

The Courtauld

Painting Pairs: Art History and Technical Study 2022-2023

'I.M. Coope and the *Old Iron* Portrait Series'

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(Photograph courtesy of BDMT, 2005)

Katharine Frances Clausen, *I.M. Coope*, 1927, oil on canvas, 68.9 x 51.0 cm

Braintree District Museum, Braintree, Essex, UK

CIA 2790

I.M. Coope and the Old Iron Portrait Series

OVERVIEW

This paper discusses the combined art historical and technical research into the early twentieth century British portrait *I.M. Coope*, conducted as part of the Courtauld Research Forum's Painting Pairs project, an annual collaboration between the Courtauld's Art History and Conservation & Technology departments. *I.M. Coope* arrived at the Courtauld in 2022 from the collection of the Braintree District Museum in Essex, to be included in this research and to receive accompanying conservation treatment due, in part, to the painting's degraded condition, which caused the portrait to be removed from public museum display in 2019. This degradation became a primary focus of the technical analysis undertaken, while the art historical research, in turn, aimed to contextualise the painting in its socio-cultural background.

I.M. COOPE

The portrait depicts a woman presented in half-length and quarter profile, seated at a desk in front of a large set of windows overlooking an urban landscape (fig. 1). Created in 1927 by American born British artist Katharine Frances Clausen (b. 1886 d. 1936), this portrait depicts Miss Irma Coope, a personal assistant to the director of the Crittall Window Company. Miss Coope wears a white blouse open at the neck with loose long sleeves. Her wavy



Figure 1. Katharine Clausen, I.M. Coope, 1927, oil on canvas, 69 x 51 cm, Braintree District Museum (photograph courtesy of BDMT, 2005)

brown hair is pulled away from her face and a pair of glasses with a thin metal frame perch on her nose. Bright sunlight streams in through the tall windows behind Miss Coope, further illuminating the left side of her face as she turns her head slightly towards the viewer. Clausen used a limited colour palette, primarily grounded in warm beige tones. The visible brushstrokes, especially on the blouse, demonstrate her attempts to quickly capture the play of light on the textured fabric.

The intricate iron balcony outside the window panes as well as the geometric detailing on the building visible in the background emphasise the location within the context of the image, likely placing Miss Coope in her office at the Crittall Window Company building in central London.¹ Clausen presents Miss Coope in a moment of reflection in her work: her gaze is directed beyond the picture plane while her hands rest on the keys of the typewriter in front of her. The papers scattered on the far edge of the desk as well as the candlestick telephone further emphasise the duties of the sitter's role as a personal assistant. This portrait of Miss Coope was painted as part

of a series commissioned by the Crittall company, dubbed the *Old Iron* portraits.

OLD IRON PORTRAITS

The *Old Iron* series comprises forty-eight paintings in total, commissioned in the late 1920s by the Crittall Window Company of a selection of their employees. The series documents forty-seven named sitters, with one duplicate sitter, and were executed by twenty-five artists. The Braintree District Museum, located in the town of Braintree, England where one of the largest Crittall factories operated for much of the early 1900s, boasts an extensive archive of

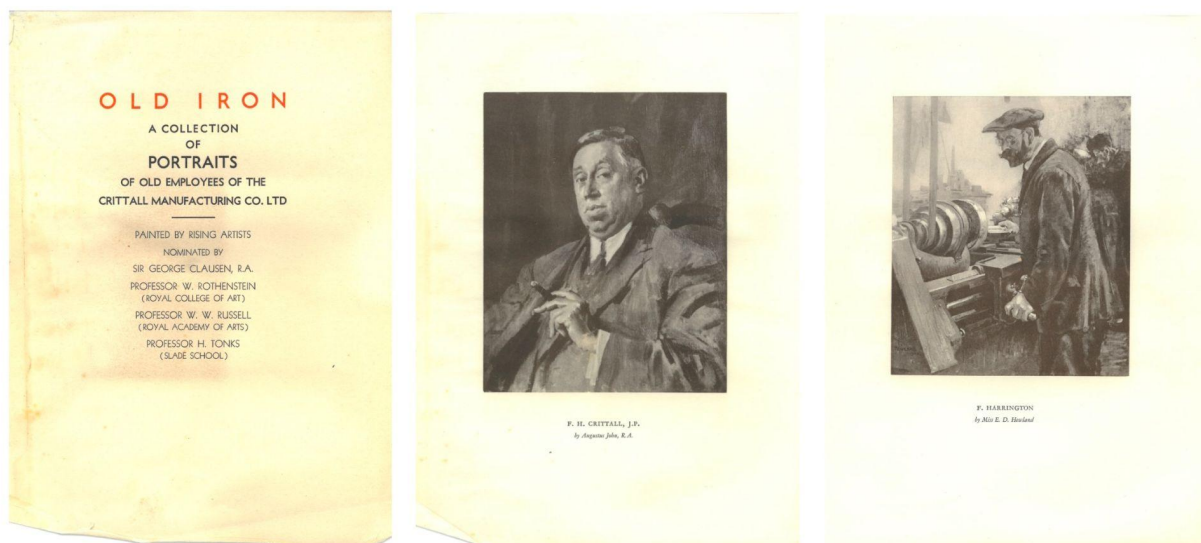


Figure 2. Selected pages from the catalogue that accompanied the 'Old Iron' portrait series, including the title page (scans courtesy of the BDMT)

¹ Using archival material and by walking in the city, we were able to locate the exact building that housed the Crittall Window Company offices in the early 1920s and in which Miss Coope likely sits. The building is near the Holborn tube station in central London and is still in use today. The art deco patterned railings seen through the window in *I.M. Coope* remain on the facade.

Crittall Window Company materials, including twenty-eight of the *Old Iron* portraits, *I.M. Coope* amongst them. Little is known about the criteria for either artist or sitter selection beyond the information provided in the catalogue

that accompanied their display, which notes that they were created by 'rising artists' selected by four professors associated with London art schools; Sir George Clausen and Walter Westley Russel of the Royal Academy of Arts, William Rothenstein of the Royal College of Art and Henry Tonks of the Slade School of Fine Art (fig. 2). Questions about the background of this series – the individuals involved and the wider social impetus and legacy of its commission – became the overarching focus of our art historical investigation.

RESEARCH QUESTIONS

Our research aimed to draw a more comprehensive understanding of both the *Old Iron* series and Katharine Clausen's *I.M. Coope* in particular. It was our goal to develop an understanding of the role of the *Old Iron* series within the history of the Crittall Window Company and the wider British historical and social contexts, as well as the role of *I.M. Coope* in relation to the *Old Iron* series as a whole.

Our first set of research questions centred around the commission of the series. We wanted to learn more about the criteria for sitter and artist selection and whether the project involved any additional instructions determining materials, composition or style. We aimed to illuminate the role of the artists' nominators, particularly lead nominator and artist Katharine Clausen's father, Sir George Clausen, as well as the

nominators' connections to both the artists and the Crittall company. Additionally, we wondered why the Crittall company chose to celebrate its employees through the medium of art and how they used the portraits; the fact that a commercially successful company invested time and money into sponsoring and producing an extensive artistic campaign documenting its employees points to the unique value of the *Old Iron* series and a chance to study the intersection between art and industry in early twentieth century Britain.

Our next questions centred on Katharine Clausen's involvement and her portrait *I.M. Coope*. We were curious about her connection with her father in the context of her work, and wanted to understand how *I.M. Coope* fit into her personal oeuvre and the collaborative *Old Iron* project. This research involved questions about her studio practice, artistic style and the materials and techniques used to create her portrait of Miss Coope. Additionally, we hoped to better characterise the degradation present in *I.M. Coope*, and to determine whether the results of our analysis could suggest potential causes. Insight gained from technical analysis about the creation of *I.M. Coope*, including clues about the object's physical history, also served to guide our questions about the wider context of the painting and the other members of the *Old Iron* portrait series.

Finally, we wondered what the precedent for a set such as the *Old Iron* portrait

series was in the art historical and social history of Britain, and how unique such a project might be in wider contexts.

CRITTALL WINDOW COMPANY

The Crittall Window company began in 1849 as an ironmongery and in 1907 secured a patent for a steel-framed window design. This signature design led to great commercial success and the company expanded to global operations from their original location in Essex, United Kingdom by the 1930s. Notable buildings in Britain with Crittall-made windows include Tower Bridge, the Tower of London and the Houses of Parliament. As a company, Crittall operated with a particular emphasis on employee life and wellbeing, exemplified in their building of

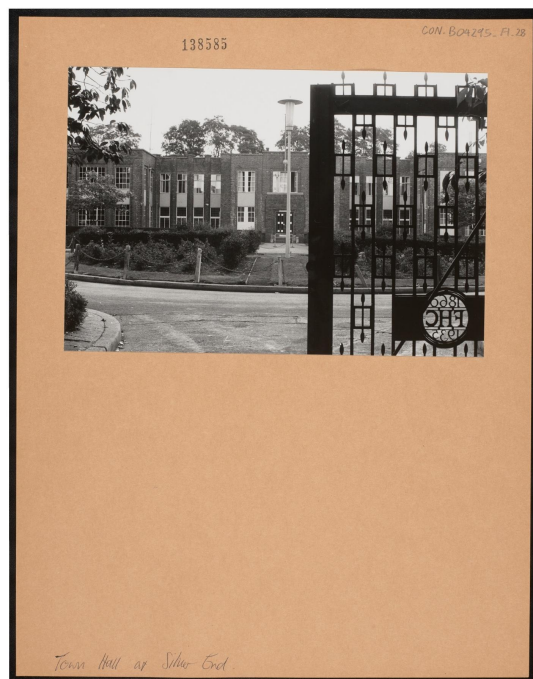


Figure 3. Historic photograph of the village hall at Silver End (photograph courtesy of The Courtauld's Conway Library)

Silver End, a model village alongside their factory in Essex, for which the company broke ground in 1926 (fig. 3). Silver End was designed to provide Crittall workers with homes and social venues that catered to their needs, including a department store, cinema, health clinics and a community hall.² The *Old Iron* portraits were commissioned as part of the celebration of the opening of Silver End, and hung on the walls of the Silver End village hall for a number of years thereafter (fig. 3).

OLD IRON COMMISSION

The Sitters

Archival records indicate that by the 1920s Crittall employees numbered in the thousands – why were these employees chosen and how were they portrayed? A catalogue of the *Old Iron* portraits that accompanied the paintings' display documented the forty-eight paintings of the series, with forty-seven named sitters; H.S. Usher was painted twice. The employees in the series illustrate a range of roles across the Crittall Window Company, including factory workers, office workers, managers, a nurse and members of the Crittall family (figs. 2, 4). The series features five women and forty-two men, with the women mainly depicted in office roles. Seventeen subjects, including Miss Coope, are

² Susan King, 'Silver End - A Place to Work and Play / written for the 70th Anniversary', last modified 1996, <http://www.silverend.org/history/susan.htm>.

pictured with objects that indicate their role within the company, such as paperwork, telephones, typewriters, factory equipment and hand tools. Most subjects are dressed in outfits that further indicate the nature of their work: chore smocks for labourers, suits and ties or blouses for managers and assistants, and a nurse's cap for a medical professional. Only ten subjects are depicted against location-specific backgrounds, such as Miss Coope's office building, while the majority of the sitters are placed against a nondescript brown background, highlighting the features of the sitter and the objects they are pictured with. All but two of the portraits are half length, featuring only the bust and face of the sitter.

roles within the company, and were painted to emphasise the profession and identity of the sitter within the context of each portrait. The title of each painting names the sitter, further emphasising the identity of the individual painted. The title *Old Iron* is of interest itself, possibly intended as a reference to the Crittall company's origins as an ironmongery. The catalogue also specifically characterises the subjects as 'old employees' of Crittall, indicating that the title *Old Iron* may also reference the sitters' ages or advanced status with the company (fig. 2).³

We found that the style, format, and exact dimensions of the portraits vary from artist to artist, indicating that, aside from the possible instruction to paint the

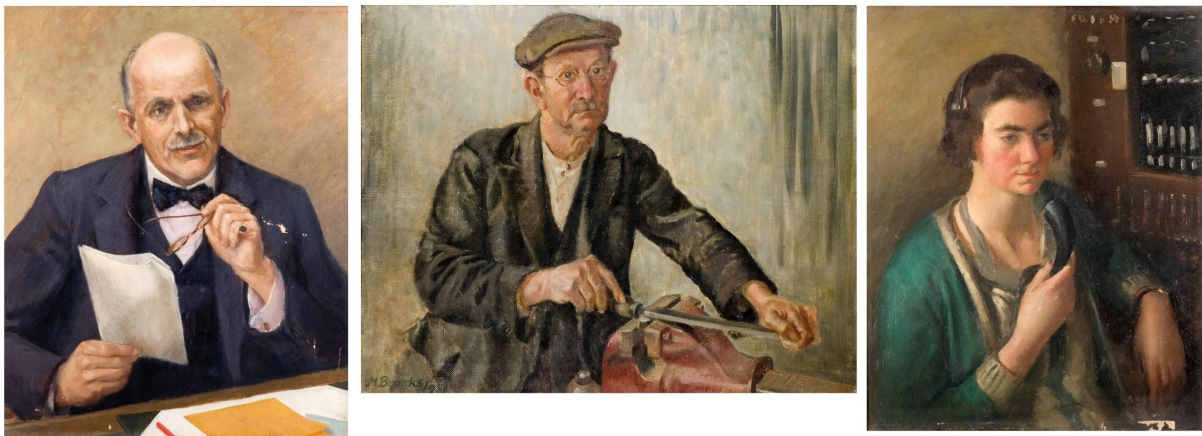


Figure 4. Selected portraits from the 'Old Iron' series, including *H.S. Munns* by H. Sands (oil on canvas, 61 x 51 cm, BDM), *W. Griggs* by M. Brooks (oil on canvas, 35 x 67 cm, BDM) and *Miss Dearlove* by H.M. Carr (oil on canvas, 61 x 51 cm) (photographs courtesy of BDMT, 2005)

Though we could not find any records discussing the exact criteria used in choosing these particular individuals to be painted, the selection appears designed to record the full breadth of

³ The title 'Old Iron' could also call back to the history of rag-and-bone men in 19th century Britain, who collected and resold unused items, including what they commonly referenced as 'any old iron.' From: Henry Mayhew, *London Labour and the London Poor, Volume 2* (London: Charles Griffin, 1861), 139.

employees in a half length format, the artists were given few other guidelines. It is also unclear whether the artists created their portraits from photographs or from life, or whether any of the artists shared a studio location or materials when making the *Old Iron* works.

Artists & Nominators

Twenty-five artists participated in the *Old Iron* series, with the majority, including Katharine Clausen, contributing only one work, while a select few painted several portraits. The painters were referenced as 'rising artists' in the *Old Iron* catalogue, suggesting that they were at the outset of their careers. Archival records indicated that all of the artists were at one time students of the major London schools of visual arts, including the Royal Academy of Arts, the Royal College of Art and the Slade School of Fine Art, and that most were either current students or very recent graduates of these schools during the years of the *Old Iron* commission.

Those in charge of nominating artists for the *Old Iron* series were also associated with the London art schools: Sir George Clausen (b. 1852 d. 1944) was a Royal Academician and Interim Master of Paintings at the RA from 1926-27, Professor William Rothenstein (b. 1872 d. 1945) was the principle of the RCA from 1920-1935, academician and professor Walter Westley Russel (b. 1867 d. 1949) was keeper at the RA in 1927 and Henry Tonks (b. 1862 d. 1937) was the Slade's professor of fine art from 1918-1930.

Their active employment with the London schools during the years of the *Old Iron* commission likely demonstrates a concurrent professor-student relationship between the nominators and the majority of the nominees for the *Old Iron* project.

Katharine Clausen herself had graduated from the Royal Academy of Arts in the early 1910s, studying at the school from 1908 to 1913. She continued as a working and exhibiting artist after her studies, specialising in painting and etching, until her death in 1936. A ledger of student records in the RA's archive lists Clausen's name alongside that of Archibald George Barnes, another artist who contributed to the *Old Iron* series and who matriculated as a member of the same cohort in 1911 (fig. 5). Clausen, Barnes, and R. Schwabe, are the few artists from the set to have attended and graduated from the London schools over a decade prior to the *Old Iron* commission, suggesting perhaps different origins to their connection to the project and the nominators than those of their *Old Iron* peers.

	Webb, Philip Edward	do	21.5	Jan. 1911
Mar 10	Siodia, Rustom D.	Painting	26.5	
28 July	Barnes, Archibald George	Painting	21.3	
	Brockhurst, Gerald Leslie	do	17.8	P
	Clausen, Katharine Frances	do	22.3	P
	Gray, Douglas Stannus	do	18.0	P
	Hodgson, Margaret	do	20.8	

Figure 5. Detail of a Royal Academy attendance ledger of the 1910s, showing artist Katharine Clausen matriculating amongst the cohort of the 1911 class (photograph courtesy of Chloé Glass)

Katharine's unique position as Sir George Clausen's daughter likely accounts for her connection to *Old Iron*. Archival records indicated that the two had close personal and professional relationships, sharing an address until 1927 and collaborating on artistic projects. Katharine, known in the family as 'Kitty', is mentioned in much of the correspondence held in the 'Sir George Clausen, Papers' archives at the RA, with some of the letters in that collection addressed specifically to her.⁴ Royal Academy records also noted that Katharine worked as George's assistant for the commission of the St. Stephens murals at Houses of Parliament during 1925-27, also the years of the *Old Iron* commission.⁵ Katharine worked primarily in watercolour throughout her oeuvre and shared similar styles to her father's work, suggesting that his teaching may have influenced the development of her personal style (fig. 6).

Concerning the *Old Iron* artists' connection to wider social contexts, our research uncovered records indicating that many of the *Old Iron* artists were politically associated throughout their artistic careers. Artist Percy F. Horton was



Figure 6. Katharine Clausen, *Untitled*, date unknown, bodycolour and watercolour on paper, 29 x 39 cm, The British Museum, London
© The Trustees of the British Museum

an early member of the Artists International Association, an organisation that used art as a tool to publicise and participate in left-leaning politics and social movements. As an AIA member, Horton went on to paint portraits of the unemployed during the Depression of the 1930s.⁶ Additionally, artist R. Schwabe was an official war artist during World War I, a post also shared by Sir George Clausen; a personal connection between the two artists from those years likely garnered Schwabe a nomination to the *Old Iron* project.

⁴ Letter, 'C. Harrison Townsend to Miss Clausen - 30 January 1910,' 1910, CL/1/231, Sir George Clausen, Papers, Royal Academy of Arts Archive, London, UK.

Letter, 'George Frampton, 90 Carlton Hill, St John's Wood, to Kitty - 15 May 1912,' 1912, CL/1/40, Sir George Clausen, Papers, Royal Academy of Arts Archive, London, UK.

⁵Royal Academy of Arts. 'Katharine Frances Clausen (1886-1936).' Accessed March 2023. <https://www.royalacademy.org.uk/art-artists/name/katherine-frances-clausen>.

⁶ The Crittall's *Old Iron* series would not be the only time Horton painted portraits of factory workers. In 1942 he painted *Blind Workers in a Birmingham Factory* as a member of the War Artists Advisory Committee during World War II. From: University of Brighton, 'Percy Frederick Horton (1897-1970),' accessed March 2023, <http://arts.brighton.ac.uk/alumni-arts/horton,-percy-frederick-1897-1970>.

SIR GEORGE CLAUSEN & ESSEX CONNECTIONS

Our research found personal and political connections between the Crittall, Clausen and Courtauld families in the early twentieth century. After moving to Essex in the early 1910s, Sir George Clausen struck a personal friendship with his neighbour Walter Frances Crittall, who was himself a trained artist and painter. Local Essex accounts attest to Clausen and Crittall attending painting holidays and expeditions together.⁷

Clausen and the Crittall family also shared similar sentiments toward social movements, particularly in regards to the dignity of the labour of the working class. Clausen spent much of his artistic life documenting the lives and work of people



Figure 7. Sir George Clausen, *Our Blacksmith*, c. 1931, oil on canvas, 76 x 91 cm, private collection (photograph courtesy of Sotheby's, 2005)

⁷ Ariel Crittall and David Blake, *Window Vision: Story of the Crittall Family, Volume 2: Crittall, 1849–1989* (Witham: Crittall Windows, 1989), 134.

in rural England, and expanded on this topic within his oeuvre after his relocation to Essex. The Crittall family purchased and commissioned several pieces from Clausen between the 1910s and 30s that depicted the labour of the working class, such as the painting *Our Blacksmith* in 1931 (fig. 7). The painting depicts three men at their work, bent over an anvil and lifting their hammer to strike and shape hot metal glowing red after emerging from the flames. The personal connections between Clausen and the Crittall's, as well as their shared beliefs in the importance of art and its role in honouring the efforts of the workforce, likely served as an impetus for a collaborative project such as the *Old Iron* portraits.

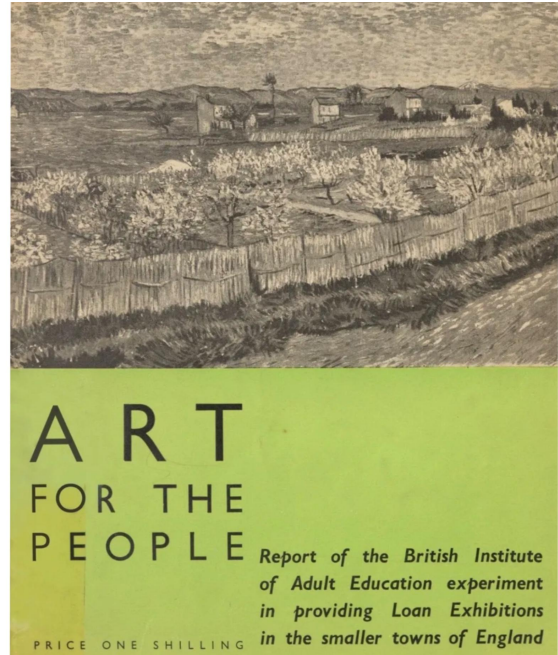


Figure 8. Cover of the exhibition report for 'Art for the People', 1935 (photograph courtesy of Tate, London, accessed in *Adventures with Van Gogh* <https://www.theartnewspaper.com/2020/09/04/art-for-the-people-how-a-van-gogh-masterpiece-ended-up-in-an-english-village-hall>)

Another connection of note in Essex is that of the Courtauld family. The Courtauld's founded a textile manufacturing firm based in Essex in 1799; one of their earliest textile mills was located in Braintree, and as such the Braintree District Museum also holds an archive of Courtauld materials beside its Crittall archive collection and the *Old Iron* portraits. The Courtauld's, like the Crittall's, were known for their concern for social justice, and though not to the scale of Silver End, the Courtauld's also built houses for their Essex workers. Additionally, in 1935 Samuel Courtauld, the founder of the Courtauld Gallery, loaned his acquisition *Peach Trees in Blossom* by Vincent van Gogh to the village hall at Silver End as part of a 1930s social project in which works of art were sent to communities that did not have their own museums or galleries, called 'Art for the People' (fig. 8).⁸

We also discovered photos in the Courtauld's newly digitised Conway Library photography archive of the houses at Silver End, taken in 1927, the very year *I.M. Coope* was painted, which may point to another direct connection between the Courtauld's and the Crittall company (fig. 3). Furthermore, the Braintree Town Hall was also built as a gift of the Courtauld family, further emphasising their desire to to encourage

⁸ Martin Bailey, 'Art for the People: How a van Gogh masterpiece ended up in an English village hall,' *Art Newspaper*, September 2020, <https://www.theartnewspaper.com/2020/09/04/art-for-the-people-how-a-van-gogh-masterpiece-ended-up-in-an-english-village-hall>.

civic and artistic engagement in smaller communities. The Town Hall was opened in 1928 and many of the Braintree District Museum's works, including the *Old Iron* portraits in their collection, are stored there today.

***I.M. COOPE* : TECHNIQUE & CONDITION**

Artist Katharine Clausen painted *I.M. Coope* in oil medium on canvas, stretched onto a four-member, keyed wooden stretcher (figs. 9, 10). The canvas is constructed of natural fibre, likely linen, in a mid-weight, plain weave. Records from the Braintree District Museum and visual analysis indicate that the canvas was commercially primed, though there is evidence to suggest the painting was stretched by the artist.⁹ The paint layer has been applied thinly in most areas of the composition, with thicker passages and some instances of impasto in the shoulder of the sitter's garment. The painting technique is dominated by wet-in-wet mixing, with visible brushwork throughout. There is little visual evidence of reworking, with the appearance of being painted quickly in a minimum amount of layers, which could indicate that the painting was composed from life with the sitter present, rather than from a photograph. Infrared

⁹ The priming is applied thinly and uniformly, with the appearance of being machine rolled, indicating the likelihood of commercial production. In contrast, the unevenly spaced tacks along the margins and inconsistent folding at the four corners suggest that this commercially produced canvas was hand-stretched by a layman, possibly the artist herself.



Figure 9. Katharine Clausen, I.M. Coope, 1927, oil on canvas, 69 x 51 cm, Braintree District Museum, Before Treatment, recto (photograph courtesy of Courtauld Conservation Department, 2022)



Figure 10. Katharine Clausen, I.M. Coope, 1927, oil on canvas, 69 x 51 cm, Braintree District Museum, Before Treatment, verso (photograph courtesy of Courtauld Conservation Department, 2022)

reflectography taken with an OSIRIS camera revealed that Clausen used only sparse underdrawing to pre-determine the placement of compositional elements in *I.M. Coope*, in the use of a series of evenly-spaced, vertical lines along the bottom edge, contributing to our understanding of the possibility of a spontaneous, *alla prima* approach (fig. 11). The colour palette used in her rendering of Miss Coope and her surroundings is limited but vibrant, and a thin varnish layer, thought to be original, has been applied.

It is unfortunately impossible to discuss this particular painting as an object and image without also discussing its

damage. Records from the Braintree District Museum indicate that the piece was removed from display and given an emergency facing in 2019, due to extensive and active paint flaking and associated paint loss in many areas of the picture plane.¹⁰ The painting arrived to the Courtauld in 2022 framed and with the facing still attached (fig. 9). Upon removing the painting from the frame it became apparent that this facing was by that time failing in many places, with the paper lifting away from the surface of the canvas and appearing to exacerbate paint

¹⁰ This facing treatment, consisting of Japanese tissue affixed with carboxymethylcellulose (CMC) adhesive, was applied in 2019 during a collection condition audit conducted by Brick House Fine Art Conservation.

detachment in those areas. Even through the barrier of the facing it could be seen that areas of loss occur throughout the picture plane, but are most extensive in areas of the background, often corresponding to specific compositional shapes. Viewing the painting in raking light also revealed many areas of tenting beneath the facing - raised paint that indicates layer separation and potential incipient flaking - in parts of the composition that had appeared otherwise secure when viewed in normal light (fig. 12).

INVESTIGATION INTO MATERIALS AND DEGRADATION

As our main questions for technical analysis involved the flaking phenomenon, our investigation began there: in casting cross sections from flakes of paint that had detached from sections of the tacking margins (fig. 13). Microscopic analysis showed each of the detached flakes to feature a very thin structure, with one or two layers of paint and the remnants of a lower layer of a crumbling white material along the bottom edge. This evidence of white residual material on the detached flakes indicated this layer to be the likely point of failure in the layer structure which led to detachment. Identifying where in the full layer structure of the painting this failing white layer falls, what its material components might be, and what we might infer about potential causes of that failure became the focus of our examination.



Figure 12. Raking light image of I.M. Coope, emphasising the detachment of the facing paper and the tenting paint

It was also noted that each of the paint samples also featured the 'sparkling' appearance under ultraviolet light characteristic of zinc-containing pigments, such as zinc white, in all of paint colour mixtures present (fig. 13). SEM EDX elemental analysis of these samples indicated the paint layers to also contain elements suggesting the presence of the bone black, iron-containing earth pigments, vermilion, and lead white in addition to zinc white. The presence of these pigments is consistent with common colour palettes of the period, while the small particle size and even distribution of the pigments in the layer morphology indicates the likelihood of the use of machine-ground tube paints.

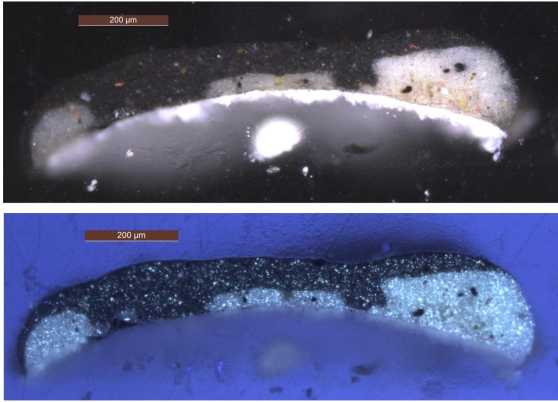


Figure 13. Photomicrographs of a cross section of a detached paint flake from the tacking margin, in normal (top) and ultraviolet (bottom) light

In investigating the full layer structure of the painting an additional sample was taken from the primed canvas on the verso (fig. 14). Microscopy of this sample shows the primed support to consist of natural fibre canvas topped with two discrete ground layers: a lower, thicker layer of coarse, mostly translucent particles, and a thin upper layer of fine, opaque white material. SEM EDX results and comparison of the primed canvas sample to the paint flake samples confirmed the identity of the crumbling white layer found on the bottom of the flaking paint as the uppermost priming layer, composed of elements that indicate the materials chalk, barium sulphate, and titanium white pigment. Dye tests on the primed canvas cross section also revealed the presence of a protein-containing size layer, likely an animal glue, and positively indicated that both priming layers are oil bound. Each of these results is consistent with period convention, though the year 1927 would be an early instance of the use of titanium white pigment in a

commercially primed canvas, as the material was only introduced to the artist supply market of Europe after 1920.¹¹

As this analysis indicated that the flaking phenomenon is associated with the upper priming layer and its materials, potentially as a cohesive failure of that layer and/or an adhesive failure between it and the paint layer above, this knowledge helped us to better characterise the nature of the issue as ubiquitous, rather than one localised to the areas where loss and flaking is apparent at first glance. In expansion of this idea, and turning back to visual analysis of the painting as the barrier of

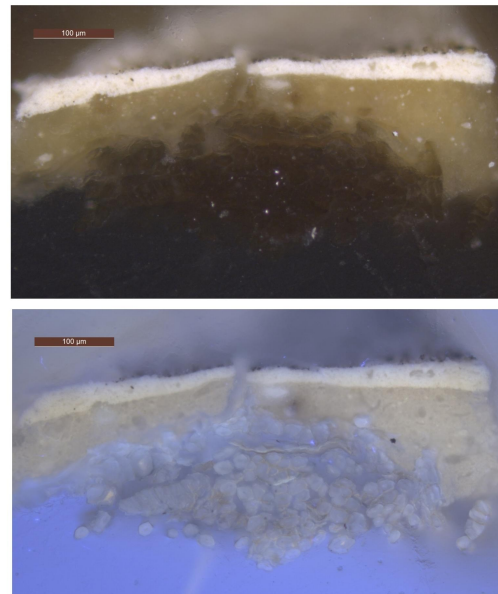


Figure 14. Photomicrographs of a cross section of a sample of primed canvas taken from verso, in normal (top) and ultraviolet (bottom) light

¹¹Ekaterina Morozova, Irina Kadikova and Svetlana Pisareva, 'Titanium dioxide whites in XX century works of art: occurrences and composition study,' in *International Journal of Conservation Science* 13, no. 1 (2022): 1553.

the facing has been removed, we noted again that the flaking phenomena is observed to be more severe for specific passages of paint, associated with the thinnest areas of paint application and with the use of particular colour mixtures. The crumbling of the priming layer is visible in areas of loss as a granular texture to the surface of the exposed area, but is only observed in areas where the priming is covered by layers of paint, an effect that can be observed in the 'halo' that follows the exact edge where the artist-applied paint covers the commercially-applied priming layer along the tacking margins (fig. 15). These observations could indicate the flaking issue as one that is not an inherent failure of the materials of the priming, but one that concerns an interaction between the priming layer and the paint layers, and which appears to be compounded by the exact recipe of the applied paint and the mode of its application.¹²

Physical History

We were also able to conjecture more about the cause of the flaking issue from other visual clues, as well as a comparison to the condition of the other paintings in the *Old Iron* set that we know to have

¹² Full discussion and notation of the techniques and results of the technical analysis of *I.M. Coope*, including data sets and analytical equipment specifications, can be found in the CIA report: Catherine Dussault, 'CIA 2790, Clausen (British 1920s), Report & Appendices', Conservation Report Archive, Courtauld Department of Conservation & Technology, Courtauld Institute of Art, May 2023.



Figure 15. Detail of the bottom tacking margin, showing the 'halo' effect where the priming degradation follows the exact edge of the applied paint

likely shared the same physical history in terms of environment. We observed several water stains on the back of *I.M. Coope's* canvas, one of which directly corresponds to an area of severe loss on the front, which raised the consideration of whether high degrees of moisture played into the response of the component materials and contributed to the flaking effect (fig. 10).

In the condition survey conducted on twenty-seven of the *Old Iron* portraits in the collection of the Braintree District Museum in 2019, it was noted that thirteen exhibited evidence of water damage, and of those over half had associated flaking of paint, including the portrait of W.C.C. Bywater (fig. 16).¹³ However, as these notes also show that there are few other commonalities to the canvases across the set - with various canvas dimensions, varied canvas weights and types, some with artist applied grounds and some with commercial, some with suppliers stamps and some without -

¹³ Brick House Fine Art Restoration, 'Braintree Museum Condition Survey', Brick House Fine Art Restoration, 2019.

it is unlikely that there is an exact materiality shared between *I.M. Coope* and any of the other portraits from the series in terms of canvas priming, and therefore unlikely that their flaking phenomena matches *I.M. Coope's* in exact nature and origin. Regardless, this commonality of evidence for a shared physical history of high moisture exposure is of interest, and contributes to the understanding of potential causes for the flaking observed in *I.M. Coope* and across the set.

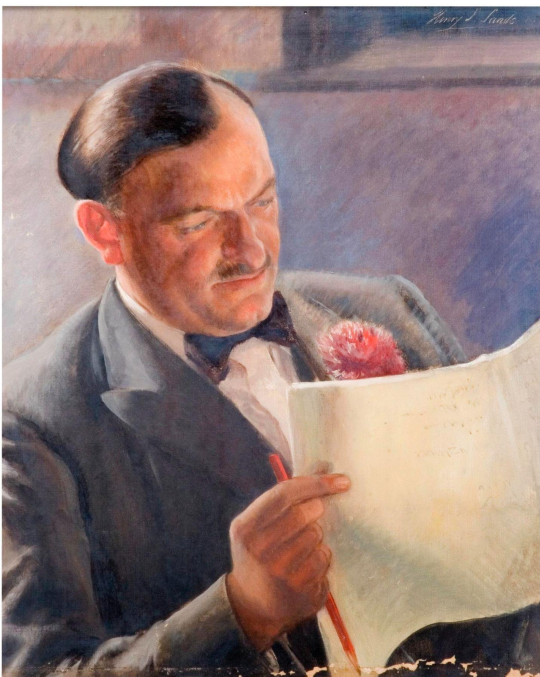


Figure 16. H. Sands, *W.C.C. Bywater*, 1928, oil on canvas, 62 x 51 cm, Braintree District Museum (photograph courtesy of BDMT, 2005)

Degradation Hypotheses

Using the knowledge of the exact materials present in *I.M. Coope* in our research into potential causes, our hypotheses became centred on two likely

culprits: first, the titanium white pigment present in the priming layer, and second, the use of zinc-containing pigments in the paint layers. Both zinc white and titanium white are semiconductor pigments, which allows them to function as photocatalysts in certain situations. The photocatalytic degradation of titanium white, which can present as 'chalking', powdering or embrittlement of the layers containing the pigment, is a well documented phenomenon.¹⁴ As noted, 1927 would have been an early use of titanium white in artists' materials; the early anatase form of the pigment was highly reactive, with issues surrounding its use arising soon after its introduction. By the 1930s, many art manuals advised against its use, and titanium white did not gain major popularity as an artist's material until after a more chemically stable version was synthesised and produced.¹⁵

Another well documented degradation phenomena is the role of zinc soap formation in paint delamination and flaking, wherein the zinc ions of the pigment react with free fatty acids from the binding media to create soap clusters, sometimes forming at the interface between paint layers and leading to adhesion failure between one layer and the next.¹⁶ It should be noted that zinc

¹⁴ Brigit Anne van Driel, *Titanium White, Friend or Foe?* (Delft: Delft University of Technology, 2018), 34.

¹⁵ Morozova, et al, 'Titanium dioxide whites in XX century works of art: occurrences and composition study,' p. 1553.

¹⁶ Christine Romano, Thomas Lam, G. Asher Newsome, Joshua A. Taillon, Nicole Little and

soap formation is known to be encouraged by elevated environmental humidity levels.¹⁷ Photocatalytic degradation, metal soap formation, and a combination of these phenomena could explain much of the degradation morphology we are observing in the present condition of *I.M. Coope*, and provides interesting context to our understanding of Katharine Clausen's studio practice, and the unexpected pitfalls of the use of novel artistic materials that occasionally accompanied the boom in commercially available art supplies of the early twentieth century.

With the painting's current damage, it is clear that interventive treatment is needed before Miss Coope can rejoin her fellows from the *Old Iron* set; the proposed conservation treatment plan for *I.M. Coope* involves two major stages, first in structural treatment to address the flaking and stabilise the fragile paint layers, and second, in aesthetic treatment to address the legibility of the image through the reintegration of the losses. In addition to providing additional context for both Katharine Clausen's studio practice and the *Old Iron* portrait series as

Jia-sun Tsang, 'Characterization of Zinc Carboxylates in an Oil Paint Test Panel,' in *Studies in Conservation*, no. 65. (2020). <https://doi.org/10.1080/00393630.2019.1666467>; Annelies Van Loon, Ruth Hoppe, Katrien Keune, Joen J. Hermans, Hannie Diependaal, Madeleine Bisschoff, Mathieu Thoury and Geert van der Snickt, 'Paint Delamination as a Result of Zinc Soap Formation in an Early Mondrian Painting,' in *Metal Soaps in Art* (2019).

¹⁷ Romano et al, 'Characterization of Zinc Carboxylates in an Oil Paint Test Panel.'

a whole, understanding more about *I.M. Coope's* materiality and how that materiality could have contributed to the degradation present in its current condition will also enable a conservation treatment plan catered to this specific object, and thus increase the likelihood of holistic treatment success.

OLD IRON SERIES: WIDER CONTEXTS

Finally, we discovered two other examples of British portraiture series created to commemorate the lives and efforts of workers, as *Old Iron* did. Erddig, a National Trust treasure house property in Wrexham, Wales, features a large and unique collection of servants portraits, paired with accompanying snippets of original verse.¹⁸ This tradition was carried through generations of the house, beginning with painted portraits in the eighteenth century and continued through photographs into the early twentieth century. These portraits were hung throughout the servants' quarters and common spaces for the family and household staff to view, and now remain a highlight of the collection for public visitors. A more contemporary example of portraiture used to document and honour the efforts of workers in Britain is the project 'Portraits for NHS Heros', organised in 2020 by Oxford-based artist Thomas Croft. The series paired artists with National Health Service workers who provided vital health care during the Covid-19 pandemic, and produced over

¹⁸ Oliver Garnett, *Erddig: The National Trust Guidebook* (Erddig: National Trust, 1995).

800 portraits from as many artists around the world, in a variety of artistic mediums and styles, and was shared publicly via social media.¹⁹

The *Old Iron* portraits thus exist as just one example within a historical tradition of British artists celebrating and honouring human labour through individual portraiture. Often depicted with the tools of their trades and in the uniforms of their professions, the working efforts of individuals of a specific household, company, and moment in time have been honoured through artistic mediums within these projects, providing a fascinating documentation of British life through the years and a unique context for the role of art in the greater scheme of social and political history.

CONCLUSIONS

The *Old Iron* series united a cohort of British artists in a collaborative commission of painted portraits documenting the efforts of employees of the Crittall Window Company in the late 1920s. This portrait series demonstrates the intersection of art and industry in early twentieth century Britain and the ways in which art has been used as a vehicle for documenting and honouring the labour of British workers, a tradition with both historic and contemporary precedents. Artist Katharine Clausen's

involvement in the series is a testament to the personal connections at the heart of this wider social project, and her portrait of Miss Irma Coope as part of the *Old Iron* series helps to place this specific object within wider cultural, historical and material contexts of early twentieth century Britain.

¹⁹ Thomas Croft, 'Portraits for NHS Heroes', accessed March 2023, <https://www.thomascroft.co.uk/portriats-for-nhs-heroes/>.

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