

**Evolving treatment
philosophies and current
research related to the
daguerreotype**

Paul Messier



Photographer unknown, *Members of Princeton University class of 1853*, sixth plate daguerreotypes

Cleaning methods and dates

Sodium or potassium cyanide

(ca. 1850 to 1955)

Acidified thiourea

(ca. 1955 – present)

“Electro-cleaning” (& electrolytic)

(ca. 1985 – present)

Plasma sputtering

(1984 – present)

Laser

(1988 – future?)



Acidified thiourea



Electro-cleaning

Courtesy of Jiuan-juan Chen, Paul Messier LLC

Cleaning concerns

Toxicity

Residual chemistry

Reliability / repeatability

Control

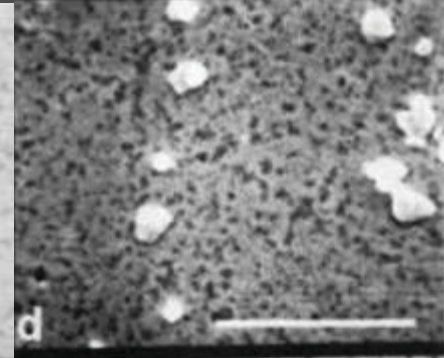


Pitting at site of high sulfur content following thiourea treatment

untreated



treated

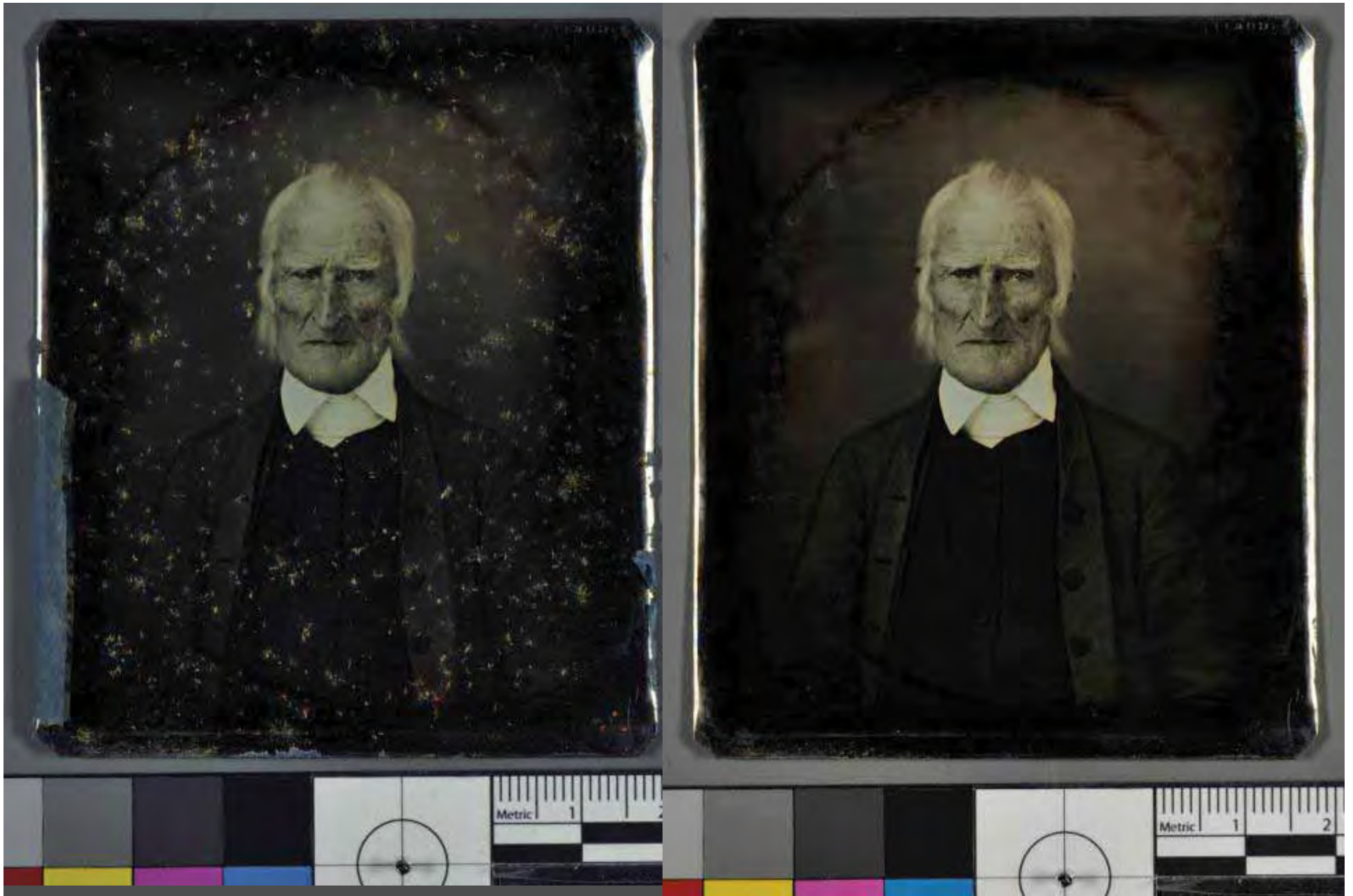


Etching and pitting of plate (on right) due to cyanide-based cleaning



Heavy copper concentration in electro-cleaning solutions following treatment

Courtesy of Juan-juan Chen, Paul Messier LLC



Unknown American photographer, ca. 1840-50, *Portrait of Thomas Richardson Robinson*, 1/6 plate daguerreotype

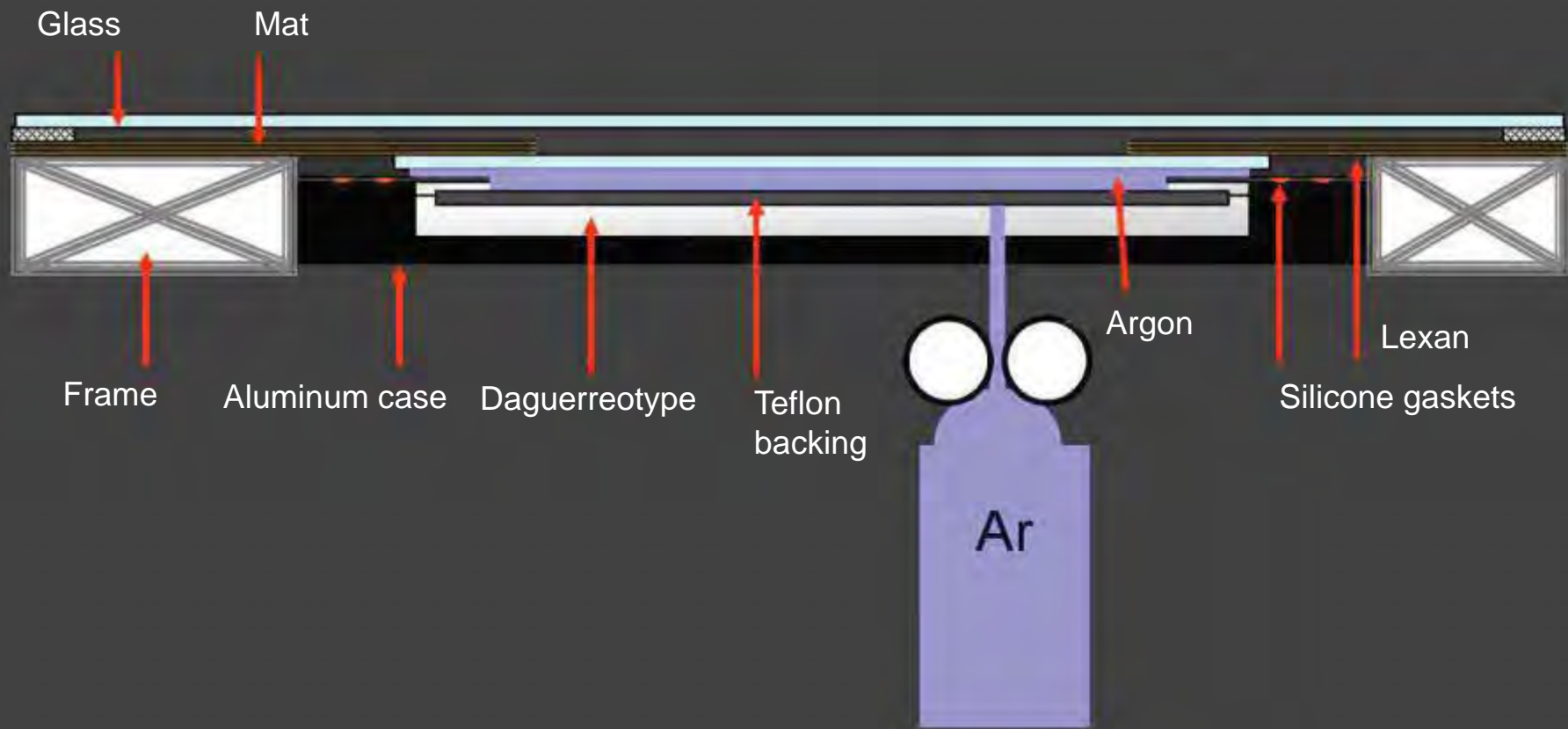


Unknown photographer, possibly Italian, ca. 1855, *Portrait of James Edward Freeman (1808-1884)*, 1/2 plate daguerreotype, with silk velvet passé-partout bound with textured paper tape



TR Williams, English, ca 1850, *Father and two sons with cricket bat and ball*, stereo daguerreotype, hand colored

Schematic of inert gas (argon) encasement for Cincinnati Waterfront daguerreotype panorama



Courtesy of Ralph Wiegandt, George Eastman House



Late 1930's



1998

Southworth & Hawes, *Portrait of Lola Montez*, ca.1850, whole plate daguerreotype

Courtesy of Silvia Centeno and Nora Kennedy, Metropolitan Museum of Art

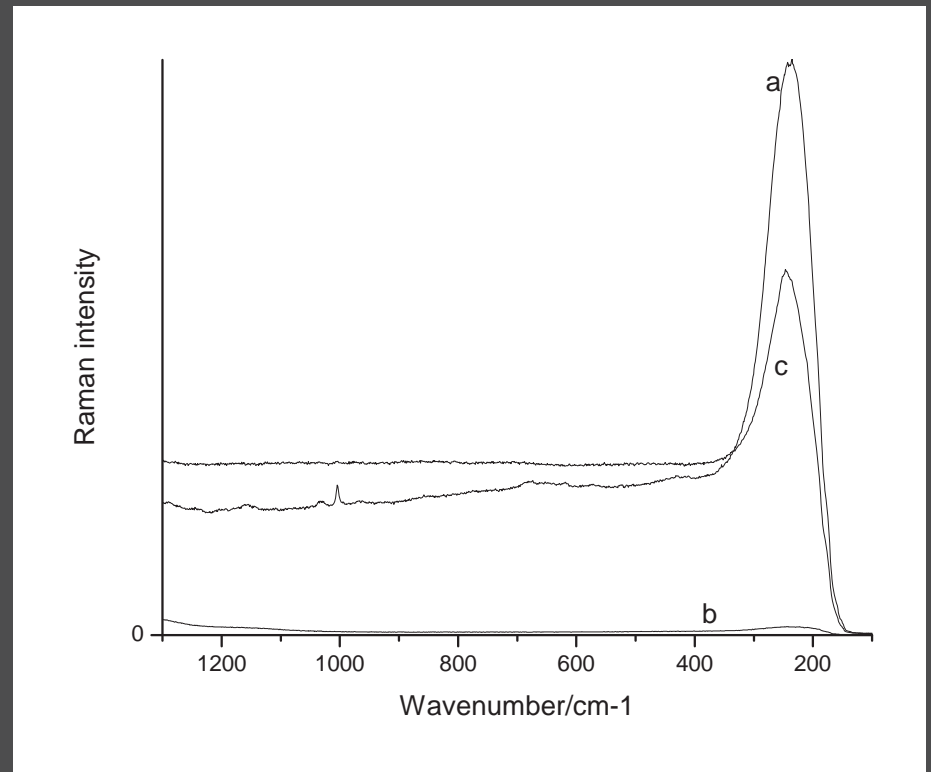


Southworth & Hawes (1842-1861), *Portrait of Lola Montez*, ca.1850, whole plate daguerreotype

Courtesy of Silvia Centeno and Nora Kennedy, Metropolitan Museum of Art



Raman spectroscopy



a-Lola Montez, white spot
b-Lola Montez, 'clean' area

240cm-1 (Ag-Cl)

Proposed mechanism



Possible sources of Cl

- Original processing
- Past treatments
 - HCl used for acidifying thiourea cleaners before the 1950s
- Environment, housing materials
 - Seawater
 - HCl and Cl-containing organic compounds from coal combustion, incineration, industrial activities.



Sculpture Gallery
Southworth & Hawes (1842-1862)

"Were you ever daguerretyped O immortal man? And did you look
with vigor at the lens of the camera...?"

— Ralph Waldo Emerson ("Our Age Is Ocular")



Courtesy of Ralph Wiegandt, George Eastman House

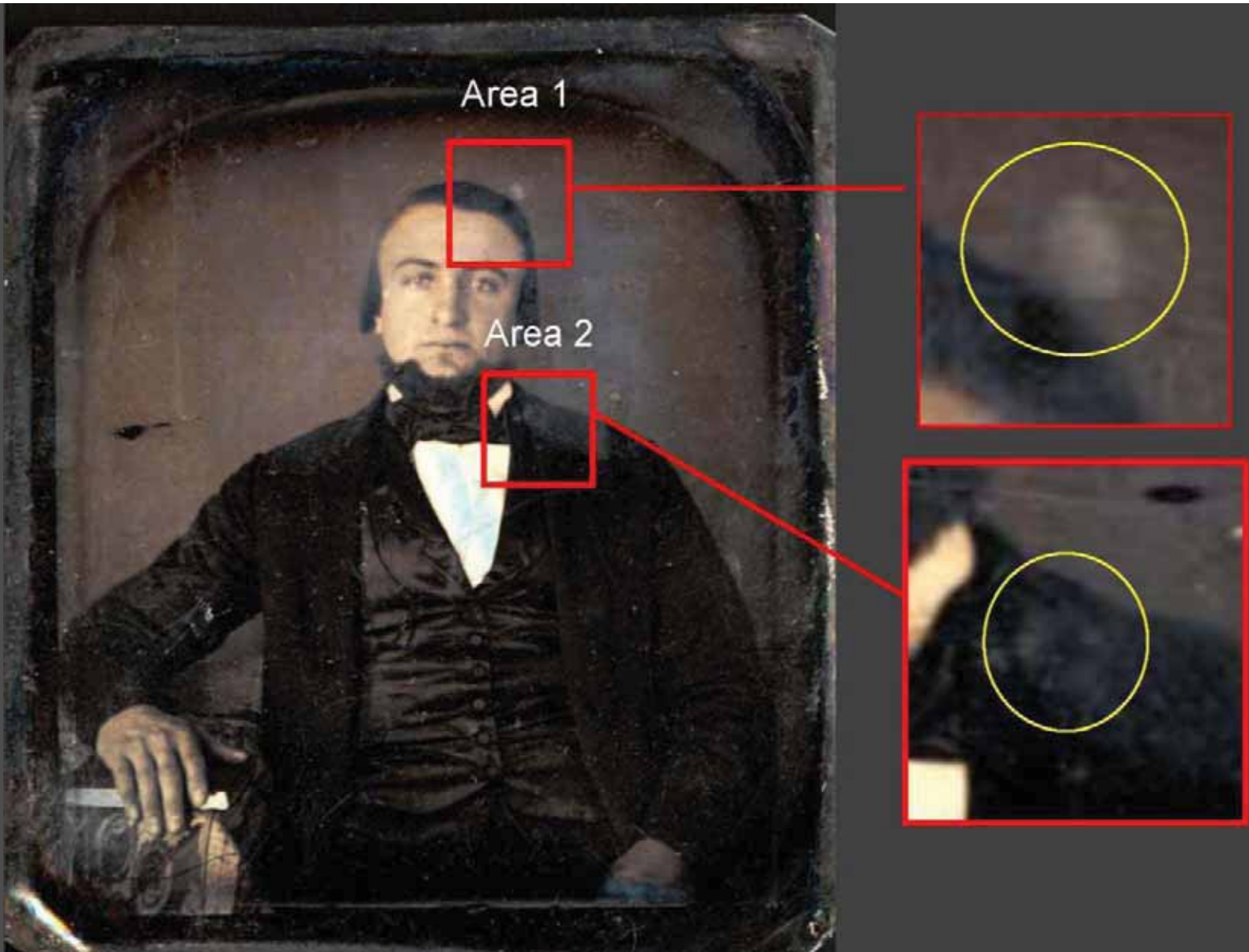
Before exhibition (March 2005)

After exhibition (May 2006)



Southworth and Hawes, *Portrait of Henry Bowdich*, ca. 1850, whole plate, daguerreotype

Courtesy of Ralph Wiegandt, George Eastman House



Corrosion induced by ultraviolet exposure

Courtesy of Ralph Wiegandt and Patrick Ravines, George Eastman House

Display and housing recommendations

Housing

- Consolidate and secure original housings

- Provide secondary enclosures

- Maintain a dry environment (ca. 40-30% relative humidity)

- Limit exposure to pollutants, especially oxidizing gasses

- To the extent possible, remove hygroscopic materials from inside enclosures

Display

- Limit light intensity (50 lux maximum) and duration of exposure

- Eliminate ultraviolet radiation

- Test display materials for oxidants and other pollutants

- Establish condition baseline with written and photographic documentation

- Monitor condition regularly

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Image	Institution	Object Number	Title	Artist	Date
	MET	37.14.4	Boston Beauty in Black Taffeta Dress and Lace Shawl	Southworth and Hawes	ca. 1850
	MFA	54.714	Brattle Street Funeral of Abbott Lawrence August 18 1855	Southworth and Hawes	1855
	MET	37.14.2	Daniel Webster	Southworth and Hawes	ca. 1850
	MFA	43.1298	Dr. Edward Norris Kirk, First Pastor of Mt. Vernon Congregational Church	Southworth and Hawes	1845-61
	MET	37.14.21	Edward Everett	Southworth and Hawes	ca. 1850
	MFA	43.1402	General John Ellis Wool	Southworth and Hawes	1845-61
					

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GEH 1974:0193:0141

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1974:0193:0141
Reverend Rollin Heber Neale



Institution George Eastman House
Object Number 1974:0193:0141
Title Reverend Rollin Heber Neale
Artist Southworth and Hawes
Object Date ca. 1850
Description Whole plate
Dimensions 6.5 x 8.5 inches; 16.5 x 21.6 cm
Markings
Provenance Gift of Alden Scott Boyer
Medium Daguerreotype
Inscribed
Notes

Bibliography

Subject identification based on wood engraved portrait from uncredited Southworth and Hawes daguerreotype published in "Gleasons Pictorial Drawing Room Companion", Vol. 5, No. 22, p. 348 (Nov. 26, 1853); The wood engraved reproduction of this daguerreotype was attributed by Charles LeRoy Moore "Two Partners in Boston" 1976, BIOGRAPHY: Connecticut-born clergyman Rollin Heber Neale (1808-1879) was known for the eloquence of his sermons and addresses, many of which were published. Graduating from Columbian College in Washington, D.C., in 1830 and studying at the Newton Theological Seminary where he was ordained, Neale became minister of the First Baptist Church of Boston in 1837 and remained there for forty years (Young America, p297).
 Mirror Image: The Influence of the Daguerreotype on American Society, Rudiail, R. 1971; Photography from 1839 to today: George Eastman House, Rochester, NY, Johnson / Williams / Rice 1999; Seizing the Light: A History of Photography, Hirsch, R. 1999; Spirit of Fact, RA Sobieszek & OH Appel, 1976; The Daguerreotype in America, Newhall, B. 1968; GEHs 2000 submission to AMICO (Art Museum Image Consortium); Young America, Romer & Wallis, 2005; cat no 256

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1974-0193-0141

Reverend Rolin Heber Neale

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- (1) Abrasion
- (1) Fingerprint (Abrasion)
- (1) (1) Scratch
- (1) Cloud
- (1) Interference Colors
- (2) Nucleated Spot/Ringed Spot
- (1) Tide Line (Tarnish)
- (1) yellowish/Brownish
- (4) Corner Clipped
- (1) corner clipped, top left
- (1) corner clipped, top right
- (1) Corner crimp mark, bottom left
- (1) Corner crimp mark, bottom right
- (2) Edge Center Crimp Mark
- (1) Edge center crimp mark, bottom edge
- (1) Edge center crimp mark, top edge
- (1) Finishing Characteristics
- (1) SSF (in diamond)
- (1) Axial Specular
- (1) UVA
- (1) Center Point

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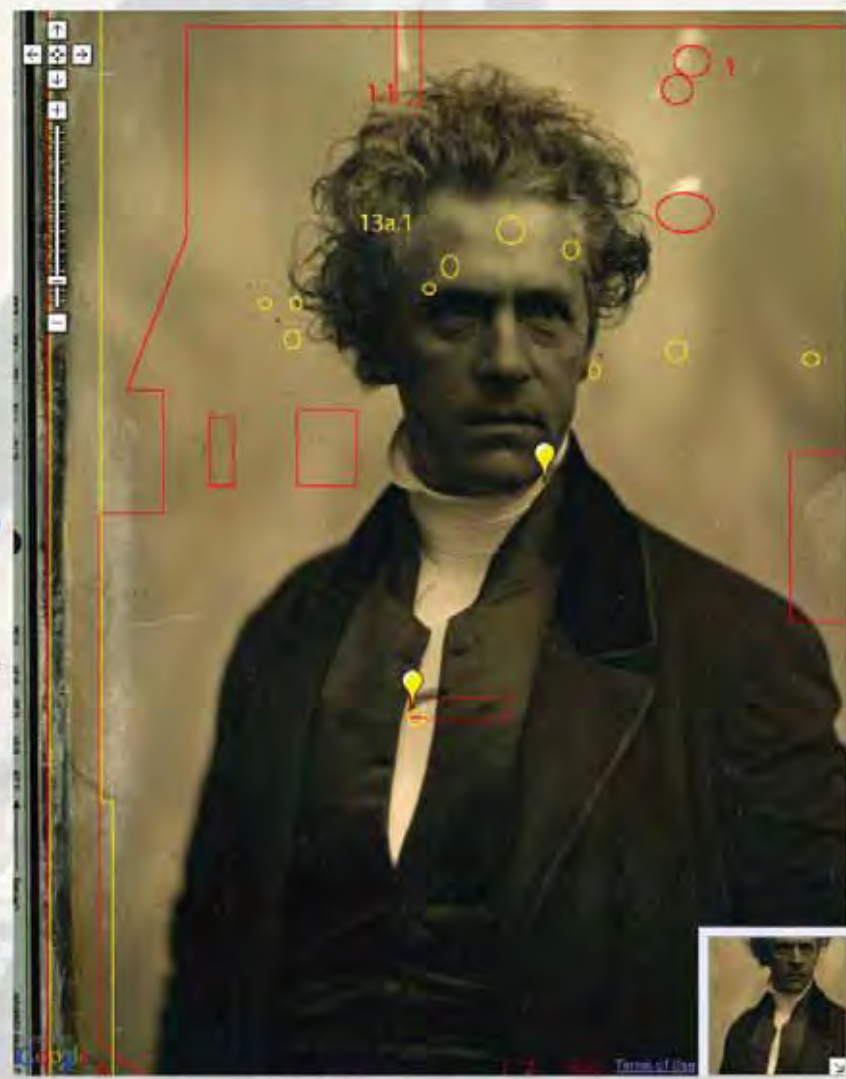
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 1974:0193:0141
 Reverend Rollin Heber Neale

Now Viewing:
 Default View
 Recto

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Reverend Kollitt Ingham Head

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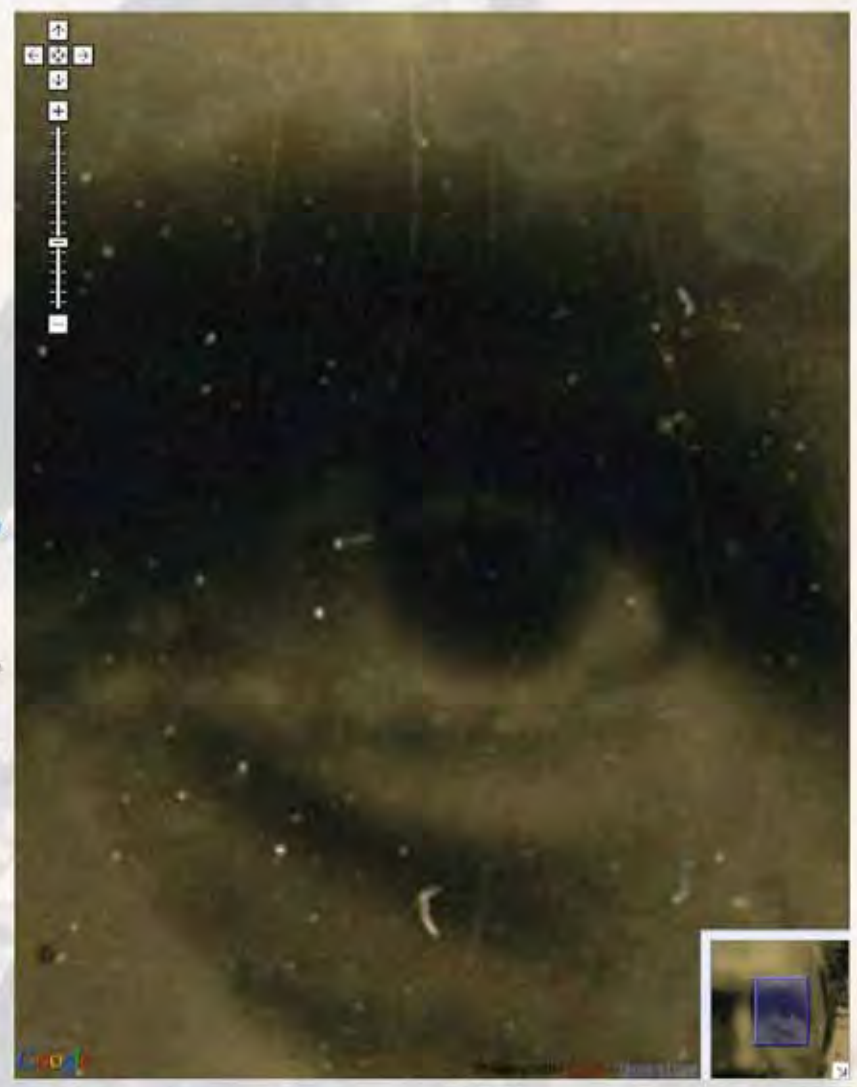
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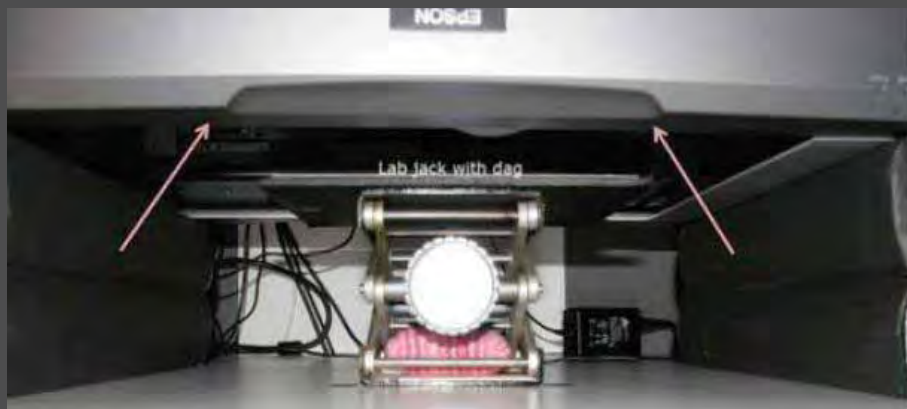
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Modified scanner, inverted

Axial lighting





Cutting neutral density filter for photographic illumination

Anonymous American, sixth plate daguerreotype
ca. 1855



Full intensity illumination
4230 lux, f10 at 1/80 second, ISO 400



Low intensity illumination
113 lux, f10 at 1/2 second, ISO 400

