





A free exhibition at the State Library of NSW from 23 February to 12 May 2013

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FOREWORD

The Holtermann Collection is undoubtedly one of the gems of the very rich collections of the State Library of New South Wales. The history of the collection, as told by the Library's Curator of Photographs Alan Davies, is as engrossing as the images themselves.

It is a tale of imagination, patronage and technological skill in which the photographers, Beaufoy Merlin and Charles Bayliss, generously commissioned by Bernhardt Holtermann, captured the pop-up towns of the NSW goldfields, growing Sydney and other localities in amazing detail, achieving resolution that is exceptional even today.

Just fifty years after the first photograph and two decades from the invention of wet plate photography, Merlin and Bayliss achieved extraordinarily high quality and quantity in difficult conditions. Their work prefigured future developments in photography: they might even be said to have anticipated Google's Street View with their capture of so many shopfronts and houses across the eastern states of Australia.

This is also a story of how collections come to be treasured. Following Holtermann's original commission and exhibition of a selection of the photographs in Philadelphia and Paris, the 3500 glass plate negatives were put aside and forgotten until an enthusiast for photography tracked them down to a garden shed in Chatswood. That rediscovery led to their acquisition by the Library, progressive exploration, description and conservation. Now, high resolution digitisation reveals them in their full glory — from the details of labels on products in shop windows to the magnificence of the two largest wet plate negatives in the world — 140 years after they were made.

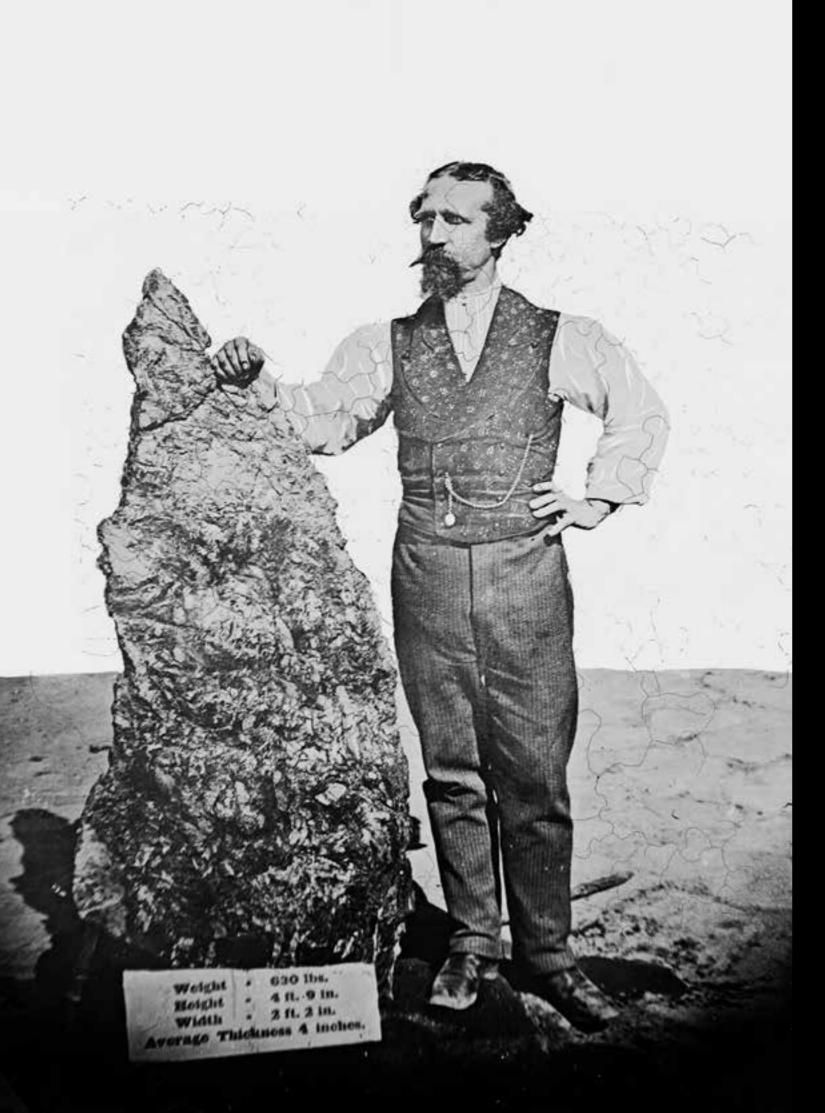
The digitisation of the Holtermann Collection was achieved through the generous support of more than 60 Foundation benefactors. Particular thanks go to Graham and Charlene Bradley, who initiated the concept for this project, the Mordant family, Geoffrey and Rachel O'Conor and Morningstar.

Dr Alex Byrne

NSW State Librarian & Chief Executive



HOTO BY BRUCE YOR



CONTENTS

FOREWORD BROUGHT TO LIGHT AN UNUSUAL VENTURE SELLING AUSTRALIA TO THE WORLD CAPTURED IN TIME A WEALTH OF DETAIL ITEM LIST COMPARATIVE CURRENCY AND WAGES

HOLTERMANN WITH 'HOLTERMANN NUGGET', HILL END 1872

			111
			2
			8
			12
			18
			22
			26
S			32
			32

BROUGHT TO LIGHT

In 1951, Keast Burke, editor of *Australasian Photo Review*, wrote to Mitchell Librarian Phyllis Mander Jones, enquiring about Bernhardt Holtermann, a name associated with several nineteenth century panoramas he'd seen in the Library. She replied that his daughter-in-law, Mary Holtermann, lived in Chatswood and might have his photographic plates. As it turned out, her garden shed was stacked with a cache of 3500 glass plate negatives in cedar boxes and smaller ones in lacquered tins, all wonderfully undisturbed for nearly 80 years.

The glass plates were unidentified, but it didn't take Keast Burke long to deduce that the smaller quarterplate [8.5 x 11 cm] negatives related to Hill End, about 60 km north of Bathurst, where German immigrant Holtermann had made his fortune. By coincidence, Burke's neighbour, Charles Marshall, was an historian and also a former resident of Hill End. Harry Hodges, another Hill End historian, who was born in the town, contributed his first-hand knowledge and slowly the unidentified negatives came to life. Judging by the flat terrain and signs on buildings, other images related to a gold town somewhere near Mudgee and after a while Gulgong was decided upon. Several hundred larger plates, ranging from 25 x 30 cm to 46 x 56 cm, showed major rural towns as well as Sydney and Melbourne between 1873 and 1875. Known as mammoth plates, these larger size negatives are extremely rare in Australia. The largest negatives, measuring a massive 0.9 x 1.6 m, were views from the tower of Holtermann's house at St Leonards, now part of Shore School, in 1875.

All the negatives were donated to the Mitchell Library in 1952 by Bernhardt Holtermann's grandson, Bernhard, and became known as the Holtermann Collection.

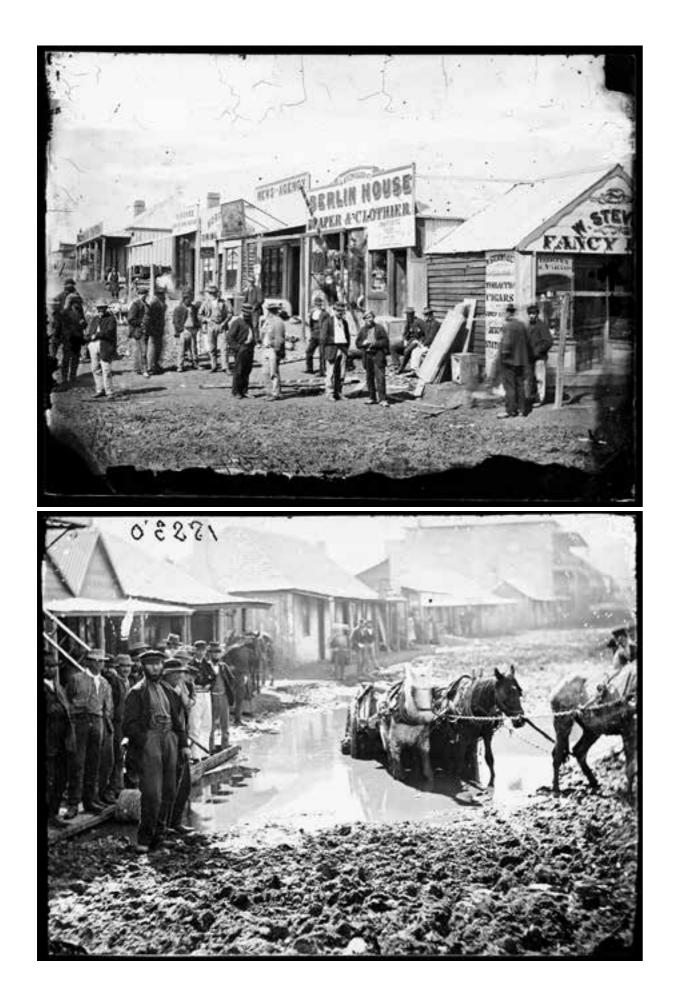
Keast Burke spent 20 years researching the negatives and realised that the photographs were not taken by Holtermann, but by Beaufoy Merlin and Charles Bayliss of the American and Australasian Photographic Company.

RIGHT: MAIN STREET (DETAIL), CANADIAN LEAD 1872 OPPOSITE: ON GAY, STORE OWNER PAGE 4: GULGONG MINERS 1872 PAGE 6 ABOVE: SHORT STREET, HILL END 1872 PAGE 6 BELOW: CLARKE STREET, HILL END 1872 PAGE 7: GULGONG DISPENSARY 1872











AN UNUSUAL VENTURE

Merlin had begun his photographic career in Victoria in 1864, after a range of theatrical jobs in NSW. Within a few years he had developed a unique style of visual documentation, systematically recording every building in the towns he visited. His photographs were distinctive, in that they captured groups of people casually standing outside their shops and residences. Some were owners or employees; others were just passers-by. By 1869, Merlin was operating with his young assistant, Charles Bayliss, as the grandiosely named American and Australasian Photographic Company. As they travelled north through NSW, they established a *carte de visite* library of cities, towns and residences — an image bank of the colonies, from which reproductions could be purchased.

When Merlin and Bayliss reached Sydney in September 1870, their advertising proclaimed that in the previous two years:

The A. and A. P. Co. have already taken photographs of almost every building in Melbourne, as well as in every town of any importance in Victoria. The negatives (many thousands) are deposited in the Company's office in Melbourne, to which place, by forwarding the number, copies can be dispatched to any address at an hour's notice. The south-eastern townships of this colony have already been taken, while others are in course of completion, each town averaging about 300 separate views.¹

In NSW, they had already photographed Albury, Yass, Braidwood, Queanbeyan and Goulburn, as well as 800 houses in Parramatta. They were aware that their venture was unusual and contemporary advertising by the American and Australasian Photographic Company reflected a considered understanding of the photographic medium.

The A. and A. Photographic Company desire further to remind the public that these negatives are not taken for the mere immediate object of sale, but that being registered, copies can at all times be had by or of those parties residing in any part of the colonies wherever the company's operations have extended, thus forming a novel means of social and commercial intercourse.²



Despite the ambitions of Merlin, it seems the American and Australasian Photographic Company was soon overextended. The company's horse-drawn vans were operating as far afield as Brisbane and Tamworth. Merlin resigned as manager for NSW and sold the Sydney studio and all his negatives to Alexander Carlisle in February 1872. Probably attracted by reports of Hill End's recent auriferous wealth, Merlin moved there in March 1872 and by April had taken nearly 100 images of the goldfields, some of which were published in the Australian Town and Country Journal. Encouraged by the favourable publicity his photographs of Hill End and Tambaroora had received, Merlin decided to stay and the American and Australasian Photographic Company opened a studio in Tambaroora Street, Hill End.

Gulgong was first photographed at the end of April and Merlin's assistant, Charles Bayliss, made trips to the alluvial goldfields of Home Rule and Canadian Lead in July 1872, before returning to record Gulgong. In August–September 1872, Merlin re-photographed Hill End and its residents, including Bernhardt Holtermann standing outside his house. When the world's largest specimen of reef gold, weighing 286 kg, was unearthed from Holtermann's Star of Hope mine on 19 October 1872, Merlin and Bayliss were able to record it above ground, before it was crushed.

18881 2

OPPOSITE: THE A&A PHOTOGRAPHIC COMPANY, HILL END 1872 PAGE 10 ABOVE: SAM HAND'S BOARDING HOUSE, HOME RULE 1872 PAGE 10 BELOW: WHEEL WRIGHT BURGESS AND MOLLER. HILL END 1872

ABOVE: DINGLE FAMILY 1873

PAGE 11: AUGUST GONDOLF



¹ SYDNEY MORNING HERALD, 5 SEPTEMBER 1870 2 SYDNEY MORNING HERALD, 21 SEPTEMBER 1870





SELLING AUSTRALIA TO THE WORLD

In November 1872, a meeting between Holtermann and Merlin in Hill End resulted in an ambitious project to bring the colonies of Australia to world attention. Holtermann, who was already a wealthy man before the discovery of 'Holtermann's Nugget', was the patron of whom every artist dreams.

In late October, Merlin, who used to be a journalist, wrote a very flattering article about Holtermann, which appeared in the Australian Town and Country *Journal* at the beginning of November 1872. Despite Merlin mistakenly calling him Julius Holtermann, it is clear that the article was the result of an extended interview. The following month, the two announced their plans for Holtermann's great International Travelling Exposition, which would publicise the potential of their adopted country to the world through photography. Holtermann intended that the display would also include raw materials, natural produce, zoological specimens and models of machinery. Merlin was to present the photographs as spectacular, coloured glass transparencies, by a process known only by him. As a successful migrant, Holtermann wanted to encourage others to come to Australia.

In December 1872, Merlin was on the road, operating as Holtermann's photographer. He was to:

... take panoramas and views of all the towns in the colonies, to form a gallery which will give those at a distance a far better idea of what the colonies are like than all the paragraphs fifty writers could deluge English and European papers with. In addition to this, Mr. Merlin is empowered to buy up all the most interesting specimens he can obtain, of all the minerals each particular district of the colonies produce, - gold, silver, tin, copper, coal, &c. A great addition to this exhibition will be some magnificent gold specimens, purchased by Mr. Holtermann from the Beyers and Holtermann claim – £5000 worth [today worth \$2.5m] in all. ¹

Tragically, Merlin fell ill and died from pneumonia in September 1873, leaving to his assistant the task of documenting towns for Holtermann's Exposition. Consequently, Bayliss toured Victoria the following

OPPOSITE ABOVE: TINSMITH JAMES JAYE, BATHURST 1873 OPPOSITE BELOW: HOLTERMANN'S MANSION, ST LEONARDS 1875 PAGE 14: THE GREATEST WONDER OF THE WORLD, GULGONG 1872 PAGE 16: VIEW ACROSS BALLARAT 1874 (DETAIL)

year, but returned to Sydney in 1875 and began making giant panoramas of the city from the tower of Holtermann's mansion in St Leonards. The venture was to cost Holtermann over £4000, but resulted in the production of the world's largest wet plate negatives and several panoramas. One measuring 10 m long impressed audiences overseas and received the Bronze award at the Philadelphia Centennial Exhibition of 1876 and a Silver Medal at the Paris Exposition Universelle Internationale in 1878.

There is no doubt Holtermann thought he was going to win first prize for his panoramas and the results were probably a disappointment. More disappointing, however, had been the lack of government support for his exposition. By 1876, he stated that the venture would be delayed.

Mr. Holtermann intends to exhibit his collection at the Philadephia [sic] Exhibition and after visiting Europe for the purpose of ascertaining the latest improvements in the photographic art, he will return to Sydney and there perfect his collection of Australasian views. He contemplates at some future time exhibiting his complete collection; in England and on the Continent of Europe.²

In the end, Holtermann's Exposition never took place. However, we know what he had intended to show, through detailed reports in newspapers and the photographs which were commissioned from Merlin and Bayliss. The negatives are particularly important, because they are so rare. In the 1870s, photographers struggled with large cameras on tripods, long exposures and a temperamental photographic process.

1 SYDNEY MORNING HERALD, 13 DECEMBER 1872 2 ARGUS, 3 FEBRUARY 1876









CAPTURED IN TIME

It's important to understand that photography in the 1870s wasn't so much about taking photographs as *making* them. Enlargement wasn't possible, as photographic paper at that time wasn't very light sensitive. Large photographs could only be made by contact printing from large negatives on sunny days. However, the production of large glass negatives was both difficult and expensive.

The first step in producing a wet plate negative was coating a clean glass sheet with an even film of photographic emulsion, by pouring a solution of collodion (which contained traces of iodide or bromide), over one side. Collodion, a syrupy solution made by dissolving guncotton in alcohol and ether, was used by nineteenth century doctors for covering incised wounds. When the ether and alcohol evaporated, it sealed the wound with a clear thin film. The manipulation necessary to coat a large glass plate evenly was tricky and failure was commonplace.

The next step was carried out in darkness. The emulsion on the glass plate was sensitised with silver nitrate, before being placed in the camera. Unfortunately, wet plate negatives lost their light sensitivity when dry, so it was necessary for photographers to coat the plate, sensitise it, then expose and develop it while still wet. That meant outdoor photographers had to carry about $25 \, \mathrm{kg}$ of chemicals and glass plates with them and have a portable darkroom nearby.

It was a tedious business making, exposing and developing each negative, one at a time. An ordinary wet plate photographer might only make 20 outdoor images a day, but Merlin and Bayliss were capable of 70 or more.

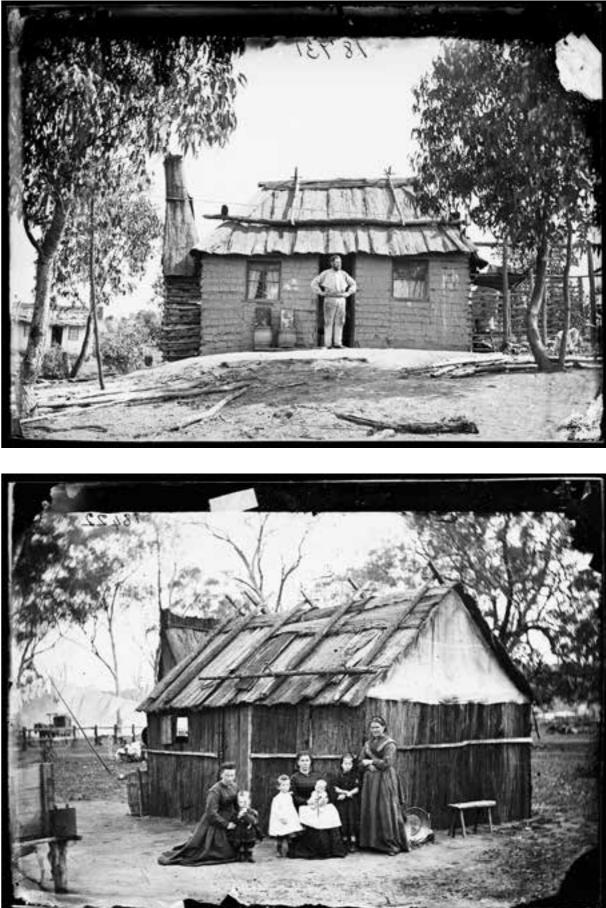
Even in sunlight, wet plate photographers needed a second or two to capture a scene, so that people had to remain motionless during the exposure to avoid being recorded as a blur. The see-through figures to the right of miners loitering in Herbert Street Gulgong (see detail, right) are the result of people moving as the photographer was at work. Indoor studio portraiture required even longer exposures and subjects were held stock-still with an iron headrest, usually carefully concealed behind them. Restless children were an especial problem and most nineteenth century photographers charged double for infants and toddlers.

From today's perspective, what the wet plate process lost in lengthy exposures is more than compensated for by its wealth of detail. Unlike twentieth century film negatives, wet plate negatives have no grain and are capable of extreme enlargement, the only limit being the resolution of the original camera lens.





ABOVE: HERBERT STREET, GULGONG 1872, AND DETAIL OPPOSITE ABOVE: WATTLE AND DAUB HUT, HILL END 1872 OPPOSITE BELOW: BARK HUT WITH WOMEN AND CHILDREN, GULGONG 1872 PAGE 20: GOLDMINE, BENDIGO 1874







A WEALTH OF DETAIL

When the Library received the Holtermann Collection of negatives in 1952, print enlargements and copy negatives were made from them. Thirty years later, Library volunteers Otto Neumann and Len Reid spent a decade identifying places and people in the photographs, building on the research done by Keast Burke. Fortunately, half the Holtermann Collection negatives were formal portraits taken in the Tambaroora Street studio, usually with a surname scratched into the emulsion, but relating them to the faces of individuals in the street was a daunting task.

Part of the problem was that the technology of the time wasn't able to cope with the extreme contrast and variable density of hand-made wet plate negatives, so the resulting photographic prints failed to reveal the wealth of information hidden within the negatives. Under magnification, faces in the crowd remained blurred and difficult to identify.

In 2008, plans were made to digitally scan the Holtermann Collection at a very high resolution. The smaller plates were scanned at 10,000 pixels on the longer side and the larger plates were captured using a medium-format camera with a 50-megapixel sensor, producing a sequence of images which were stitched together by computer. Scanning took two years and the last negative was digitised in September 2011.

For the first time in 140 years, it is possible to see what Beaufoy Merlin and Charles Bayliss photographed, with astonishing clarity and fidelity. It is now feasible to read nineteenth century posters on a distant wall, the labels on bottles in a pharmacy window, and to identify individuals in the crowd. More than ever, the Holtermann Collection is the most important visual record of goldfields life in Australia. It is a remarkable testament to both the skill of photographers Beaufoy Merlin and Charles Bayliss and the foresight of benefactor Bernhardt Holtermann.

Alan Davies

Curator of Photographs

RIGHT: J GREEN'S PIE AND COFFEE ROOMS, HILL END 1872, AND DETAIL OPPOSITE: SAMUEL BUCKETT PAGE 24: CIRCULAR QUAY FROM DAWES BATTERY 1873









ITEM LIST

All items are held in the collections of the State Library of New South Wales.

 \star denotes in the exhibition film



The Greatest Wonder of the World, Gulgong 1872 a2822094





Beaufoy Merlin 1871 a2824453



The A&A Photographic Company, Hill End 1872 a2822709



Hawkins Hill 'Golden Quarter Mile' 1872 a2825324



Holtermann with 'Holtermann nugget', Hill End 1872 a2825340

26 THE GREATEST WONDER OF THE WORLD



★ Panorama of Ballarat 1874 a2825394



★ Bernhardt Otto Holtermann a2825339



★ Gold specimens from the Star of Hope mine 1872 a2825335



★ Sydney Harbour from Holtermann's house 1875 a2825093



★ Post Office Hotel, Sydney April 1874 a2825414



★ Holtermann's carriage, Hill End 1872 a2822731





★ Mair Street, a2825252



St Leonards 1875 a2825104



★ All Nations Hotel, a2822524



WET PLATE

Panorama of Ballarat 1874 a2825394



Interior Exhibition Hall, Sydney 1875 a2825407

DIGITISATION





Circular Quay from Dawes Battery 1873 a2825014



EXPOSITION





Melbourne 1874

a2825110

Glebe Island Bridge 1873 a2825010



a2825071

View across Ballarat 1874 a2825398



Pall Mall, Sandhurst

[Bendigo] 1874

a2825413

Looking up Hunter Street, Sydney a2825035



French warship Funeral of Commodore in Sydney 1873 Goodenough 1875 a2825357



a2825417

Tinsmith James Jaye, Bathurst 1873 a2824888



Railway Pier, Williamstown 1874 A2825207



Brickmaking, Carcoar

1873

a2824845

Panorama of Yass district 1874 a2825290-3

★ Belubula Street, Carcoar 1873 a2824841



Ballarat West 1874









Hill End 1872

View of Gulgong from

Church Hill 1872 a2822266





Darling Street, Balmain a2825027



Goldmine, Bendigo 1874 a2825246



Panoramic view of Bright, Victoria 1874 a2825284

ON THE GOLDFIELDS



Short Street, Hill End 1872 a2822400



View of Clarke Street, Hill End 1872 a2822795



Snowstorm in Clarke Street, Hill End 4 October 1872 a2822737



Lysaught's butcher shop, Hill End 1872 a2822439



J Green's Pie and Coffee Rooms, Hill End 1872 a2822409



Gold mines, Hawkins Hill and Nuggetty Gully 1872 a2824811



1872 a2822650



Wheelwright Burgess and Moller, Hill End 1872 a2822566



Charles Mayes, architect and surveyor, Hill End 1872 a2822607



Gold miner's hut, Hill End 1872 a2822942



Clarke Street, Hill End 1872 a2822718



Great Western Store, Hill End 1872 a2822490

28 THE GREATEST WONDER OF THE WORLD



A domestic miner, Hill End 1872 a2822867



Wattle and daub hut, Hill End 1872 a2822616



Australian Joint Stock Bank, Gulgong 1872 a2822063



The detectives, Gulgong 1872 a2822182



Charles Bird's Medical Hall, Gulgong 1872 a2822112



William Lewis, undertaker, Gulgong 1872 a2822118



The Lawson family, Gulgong 1872 a2822303



John Osborne, painter and signwriter, Gulgong 1872 a2822301



Pitsawing timber, Gulgong 1872 a2822085



Puddling machines, Gulgong 1872 a2822387



Chinese store, Gulgong 1872 a2822392



James Leggatt's butcher shop, Gulgong 1872 a2822188



Herbert Street, Gulgong 1872 a2822178



J Heins's cottage, Gulgong 1872 a2822123



Bark hut with women and children, Gulgong 1872 a2822348



Gulgong miners 1872 a2824746



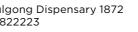
Gulgong mining 1872 a2822380

















Catholic Church, Gulgong 1872 a2823013 and a2822050



Hill End School and pupils 1872 a2822686



bootmaker, Gulgong 1872 a2822098 & a2822166





Main Street, Canadian Lead 1872 a2822331



John Davey, baker, Canadian Lead 1872 a2822313



Sam Hand's Boarding

House, Home Rule 1872

Prince of Wales Hotel,

Home Rule 1872

Tent city, Home Rule 1872 a2822219



















Gold sluice and tailings, Home Rule 1872 a2822198



Holtermann's Life Preserving Drops 1875 Posters/Medicine/8

PORTRAITS





Mrs Penhall and daughter 1873 a2823710 & a2823709



Charles Shipway a2823755



Miss Burgess 1874 a2824182



William Standen 1872 a2823449



Dr and Mrs O'Connell 1874 a2823375



Alice Grotefent on her mother's lap 1872 a2823180



C War a2823968



Miss Brady 1872 a2823084



Dingle family 1873 a2824015



William Pullen A2824364



Miss Jeffree a2823873



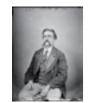
White and Hewitt 1873 a2823715



Mrs Southwell and baby 1874 a2824402



Peter Myer a2824128



Captain Gus Pierce 1872 a2823818



Reverend Thomas Tress in vestments a2823478



Miss Davis and baby 1873 a2824018



Samuel Buckett A2823844



Miss Geaney a2824052



Master Coyle 1872 a2823112



Mr E O'Brien a2824145



Seren Petersen and family a2824149



August Gondolf a2823746



Mary and Sophia Myer 1872 a2823337



On Gay, store owner a2823541



Miss Taylor and **Miss Paterson** a2823404



Edwin Hosie 1874 a2823911



Adelaide Montgomery a2823342



Postmortem portrait a2824425



James Letcher and twins a2823294



Miss Kearnes a2823260



2013 Emma Bjorndahl © State Library of NSW, Sydney The Wet Plate

Process, 2013 Emma Bjorndahl © Emma Bjorndahl, Sydney

The Holtermann *Legacy*, 2013 Catherine Hunter © State Library of NSW and Catherine Hunter, Sydney



Open 7 days (o2) 9273 1611 libshop@sl.nsw.gov.au www.sl.nsw.gov.au/shop

You can purchase digital archival reproductions of all Holtermann Collection photographs. Prices start at \$59.

Visit the Library Shop for more information and a great range of books and merchandise.



COMPARATIVE CURRENCY AND WAGES

Before 1966, Australian currency was based on the pound (£), with 20 shillings (s) to the pound and 12 pence (d) to the shilling. When decimal currency was introduced in 1966, the dollar was equivalent to 10 shillings, or to put it another way, £1 was worth \$2.

However, it is not possible to directly compare nineteenth century currency with money today.

In 1872, annual wages given for the Sydney labour market were:

With board and lodging, or hut room and rations per annum: — Carpenters, wheelwrights and blacksmiths, £50 to £70; rough carpenters, £35 to £40; married farm and domestic servants, £45 to £60; grooms and gardeners, £35 to £50; farm and garden labourers, £30 to £32; surveyors' men and bushmen, £35 to £40; ploughmen, stockmen and shepherds, £32 to £36; shepherding families, £45 to £65; boys for farms and stations, £18 to £20; female servants, £18 to £30.

On the gold fields, miner's wages, exclusive of lodging, were $\pounds125$ to $\pounds150.$

To put these wages into context, bread cost 6d per loaf, a horse cost £4 to £10 and the must-have technological marvel of the 1870s, which was a treadle sewing machine, cost £10.

EXHIBITION RELATED EVENTS

CURATOR-LED TOURS

Tuesday 5 March 6 pm Saturday 27 April 2 pm Wednesday 1 May 2 pm

Galleries \$15/10, bookings essential

Join Alan Davies, Curator of Photographs at the State Library and of our latest exhibition, *The Greatest Wonder of the World*. On this special curator-led tour, Alan will give insights into colonial photographic techniques and the fascinating story of Bernhardt Holtermann and his vision to sell Australia to the world.

VOLUNTEER-LED TOURS

Tuesdays and Thursdays 11.30 am Free, no bookings are required Please meet in the Macquarie St foyer

OUT OF THE VAULTS

Thursday 4 April 6 pm to 7 pm Friends Room, Mitchell Library \$30 Numbers limited to 15

Join Alan Davies, curator of *The Greatest Wonder* of the World, as he delves into the Library's historical photographic collection. Alan will discuss some of his favourite items from the collection and tell the fascinating stories behind them.





The State Library of NSW is a statutory authority of, and principally funded by, the NSW State Government