advanced in our plan for the development of animated photography to warrant a special building for our work, but it was such an ungainly looking structure when it

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5. For the dates re Mr. Edison's departure for and return from Paris see the legal testimony of Mr. Norman C. Raff in the United States Circuit Court, Southern District of New York, Thomas A. Edison vs. American Mutoscope Company and Benjamin F. Keith. In Equity No. 6928 on Letters Patent No. 589, 168, Complainant's Record. (New York: C.G. Burgoyne, n.d. ), p. 194. Hereinafter cited as Complainant's Record.

6. Ramsaye, op. cit., p. 65.

7. Dickson, "A Brief History of the Kinetograph, the Kinetoscope, and the Kineto-Phonograph," pp. 447-450.



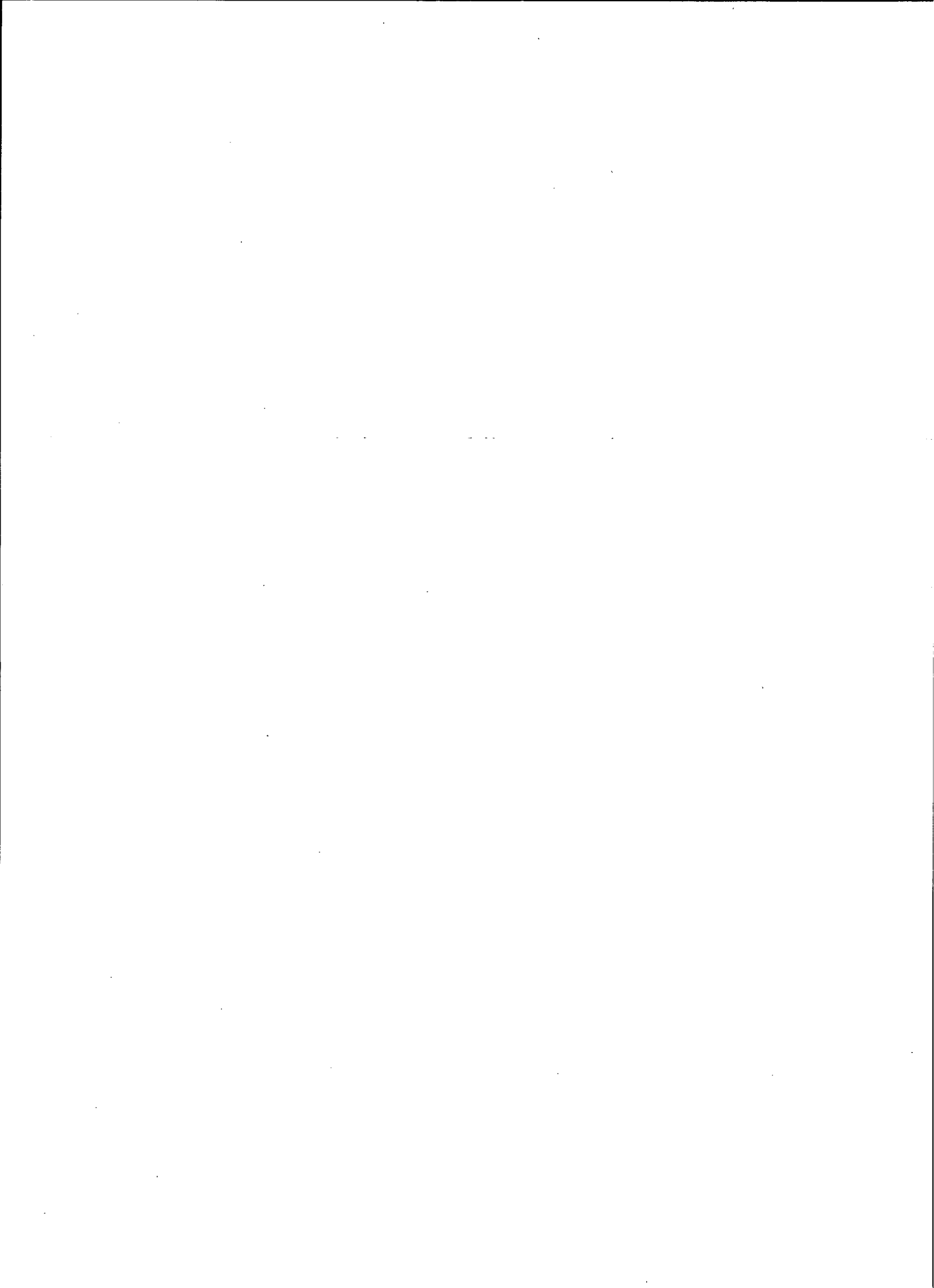
was done, and the boys had so much sport with it, that we called it 'The Black Maria'""<sup>8</sup>

By this time the photographic building erected in September of 1889 had become quite inadequate for the realization of Edison's plan. Dickson, with his sister Antonia, in a pamphlet published in 1895, explained the circumstances which brought about the construction of the "Black Maria" as follows: "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 of the most superficial observer."<sup>9</sup>

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8. Thomas A. Edison, The Diary and Sundry Observations of Thomas Alva Edison. Edited by Dagobert D. Runes. (New York: Philosophical Library, 1948), pp. 68-69.

9. W.K.L. Dickson and Antonia Dickson, History of the Kinetograph, Kinetoscope, and Kinetophone, p. 19.





## II. BUILDING THE "BLACK MARIA"

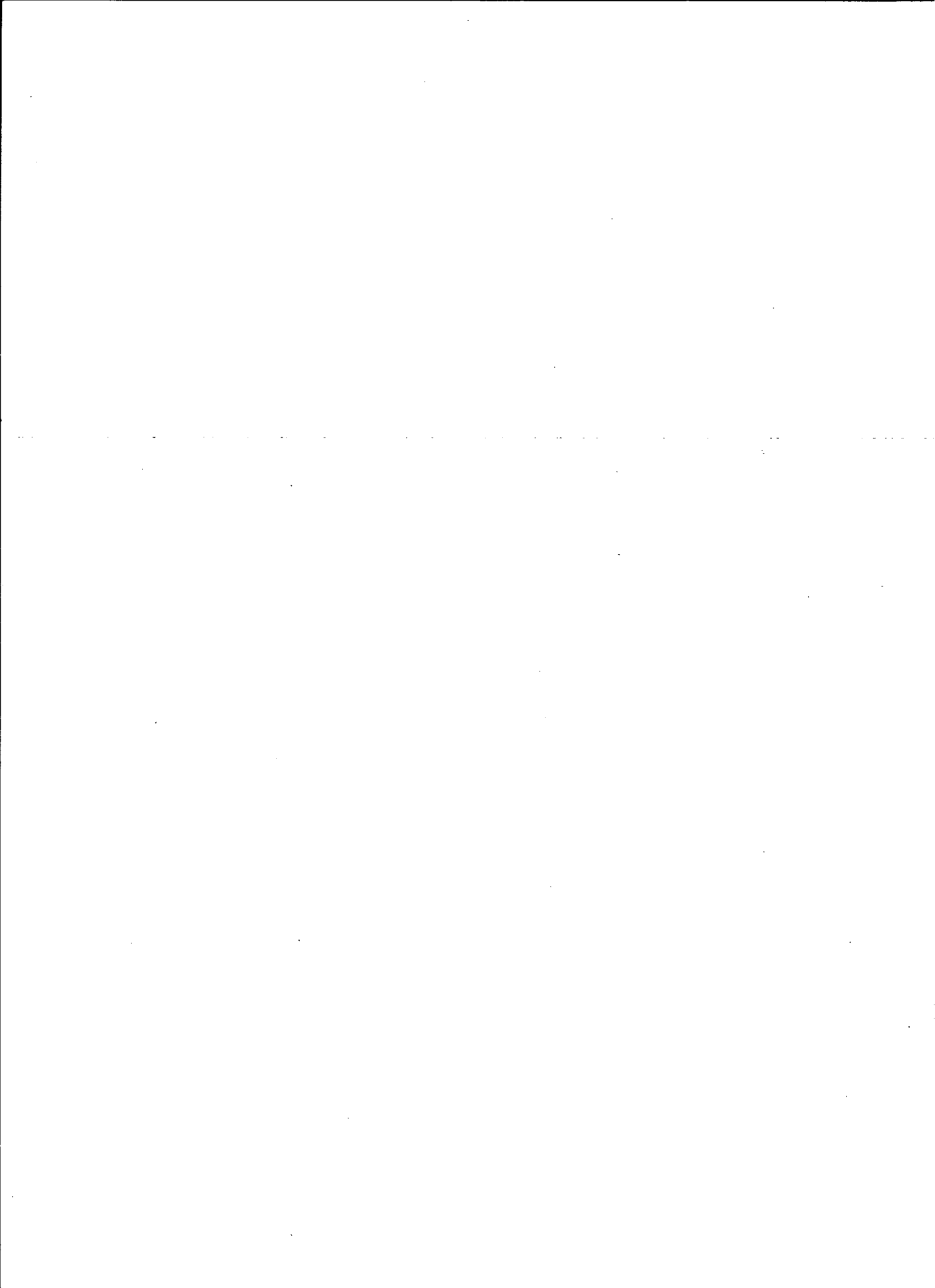
According to architect Norman M. Souder the "Black Maria" was "designed by Edison."<sup>1</sup> There is no actual proof that Edison indeed designed this first motion picture studio. As of now no drawings or notebooks related to the building of the "Black Maria" have been found. Who then designed the "Black Maria"? According to Dickson it was he who designed this first motion picture studio in 1891.<sup>2</sup> This is probably a correct statement, but we do not know to what extent Edison himself may have contributed to the design of the "Black Maria." We should remember that this first motion picture studio<sup>3</sup> was built when Edison was at the Laboratory, back from his European trip. As it was the habit of Mr. Edison to keep a close observance of everything that was happening at the Laboratory, it is perhaps fair to state that

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1. Norman M. Souder, "Historic Structures Report, Part I: Architectural Data Section on 'Black Maria' Edison National Historic Site." (Philadelphia, Pa.: U.S. Department of the Interior, National Park Service, Eastern Office, Design and Construction, Division of Architecture, August 1964), p. 1.

2. Dickson, "A Brief History of the Kinetograph, the Kinetoscope, and the Kineto-Phonograph," p. 453.

3. Gordon Hendricks in his book The Kinetoscope, America's First Commercially Successful Motion Picture Exhibitor. (Brooklyn, N. Y.: Theodore Gaus' Sons, Incorporated, 1966), on page 21 tries to prove that the "Black Maria" was not actually the first motion picture studio, but rather that the first motion picture studio was the photographic building erected in September 1889. This premise is of course not true. Neither Edison nor Dickson refer to the photographic building as a "Motion picture studio." Dickson, in his article "A Brief History of the Kinetograph, the Kinetoscope, and the Kineto-Phonograph," page 449, and also in the pamphlet which he wrote together with his sister Antonia entitled History of the Kinetograph, Kinetoscope, and Kineto-Phonograph, page 7, clearly states that the photographic building erected in September of 1889 was the "photographic studio" and not the first "motion picture studio."



the design of the "Black Maria" as well as its construction was done with Mr. Edison's participation and supervision.

Preparations for the building of this first motion picture studio were started most probably during the latter part of the summer of 1892. The studio at first was not known as the "Black Maria," but as the "Revolving Photograph Building."

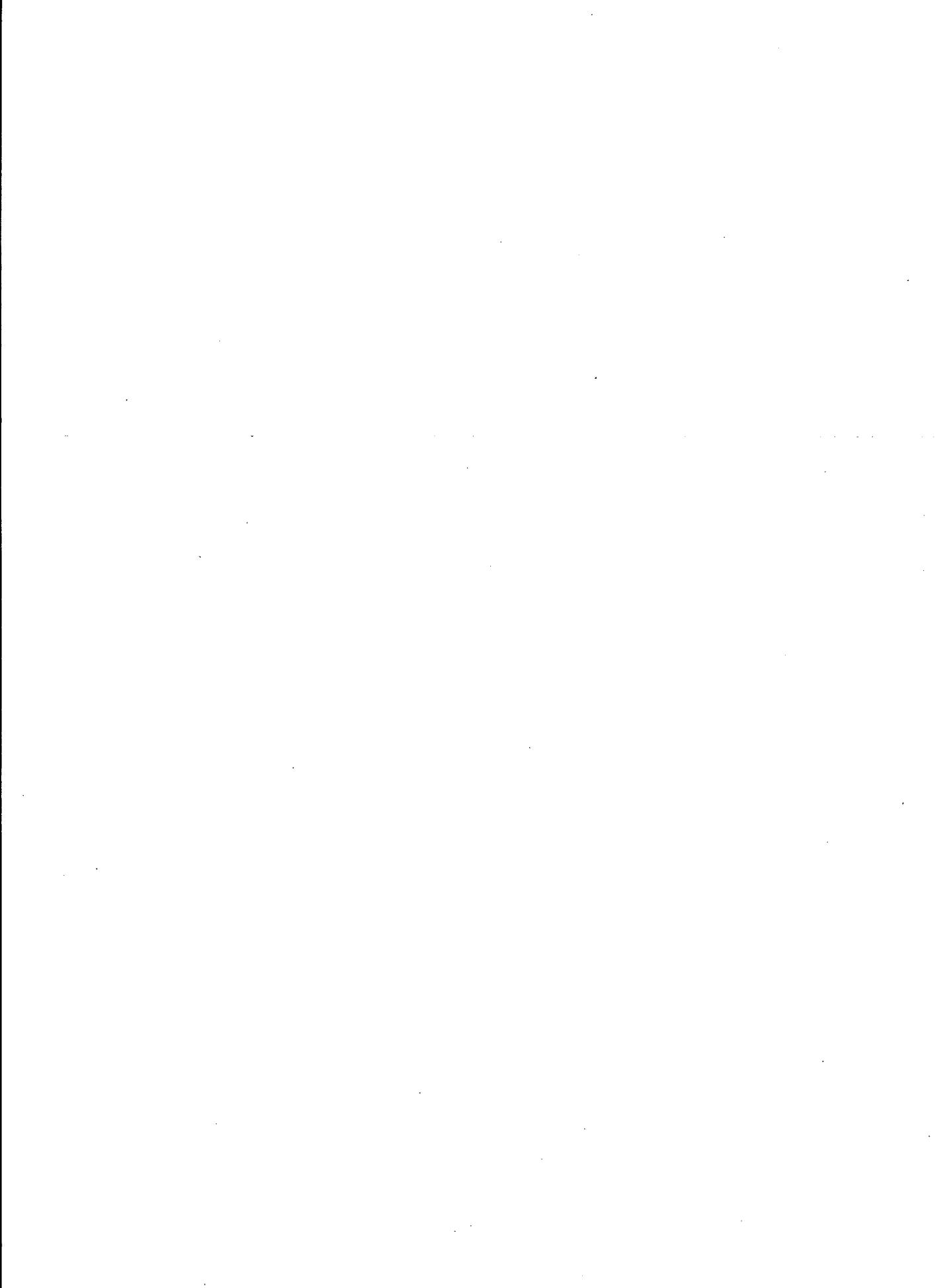
In the meantime, experiments on the motion picture had continued at the Edison Laboratory. A record shows that for the "Kinetoscope Experiment" during the month of October 1892, \$311.41 was spent, while for November of the same year \$526.83 was spent, giving a total for those two months of \$838.24.<sup>4</sup>

A record for December 10, 1892, shows that Newark lumber dealers Swain and Jones delivered to the Edison Laboratory a large quantity of lumber, whose diversity might indicate that it may have been used for the construction of the studio. It consisted of the following:<sup>5</sup>

6 -	1 1/2 x 6"	20 ft.	Hemlock	\$16.
1 -	1 1/2 x 6"	12 "	"	15.
4 -	6 x 12	28 "	Spruce	22.25
1 -	"	26 "	"	22.25
1 -	"	22 "	"	22.25
1 -	10 x 12	22 "	Yellow Pine	.03/4
1 -	2 x 10	12 "	Hemlock	15.
7 -	"	14 "	"	15.
2 -	"	18 "	"	16.

4. Labor and Material Sub-Ledger No. 6, June 1890 to July 1896, p. 44. Edison National Historic Site, West Orange, New Jersey.

5. Receiving Book No. 5, January 1, 1892 to December 31, 1892, p. 181, Edison National Historic Site, West Orange, New Jersey.



2 -	"		20 "	"	16.
2 - 6	x 6		18 "	Spruce	22.25
9 - 3	x 4		14 "	"	20.25
5 -	"		12 "	"	20.25

Two days later, on December 12, 1892, the same lumber dealers delivered a second shipment of lumber which consisted of "N. C. Pine Flooring," "Hemlock" and "Planed Pine" valued at \$83.<sup>6</sup> On December 27, 1892, the lumber firm of Burton and Conover, of Orange, N. J., delivered 20 pieces of 2" x 8" x 14 foot spruce valued at \$20.25,<sup>7</sup> and on December 30, 1892, the same firm delivered 215 feet of shelving and 100 feet of 1" pine, dressed.<sup>8</sup>

On the account sheet for 1892 the "Black Maria" was referred to as the "Revolving Photograph Building" with a cost of \$637.67.<sup>9</sup> At that time the bookkeeper for the Thomas A. Edison Laboratory was John F. Randolph. His testimony of February 3, 1900, on accounts pertaining to the expenses of the "revolving photograph building," confirms the sum of \$637.67.<sup>10</sup>

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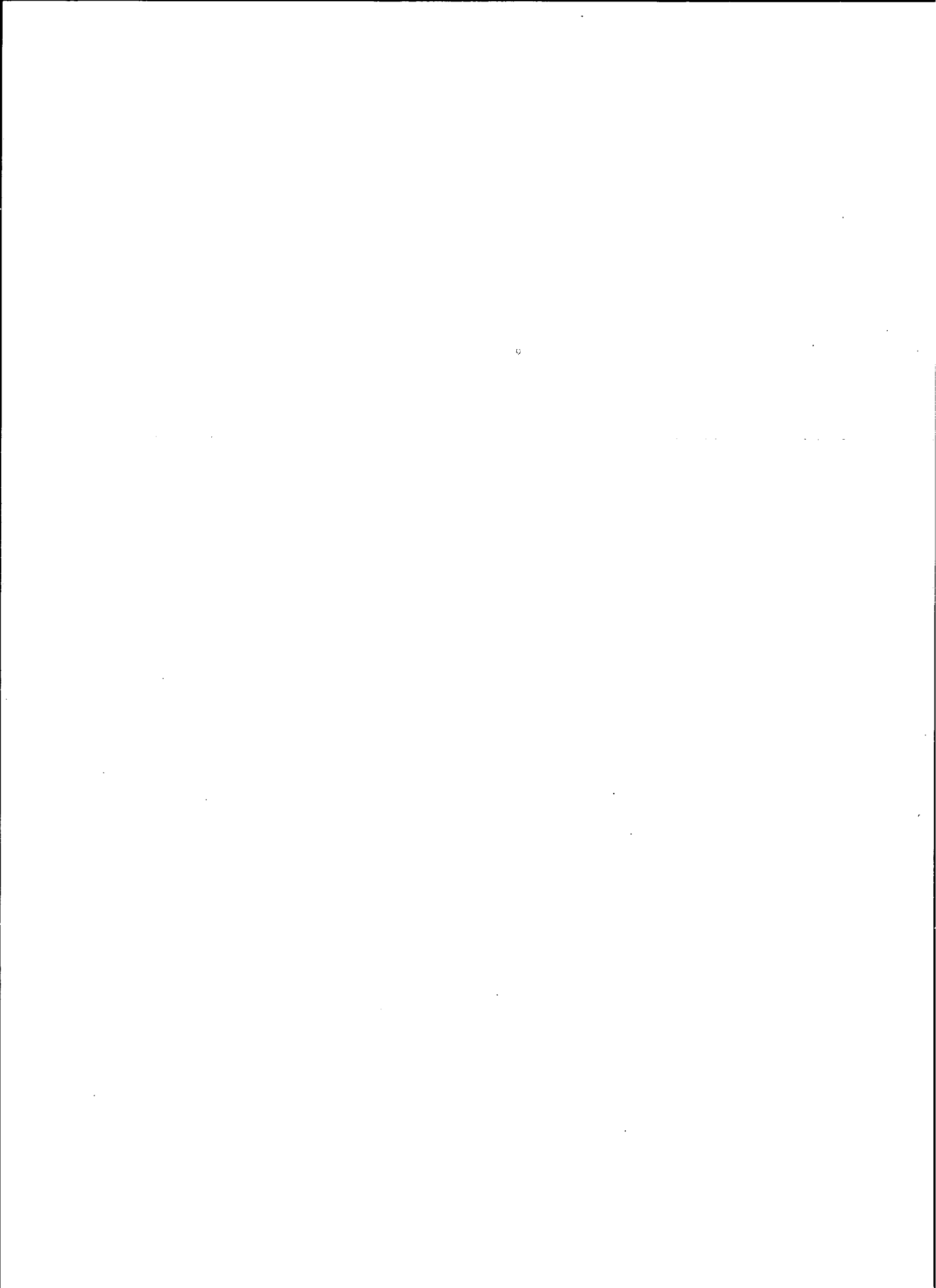
6. Ibid., p. 182.

7. Ibid., p. 188.

8. Ibid., p. 190.

9. See Appendix A.

10. See Complainant's Record, p. 161.



According to the testimony of Mr. Randolph the revolving photograph building was started in December of 1892 and completed on February 1, 1893.<sup>11</sup> These are probably the correct dates, although Dickson in his article written in 1933 at the request of the Society of Motion Picture Engineers states that the building was completed in February 1892.<sup>12</sup> Dickson's date then would appear to be off one year, as the date of February of 1892 given in his article contradicts the account book. Even though the Journal of the Society of the Motion Picture Engineers had accepted the date of February 1, 1893, as the date of completion of the revolving photograph building, this magazine nevertheless included in Dickson's article the evidently erroneous date, because Dickson insisted on this point.<sup>13</sup>

It is impossible to ascertain who first nicknamed the "revolving photograph building" the "Black Maria." Dickson refers to this "studio revolving on wheels to meet the sun at all hours, which some wag later dubbed the 'Black Maria.'"<sup>14</sup> The earliest known written use of the name

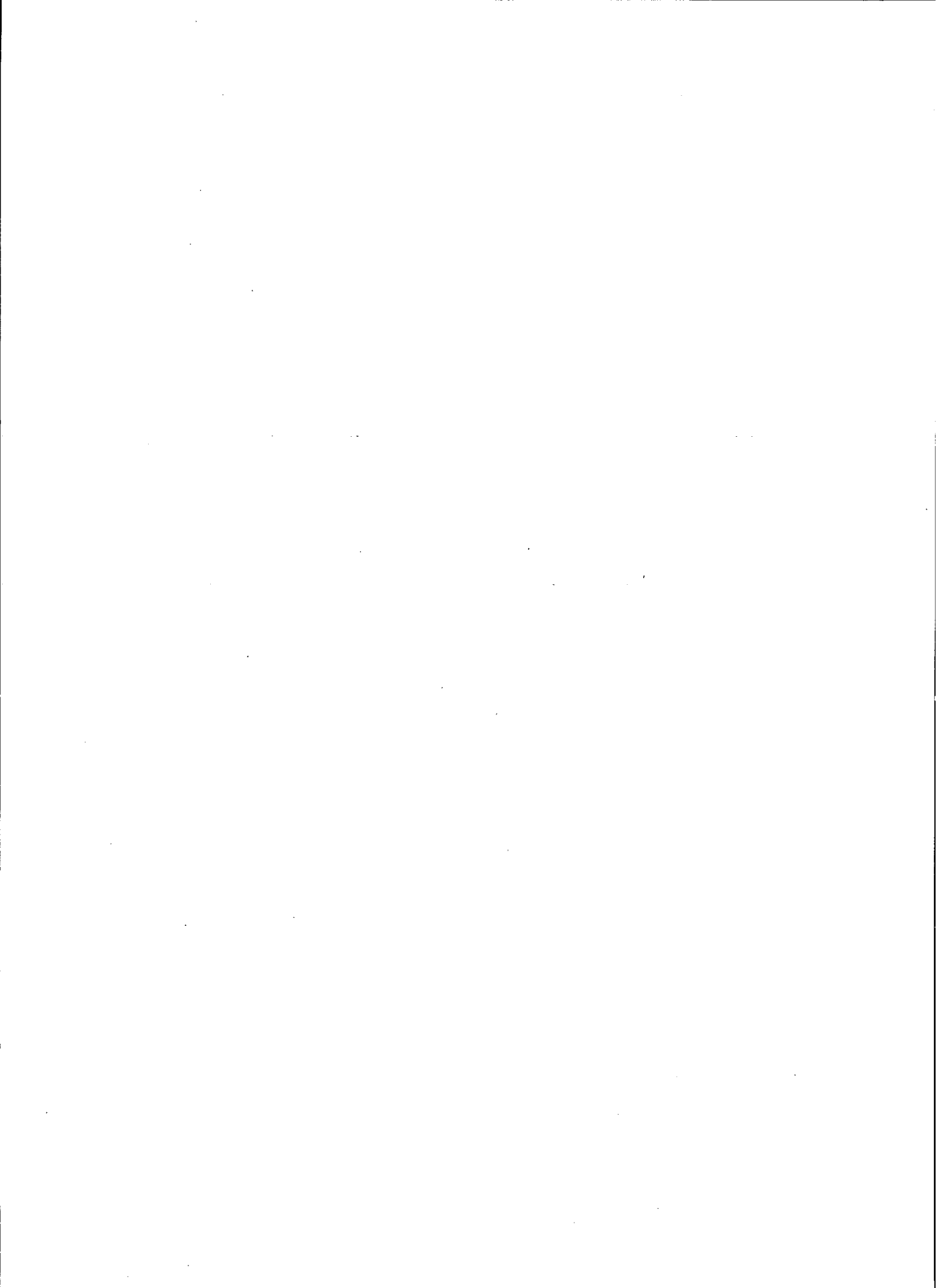
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11. Ibid., p. 164.

12. Dickson, "A Brief History of the Kinetograph, the Kinetoscope, and the Kineto-Phonograph," p. 453.

13. Regarding the confusion over the date of completion of the studio called the "Black Maria," there exists correspondence between Dickson and the editors of the Journal of the Society of Motion Picture Engineers in which the later call his attention to the one-year difference in date. See Dickson Correspondence, 1931-1835, File E5801, Edison National Historic Site, West Orange, New Jersey.

14. Dickson, "A Brief History of the Kinetograph, the Kinetoscope, and the Kineto-Phonograph," p. 453.





"Black Maria" referring to this studio is shown on an invoice dated April 27, 1893, from the New York Roofing Co., Newark, New Jersey, charging to Mr. Edison \$9.96 for "roofing 'Black Maria' at Laboratory, Orange, N.J."<sup>15</sup>

The origin of the term "Black Maria" is uncertain. It has been used widely here and abroad. A dictionary defines a "Black Maria" as "A closed vehicle in which prisoners are conveyed to and from prison."<sup>16</sup> The Boston Daily Evening Traveller, September 25, 1847, mentions "A new Black Maria, . . . a new wagon for the conveyance of prisoners to and from the courts of justice."<sup>17</sup> An unknown Englishman, commemorating his time spent in jail, described in 1877 the Black Maria as follows: "We were then all marched down the gloomy stone passages to the yard, where our carriages awaited us. These were the usual black Marias, some four or five of which were drawn up in the prison yard. The one I was in was different from any other I had travelled in before. By standing up I could, through the top ventilating grating, just catch a glimpse of the streets we passed through."<sup>18</sup>

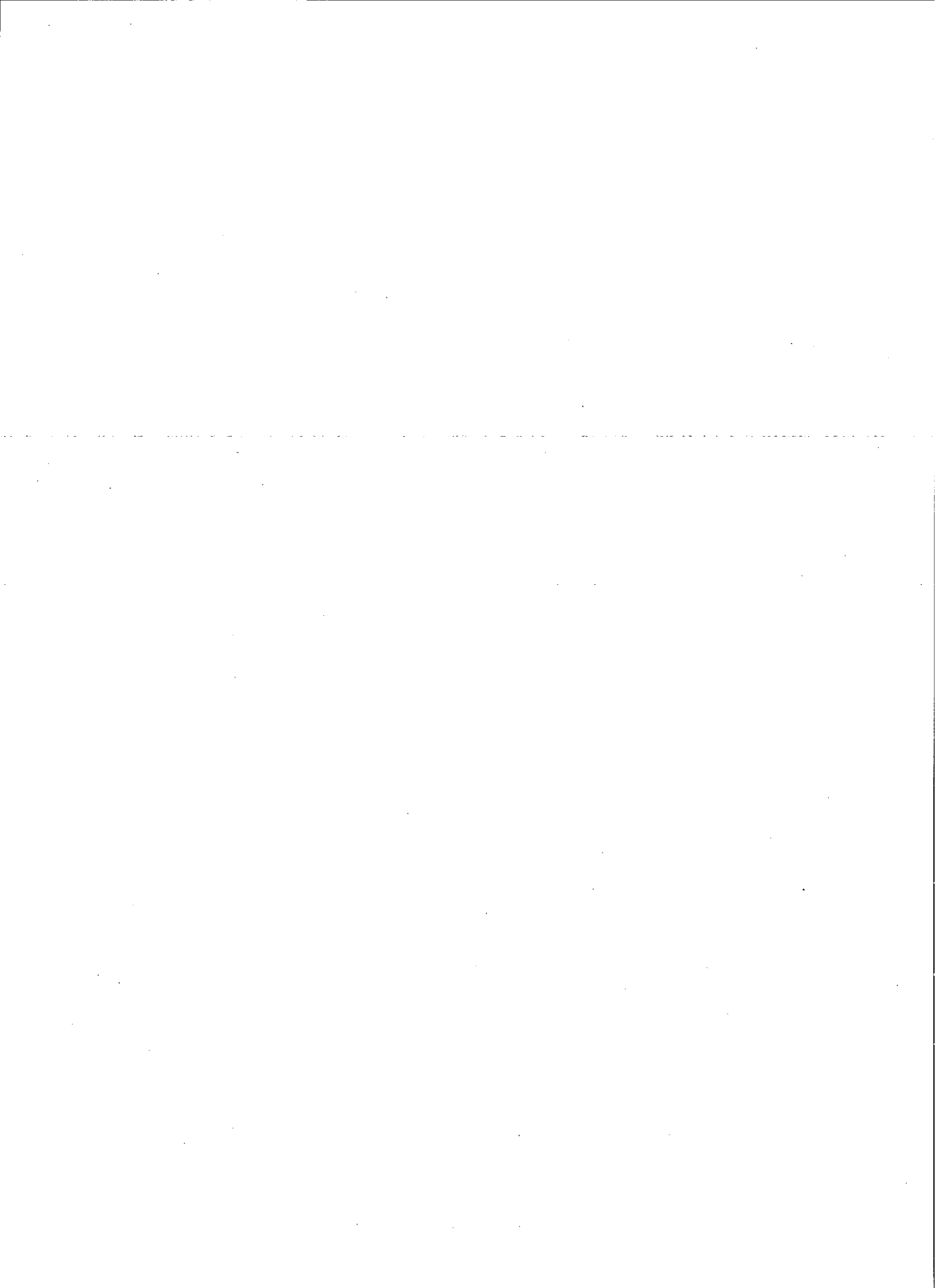
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15. See Appendix B.

16. A Dictionary of Americanisms on Historical Principles. Edited by Mitford M. Mathews. Vol. I: A-Lincolnism. (Chicago: The University of Chicago Press, 1951), p. 125.

17. Daily Evening Traveller, September 25, 1847, p. 2.

18. Five Years' Penal Servitude By One Who Has Endured It. (London: Richard Bentley & Son, 1877), p. 60.



An anonymous reader on April 21, 1883, realizing that the Black Maria was "a popular name in London for a police van," wanted to know what the origin of the term was. <sup>19</sup> Julian Marshall, in his reply to this inquiry dated May 5, 1883, suggested that the term Maria may be derived from "marinated" or "transported." He also pointed out that "The colour (black) explains itself, from the dark hue of the vehicle."<sup>20</sup>

Mrs. Elizabeth B. Custer, widow of General Custer, describing Army life on the western frontier, especially with Custer and the 7th Cavalry in the Washita campaign, 1868-69, wrote in 1890: "our escort . . . hurried us out of what seemed like a 'Black Maria,' it was so dismal in the carriage, and we were taken into the station."<sup>21</sup>

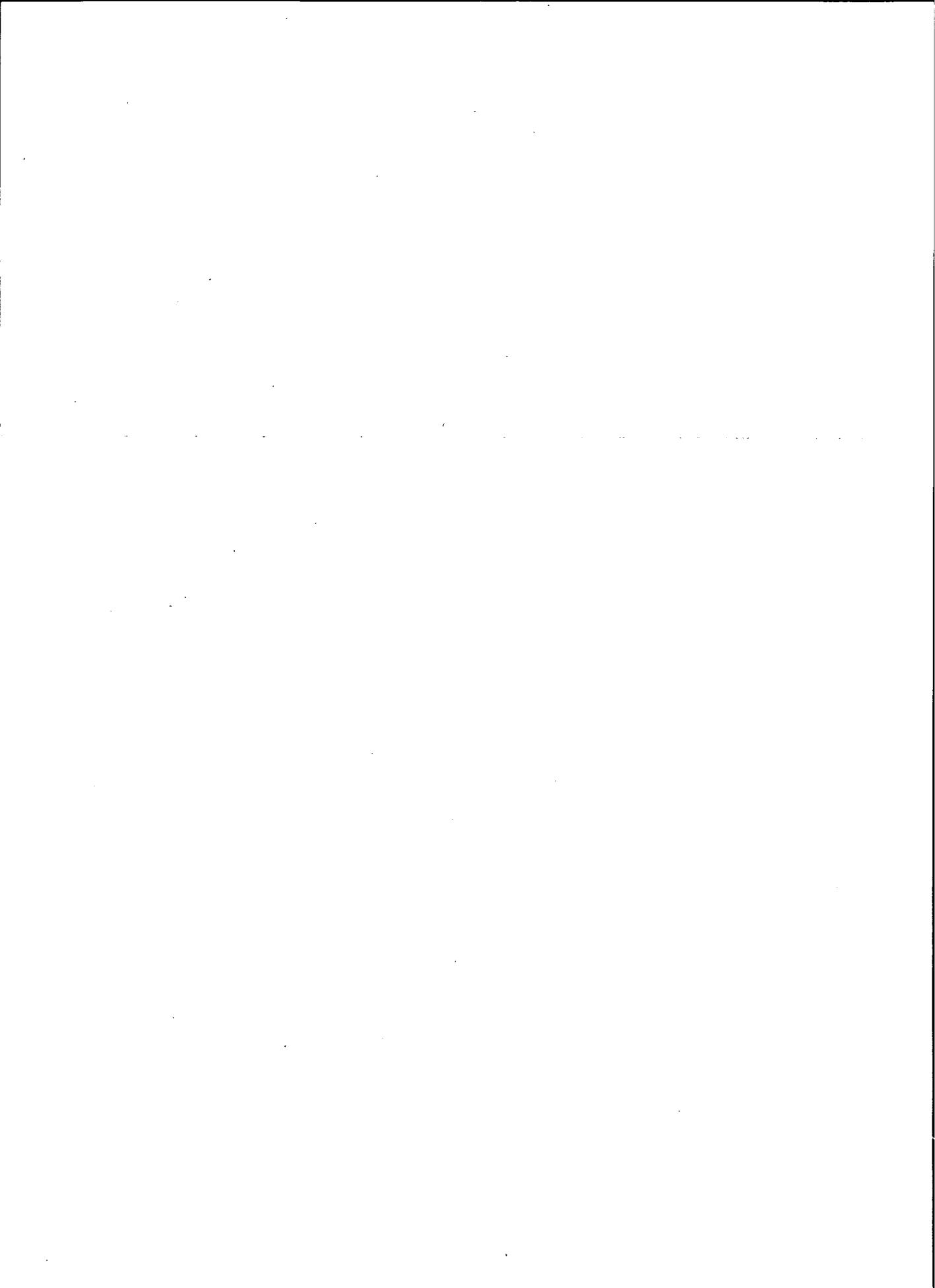
Answers, a London weekly journal of illustration, literature and interesting facts for February 9, 1889, stated: "There are two kinds of Black Marias. One is called the night van and the other the day. The passengers politely term them 'mails.' The day van holds

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19. See Notes and Queries: A Medium of Intercommunication for Literary Men, General Readers, etc. Sixth Series. Vol. 7th (January-June, 1883), p. 309.

20. *Ibid.*, p. 355.

21. Elizabeth B. Custer, Following the Guidon. (New York: Harper & Brothers, 1890), p. 160.



eighteen passengers, not including the driver and warden, and the night van a dozen. The vans are divided into two halves, and on each side are small compartments about two feet square with a seat and door, which is carefully locked."<sup>22</sup>

Louis Armstrong in his autobiography recalls that "New Orleans had fine big horses to pull the patrol wagons and the Black Maria."<sup>23</sup>

In addition to referring to a "paddy wagon," "Black Maria" was a term used during the First World War for a large high-explosive shell. The Germans, for example used the term "Schwarze Maria" during the First World War for the American heavy shells.<sup>24</sup>

It is evident then, that the term "Black Maria" was rather widely used. It had primarily a sinister connotation, meaning something blind, dark, without windows, prison-like. It seems that the application of the term "Black Maria" to the "Revolving Photograph Building"

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22. Quoted in Dictionary of Slang & Its Analogues Past & Present. A Dictionary, Historical and Comparative, of the Heterodox Speech of all Classes of Society for More than Three Hundred Years with Synonyms in English, French, German, Italian, etc. Compiled and Edited by John S. Farmer & W.E. Henley. Vol. I. Revised Edition. Introductions by Lee Revens & G. Legman. (New Hyde Park, N.Y.: University Books, 1966), p. 247.

23. Louis Armstrong, Satchmo; My Life in New Orleans. (New York: Prentice-Hall 1954), p. 12.

24. Eric Partridge, A Dictionary of Slang and Unconventional English Colloquialisms and Catch-phrases, Solecisms and Catachreses, Nicknames, Vulgarisms and such Americansisms as have been naturalized. Two Volumes in One. (New York: The Macmillan Company, 1961), p. 60.

must have developed primarily as a result of the unusual structure of this building. It should be remembered that the building was not intended to be imposing; its appearance was secondary to its practical functions as the first motion picture studio. Edison himself admitted that "it was such an ungainly looking structure when it was done, and the boys had so much sport with it, that we called it 'The Black Maria.'"<sup>25</sup> It seems obvious then that the term "Black Maria" was applied to this somewhat amazing looking structure as a joke, perhaps mostly because it was dark and its appearance reminded observers of a prison van or police patrol wagon and also of a mysterious place, which this first motion picture studio certainly must have seemed.

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25. Edison, op. cit., pp. 68-69.

### III. EVOLUTION OF THE "BLACK MARIA"

Although there are many articles describing the "Black Maria" in various magazines of the period when the studio was in use, these articles do not give details as to its dimensions or location.

A careful analysis of two of the three known photographs of the outside of the building has yielded, by reverse perspective, a fairly adequate estimate of its size and proportions, while the third and earliest photograph has shown its position with relation to the Main Building of the Laboratory Group.

These photographs, arranged in date order, will be referred to as Photograph No. 1, Photograph No. 2, and Photograph No. 3.

Photograph No. 1 was taken most probably by W.K.L. Dickson between February 1, 1893, when the building was considered finished, and the winter of 1893-94.<sup>1</sup> A sketch made from this photograph by E.J. Meeker was published in an article by Antonia and W.K.L. Dickson, entitled "Edison's Invention of the Kinetophone" which appeared in the June 1894 issue of The Century Illustrated Monthly Magazine.<sup>2</sup> Another sketch from this photograph of the "Black Maria," done by Richard F.

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1. See Appendix C.

2. Antonia and W.K.L. Dickson, "Edison's Invention of the Kinetophone." The Century Illustrated Monthly Magazine, Vol. 48, No. 2 (June 1894), p. 214.

Outcault, appeared in The Electrical World of June 16, 1894.<sup>3</sup>

Photograph No. 2 was taken most probably by W.K.L. Dickson during the winter of 1894-95, as it appeared in 1895 on page 5 of History of the Kinetograph, Kinetoscope, and Kineto-Phonograph, by W.K.L. Dickson and his sister Antonia Dickson.<sup>4</sup>

Photograph No. 3 was taken by William L. Jamison in the summer of 1903.<sup>5</sup> This date was furnished by Mrs. William L. Jamison from a print in her possession.<sup>6</sup>

A comparison of the three photographs shows that, while the overall dimensions of the "Black Maria" remained the same, several important alterations were made on this structure during the ten years of its existence.

Photograph No. 1 shows only one narrow entrance door. The hinged roof door, when closed, overlapped the peak of the roof, while the supports for the floor, when opened were about 4 feet from the end of the building. The stovepipe chimney has

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3. "The Kineto-Phonograph," The Electrical World, Vol. 23 No. 24 (June 16, 1894), p. 800.

4. See Appendix D.

5. See Appendix E.

6. Oral statement of Supervisory Museum Curator Norman R. Speiden to the author. Mr. Speiden stated that he received this information from Mrs. William L. Jamison.



been removed, leaving a hole. The electric wires entered the building about 2.7 feet to the right of the chimney hole and about 1.4 feet higher than the hole.

Photograph No. 2 shows the 14 foot roof door open and resting against its supports, which have been moved to the end of the building. The hinge of the door has been moved about 4 feet to the right, and as the door no longer reaches the peak of the roof, about two feet of roof must have been added. This section of the roof follows the original slope, as will be seen by the added timber which shows just back of the two men standing against the far wall of the opening. A new entrance door and steps have been added just under the hinge of the open roof. A new door about 6.3 feet wide has replaced the small door shown in Photograph No. 1. This new door is in a "bay" which widens the building by about 10 feet parallel to the original wall. A similar large door and widening of the building on the opposite wall is indicated in one of the interior sketches.

In Photograph No. 3 the principal change shown is the cutting of the roof ridge down to the top edge of the original roof door and the installation of another hinged door on the opposite slope of the roof, so that when closed this roof door overlaps the original roof door. A skylight has been installed in the center of the original roof door. This is the only one of the photographs that shows the

stovepipe chimney. As the leaves on the trees show that it was summer we may assume that the peculiar angle of the pipe is due to the removal of the stove and the rusting out of the horizontal section of the pipe. Another small entrance door has been installed in the left side of the building.

#### IV. PHYSICAL DESCRIPTION OF THE "BLACK MARIA"

##### A. EXTERIOR

The "Black Maria" was then a tar-papered skylighted studio built on the grounds of the Edison laboratory in West Orange, N. J., where Edison engaged in film production. Dickson with his sister Antonia described this new studio as follows:

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.<sup>1</sup>

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1. W. K. L. Dickson and Antonia Dickson, History of the Kinetograph, Kinetoscope, and Kinetograph, pp. 19-20.

According to Mr. Edison, "Our studio was almost as amazing as the pictures we made in it. We were looking for service, not art. The building itself was about twenty-five by thirty feet in dimensions, and we gave a grotesque effect to the roof by slanting it up in a hunch in the center and arranging shutters that could be opened or closed with a pulley to obtain the greatest benefit from the light."<sup>2</sup>

The appearance of the "Black Maria" was so strange that Edison himself admitted,

'The Black Maria' always reminded me of an Irishman who used to work for me in my early days when we were trying out a certain variation of the railroad telegraph system; that is, sending a message from an ordinary wire to and from a moving train. We were working with our apparatus down on Staten Island at the time, and my Irish friend - his name was King - was in charge of the crew on the line.

He was a good electrician, too, but for some reason he had difficulty in making the system operate as it should. Strange to say, it worked like a charm when the train was running in one direction, but as soon as it started on its return trip troubles began. Although King would swear and tear his hair he couldn't fathom the source of the disturbance.

Finally, in disgust, he wrote me that the only solution he could think of was for me to run an axle under Staten Island so the island could be turned instead of the train! This was a good deal the same kind of problem we had with our old 'Black Maria'. But we couldn't very well control the sun. So we had to compromise, and fix up a contrivance to turn the studio.<sup>3</sup>

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2. Edison, op. cit., p. 69.

3. Ibid., pp. 69-70.

There seems to be a discrepancy regarding the dimensions of the "Black Maria". In addition to the above statement of Mr. Edison that the building was "about twenty-five by thirty feet in dimensions," there are other measurements available which contradict Mr. Edison's statement. According to The Orange Chronicle of March 10, 1894, the dimensions of the building were 50' x 13',<sup>4</sup> The New York Morning Journal of September 8, 1894, reported that the building was "about 30 feet long, 12 feet wide, 8 feet high and tar paper does the service of the brick walls."<sup>5</sup> According to the New York World of September 8, 1894, the building was 15 feet wide.<sup>6</sup> Hendricks on the other hand is convinced that "The Black Maria was presumably 48' x 10' -14' x 18" overall."<sup>7</sup>

The "Black Maria" was balanced on a pivot which allowed it to be turned to follow the sun. We do not have any details on the pivot except that it was circular. Leslie's Illustrated Weekly of July 19, 1894, described the studio as being "fixed on a monster centre pivot and moved on heavy rollers, so that the glass front is always in line with the direct rays of the sun."<sup>8</sup> Also we are told that the

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4. The Orange Chronicle, March 10, 1894, p. 5.

5. New York Morning Journal, September 8, 1894, p. 1.

6. The World, September 8, 1894, p. 7.

7. Hendricks, op. cit., p. 26.

8. Leslie's Illustrated Weekly, Vol. 79, No. 2027 (July 19, 1894), p. 46.

pivot, over which the "Black Maria" swung suspended on a central verticle axis, was of graphite.<sup>9</sup> The rollers which are shown in a sketch by E.J. Meeker in The Century Illustrated Monthly Magazine gave considerable support to the end weight of the building.<sup>10</sup> A reporter from the New York Sun, who covered the fight between James J. Corbett and Peter Courtney which took place in the "Black Maria" on Friday morning, September 7, 1894, observed that the studio "reminded everybody of a huge coffin. It was covered with black tar paper, secured to the woodwork by big metal-topped nails, and was the most dismal-looking affair the sports had ever seen."<sup>11</sup>

While the structural changes previously described are shown of the three available photographs<sup>12</sup> (which show only the front of the "Black Maria"), we know nothing of how the back side of this studio appeared, since no photographs or sketches have so far been found which depict the building from the rear.

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9. Antonia and W.K.L. Dickson, "Edison's Invention of the Kinetophonograph," The Century Illustrated Monthly Magazine, Vol. 48, No. 2 (June 1894), p. 212.

10. Ibid., p. 214.

11. The Sun, September 8, 1894, p. 2.

12. See Supra, pp. 13-16.

## B. INTERIOR

In addition to knowing nothing about the back of the "Black Maria," we also know nothing about its interior, except for a few sketches. One thing is certain, that the interior of the "Black Maria" was painted black. Edison in his Diary states that they "painted it a dead black inside"<sup>13</sup> and the New York Sun pointed out that "Inside the walls were painted black."<sup>14</sup>

Two prize fights took place in the "Black Maria" in 1894 which have given us some information on its interior. The first fight took place on Thursday morning, June 14, 1894, between Mike Leonard and Jack Cushing.<sup>15</sup> According to the New York World "It was a very strange and unusual fight. The ring, only 12 feet square, was arranged in Edison's laboratory."<sup>16</sup> Similarly the New York Morning Journal stated that "Both men entered the 12-foot ring at 130 pounds."<sup>17</sup> A second fight in the interest of science took place in the "Black Maria" between the Champion, James J. Corbett, and Peter Courtney on Friday morning, September 7, 1894, in which Corbett knocked out Courtney. A purse of

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13. Edison, op. cit., p. 69.

14. The Sun, September 8, 1894, p. 2.

15. Ibid., June 16, 1894, p. 7.

16. The World, June 16, 1894, p. 1.

17. New York Morning Journal, June 16, 1894, p. 4.

\$5,000 was involved of which the loser received \$250. The walls of the shooting space were padded for this fight. According to the New York Herald, "In consequence of the limited room only a 14-foot ring could be prepared, and the two sides of this next the walls were heavily padded to prevent injury to the fighters."<sup>18</sup> The New York World in its comment on the Corbett-Courtney fight reported that "The building is only fifteen feet wide, and its sides, heavily padded up to a height of six feet, made the use of ropes unnecessary except in the front and back of the improvised arena."<sup>19</sup>

Commenting on the Corbett-Courtney fight, the New York Sun also revealed some particulars on the interior of the "Black Maria," stating:

Inside the walls were painted black, and there wasn't a window of any description, barring a little slide which was directly beside the kinetograph and could be opened or closed at the will of the operator. Half of the roof, however, could be raised or lowered like a drawbridge by means of ropes, pulleys, and weights, so that the sunlight could strike squarely on the space before the machine.<sup>20</sup>

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18. The New York Herald, September 8, 1894, p. 11.
  19. The World, September 8, 1894, p. 7.
  20. The Sun, September 8, 1894, p. 2.



There is no doubt that the "little slide" would be the ruby glass window which looked into the darkroom used for reloading the camera and for removing the exposed film. The New York Morning Journal of September 8, 1894, described the darkroom as "a dark closet in the rear of the building, where the kinetoscope lens and other paraphernalia are stationed." It further stated that "The photographing machine works on rollers, and can be adjusted to suit the operator."<sup>21</sup>

The studio was so arranged then that part of the roof could be opened to admit sunlight to the stage, which could revolve on its track to follow the sun. An interesting fact is that both of the fights, between Mike Leonard and Jack Cushing and between James J. Corbett and Peter Courtney, took place in the "Black Maria" shortly after 11 a.m. in the full glare of the bright sunlight.

The "Black Maria" was covered entirely with black tar paper, thus "giving the effect of a dead black tunnel behind the subject

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21. New York Morning Journal, September 8, 1894, p. 1.

to be photographed."<sup>22</sup> The darkroom was "lined with heavy black felt."<sup>23</sup> The camera in the "Black Maria" was mounted on a table which ran on a track, enabling it to be moved, when necessary, toward the stage for close-ups. This fact is evident from the sketch of the interior of the Kinetographic Theatre by Richard F. Outcault.<sup>24</sup> Furthermore this sketch illustrates how the camera was connected electrically with the motor of the phonograph recording machine, thus effecting the synchronization of sound with picture.

In addition to these prize fights, the "Black Maria" became an enormously active scene for the making of other movies. In order to illustrate its importance, there are listed below a number of pictures made inside the "Black Maria" between 1893 and 1895:<sup>25</sup>

Carmencita, the Spanish Queen of Dancers

Gayety Girls

Buffalo Bill (firing rifle)

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22. The Orange Chronicle, March 10, 1894, p. 5.

23. Leslie's Illustrated Weekly, Vol. 79, No. 2027 (July 19, 1894), p. 48.

24. See Appendix F.

25. W.K.L. Dickson and Antonia Dickson, History of the Kinetograph, Kinetoscope, and Kinetograph, p. 17-50.

Sioux Indian Ghost Dance  
Lasso Thrower  
Corbett and Courtney (prize fight)  
Alcide Capitaine (trapeze act)  
Mexican Knife Duel  
Eugene 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

Subsequently, as motion-picture making became a highly competitive industry, Edison's interest in this activity declined. Finally the "Black Maria" studio was torn down in 1903.

## V. LOCATION OF THE "BLACK MARIA"

Prior to 1953 it was impossible to determine the original location of the studio. Mr. Charles Edison thought that the "Black Maria" was on Lakeside Avenue, just below Building No. 6. According to the testimony of Mr. William A. Hayes, it was below Building No. 4,<sup>1</sup> and the earliest known photograph, taken during the winter of 1893-94, confirms this testimony.<sup>2</sup> The aerial drawing of the Edison Laboratory and Works of the National Phonograph Company which appeared in the Edison Phonograph Monthly in May 1903 shows the "Black Maria" behind the back line of the four one-story Laboratory buildings.<sup>3</sup> The building which appears to the left of the "Black Maria" was known as the Cement Building; part of this building is shown on Photograph No. 3 (Appendix E).<sup>4</sup>

By projection from the earliest known photograph (Appendix C), Supervisory Museum Curator Norman R. Speiden was able in

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1. Norman R. Speiden, "Historic Structures Report, Part I: Black Maria, Building No. 13 'Historical Data.'" (West Orange, N. J.: Edison National Historic Site, November 30, 1966), p. 8.

2. See Appendix C.

3. See Appendix G.

4. See *Supra*, pp. 14-16.

December of 1964 to prepare a drawing showing the location of the original "Black Maria," which was below the four one-story Laboratory buildings.<sup>5</sup>

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5. Speiden, *op. cit.*, pp. 8-9. See also Appendix H.

## VI. RECONSTRUCTION OF THE "BLACK MARIA"

Since the time when the original "Black Maria" was torn down in 1903, numerous attempts have been made to build small models of this first motion picture studio. One such model, although not historically authentic, was built on May 15, 1940, at the Edison Laboratory for the premiere of the Metro-Goldwyn-Mayer movie "Edison the Man" with Spencer Tracy in the title role. Despite the fact that the structure cost around three thousand dollars, its roof could not be opened and the model studio could not be turned to follow the sun. Shortly afterward this model was taken down.

It was the opinion of the inventor's son, Mr. Charles Edison, that any future reconstruction of the "Black Maria" should be as authentic as possible. It should be remembered that in the early 1950s only two photographs of the "Black Maria" were known to be in existence, those reproduced herein as Appendices D and E. It was on the basis of these two photographs that Mr. Norman R. Speiden prepared three drawings on September 29, 1952, showing the side elevation, the end elevation, and the floor plan of the "Black Maria." Subsequently, on the basis of these three drawings, the Newark architectural firm of Frank Grad and Sons made the structural plans and specifications for the present replica. The construction of the replica was done by August Ramsland and on September 22, 1954,

this newly reconstructed "Black Maria" was officially dedicated.<sup>1</sup>

The replica was built entirely on the basis of the Dickson and Jamison photographs as shown in Appendices D and E. The reconstructed "Black Maria" is approximately 49 feet long, 18 feet wide at the wide part, and 9 feet wide at the narrow part, where the camera is located. The height from the bottom part of the floor joist to the peak of the floor is 21 feet.<sup>2</sup> The interior of the reconstructed "Black Maria" has received certain additions which have improved not only its internal appearance but also adjusted it to present-day conditions. Instead of the hardwood floor resting on the central pivot, a steel framework has been added to the floor, which not only helps to support the weight of the building but also assures it longer preservation. There have also been added several electric strip-heaters to replace the original coal or wood-burning stove. All these features added to the cost of the "Black Maria," which was paid by the Thomas Alva Edison Foundation. Although we do not have the total cost for the erection of this present "Black Maria," Mr. Ramsland has stated that his contract amounted to \$25,000.<sup>3</sup>

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1. Speiden, op. cit., pp. 5-7. For the depiction of this present reconstruction of the "Black Maria," See Appendix I.

2. These specifications are taken from Speiden, op. cit., Appendix IV, Photograph Nos. 6, 7 and 8.

3. Ibid., p. 7.

## VII. PROPOSED NEW LOCATION FOR THE "BLACK MARIA"

The "Black Maria" is presently about 413 feet to the north of its original location. It cannot be moved to the original spot because the land would not be available. The original spot on which the "Black Maria" stood is still on the Company's land; consequently the feasibility of relocating it there is a question. Perhaps eventually the "Black Maria" could be moved to Building No. 4. The Master Plan for the Edison National Historic Site shows where the "Black Maria" is to be moved. The proposed new location of the "Black Maria," Building No. 13, when scaled from the drawing in the Master Plan, indicates that the center of the turntable would be about 45 feet back of the east corner of Building No. 4, and 8 feet southeast of the line of the southeast wall of the building. This position was plotted by Supervisory Museum Curator Speiden on a large drawing showing the location of the original "Black Maria." The scaling on this drawing gives the distance between the proposed new location of Building No. 13 and the 1893 position of the original "Black Maria" as 160 feet.<sup>1</sup>

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1. See Appendix H.



### VIII. RECOMMENDATIONS

One may have real doubt as to whether the reconstruction of the "Black Maria" really served tis purpose. First of all it is not authentic. The replica is based entirely on the picture taken by Dickson during the winter of 1894-95 (Appendix D) and the photograph taken by Jamison in the summer of 1903 (Appendix E). A new source of information was brought forth in January of 1954 with the discovery of a new photograph taken during the winter of 1893-94, which is shown as Appendix C. This presently earliest known photograph was not taken into consideration because at the time of its discovery the present replica of the "Black Maria" was well on the way to its completion. As mentioned above, we know very little about the interior of the "Black Maria," and nothing at all of how this first motion picture studio looked from the back.

Secondly, the "Black Maria" is very difficult to maintain, as the Work and Purchase Orders will indicate. In 1966 the rehabilitation of the "Black Maria" involved the following: removal of exterior trim and tarpaper from the exterior walls; replacement of rooted framing and sheathing; application of new tarpaper to walls; making and installation of new window frames; repairs to the exterior trim; replacement of fabric around the movie screen; installation of a new fan between the main and projection rooms; rebuilding of stairs and building of

a portable ramp for safer visitor exit; and painting new and old work as required. The cost of this rehabilitation, including personal services, supplies and materials, amounted to \$3,000.<sup>1</sup> The interior and exterior painting of the "Black Maria" on June 13, 1968, cost \$250.<sup>2</sup> Emergency work to repair a leak in the "Black Maria" was undertaken on June 19, 1968. This work consisted of renewal of the tar paper on the upper portion of the east gable, for which the amount paid was \$160.<sup>3</sup>

Despite these constant and expensive repairs the "Black Maria" is a good public relations vehicle. It attracts public attention, and people, particularly children, want to see it. The present "Black Maria" has a seating capacity of about 70 and a standing capacity of about 90 people. It functions only during the summer, usually between the middle of May and the middle of October, depending on the weather, and movies such as the "Great Train Robbery" and others are shown on a modern 16-mm movie projector.

It should be remembered that the "Black Maria" was never meant as a truly historical replica but rather as a tourist attraction. It was made by the Thomas Alva Edison Foundation

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1. See Work Order No. 403-211730, June 27, 1966, in the Archives of the Edison National Historic Site.

2. See Purchase Order No. 403-70 in Ibid.

3. See Purchase Order No. 403-84 in Ibid.

prior to the Park Service's tenure of the site. It seems to the present writer that the building has indeed served its purpose, and that when the Visitor's Center is built at the Edison National Historic Site we can then decide if we want to spend money to move it to the proposed new location. However, whether or not the "Black Maria" is moved from its present 413 feet from the original location to a position 160 feet away, or even torn down completely, we should seriously consider the erection of a diorama, in which, on the basis of the three available photographs shown in Appendices C, D and E we should show the three known stages in the development of the "Black Maria," illustrating the structural changes and changes in the building's fabric. It would be more historical and authentic as well as appealing to visitors. In this way the visitor to the Edison National Historic Site could compare the presently reconstructed "Black Maria" with the diorama showing the authentic structures, and in this way see the structural changes made in this first motion picture studio. This procedure would be historically correct and would also indicate that the Park Service really cares about the true historical interpretation of the Sites. The sophisticated Romans referred to history as res gestae, which means "things done." Whether or not it is moved to a new location, we ought to consider the erection of the proposed diorama on the basis of the presently available three photographs. After all there is honor in every work which results in good.

ACCOUNT FOR CONSTRUCTION OF THE REVOLVING PHOTOGRAPH BUILDING

Revolving Photograph Building

Date	Description	Amount	Balance
1892			
Dec 31	City Cash	105	
31	Lumber	184.04	
31		212.46	
1893			
Jan 31	City Cash	10	
31	Lumber	69.38	
31		148.77	
Feb 28		100	
28		677	
Mar 31		378	
Apr 30		776	
30		1870	
May 31	City Cash	100	
31		100	
June 1	By Cash	608.52	
30	By Cash	687	
			608.52
			687

1 Labor and Material Sub-Ledger No. 6, June, 1890 to July, 1896, p. 342. Edison National Historic Site, West Orange, New Jersey.

APPENDIX B

INVOICE SHOWING EARLIEST KNOWN WRITTEN USE OF THE NAME "BLACK MARIA"<sup>1</sup>

E. H. KIDDER, PRESIDENT.  
M. F. WOODBRIDGE, VICE PRESIDENT.  
H. G. HOMER, SECRETARY.

—\*TELEPHONE NO. 678.\*—

ESTABLISHED 1860.  
INCORPORATED 1873

Newark, N. J., Apr 27 1895

*Mr. W. A. Edison*

WHOLESALE DEALERS IN

**Roofing x Materials,**

Two and Three-Ply Roofing Felt.

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

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

CHAS. L. PITTS, TREASURER AND GEN'L MANAGER.  
JOHN CONDON, SUPERINTENDENT.  
W. W. SCHOULER, SALES AGT.

<i>To roofing "Black Maria" at Laboratory</i>			
	<i>Orange, N.J.</i>		
<i>8 x 18 - 144 ft.</i>	<i>@ 4/8</i>	<i>6 48 ✓</i>	
<i>8 x 14 1/2 - 116 "</i>	<i>" 3 "</i>	<i>3 48 ✓</i>	
			<i>9 96 ✓</i>
<i>Revolving Photo. Building</i>			
<i>Charles Schmitz</i>			

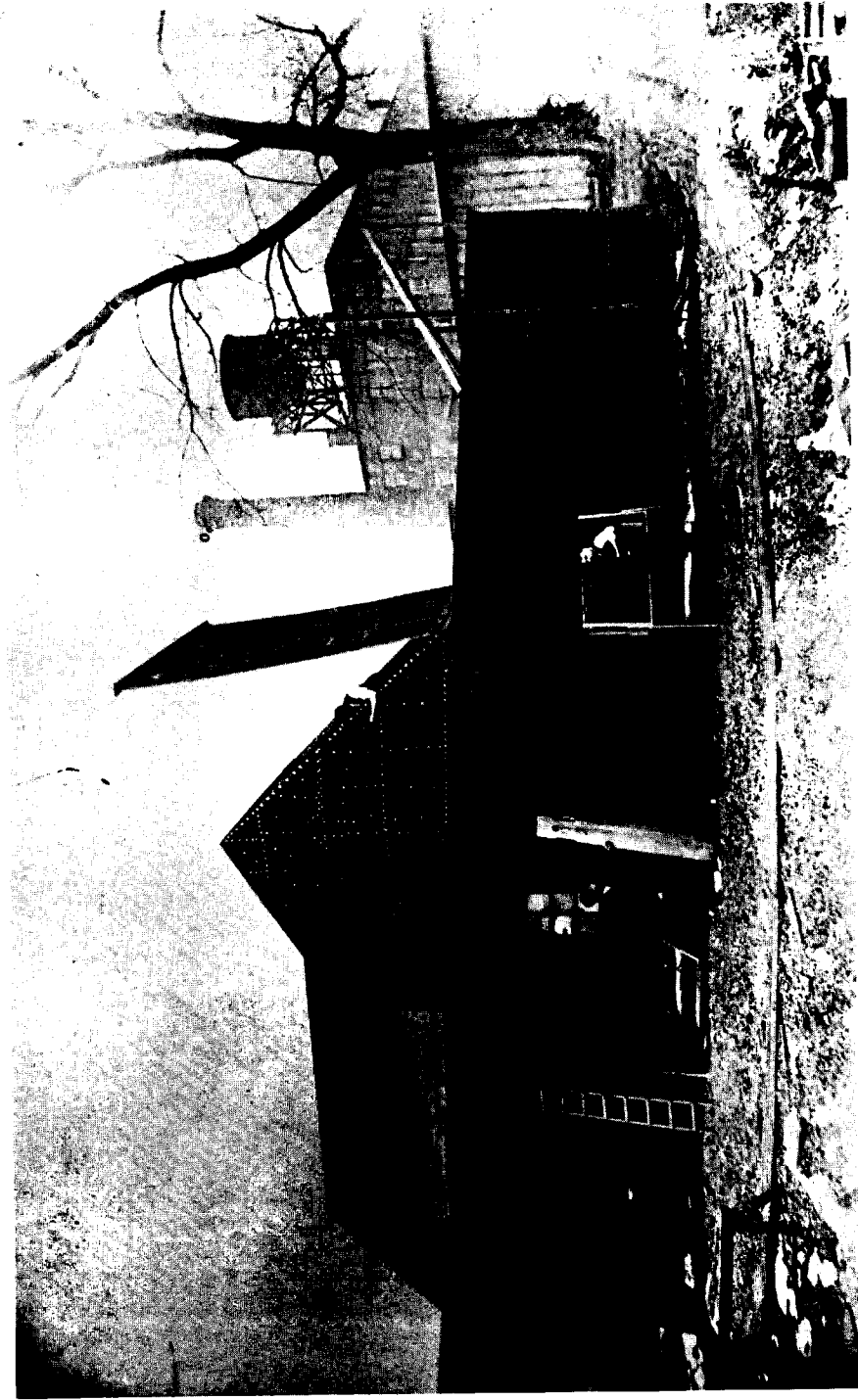
*Order #9815*

<sup>1</sup>Voucher File, 1893, Voucher No. 259. Edison National Historic Site, West Orange, New Jersey.

APPENDIX C

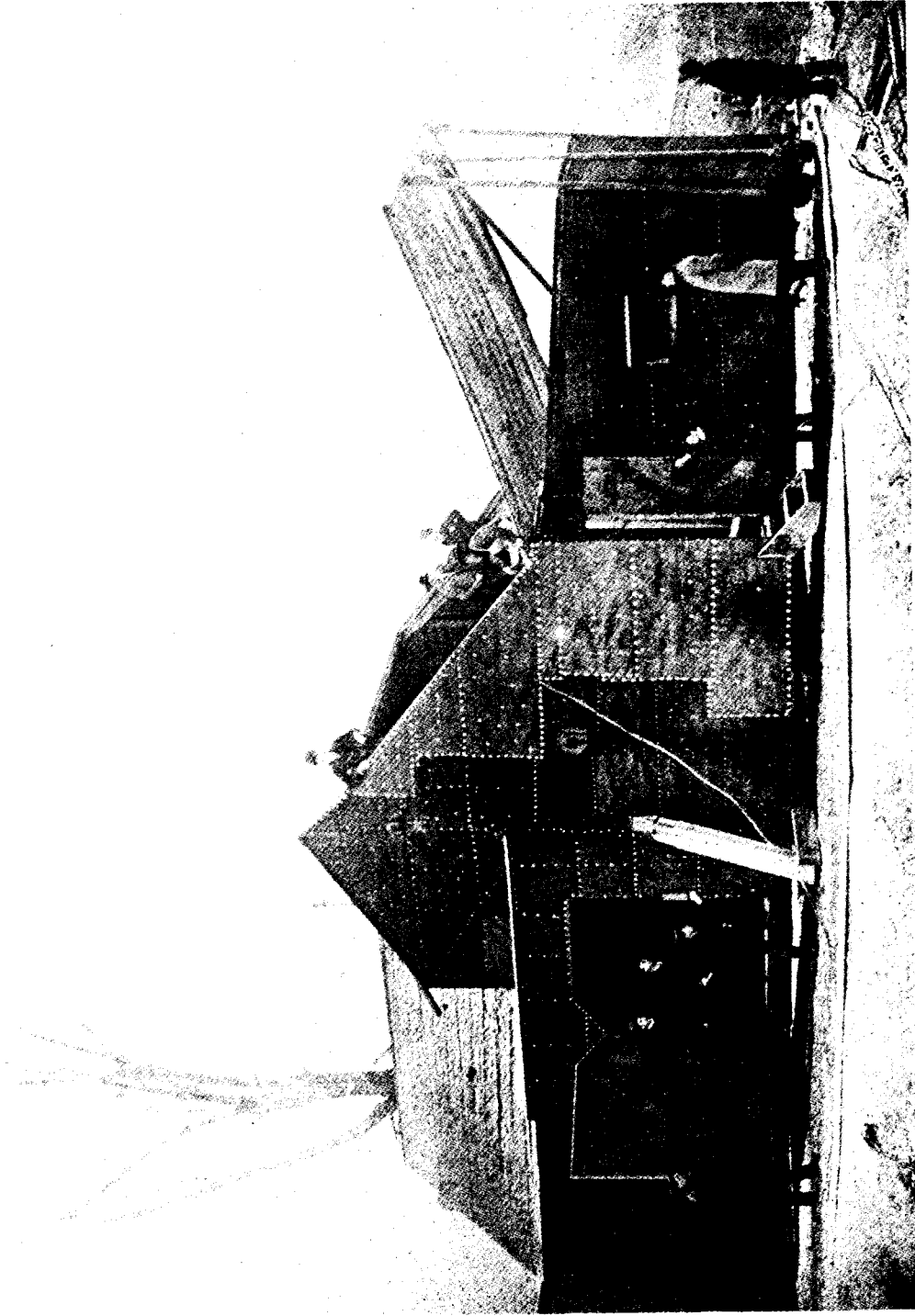
THE EARLIEST KNOWN PHOTOGRAPH OF THE "BLACK MARIA"

TAKEN PROBABLY BY W.K.L. DICKSON DURING THE WINTER OF 1893-94<sup>1</sup>



<sup>1</sup>See Negative No. 6570 in the Archives of the Edison National Historic Site.

THE APPEARANCE OF THE "BLACK MARIA" DURING THE WINTER OF 1894-95<sup>1</sup>



<sup>1</sup>W.K.L. Dickson and Antonia Dickson, History of the Kinetograph, Kinetoscope, and Kinetograph. (New York: Albert Bunn, 1895), p. 5. See also Negative No. 6543 in the Archives of the Edison National Historic Site.

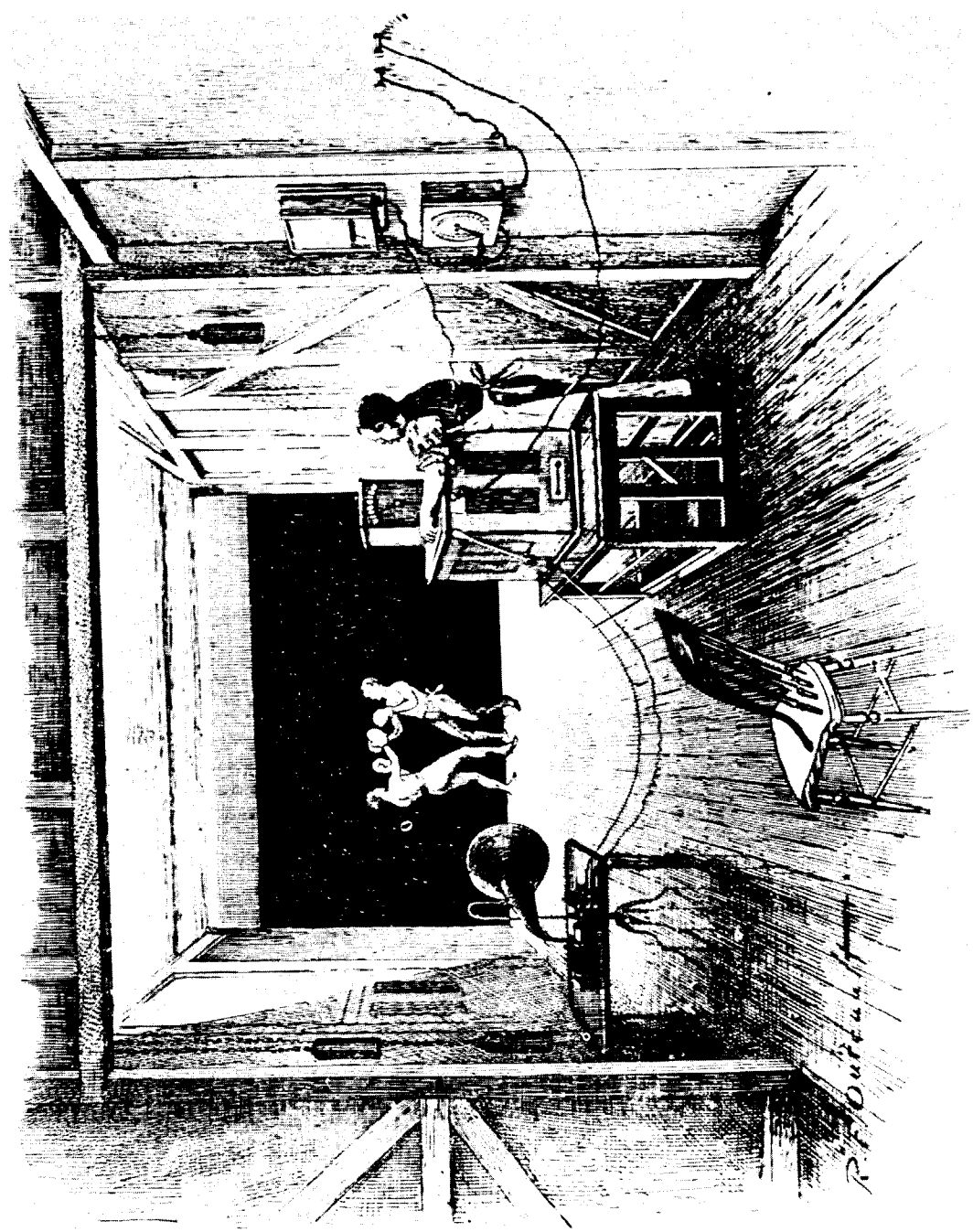
THE APPEARANCE OF THE "BLACK MARIA" DURING THE SUMMER OF 1903<sup>1</sup>



<sup>1</sup>See Negative No. 2974 B in the Archives of the Edison National Historic Site.



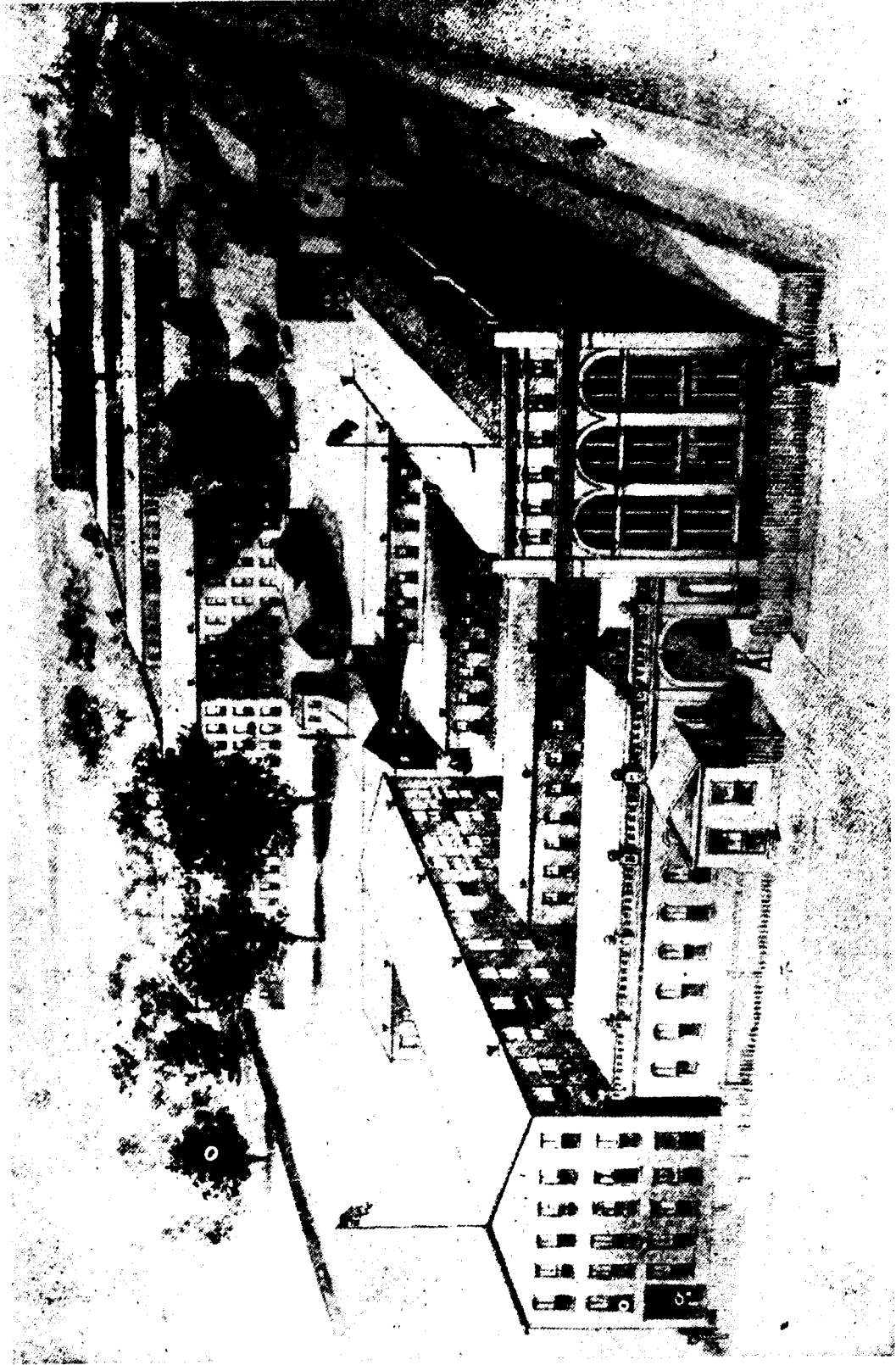
1  
SKETCH OF THE INTERIOR OF THE KINETOGRAPHIC THEATRE BY RICHARD F. OUTCAULT



INTERIOR OF KINETOGRAPHIC THEATRE.

1. "The Kinetograph." The Electrical World, Vol. XXVIII, No. 24 (June 16, 1894), p. 801.

AERIAL DRAWING OF THE EDISON LABORATORY AND WORKS OF THE NATIONAL PHONOGRAPH CO., ORANGE, N.J.



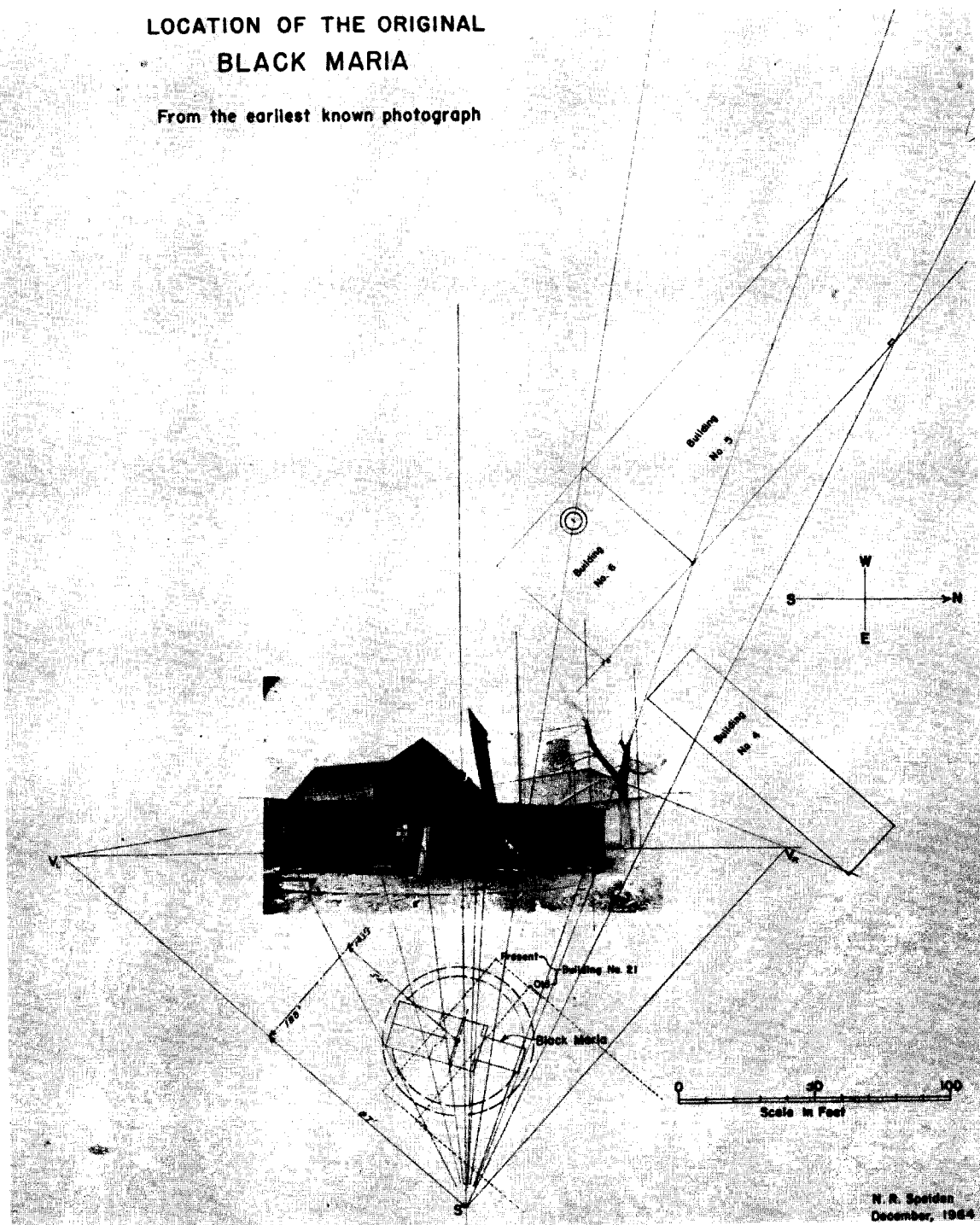
Edison Phonograph Monthly, Vol. I, No. 3 (May, 1903), p. 14.

APPENDIX H

DRAWING PREPARED BY SUPERVISORY MUSEUM CURATOR N.R. SPEIDEN,  
SHOWING BY PROJECTION FROM THE EARLIEST KNOWN PHOTOGRAPH  
THE LOCATION OF THE ORIGINAL "BLACK MARIA."<sup>1</sup>

LOCATION OF THE ORIGINAL  
BLACK MARIA

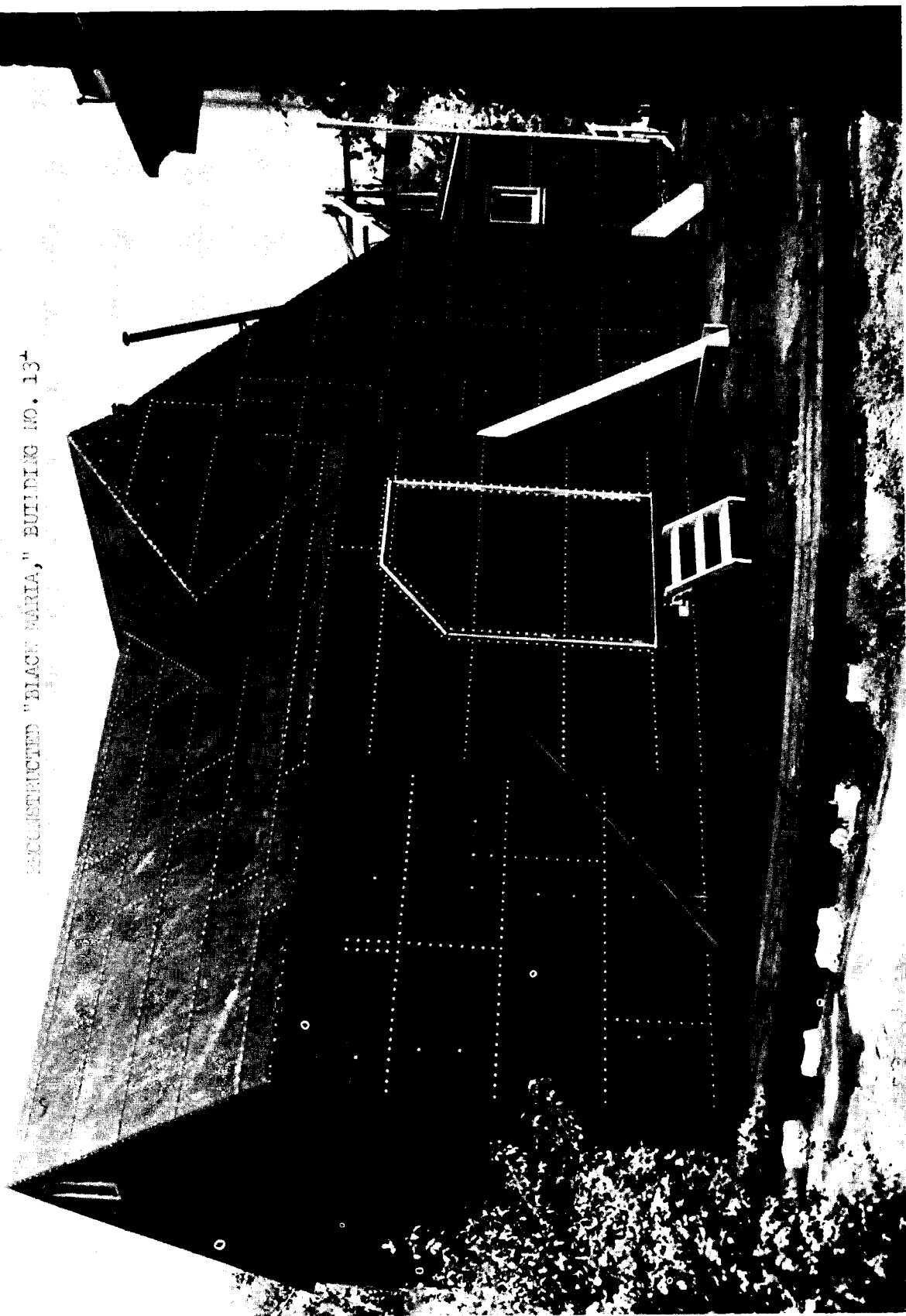
From the earliest known photograph



<sup>1</sup>See Negative No. 6920 in the Archives of the Edison National Historic Site.

APPENDIX I

RECONSTRUCTED "BLACK MARIA," BUILDING NO. 13<sup>4</sup>



1-See Negative No. 6647 in the Archives of the Edison National Historic Site. This photograph was taken at the time of the Dedication Ceremony on September 22, 1954.

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