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Object name: Percy E. Ludgate Prize in Computer Science

Vintage: c.1909

Synopsis: Prize in memory of Percy Ludgate's novel 1909 design for an Analytical Engine, the next after Babbage's.

Description:

Percy Edwin Ludgate (1883-1922) was notable as the second person to publish a design for an Analytical Engine, after Babbage [6, 7]. Strangely enough, he was not a scientist, but an accountant, born in Skibbereen and employed in Dublin, Ireland, working in his spare time in isolation from 1903 to 1909, who was not aware of Babbage's work until later. Indeed his engine was based on multiplication using rods in shuttles plus 'slides' like a digital evocation of sliderules, with input on a perforated paper sheet or roll, while Babbage's was based on addition using cogs and wheels, with input on punched cards. From Prof.Brian Randell's 1982 paper "*From analytical engine to electronic digital computer: The contributions of Ludgate, Torres, and Bush*" in the IEEE Annals of the History of Computing [9]:

"Babbage had planned to use columns of coaxial toothed wheels to represent numbers ... Ludgate planned to represent each multidigit number by a set of sliding rods in a shuttle and to arrange such shuttles around a cylindrical shuttle box, which merely had to be rotated to bring the right number to the arithmetic unit.

...

Ludgate's planned arithmetic unit was even more novel ... indeed, as far as I know, unique-scheme for multiplication, based on what a contemporary delightfully termed "Irish Logarithms" [3]. Multiplication involved converting all the digits of the multiplicand and a single digit of the multiplier to index numbers [*'logarithms'*]; the index number corresponding to the multiplier digit was added to each of the index numbers corresponding to multiplicand digits (by additive linear motion); the results were then converted back to give a set of two-digit partial products."

Ludgate's engine had conditional and unconditional instructions with an opcode, two operand addresses, and one or two result addresses, multiplication was via partial products as above, and division was via successive approximation seeded from a table of reciprocals. It had 192 x 20-digits of memory, could multiply in 10 seconds and take logarithms in 120 seconds, could input and store data and programs, had a printer, and even a fledgling operating system, could be stopped at any stage to add new variables, and could execute subroutines. It was designed to be motor driven and would be a compact and portable 2-ft cube.

The use of a perforated paper sheet or roll presaged what became by the 1950-70s a widely-used method for program and data I/O, although punched cards and paper tape were widely used by the time of Ludgate, whereas Babbage's use of Jacquard's recently invented cards was entirely novel.

Ludgate published an account of his work in Apr-1909 [2], thanking Charles Vernon Boys. Fig.2 shows the first page of Ludgate's paper. C.V.Boys then reviewed this

paper in *Nature* in Jul-1909 [3], see elsewhere in this catalog, and in 1914 Ludgate wrote an article in the *Napier Tercentenary Celebration Handbook* [4].

Half a century later, when in the 1970s Randell was investigating Babbage and Lovelace, calculating machines and the prehistory of computing, the *Napier Centenary Handbook* was the second most obvious and accessible reference to consult about calculating machines (the first was Baxandall's *Calculating Machines and Instruments: Catalogue of Collections in the Science Museum* [33]). The former had a chapter on Analytical Engines, and this was by Ludgate, a name that was unfamiliar, which ended with the paragraph which led to Ludgate's 1909 article. The only person contacted who admitted any previous awareness of the Ludgate name was Maurice Wilkes (leader of the EDSAC team), but it's not known if he'd read the 1909 article. It has been suggested this was also the case for Howard Aiken (leader of the Harvard Mk.1 team) [34]. From the 1970s Randell highlighted Ludgate's work [8, 9].

Shortly afterwards an undergraduate project at University College Swansea explored the implementation of an electronic version of a Ludgate-type arithmetic unit [13, and see the related folder in this collection]. A subsequent analysis of Ludgate's machine by David McQuillan (a TCD maths graduate) is now online [10, 11]. Randell also provided an entry on Ludgate for the Dictionary of Irish Biography [12].

Although Charles Vernon Boys was thanked by Ludgate in his paper, it was conveyed to the publishers (RDS) by Prof.Conway. This may denote Conway was the referee, as was then common; it is known that Conway first reviewed the paper, and suggested Boys reviewed it. However, their influence has yet to be fully investigated.

Trivia: Conway was Prof.Mathematical Physics at UCD for 40 years, then President of the Royal Irish Academy, then president of UCD

Babbage's analytical engine (for which extensive drawings survive) has never been constructed, as it would be as big as a cathedral with precision mechanics. Nor (as far as is known) has Ludgate's machine been constructed yet, despite apparently being a better candidate than Babbage's, a 60cm cube not the size of a cathedral, and using low tolerance rods/shuttles not tight-tolerance cogs/wheels. The lack of drawings mitigates against reconstruction, which would be more a re-imagining (nonetheless an informal background modelling effort has begun in the School of Computer Science and Statistics, TCD, any help welcome). Given the complexity of the machine it seems unlikely Boys or Conway received copies of Ludgate's plans before his death (there would have been copious sheets of drawings), but the possibility that might have happened after death does exist. If his plans were discovered it would cause a sensation.

Ludgate appears to have found his index numbers ("Irish Logarithms") without recourse to theory. Andries de Man has created a useful educational emulator for these [35, 36]. Logarithmic indexes can be derived as *Jacobi indexes*, but Ludgate's indexes are different. As happens surprisingly often with novel inventions, in the same year as Ludgate's 1909 paper a sliderule with Jacobi indexes was designed by Prof.Schumacher of Germany [37] and later manufactured as the Faber Model 366.

Prof. John Gabriel Byrne of the Dept. Computer Science, Trinity College Dublin, collected an original offprint of Ludgate's 1909 paper in the RDS Proceedings, and in 1991 instigated a prize in memory of Percy E. Ludgate, awarded to the student who submits the best project in the senior sophomore year of the Moderatorship in Computer Science. Later Dr. Brian Coghlan donated a RDS Proceedings reprint containing Ludgate's 1909 paper and a 1909 *Nature* containing Boys' review, and Dr. Chris Horn donated a 1914 *The Handbook of the Napier Tercentenary Celebration* to this collection.

Trivia: a John Byrne lived next door to Percy Ludgate's home

Percy Ludgate's life

It is said little is known about Ludgate himself. Again from Randell [9], and see Fig. 1:

"But who was Ludgate ... an archivist stated that by all normal criteria, it was clear that Ludgate had never existed. Eventually, however, the heroic efforts of the librarian of the Royal Dublin Society, who telephoned all the Ludgates in the Dublin telephone directory, traced Ludgate's niece, who enabled me to obtain his picture"

Percy Ludgate's father Michael Ludgate was born c.1840. In 1858, aged about 18, he enlisted in the 2nd Battalion 20th Foot, becoming a sergeant in 1859 (Fig.8). He married Mary McMahon (born c.1841) in Winchester in 1863 (Fig.7). In 1871 he was posted to Bellary, Madras, India, and was pensioned in 1876 (Fig.8). He collected his pension in Skibbereen in 1882, where Percy was born. The family then moved, with Michael resident in Balbriggan, County Dublin, and his wife Mary and sons Percy and Alfred in Drumcondra, Dublin (Figs.20, 21). Michael appears to have become a shorthand teacher in Dublin (Figs.9, 10), and in 1899 he seems to have been imprisoned for debt (Fig.11). From Randell [9]:

"Percy Edwin Ludgate was born on 2 August 1883, at the house of his parents Michael and Mary Ludgate in Townshend Street, Skibbereen, County Cork, Ireland [Fig.12]. He was the youngest of four [surviving] children, all boys, his brothers being names Thomas, Frederick and Alfred. His father, Michael Ludgate, was born at Mallow, County Cork, and was married while serving in the army. He and his wife spent a part of their married life in India, where their first [surviving] child, Thomas, was born. The second [surviving] child, Frederick, was born in Winchester in 1879. Later the family moved to Ireland, first to Skibbereen, and later to Dublin, where Percy was brought up. It is believed that Percy Ludgate attended North Strand Parish School, and that he studied accountancy at Rathmines College of Commerce, Dublin, and was awarded a gold medal by the Corporation of Accountants on the occasion of his final examinations, which he passed with distinction. (Efforts to confirm these details of his education have not so far met with any success.) He attended St. George's Church, Temple Street, Dublin [Figs.17, 18]."

Mystery to be Solved: However, in Mar-2014 a "[G.J. K.](mailto:emailgk@btinternet.com)" <emailgk@btinternet.com> emailed a Microsoft Word document entitled "*Percy Edwin Ludgate – Irish Civil Service Saga*" [14] plus a Microsoft Excel spreadsheet of the Ludgate family tree [15] to Prof. Brian Randell, his interest having been stimulated by Mark Ward's article [28] about Randell's work. Although he identified himself as Gerry Kelly, the document 'Properties' identify the author as "user", and the company as "Hewlett-Packard". The email address now elicits no response. Despite intensive searches the author has not

been located and so it is not possible to properly attribute these documents; any information that can resolve this unsatisfactory situation is very welcome. The document and family tree substantially add to the collected information on Percy Ludgate. Further information about Ludgate family has since been added to the family tree, see the updated version in Figs.3 and 4.

Gerry Kelly added in the email:

“The 1911 census revealed that Percy was one of thirteen children, five of whom were surviving. Your original profile only mentions four (which may have been the case at the time of Percy's death). I've managed to identify a further four (pos. five) but not the fifth surviving child. Their places of birth co-inside with the movement and Stations of the 60th Foot, 3rd Battalion to which Percy's father was attached.

Intriguingly, I also came across a record of Percy being born in Liverpool with a residence stated as Lancashire (attached). There is also a Civil Registration record of the birth in Skibbereen. Both the 1901 and 1911 Census state Place of Birth as Co Cork. It is possible that his mother was staying in Liverpool with relatives at the time (she was English born) or Percy arrived before her planned travel back to Ireland.”

The latter is almost certainly a red-herring. Gerry Kelly also emailed Randell a very useful summary of the 1901 and 1911 Irish Census (Figs.26, 27).

Michael and Mary Ludgate had thirteen children, most of whom died in early childhood, but as only 8 have been found, maybe the census taker added 5 surviving to 8 borne. Whatever the numbers, Mary Ludgate in particular must have had a significant burden of sorrow, as most of her family predeceased her.

Percy Ludgate, his mother Mary and brother Alfred lived at 30 Dargle Road, Drumcondra, Dublin. Another of his brothers, Frederick, wife Alice and family (including Violet Ludgate, see later) lived nearby in Drumcondra (Figs.19, 23). His eldest brother Thomas and wife Bedelia lived in Cork city (Figs.22, 25). Thom's Irish Almanac of 1891 for Dublin shows an Augusta Ludgate and a Fred Ludgate as shorthand teachers (like Percy's father Michael Ludgate). The 1911 Census (fig.24) indicates that Percy's mother had five surviving children, so Augusta Ludgate must have still been alive, and certainly the 1901 UK Census lists an Augusta Ludgate (born India) in Liverpool, and the 1911 UK Census lists an Augusta Ludgate (born India) in St.Pancras, London. Percy Ludgate's niece Violet, who was born in Tullamore, and subsequently lived nearby in Drumcondra, died in 1987 aged 86 [Fig.16].

Gerry Kelly's document is shown below, with original footnotes changed to citations:

Percy Edwin Ludgate – Irish Civil Service Saga

It appears that Percy Ludgate had ambitions to join the Irish Civil Service. The following note outlines the chronology.

On 4th November 1898 the Civil Service Commission (CSC) placed notice in the London Gazette (LG) that Percy Edwin Ludgate was registered as a “Temporary Boy Copyist (New Class)” [16]. Although the upper age criterion was eighteen, he had just celebrated his fifteenth birthday three months before. These positions were qualified through competitive examination [17] and would certainly be a sought after

entry level for a career in the Civil Service. The Regulations and Remuneration for temporary boy copyists were also published in the LG and give some insight to the role [18, 19]. It marks the start of his ambition to join the Irish Civil Service. According to the 1901 Census on 31st March, Percy was working as a Boy Copyist at the National Education Office (17 ½ years old).

The CSC gave notice in the LG on 7th Nov 1902 of an Open Competitive Examination for situations as Assistant Clerks (Abstractors) [20]. Percy applied and subsequently sat the examination on 10th February 1903. The top fifty candidates were announced on 13th March and published in the LG on 17th March 1903. He was the top Irish candidate being placed nineteenth in the Order of Merit [21, 22]. This did not result in him being offered a position despite him passing a formal medical examination. A spot check in the LG of other Irish candidates on the Order of Merit confirms they were offered positions on 30th March. The Regulations for Assistant Clerks (Abstractors) are attached for reference [23]. Boy Clerks were not retained on the Register beyond the age of twenty and Percy would have had to step down from this position on 1st August 1903 (if indeed he stayed until this date or was released earlier).

The LG published the “Regulations respecting Open Competitive Examinations for Clerkships in the Second Division of the Civil Service” on 23rd August 1904 and gave further notice of an examination to be held on 18th October 1904 [24]. Percy competed successfully for this more senior graded clerkship but failed the medical examination. Consequently his certificate was not issued.

On 20th February 1905 in the House of Commons the “Case of Mr. Percy Ludgate – Irish Civil Service” was raised during Questions in the House [25]. The question was put by Mr. Timothy Harrington MP Dublin Harbour (and former consecutive three term Mayor of Dublin from 1901 to 1904). The Financial Secretary of the Treasury responded (Mr. Victor Cavendish MP, soon to be the 9th Duke of Devonshire). The oral question would have been pre-submitted through the Speaker of the House (William Court Gully) and oral answer prepared by The Treasury which was responsible for the Irish Civil Service at that time. The questioner petitions for Percy Ludgate to undergo a new medical examination with a view to being certified for one or other of the above positions. The answer corrects some factual inaccuracies posed in the question but the response is not supportive. It seems that Percy’s hope of a career in the Civil Service ended at this point. Percy was 21 years old at the time.

According to the 1911 Census, Percy was working as a Commercial Clerk at a Corn Merchant [26]. It could be that his experience in this business qualified him to be included on the associated War Office Committee “headed by Mr. T. Condren-Flinn, senior partner of Kevan & Son” [8]. If he had not already been working for this accountancy firm, the assignment may have introduced him to them and the offer of a staff position. It is ironic that having been rejected by the State, his later contribution to the War Effort would be so valued.

The London Gazette publishes promotions, exam results and public announcements by the civil service commission.

The question on Percy Ludgate to the House of Commons and its answer were as follows:

Irish Civil Service—Case of Mr. Percy Ludgate.
Hansard HC Deb 20 February 1905 vol 141 cc619-20 619 [25]

§ MR. T. HARRINGTON (Dublin Harbour)

I beg to ask the Secretary to the Treasury whether he is aware that Mr. Percy E. Ludgate, of Drumcondra, passed the Civil Service examination for assistant clerkship, abstractor class, in October, 1903, and was medically examined by the physician selected by the Civil Service Commissioners and declared fit for the service; that, without having received an appointment as assistant clerk, he competed successfully for a second division clerkship, but failed to satisfy the examining physician as to his fitness; that, in consequence of the latter medical examination, Mr. Ludgate's certificate of qualification given in the former case has been cancelled, thus penalising him for one appointment by reason of his success in securing another; and, if so, whether he will take steps to have him medically examined with the view to his securing one or other of the above appointments, and will he say whether there is any difference in the medical standard of qualification required for assistant clerkship or second-division clerkship.

§ THE FINANCIAL SECRETARY OF THE TREASURY (Mr. VICTOR CAVENDISH,) Derbyshire, W.

The facts are 620 substantially as stated in the hon. Member's Question, except that Mr. Ludgate's certificate as assistant clerk was never granted, and therefore was not cancelled; and that the date of the examination referred to was February, 1903, and not October, 1903. As nearly a year had elapsed since Mr. Ludgate's medical examination for an assistant clerkship, it was necessary to re-examine him before issuing him a certificate for a second-division clerkship. The result of the medical examination proving unsatisfactory the Civil Service Commissioners were unable to grant a certificate for either position. The medical requirements are practically the same in both cases.

Very little is known of Ludgate's subsequent accountancy history. In Jun-1917 he sat and passed as top Irish candidate in the accountancy exams [31, and see Fig.6], of the Corporation of Accountants. From Randell [9]:

“Percy Ludgate worked as an auditor until his death, with the firm of Kevans and Son, 31 Dame Street, Dublin [29], which later transferred to Westmoreland Street, and is now part of the firm of Cooper Brothers. It seems almost certain that his work on the analytical machine was a private hobby which, according to his niece [Violet Ludgate], 'he used to work at nightly, until the small hours of the morning'. He never married. Quoting from another letter that I received from Miss Ludgate: 'Percy liked walking; he took long solitary walks. I do not think he had many other interests. He attended his parish church services regularly. He was very gentle, a modest simple man. I never heard him make a condemning remark about anyone. I would say he was a really good man, highly thought of by anyone who knew him. Always appeared to be thinking deeply.' The photograph is believed to have been taken a few years before his death.”

The Corporation of Accountants (1891-1939) merged with the Association of Certified and Corporate Accountants (ACCA) Dublin in 1939; the latter may have a record of their former member. According to the obituary of Dan McGing, a leading Dublin accountant who joined the Dublin-based chartered accountancy firm Keane & Co and who qualified as a chartered accountant in 1968: “In 1968, Dan's firm amalgamated with Kevans and Son, and Peterson Morrison & Co, and at the same time merged with Coopers & Lybrand, one of the then leading accountancy firms in the world” [30]. Coopers & Lybrand became Price Waterhouse Cooper (PWC), with an office in Dublin (they currently sponsor the Six Nations rugby). From Randell [9]:

“The one other person I have traced who has recollections of Percy Ludgate is Mr. E. Dunne, of Cooper Brothers, who joined the firm of Kevans and Son early in 1921. According to Mr. Dunne, 'My association with Mr. Ludgate was quite brief, but I had known him by repute for some time ... As a person he possessed the characteristics one usually associates with genius, and he was so regarded by his colleagues on the staff ... Like all men of his stature he was humble, courteous, patient and popular, and his early death closed a career that was full of promise for the future ... The books and other memoranda of his disappeared and whether they were taken away by Percy before he became ill, or treated as part of the flotsam when Kevans and Son moved to Westmoreland Street, I cannot say.' During the 1914-18 war he worked for a committee, set up by the War Office, headed by Mr. T. Condren-Flinn, senior partner of Kevans and Son. The task of this committee was to control the production and sale of oats, over a wide area of the country, in order to maintain a supply for the cavalry divisions of the army. This involved planning and organisation on a vast scale and Ludgate was much praised for the major role that he played. It is interesting to note that this provides a further parallel to the work of Charles Babbage who, because of his book *On the Economy of Machinery and Manufactures*, has often been called one of the originators of what is now known as 'Operational Research'.”

Percy Ludgate died on 16 October 1922 (Fig.13) shortly after his return from a holiday in Lucerne. A death notice appeared in the Irish Times two days later, see Figures 51 and 52. At the time he was living with his widowed mother and his brother Alfred, at 30 Dargle Road, Drumcondra, Dublin. Again from Randell [9]:

“He developed pneumonia, and his brother Frederick's wife (or rather, widow, since Frederick had died nine months earlier) who had helped to nurse Percy during his fatal illness, contracted pneumonia herself and died six days after Percy, leaving a daughter, Violet, who is now the sole surviving descendent of Michael and Mary Ludgate.

In his will [*Figs.14, 15*], drawn up some five years before his death, Percy Ludgate had appointed his brother Alfred as his executor, and had willed the residue of his estate to his mother. His assets, mostly government stocks, amounted to somewhat over £800, and included a mere £10 for his personal effects. There is no means of knowing whether his drawings and manuscripts relating to the analytical engine were amongst these personal effects. His mother died in 1946, aged 97, and his brother Thomas, who had lived most of his life in Peacehaven, Sussex, in 1951. If any drawings or manuscripts had remained in the family they would presumably have passed into the possession of Percy's brother Alfred. However, there is no indication

that this happened, and at Alfred's death in 1953 no such papers were found amongst his effects.”

Note that in the 1901 and 1911 Census the age of Ludgate's mother implies she was born in 1841, so if she died in 1946 she would have been aged 105-106; in fact she died in 1936, aged 95-96. In addition, it is uncertain whether the Thomas Ludgate of Peacehaven was Percy Ludgate's brother Thomas.

From Percy Ludgate's probate notices, including London assets of £192 (Fig.14), his total assets were £885.7s.4d (Fig.13), worth in 2017 about €57,000, so by age 39 he had modest assets. Beneficiaries of his will are clearly pertinent to locating his plans. Fortunately, even though the Customs House fire occurred on 25-May-1921 and the Four Courts fire on 28-Jun-1922, both predated his probate. Moreover, although the Irish civil war lasted until mid-1923, his original probate survives intact. And even more fortuitously, despite the fires and war, his original handwritten will survives, the only known example of his handwriting and his signature.

Percy Ludgate is an important person in Irish computing history, some may say a genuine Irish computing hero, although not quite of the stature of George Boole (whose work impacts on all aspects of modern life). His role is gradually being recognised in Ireland, where IT manufacturing is now a very important part of the economy. In Nov-2015 the *Ludgate Hub* initiative was formulated in his honour as a digital facility (a “state-of-the-art co-working space”, similar to a startup office) in his place of birth, Skibbereen, and opened in Jul-2016 [32]. There is certainly a strong case that a blue plaque in his memory be erected at 30 Dargle Road, Drumcondra.

Many thanks to Prof.Brian Randell, David McQuillan, Paul Hockie and Reddy O'Regan for guidance, documentary detail and evidence, especially to Paul Hockie for his expert genealogical research, to Prof.Randell for the photograph of Percy Ludgate, and to the still mysterious Gerry Kelly.

Many thanks also to Prof.John Tucker, University College, Swansea, for permission to publish the 1973 undergraduate project report from by D.Riches (*An Analysis of Ludgate's Machine Leading to the Design of a Digital Logarithmic Multiplier*) from the Dept.Electrical and Electronic Engineering, University College, Swansea [13] in the related folder in this catalog.

On the Ludgate family, Dr.Susan Hood of the RCB Library [58] and the Rector of Mallow Church of Ireland, Canon Eithne Lynch, have been very gracious and helpful.

See the extensive set of documents and evidence in the related folder in this catalog.

Any further information relating to Percy Ludgate would be very welcome. Please email the contact person given at <https://www.scss.tcd.ie/SCSSTreasuresCatalog/>

Extended Discussion

within this document *text in pink* highlights pending research issues

As it is said little is known about Ludgate himself, and certainly there is a paucity of relevant material in print or online, the following encapsulates further research.

Percy Ludgate's motivations

In the late 18th century there were lots of developments in calculating machines, i.e. machines that could be used to do multiplication and division, though not necessarily in a single operation, and also in adding machines. As a gross simplification there were two very different strands of development, for two very different markets, one essentially scientific, the other commercial, that stayed largely separate until the work of Comrie in the 1930s. However, it was in the late 19th Century that commercial developments accelerated. Felt manufactured the Comptometer from 1887 and Comptograph from 1889 [41]. Burroughs manufactured his adding machine from 1892, opening a factory in Nottingham in 1895 [40]. The Millionaire calculator, which does direct multiplication, was manufactured from 1893 [38].

From Irish Newspapers on *Findmypast* (via OCR), courtesy Paul Hockie:

MACHINE-MADE CLERK. are, will suppose, 100 cheques brought into bank, and they have entered and the amount added np. They are taken to the adding machine, the various amounts registered roll of paper the manipulator of keys in the typewriter, and When the whole hundred cheques

May 9, 1903 - Longford Journal - Longford, Longford, Republic of Ireland

FIFTY NEW MACHINES ADDED. Fifty New Machines have recently been added the Commercial Department the Academy. Students receive a most thorough and most up-to date Training. BUSINESS FIRMS RELY ON THE CERTIFICATES PROFICIENCY five u by Mr. Hughes. Intending

January 25, 1904 - Belfast Telegraph - Belfast, Antrim, Northern Ireland

MACHINES THAT COUNT. design combining the work the typewriting machine and adding machine in one operation, the nine numeral keys of the typewriter keyboard setting the eighty-one numeral keys the adding machine. This machine is available at all times for correspondence or other

September 19, 1904 - Derry Journal - Londonderry, Londonderry, Northern Ireland

1909: Modern Business, an English office journal, says of the Burroughs adding machine it has just purchased: "It brings mechanical skill almost to the point of human intelligence.... it is amazing, but it is true."

1911: The first model of a Burroughs calculator is introduced. Bearing a striking similarity to the Felt & Tarrent machine.

1909 and 1911 - from [40]

There are many more, both earlier and later. There is no indication that inspiration for Ludgate's novel mechanisms came from any pre-existing machines, but it is necessary to explore that possibility.

In his early years, with his involvement in accountancy, one might expect Ludgate to be interested in adding machines. Ludgate was an accountant at a time when much of the work involved listing and totalling, and would understand the design requirements for an accounting machine and how it would make his life easier. He worked for Kevans & Son, which was only taken over in 1968 (now part of PWC) and as adding machines were expensive they often were retained and maintained for a very long time. It would not be surprising if his employers had such machines and he intended to "design a better mouse trap". However, it is not obvious why he became interested in automating complicated mathematical calculations.

As pure speculation, it may be that he became interested in accounting machines with added functionality by exposure to very useful features like the tally roll of the Comptograph [41]. Or equally speculatively, perhaps it derived from his father's work and the world of ballistics, rather than his own accountancy work. Percy's father was posted to the School of Musketry (which had the responsibility for the selection of automatic weapons) and would have had in-depth knowledge of the mechanics of small arms and also machine guns that fired a round, ejected the spent cartridge, loaded the next cartridge and fired it, repeating the process many times. It is possible that he became familiar with ballistics and that some of this interested his son.

Percy Ludgate's inspirations

One very novel aspect of his design is the choice of multiplication as the basic operation. Ludgate could have been exposed to a Millionaire calculator [38], which does multiplication with one handle rotation, a descendent of Bollée's 1889 invention. The Millionaire was designed and patented by Otto Steiger, a Swiss engineer, in 1892, and manufactured from 1893, but sold by Hans W. Egli of Zürich from 1899.

Trivia: At the Napier Tercentenary Celebration Prof.d'Ocagne explained that the principle of the Millionaire calculating machine was invented in 1893 by a young French mechanician, Léon Bollée, who constructed a machine to help his father, a bell founder, in the necessary calculations

From email discussions with John Wolff, a technical expert on the Egli's MADAS machines [42], about any possible influence of the Millionaire on Ludgate's design:

That would be rather hard to answer until you find either his plans or his machine. But why focus on the Millionaire? It is just one of three descendants (Millionaire, Kuhrt, Hopkins) of Bollee's "multiplication table" mechanism, and there were other multiplying technologies (e.g. the Mercedes Euklid) commercially available in the early 1900s. If Ludgate's machine does not use a lookup table or proportional racks, there seems little reason to try to connect it to any of these machines in preference to any other.

Of course, all machines use common components like registers and carry mechanisms, but these were established technology since the time of Pascal and Leibnitz. If you're looking for a basic calculator mechanism onto which to graft a Ludgate multiplier, you should perhaps start with the "grandfather" of all modern-era machines, the Thomas Arithmometer. (Even George Chase, the chief engineer at Monroe, used the Thomas machine as a platform to illustrate new principles in some of his patents from the 1930s).

On the converse question of influence of Ludgate's design on subsequent machines, and especially as Ludgate died after visiting Lucerne in 1922, on any visit to Egli while there and hence any influence on Egli's 1931 Portable MADAS calculator:

Apart from its multiplier, the "Portable" MADAS from 1931 is just a re-packaging of the "long" MADAS of 1913, which in turn is just another copy of the Thomas Arithmometer with a cam-programmer mechanism to perform the division algorithm. The multiplier mechanism in the Portable MADAS uses the same cycle-counting mechanism as has been used in Swiss striking clocks since the 1700s, except that it uses stepped drums instead of snail cams as the storage mechanism, and another cam-programmer mechanism to select the appropriate drum. In short, the MADAS is a logical development from existing well-established technologies. The only known external influence is a collaboration with Carl Friden from the USA on the design of the tens-carry mechanism for the counter register, and an apparent cartel arrangement with Friden not to compete in each other's territories.

So the long-MADAS uses the Thomas Arithmometer mechanism (its basic operation is addition using Leibniz wheels, with multiplication in an accumulator) while the later Portable MADAS uses a cycle-counting mechanism. Neither uses the same multiplier as the Millionaire or that of Ludgate's engine.

In regard to personal interactions, nobody knows where the Steiger and Egli records ended up. John Wolff's associate Gerard Saudan [43] has made an extensive search for Egli company records, without success, and also has been in contact with one of Egli's grandsons, but obtained no useful information on personal records either. There are various lists of purchasers in Egli's advertising materials from the time. Egli publicity material from 1904 shows that only nine Millionaires had been sold in England until that time. The sales agent is named as E.Hornberger, but Ireland is not listed separately, and so Irish companies probably had to purchase Millionaires from Hornberger. The register of still-extant machines [42] contains details of the original owners, where known. Usually only the local sales agents serviced Millionaires. And while it is possible that Steiger or Egli could have attended the 1914 Napier 300th Exhibition in Edinburgh and met Ludgate, in *ancestry.co.uk* shipping passenger records there are only 34 Egli records (no Hans), and 101 Steiger records (no Otto).

Unless contrary evidence emerges, it seems that any influence of the earlier Millionaire on Ludgate cannot be known without his plans being found, and that Ludgate's influence on the later MADAS can be discounted.

It remains interesting that the MADAS design is automatic, with much of what an analytical engine needs, so it might be a good basis for 're-imagining' Ludgate's engine. However, patent drawings show the principles but do not illustrate the Millionaires as actually built, and John Wolff is not aware of any detailed plans or CAD models of them anywhere, and only has a partial set of factory training drawings for the MADAS Portable.

Ludgate's 1909 Paper

Ludgate published his first paper in 1909 in the Scientific Proceedings of the Royal Dublin Society. The Library of the Royal Dublin Society retains a complete series of

this journal. The Chief Librarian and Chief Archivist have been very helpful in investigating the submission process that Ludgate's paper underwent. For Ludgate's adult life the Minutes of the Society's Publications Committee are preserved in two ledgers, one for 19??-1914 and another for 1914-19??. The second of these has been checked for 1914 to Mar-1919 as well as Apr-1922 to Dec-1924 without finding any reference to Ludgate (the **intervening period needs to be checked**). But in the first of these ledgers there are four references to Ludgate's paper:

- (1) the paper is referred to Conway for review on Tuesday 8-Dec-1908
- (2) Conway's review suggests to send it to Boys for review
- (3) Boys review says accept but recommends writing to Ludgate to ask he adds material (one could imagine on Babbage's work)
- (4) Ludgate writes in reply

So Conway reviewed first, then Boys. Perhaps Conway was Ludgate's sponsor (below the title of the paper it does say 'conveyed by Conway'), but this is not yet known.

Why were Ludgate's ideas forgotten?

Another curiosity is after the 1909 and 1914 papers there was very little mention of his work. After Ludgate's and Boys' 1909 articles, one might expect that the Encyclopedia Britannica would have mentioned those ideas, but the 1911 edition does not, see [39]. Maybe World War I upset the dissemination of his ideas, certainly by 1926 they had become relatively unknown. Prof. Brian Randell is sure he originally found Ludgate's critical 1909 article via the 1914 *Napier Tercentenary Celebration Handbook* [4], and that he found this via Baxendall's very well-known 1926 Science Museum catalogue *Calculating Machines and Instruments* [33], where it is mentioned in its Introduction. All Baxendall says about Ludgate is: "Other difference engines were designed and made by Martin Wiberg (1864) in Sweden, G B Grant in the United States: others were designed by Léon Bollée in France, and Percy E. Ludgate in Ireland, which however were never constructed." So with just this brief and very misleading reference (i.e. amongst difference rather than analytical engines) in the premier English-language pre-war catalogue of calculating machines, Ludgate remained pretty obscure, and so it would be of little surprise if Encyclopedia Britannica didn't mention him.

On the other hand Ludgate's work was sufficiently recognised to merit inclusion in the Napier tercentenary handbook Section D on "Calculating Machines", following the detailed main presentation by Francis John Welsh Whipple (of the Meteorological Office) of Glashutter's *Archimedes*, Teetzmann's *Colt's Calculator*, BCL's *Brical*, Brunsviga's Odhner pinwheel machines, Felt's *Comptometer*, Layton's *Improved Arithmometer*, Hamann's *Mercedes-Euklid*, Steiger's *Millionaire*, and Thomas de Colmar's *Arithmometer*. The fact that a trainee accountant from Dublin should be chosen to describe Babbage's engines (the obvious choice, Babbage's son Henry Prevost Babbage, was aged 90 in 1914), rather than a notable mathematics professor, shows great respect for his abilities, so **this topic does need to be further investigated**.

Trivia: At the Napier celebrations Prof. Cajori, Colorado Springs, insisted that historians must go back to first sources: "an error once started died hard" [Cajori wrote a history of Gunter's scale, see elsewhere in this catalog]

The Napier Tercentenary Celebration [46] took place from Friday 24-Jul-1914 to Monday 27-Jul-1914, and was followed by the Edinburgh Mathematical Colloquium

[47] from Tuesday 28-Jul-1914 to Friday 31-Jul-1914. As the Napier exhibition continued to attract attention, it was kept open on Tuesday 28-Jul-1914, and visitors were admitted at a special admission charge.

On that Tuesday World War I is said to have begun, lasting from 28-Jul-1914 to 11-Nov-1918 [48]. The tercentenary celebration took place in an exceptionally eventful period: on 25-Jul-1914 Russia began mobilisation and on 28-Jul-1914 the Austro-Hungarians declared war on Serbia; Germany declared war on Russia on 1-Aug-1914; France began mobilisation on 1-Aug-1914 and on 3-Aug-1914 Germany declared war on France; then the UK entered World War I on 4-Aug-1914. The UK Defence of the Realm Act (DORA) was passed four days later on 8-Aug-1914, giving the UK Government emergency powers during the war.

As the last prominent mention of his work was in his 1914 paper for the Napier Tercentenary Celebration that ended the day before the outbreak of World War I, is it possible his ideas disappeared into the War Office or a related entity?

A significant aspect is that in Dublin, Percy Ludgate lived in north Dublin, worked in central Dublin, and studied accountancy at the Rathmines College of Commerce in south Dublin, passing from Kevans and Sons at 31 Dame St, across the La Touche Bridge over the Grand Canal to Rathmines College of Commerce (now Dublin Institute of Technology) at 143-149 Rathmines Road Lower, a 2,121 square metre complex of four storeys of offices and lecture halls. Close by (400 metres and 5 minutes walk down Military Road) was and is a major military barracks. With Ludgate's war contributions it is conceivable that he interacted with the military authorities and the scientific authorities, including Prof.C.V.Boys FRS (who sat on the Addison's War Office *Scientific Advisory Committee*), Prof.Arthur Conway FRS (who conveyed Ludgate's 1909 paper to the Royal Dublin Society), and Sir Howard Grubb FRS (see below, who studied at Trinity College Dublin but withdrew before graduation and yet became Vice-President of the Royal Dublin Society from 1893 to 1922). Very speculatively, some aspect of Ludgate's design may have been conveyed to the military, and as his ideas quickly became forgotten, maybe they were classified early in the war, so the War Office 1910-1925 'Classified Archives' (200+ boxes) need to be examined.

And almost directly opposite the college, 170 metres and 2 minutes walk away, was Sir Howard Grubb's very well known Grubb Telescope Company [48] factory ("The Optical and Mechanical Works", now Leinster Sports Club, accessed via a cul-de-sac called Observatory Lane). Grubb had very substantive War Office links; during World War I the factory manufactured telescopic gun-sights and perfected a periscope design for Royal Navy submarines, and were considered a critical resource. It is said that after the 1916 uprising in Dublin and as the Navy feared German submarines would sink shipments from Grubb, the Navy insisted the factory be moved to mainland UK (to St.Albans, near Vickers, it took so long the War was over before it was complete). The Grubb Telescope Company went into liquidation in 1925 and was bought by the inventor of the first successful steam turbines, Sir Charles Algernon Parsons, youngest son of the Earl of Rosse and graduate of Trinity College Dublin. The families knew each other; Sir Howard Grubb's father Thomas Grubb had helped design the levered mirror supports for Rosse's Leviathan telescope (see Babbage elsewhere in this catalog), and after a Miss M.Grubb, the Countess of Rosse was the

2nd female member of the Dublin Photographic Society, founded in 1854 by Thomas Grubb and others. The company was renamed Sir Howard Grubb, Parsons and Co and moved to Walker Gate, Newcastle-upon-Tyne, until it closed in 1985. Quite apart from his war contributions, it is very conceivable that with his interest in a precision mechanical design that Ludgate would have visited the Grubb factory, famous for their precision mechanical and optical designs, and have interacted with Sir Howard Grubb. Again very speculatively, some aspect of Ludgate's design may have been conveyed to the company, so its records, need to be examined. However the catalogue entry for their records is not very hopeful, as it starts with:

The records of Grubb Parsons Ltd, Newcastle upon Tyne, England, consist of 65 linear metres (213 linear feet) of files, plans, photographs and glass plate negatives relating to this internationally renowned firm's manufacture of precision telescopic instruments. The records date mainly from the twentieth century, and in particular to the period after 1925 when the firm was based in Newcastle upon Tyne.

[http://www.tyneandweararchives.org.uk/DServe2/dserve.exe?dsqIni=Dserve.ini&dsqApp=Archive&dsqCmd=Show.tcl&dsqDb=Catalog&dsqPos=0&dsqSearch=\(\(\(text\)='Grubb'\)AND\(\(text\)='Parsons'\)\)](http://www.tyneandweararchives.org.uk/DServe2/dserve.exe?dsqIni=Dserve.ini&dsqApp=Archive&dsqCmd=Show.tcl&dsqDb=Catalog&dsqPos=0&dsqSearch=(((text)='Grubb')AND((text)='Parsons'))) (courtesy Prof.Brian Randell)

Although Grubb Parsons material held in the Tyne and Wear Archives has not yet been catalogued down to item level, its archivists are not aware of any material referring to the company's existence in Dublin (this needs to be checked again in 2018 as there may be some further cataloguing work conducted on this collection). This begs the question of where are the Grubb Dublin Archives? As astronomers are very protective of their archives it is hard to imagine Grubb's Dublin archives being scrapped. Prof.Luke Drury of DIAS is confident they are not at Dunsink Observatory. Possibly they could be amongst the Royal Irish Academy's Grubb papers (especially Sir Howard Grubb's papers), or as Charles Parsons rescued Grubb in 1926 perhaps they are in the Birr Castle Library, although in both cases initial searches have proven negative. There are 28 letters to the 3rd and 4th Earls from Thomas Grubb and 10 letters to the 4th Earl from Howard Grubb, one undated copy of a letter from the 4th Earl to H. Grubb, and also copies of letters from W. De La Rue to E. Sabine and from T. Grubb to E. Sabine, and correspondence related to Grubb's refractor for the Vienna Observatory, all from the 19th Century. It appears there is no relevant material from the early 20th Century, however **these archives need to be explored further.**

Perhaps Ludgate's ideas would be of most interest (in those days) to those who had to create tables of military use (navigation, ballistics, etc). Apparently meteorology was used in firing calculations at the time [50]. And coincidentally Ludgate's 1914 paper was in the Napier tercentenary handbook Section D on "Calculating Machines", following the detailed main presentation by Whipple of the Meteorological Office, who clearly would appreciate Ludgate's plans. Mathematics has long been important to army ballistics, for example the notable mathematician John Edensor Littlewood [51] served in the Royal Artillery from 1914-18 as a 2nd Lieutenant in the Royal Garrison Artillery, doing calculations for ballistics by hand, apparently making important contributions to the subject, and there is a record of him writing "A [memo] I wrote (about 1917) for the Ballistic Office". Littlewood's only reference in the National Archives is his service medals although his papers are deposited in several universities. C.V.Boys had an interest in the behaviour of bullets [88] and in naval fire control [89], and for example was on the War Office Ordinance Committee in 1932. Ludgate's work would have been known to anyone for whom calculation was a central

issue, and once the war started it is very conceivable that he would have been approached, so at minimum the **Ballistic Office's records need to be examined.**

Also of interest is that meteorology and computing have been inextricably linked since Lewis Fry Richardson published his remarkable book, *Weather Prediction by Numerical Process*, describing his attempt to forecast changes in the weather by numerical means. Richardson's first works in 1908 proposed a graphical method to solve the Laplacian equations for free flow of water in saturated soil in relation to draining peat, and his second paper was published in the Scientific Proceedings of the Royal Dublin Society in 1908 on that subject, the year before Ludgate published his first paper in the same journal. Richardson's paper was referred to Prof.A.W.Conway for report in the minutes of the RDS Publications Committee on Tuesday 10-Dec-1907, then Ludgate's paper was referred to Prof.Conway for review on Tuesday 8-Dec-1908. In 1913 Richardson joined the Meteorological Office, and is likely to have known Francis Whipple, whose paper in the 1914 Napier tercentenary handbook preceded Ludgate's paper.

See Figures 100-105 for related photos and maps.

Why did Ludgate fail to get a Civil Service post?

It is clear that he was very intelligent. He came first in civil service exams and eventually also in accountancy exams. Why did the civil service deny their top Irish candidate an appointment?

Gerry Kelly said:

Percy applied and subsequently sat the examination on 10th February 1903. The top fifty candidates were announced on 13th March and published in the LG on 17th March 1903. He was the top Irish candidate being placed nineteenth in the Order of Merit [21, 22]. This did not result in him being offered a position despite him passing a formal medical examination. A spot check in the LG of other Irish candidates on the Order of Merit confirms they were offered positions on 30th March. The Regulations for Assistant Clerks (Abstractors) are attached for reference [23]. Boy Clerks were not retained on the Register beyond the age of twenty and Percy would have had to step down from this position on 1st August 1903 (if indeed he stayed until this date or was released earlier).

Gerry Kelly then said:

The LG published the "Regulations respecting Open Competitive Examinations for Clerkships in the Second Division of the Civil Service" on 23rd August 1904 and gave further notice of an examination to be held on 18th October 1904. Percy competed successfully for this more senior graded clerkship

NB: hard evidence of Percy Ludgate passing this exam has not been found in the LG. The LG announcement for the 1903 exams exists, but only the top 50 were included. Some results were published after Oct-1904 but did not include Percy Ludgate. He may not have made the published list, perhaps through illness.

At least until the 1970s, entry and promotion to civil service staff grades was by exam and medical. Exams took place on a regular basis and successful candidates could then seek a post at that grade. Sometimes the exams were for a specific job within a grade but once qualified, the candidate could request any department or location but

there was no guarantee a place anywhere was available. Percy Ludgate passed his first medical but got no offer.

In the above Gerry Kelly says other Irish candidates were offered posts, so there were posts available, but maybe those were not jobs Ludgate wanted or not in the location he wanted. If he was not offered an acceptable post, it is not clear how long he would have stayed in the pool. Also it is not clear whether when stepping down from the Boy Clerk post he would remain in the pool for level 1 posts, or instead removal from the 'Register' equated to removal from the pool. Nearly a year passed before he took the second medical, which would seem long enough for an acceptable junior post to arise. Even so, this was not the basis of Ludgate's case to the House of Commons.

Instead, although it may have been unusual to take the next level exam without having a job in at previous level, Ludgate took the exams for level 2 and having passed should have gone into the pool for level 2, but was found to be unfit. His case to the House of Commons appears to have been that the medical following his first exam should be remain valid. That he failed the second medical was not disputed. The civil service at the time did expect a high level of fitness and encouraged athletic pursuits though after-hours activities. At the time there were no 'fast tracks' and the Civil Service Commission had to follow procedure even though he was top of the class.

Was his health very bad? Perhaps his illness was evident even at his first medical; he does look sallow. His health is very likely to have been the predominant issue. Other aspects, discussed below, are very unlikely to have been contributory.

Firstly even up to the middle of the 20th century the civil service preferred classicists. It would not be surprising if his ability at mathematics was not then considered useful, but he came first in the civil service exams, so he must have been strong in classics.

Secondly the civil service may have avoided appointing nationalists, but his family were of the established church, members of the Episcopalian or Unitarian church, considered part of the Anglo-Irish Protestant community, loyal to the UK. Some notable Protestants were nationalist, but were such a minority in that community that the probability of Ludgate being nationalist is extremely low, and certainly Ludgate is absent from the Irish Military Archives [54].

Finally, Drumcondra was in the North Dublin constituency, where the MP was John Joseph Clancy, a highly educated nationalist politician and KC. The MP that took Ludgate's case, Timothy Charles Harrington, was a Corkman who became Lord Mayor of Dublin three times from 1901–04, owned two newspapers (*United Ireland* and *Kerry Sentinel*), was a member of the 'Bantry band' of prominent nationalist politicians, and also a highly educated KC (including at Trinity College Dublin). He was MP for Dublin Harbour, a hotbed of Sinn Féin and Irish Republican Army activity. Why would he waste a valuable opportunity to question the House of Commons on an unqualified non-constituent denied a civil service post after a failed medical? Was there a prior relationship? Most of Percy's uncle William Joseph Ludgate's family in Cork worked for a newspaper in Cork. Or perhaps these educated MPs recognised the loss of a prodigious talent. **This needs to be explored.**

His main civil service file may have been destroyed in the Customs House or Four Courts fires, but that it was discussed in the House of Commons must mean a file circulated in Westminster, and so **this civil service file may survive in the UK.**

Harrington and his son Niall's papers [53] are in the National Library of Ireland:

The collection also includes additional papers of his father, Timothy C. Harrington MP, BL (1851-1910), most of whose papers were already in the National Library for many years (Mss 5384-88; 8576-95; 8930-34, 9210-11).

Also the **United Ireland and Kerry Sentinel archives might mention Ludgate.**

Percy Ludgate's illness

Ludgate's early health issues are a mystery. In the photograph he looks sallow and wan, but with square shoulders and a normally-proportioned chest. In the UK and Ireland, life expectancy was 57yrs in 1922 [62], e.g. as a group, Mary (96), Frederick (45), Percy (38), Alice (40), Alfred (72), died at an average age of 58yrs, so Percy died younger than expected.

Percy Ludgate died shortly after his return from a holiday in Lucerne. He developed pneumonia, and his brother Frederick's widow helped to nurse Percy during his fatal illness, then contracted pneumonia herself and died six days after Percy. The fact his sister-in-law died six days later strongly suggests it was a highly infectious illness, so this does not implicate any prior illness. Perhaps his health was poor and this was a knockout blow, but that causality is weakened by his sister-in-law's death.

His death certificate states cause of death as *catarrhal pneumonia*, which is "an inflammatory condition of localized areas of the lung resulting from inflammation of the terminal bronchioles, capillary bronchitis ... It is due in the majority of cases to infection, and is most common as a sequel to the infectious fevers that are accompanied by bronchitis, as in measles, whooping-cough, and influenza" [70]. It is now known as *bronchopneumonia*, and is usually a result of the spread of infection from the upper to the lower respiratory tract [71]. However the cause of death on a certificate is best understood by coroners and pathologists, and **needs to be explored.**

The last vestiges of the great Spanish Flu epidemic that killed 20-40 million people, mostly 20-40yrs age, had a very small peak in 1922 [52], see Fig.52:

Bern and Switzerland had three influenza waves during the Spanish pandemic, the first beginning in July, the second in October/November in 1918, and a late third wave in February 1920. A further wave was observed in Bern in January 1922.

Percy died on 16-Oct-1922 (not Jan/Feb-1922), so the causality is again weak. An article in the Irish Times shortly after Percy and Alice died gives an interesting analysis of deaths in Dublin for October 1922, see Fig.53.

A very speculative possibility is Percy and Alice caught TB from Frederick, and could have supported each other, witnessed by Violet (she registered Percy's death). Again speculatively, perhaps his illness in 1904 was TB, then he survived until 1922; those who survived at first could have multiple severe recurrences, so Percy may have gone to Lucerne for mountain air, perhaps to a sanatorium, but then what about Alice? Any speculation that Percy had TB or was in a clinic doesn't explain why Alice died so quickly after nursing him. The counter-speculation is that since bronchopneumonia

usually results from infection, this implies Alice died from an infectious disease, which implies Percy did too. However, TB cases were *notifiable*.

There were advances in understanding TB by the early 20th century, but [55]:

After the establishment in the 1880s that the disease was contagious, TB was made a notifiable disease in Britain

50% of those who entered [sanatoria] were dead within 5 years (1916)

BCG vaccine was first used on humans in 1921 in France, but it was not until after WW2 that BCG received widespread acceptance in Great Britain, and Germany

The Ludgates died before treatments for TB became really effective, and before tuberculin tests were used in Dublin. If they exist, lists of notified medical cases need to be explored, even though the stigma of TB led many to avoid its mention as cause of death. The Health Protection Surveillance Centre (HPSC) only have data on TB cases back to 1998. The Department of Health may have data back to the 1950s, and this needs to be explored. Archives in the Edward Worth Library at Dr. Steeven's Hospital, in the library at the Royal College of Physicians of Ireland (RCPI), and at Peamount Hospital (which in the past had a rich archive) all need to be explored.

Percy Ludgate's early ill health could be said to remain a mystery.

Percy Ludgate's wartime role

Brian Randell says:

During the 1914-18 war he worked for a committee, set up by the War Office, headed by Mr. T. Condren-Flinn, senior partner of Kevans and Son. The task of this committee was to control the production and sale of oats, over a wide area of the country, in order to maintain a supply for the cavalry divisions of the army. This involved planning and organisation on a vast scale and Ludgate was much praised for the major role that he played.

Gerry Kelly says:

According to the 1911 Census, Percy was working as a Commercial Clerk at a Corn Merchant [26]. It could be that his experience in this business qualified him to be included on the associated War Office Committee "headed by Mr. T. Condren-Flinn, senior partner of Kevan & Son" [8]. If he had not already been working for this accountancy firm, the assignment may have introduced him to them and the offer of a staff position. It is ironic that having been rejected by the State, his later contribution to the War Effort would be so valued.

However, it is not known where Ludgate was praised and how, e.g. whether he received a letter or an award.

There is no indexed reference to Condren-Flinn or Ludgate in the UK National Archives, but there is a mention of the 'Oats Control Committee':

Reference: MUN 4/6489

Description: WAR OFFICE: DEPARTMENT OF SURVEYOR GENERAL OF SUPPLIES: Miscellaneous papers concerned with: War Office expenditure Staff of Surveyor General of Supplies Functions of Contract Branch Stores Advisory Committee Departmental Contracts Committee Tonnage Priority Committee Forage Committee **Oats Control Committee**

Reconstruction Committee Control of wool trade Control of cotton trade Boot polish Labour
Organisation of Finance Branch of Ministry of Munitions
Date: 1915 Sept. 10-1917 Aug.

The papers of this committee need to be examined.

The National Archives of Ireland has a few documents relating to Condren-Flinn but these are in respect of insurance claims processed by Kevans & Sons for damages sustained in Easter 1916. There are no references in the Findmypast British and Irish Newspaper collections other than T.Condren-Flinn attended a 1917 memorial service.

Percy Ludgate's home: 30 Dargle Road, Drumcondra

On Thursday 29-Jun-2017 Dr.Brian Coghlan visited 30 Dargle Rd, Drumcondra, home of Percy Ludgate, and where he did his famous work. From the front it is very recognisably Victoriana. In Fig.107 it is the house with the grey door beside one with a black door. These houses are deceptive, as the land slopes down so they have two storeys at the rear. Also see Fig.108.

Unfortunately the old lady who owned the house next door (with the black door) died a couple of months before at an advanced age, so it was for sale. She would probably have known Mary & Alfred Ludgate, Percy Ludgate's mother (d.1946) and brother (d.1953). It would be useful to ask local people to locate older residents in that vein.

The young couple who now own 30 Dargle Rd bought it 6 years previously and then completely refurbished it to a high internal standard. They remember from the deeds that it was built c.1890, so it seems (see further below) that the Ludgates moved into it when new. The owners intend to look at the deeds to establish ownership, inheritance and sale history, which is an excellent idea, as the lives of Mary, Alfred and Percy, their home at 30 Dargle Rd, and their wills may well provide the best links to evidence that might point to drawings and papers. The Valuation Office may also help. There remains the puzzle of why Michael Ludgate lived apart.

The young couple bought it from an old lady who had lived there for 30 years, so may not have even known of the Ludgates. They felt they could vouch that they were the first to renovate the house internally, although there was a flat-roof kitchen extension added at some earlier date. The young couple had the floors and ceilings removed, and the only things found were newspapers above a partition wall, presumably to stop draughts. They did expect to find something, as the parlour (the room at the front with the two-window bay) had a 14-foot ceiling, above which was an inaccessible void, but there was nothing there. They lowered that ceiling to add a bedroom above with the skylights in the front roofing. Hence it is fairly certain that Ludgate's drawings were not hidden in the attic or underfloor.

The external walls, downstairs flooring, roof, stairs/banisters as far as the landing (an extremely well matched further landing & banisters was added for the new bedroom), parlour fireplace, and front door were original. Almost everything else was new. To sit/stand where notable predecessors have been, to use the same doorhandle, etc, is very interesting.

The young couple did not know of Ludgate, and proved to be thoughtful and interested, and very receptive to having a blue plaque to honour Ludgate on their frontage, but that's an issue that should be given time to digest and be careful over. They intend to enquire about older residents as well.

From Thoms Directory it can be seen that Dargle Rd was developed from the late 1880s to late 1890s. By 1897 house no.30 existed but was vacant. In 1898 it was occupied by Mrs. Williamson. Then from 1899-1935 the Ludgates lived there, as confirmed by the 1901 and 1911 Censuses, the 1915 Dublin City electoral register, and the sample of Thoms Directories listed below, but in 1936 it is shown as vacant, presumably on the death of Percy's mother Mary Ludgate.

Year	Address	Occupier	Comment
1889	13 Dargle Rd	Emile Jugla artist	No.1-13 listed
1890	13 Dargle Rd	Emile Jugla artist	No.1-13 listed
1891	Dargle House, Dargle Rd	Emile Jugla artist	No.1-16 listed
1892	Dargle House, Dargle Rd	Emile Jugla artist	No.1-16 listed
1893	Dargle House, Dargle Rd	Emile Jugla artist	No.1-16 listed
1894	Dargle House, Dargle Rd	Emile Jugla artist	No.1-16 listed
1895	Dargle House, Dargle Rd	vacant	No.1-21 listed
1896			No.1-27 listed
1897	30 Dargle Rd	vacant	No.1-37 listed
1898	30 Dargle Rd	Mrs. Williamson	
1899	30 Dargle Rd	Frederick Ludgate	
1900	30 Dargle Rd	Frederick Ludgate	
1901	30 Dargle Rd	Frederick Ludgate	
1902	30 Dargle Rd	Alfred Ludgate	
1903	30 Dargle Rd	Alfred Ludgate	
1904	30 Dargle Rd	Alfred Ludgate	
1905	30 Dargle Rd	Alfred Ludgate	
1922	30 Dargle Rd	Alfred Ludgate	
1929	30 Dargle Rd	Alfred Ludgate	
1930	30 Dargle Rd	Alfred Ludgate	
1931	30 Dargle Rd	Alfred Ludgate	
1932	30 Dargle Rd	Alfred Ludgate	
1934	30 Dargle Rd	Alfred Ludgate	
1935	30 Dargle Rd	Alfred Ludgate	
1936	30 Dargle Rd	vacant	
1937	30 Dargle Rd	vacant	
1938	30 Dargle Rd	J.J.McDonnell	
1939	30 Dargle Rd	J.J.McDonnell	
1940	30 Dargle Rd	J.J.McDonnell	

It may be that the family were either leasing the house long-term (not unusual then) or perhaps it was a council house, but most likely it was rented from a private owner, as Percy Ludgate's will includes settlement of rent of £5.18s.8d to Miss Lennon, 78 Queen St. On the other hand the long period of vacancy after Mary died may indicate a sale of the property. The question is who owned the family home at 30 Dargle Rd, and then who owned it once Mary died? **This needs to be investigated further,** perhaps through property ownership or by examination of the deeds.

The 'Liverpool' Percy Ludgate

Percy Edwin Ludgate was born in Skibbereen on the 2-Aug-1883, the son of Michael Ludgate and Mary McMahan.

This may not be strictly true. In the records there is a second Percy Ludgate born 1883 in Liverpool with a father Michael who resided in Lancashire. Michael was discharged in 1882 in Winchester. It is conceivable that he was on his way home and Percy was born en-route after his father's discharge, registered before embarking on the ferry, then registered a second time in Skibbereen where he collected his pension; this was illegal but did happen. There was often a delay between discharge and collecting a pension usually due to paperwork catching up. On the other hand, this 'Liverpool' Percy could be the Percy T.Ludgate who died 1946 in Runcorn, Cheshire. The **Liverpool birth certificate needs to be checked.**

Percy Ludgate's family context and related questions

Please note what follows raises research questions relating to Percy Ludgate's family as well as additional contextual information, not the known genealogical facts, which are detailed in the appropriate section further below.

The following details of Percy's immediate family have yet to be found:

Michael Edward Ludgate: [death cert]
 Mary Ludgate ne McMahan: [will]
 Thomas Edward Ludgate: [death cert, will]
 Bedelia Bridget Ludgate ne Buckley: [death cert, will]
 Thomas & Bedelia's child [birth cert & death cert]
 James Ludgate: [death cert]
 Augusta Ludgate: [will]
 4 x unknown Ludgate siblings: [birth cert & death cert]
 Frederick Ludgate: [will]
 Alice Emily Ludgate: [birth cert, will]
 Alfred Ernest Ludgate: [will]

The details are expanded below. It is desirable to get concrete evidence (certificates). If not so indicated then these have been obtained or ordered.

Michael Edward Ludgate
 b.1839 c.8-Feb-1840 Kilshannig by Mallow, Co Cork
 d.[????]
 [death cert]
 Mary Ludgate ne McMahan
 b.19-Nov-1840, c.20-Dec-1840 Iden, Sussex UK GRO Vol.7 p.384, F:Thomas McMahan
 d.22-Aug-1946
 m.15-Aug-1863 Michael Edward Ludgate, St Thomas, Winchester 2c 175 UK GRO
 [will]
 Thomas Edward Ludgate
 b.Q4/1865 c.15-Oct-1865 Winchester
 d.11-May-1945 aged 79 Victoria Hospital, Cork **PROOF?**
 m.24-Apr-1888 Bedelia Bridget Buckley
 [death cert, will]
 Bedelia Bridget Ludgate ne Buckley
 b.1864
 d.[????]
 m.24-Apr-1888 Thomas Edward Ludgate
 [death cert, will]
 Thomas & Bedelia's unknown child
 b.[????]

d.before 1911 Census
 [birth cert & death cert]
 James Ludgate
 b.1-Jul-1866 Bangalore, Madras, India
 d.[????]
 [death cert]
 Augusta Ludgate:
 b.3-Mar-1871 c.04-May-1871 Bellary, Madras, India
 d.30-Dec-1954 Watford
 [will]
 4 x unknown Ludgate siblings
 b.[????]
 d.[????]
 [birth certs, death certs]
 Frederick Ludgate
 b.17-Jun-1875 Gravesend, Kent
 d.2-Dec-1921 Richmond Rd, Dublin
 m.27-Aug-1900 Alice Emily Walshe
 [will]
 Alice Emily Ludgate ne Walshe
 b.1876
 d.22-Oct-1922 Drumcondra Dublin
 m.27-Aug-1900 Frederick Ludgate
 [birth cert, will]
 Alfred Ernest Ludgate
 b.1-Apr-1881 Skibbereen Co.Cork
 d.3-Sep-1953 Drumcondra Dublin
 [will]

Percy Ludgate's father Michael's military career began when he signed up in 1858. The army was desperately trying to replace troops lost in the Crimea. Michael signed up with four other members of the North Cork Militia [44], including Robert and David Ludgate (who might be related). It could be that their experience in the militia gave rise to their rapid promotion in the army. Robert and David stayed with the 21st Foot for the whole of their career. Within 2 weeks Michael was promoted to Corporal and one year later to 'Sergeant Musketry Instructor'. For the final years of his service Michael was with the School of Musketry which, in addition to teaching marksmanship, was also responsible for evaluating new rifles etc. They seem to have a systematic testing program which included workshop capability. Some of their reports are available for download from the National Archives. This appears to be the only circumstances in which a Ludgate could have acquired engineering skills that might have been useful to Percy Ludgate. From [45]:

To return to 1853 and the formation of the school. The Army now had the Minie bullet and Rifle that shot further, more accurately than previous weapons, soon to be superseded by the popular 1855 .577 Enfield. Now shooting became a personal skill rather than a Drill movement. The decision was made to create an "establishment for the instruction of the Army in rifle and target practice". Staffed by a corps of experts that was able to train up regimental instructors in shooting skills. They returned to their regiments to train the troops in marksmanship. The wild and pebbled beaches of Hythe were decided as the most appropriate area as all shooting could be directed safely out to sea. The did not consider "butts", as we know them today, necessary.

By this time the army had started using civilian teachers and trainers and his move to the School of Musketry may have been a prelude to this; it is unlikely that he turned

up at Hythe on the off-chance they would give him a job. There were plenty of regiments recruiting all over Ireland. There was a depot at Shiffnall where four Ludgates, including a Frederick, were registered in the time after Michael left Winchester. Michael must have had significant rifle experience before Hythe. There is a possibility that he was a member of the Cork Militia and may have returned there as his final assignment. The various muster documents should give his movements between 1858-1863 prior to marrying Mary. **These need to be examined.**

Some uncertainty exists about Percy's mother Mary Ludgate nee McMahon and her parents. It seems fairly certain that she was born in England of Irish parents, one a soldier and the other possibly a soldier's daughter. **Proof is needed.**

Another question arises because Gerry Kelly suggested that a brother James Ludgate was born in 1866 in Bangalore, India, but no trace of him has been found yet. He is not listed in the England, Ireland or India indexes, and once Michael returned from India he moved into married quarters and the number and ages of his children are listed every quarter, where their ages fit for Thomas, Augusta and Frederick (born in the married quarters), and there are no other children until Alfred in Skibbereen. By the 1911 Census the implication is that James had died, although his birth and death **need to be confirmed with evidence** (UK GRO Indian dates/indexes need to be found and certificates acquired). But if these are confirmed then Michael must have been stationed in India in the mid-1860s as well as the known period in the early-1870s.

Gerry Kelly created further questions when he suggested two unknown siblings were born after 1871, followed by a known surviving elder brother (Frederick) born in Gravesend in 1875, then subsequently two more unknown sibling births. As for James, **these unknown siblings need to be confirmed with evidence** (dates/indexes need to be found and certificates acquired). **The muster books in the National Archives may show exactly where he was stationed.** Note that Frederick was born at Milton Barracks, Gravesend, Kent, whereas he stated in the 1911 Census that he was born in Winchester, but the Army Musters show that the family acquired an extra member just before Michael left the army in Dec-1876 in Chatham where he was stationed after he returned from India, so Frederick could have been under the impression he was born in Winchester.

Michael Ludgate's final months in the army were spent assigned to Corps of the Small Arms School. His service record shows his profession as a Clerk. He left the army as a small arms instructor in 1876 with a ticket to Cork. His Army record shows he was discharged in Dec-1876, then the family appear to have moved to Skibbereen, Co.Cork. Percy's last brother Alfred was born in 1881 there, Michael's pension record appears to show his pension being collected there in 1882, then Percy Ludgate was born there in 1883. Thereafter their whereabouts are unknown for the next 7 years. Where were they from 1883-1890? There is no hint thus far of what Michael did in Cork. **Directories for Cork in the 1880 need to be found** (directories were being published during the 1880s and may be in a local library or the National Library of Ireland).

Meanwhile Thomas Ludgate married Bridget Buckley in 1888 in Cork and settled there:

Thomas Edward Ludgate d.Q2/1945 Cork
Bridget Buckley b.1864 Cork v5/p124 OR b.1865 Cork v15/p177

But further details of the locale or their descendent(s) need to be found.

Then Michael (and Augusta and Frederick) re-appeared in Dublin: Thom's Irish Almanac of 1890-98 for Dublin shows them as shorthand teachers, tantamount to a family business. From 1891 Frederick (aged 16) taught, and from 1892 onwards the reference to 'sons' implies Alfred (aged 11) and/or Percy (aged 9) also taught:

Year	Thoms Directory entry for 28 Foster Terrace, Dublin
1890	Ludgate, Michael Edward, teacher of shorthand
1891	Ludgate, Michael Edward, teacher of shorthand, Ludgate, Fred, teacher of shorthand, Ludgate, Miss Augusta, teacher of shorthand,
1892	Ludgate, Michael Edward, sons & daugh, teachers of shorthand
1893	Ludgate, Michael Edward, sons & daugh, teachers of shorthand
1894	Ludgate, Michael Edward, sons & daugh, teachers of shorthand
1895	Ludgate, Michael Edward, sons & daugh, teachers of shorthand
1896	Ludgate, Michael Edward, sons & daugh, teachers of shorthand
1897	Ludgate, Michael Edward, sons & daugh, teachers of shorthand
1898	Ludgate, Michael Edward, sons & daugh, teachers of shorthand

Note Foster Terrace (and indeed Ballybough in general) appears to have housed a high concentration of Royal Irish Constabulary policemen.

Census	House	Foster Terrace, Ballybough, Mountjoy Census District, Dublin
1901	5	P.Saunders, Police Sgt
1901	14	J.Lawless, Police pensioner
1901	22	W.Richardson, Police Const.
1901	23	P.Sheehan, Police Const.
1901	29	J.Dowd, Police pensioner
1901	36	P.Kennedy, ex R.I.C. head Const.
1911	11	W.Dwyer, Constable
1911	14	T.O,Meara, Constable
1911	29	J.Larkin, Inspector
1911	31	T.Foster, Police pensioner
1911	34	E.O.Reilly, Sergeant

But by 1901 (actually 1899) the family, except Michael, had moved to 30 Dargle Rd.

While at Foster's Terrace, Thom's Directory shows them as shorthand teachers. There is no hint of where they learnt shorthand. The following very speculative possibility could be considered: as Timothy Harrington (a Corkman) put Percy Ludgate's case to the House of Commons, was there a prior relationship? Most of Percy's uncle William Joseph Ludgate's family in Cork worked for a newspaper in Cork. Did Harrington or they employ Michael as an aspiring journalist who then had to learn shorthand and taught his children? Harrington's newspapers (United Ireland and Kerry Sentinel) need to be searched.

On 8-Sep-1899 Michael was in Kilmainham prison for non-payment of debt, and the 1899 Thoms Directory indicates the remainder of the family had moved to 30 Dargle Rd, Drumcondra, where Frederick as the nominal householder. By then Percy would have been 16 years old, already earning in an income as a Boy Copyist in the Civil Service, and both his elder brothers are likely to have been earning income too. The source of Michael's debt needs investigation.

Then by the 1901 Census Michael Ludgate was living by himself at 2 Quay St, Balbriggan, 28kms from his wife and family at 30 Dargle Rd, Drumcondra, so this

might indicate a marital separation after serving time in prison. The census enumerator's abstract Form N says the house is two-storey house with stone or iron or brick or concrete walls, slate or tile roof, 5 or 6 rooms (with 5 rooms occupied by only Michael), two windows at front, in census terms a 2nd class house, which corresponds to the present ~80sqm terraced house at 2 Quay St, situated in the heart of old Balbriggan, adjacent the train station, viaduct, harbour and front strand beach, quite similar to 30 Dargle Road, and generous if basic accommodation for one person.

Interestingly, although 2 Quay St can be found on Google Maps, the street is absent from the Balbriggan entries in Thoms Directories, but there is a Quay St in nearby Skerries. Balbriggan and Skerries electoral registers may yield more information. **This needs investigation.**

Whatever about Michael, the rest appear to have been a close knit family, for example Frederick is shown in Thom's Directories for 1899-1901 as the resident of 30 Dargle Rd (thereafter it shows Alfred), but after marrying in Aug-1900 the 1901 Census shows he and family just six doors away at 24 Dargle Rd, and the 1911 Census shows them at 17 Carlingford Terrace, the street behind Dargle Rd. In the interim they may have moved to Tullamore, as their last two children were born there, or perhaps there was just a family connection to Tullamore that led to the births taking place there. The Dublin electoral register does enlighten as it only shows Frederick at 17 Carlingford Terrace in 1912. **This needs to be explored.**

Gerry Kelly raised yet another question when he indicated that Percy's brother Thomas and wife Bedelia also had a child that died between the 1901 and 1911 Censuses. **This needs to be confirmed with evidence** (certificates).

Michael Ludgate is not in the 1911 Census. He would have had a decent army pension so it would seem unlikely he would just disappear. His death certificate has yet to be found. When/where/how did Michael Ludgate die? There is in MyHeritage:

<p>Michael Ludgate (in MyHeritage Family Trees, Browne Family Tree in Browne Family, managed by Mary Louise Browne (Contact) Birth: Feb 8 1840 Parents: Robert Ludgate, Susanna Ludgate Siblings: Thomas Ludgate, Mary Anne Farmer (born Ludgate), Elizabeth Alicia Ludgate, Robert Ludgate, Richard Ludgate, David Ludgate, William Ludgate</p>

The contact Mary Louise Browne may have information about Michael Ludgate's movements in Cork and Dublin after 1876; **this needs to be explored.**

One intriguing entry in the 1911 Census states the Royal Hospital for Incurables in Bloomfield Avenue had a patient with Surname "L" and initial "E M" born in 1840. Michael Ludgate's prison record indicates his health was failing, so **if this hospital's records still exist then they need to be explored.**

Percy Ludgate's mother Mary Ann Ludgate ne McMahan was is said to have been baptised in 1840, but **this needs to be confirmed.** The following misspelt entry has proven to be for her death.

<p>Name: MARY Leedgate Year of Death: 1936 Group Registration ID: 1470827 SR District/Reg Area: Dublin South</p>

Deceased Age at Death: 96

See Fig.31 for a transcription, also [60]. This tallies with the information from Randell [8] that she died aged 96 years in Dublin. Until this entry was found Mary Ludgate was a mystery, missing under 'Ludgate' from the indexes for 1936-8 and 1943-50 in the research annex of the Dublin BMD. She was said to have been born in 1841 and died in 1946 aged 97 (which doesn't add up), so that was an error. She actually died in 1936 as above, in St.Kevin's Hospital (now called St.James's), which was then a site with a number of small hospitals (St.Kevin's being the largest), having originally been the site of the south Dublin workhouse, see [61], also see a very sobering history at [62].

Once Mary died there were only three known surviving descendants: Percy's brother Alfred and sister Augusta, and their niece Violet. It is uncertain whether the Thomas Ludgate of Peacehaven was Percy Ludgate's brother Thomas. **This needs to be explored.**

When Percy's brother Alfred administered his probate he declared himself an accountant employed at George Drevar Fottrell & Sons, 46 Fleet St, Dublin, presumably with a reasonable income. But where did Alfred live after his mother's death? The Dublin City electoral register 1937-63 [64] shows the following entries:

Name	Years	Unit	Polling	Elect.No.	House	Street
Mary Ludgate	1937-38	Drumcondra	LD	1642	17	Richmond Rd
Alfred E. Ludgate	1939-43	Rotunda	HD	6	2	Belvidere Ave
Alfred E. Ludgate	1949-51	Mountjoy	E.F.B	1258	10	Emmet St
Violet Ludgate	1937-38	Fitzwilliam	OB	1268	43	Leeson St Lower
Violet Ludgate	1944-45	Pembroke West	FE	2518	39	Wellington Rd
Violet Ludgate	1949-64	Pembroke West	E.T.C		39	Wellington Rd

So from 1939-43 Alfred lived at 2 Belvidere Ave, off the North Circular Rd, and by 1949-51 had moved not far away to Emmet St, again off the North Circular Rd. He died without a stated residential address two years later in the Royal Victoria Eye & Ear Hospital where his niece Violet was employed as an Alomer's clerk, but his death was registered by the hospital, not by Violet.

Note from the above it appears that the registered elector for 17 Richmond Rd was a Mary Ludgate. This is close to 1 Tolka Villas, Richmond Road, from which Violet Ludgate registered Percy Ludgate's death. **This needs to be explored.** Similarly, in the 1935-41 and 1951-53 Thoms Directories, 4 Belvidere Ave is occupied by an M.Walsh, which prompts the question of whether this was a relative of Frederick Ludgate's wife Alice Ludgate ne Walshe, and if so whether this motivated his residence nearby? In fact in 1900 when she married, Alice Walshe lived at 10 Belvidere Ave, but maybe only briefly as she was not there in the 1901 Census. **This also needs to be explored.**

Year	Address	Occupier	Comment
1922	2 Belvidere Ave	T.Walsh	
1922	4 Belvidere Ave	Mark Vause	
1935	2 Belvidere Ave	Annie Kelly	
1935	4 Belvidere Ave	M.Walsh	
1936	2 Belvidere Ave	Annie Kelly	

1936	4 Belvidere Ave	M.Walshe	
1937	4 Belvidere Ave	M.Walshe	
1938	4 Belvidere Ave	M.Walshe	
1939	4 Belvidere Ave	M.Walshe	
1940	4 Belvidere Ave	M.Walshe	
1941	4 Belvidere Ave	M.Walshe	
1951	4 Belvidere Ave	M.Walshe	
1952	2 Belvidere Ave	Mrs.Brennan	
1952	4 Belvidere Ave	M.Walshe	
1952	21 Belvidere Ave	Let in flats	
1953	2 Belvidere Ave	Mrs.Brennan	
1953	4 Belvidere Ave	M.Walshe	
1953	21 Belvidere Ave	Let in flats	

The creeping subdivision of these buildings into flats is evident.

An M.Walshe also occupies 4 Belvidere Rd (not Ave) from 1935-39, but not 1940-41.

At her marriage, Alice Walshe's father was recorded as William Walshe. On 23-Feb-1873 a William Walshe of 24 Albert Place (not the occupier, so presumably a lodger) and a Mary McFarland of 2 Albert Court (a tenement) married (Q1 Vol.2 p.847) in St.Andrew's Church. This marriage was not Church of Ireland, but it is possible Alice converted to Church of Ireland before the 1901 Census when she is of that church.

Two years later an Alicia Walshe was born on 3-Aug-1875 in South Dublin to William Walshe and Mary Walshe ne McFarland of 1 Erne Terrace (a tenement), and baptised in St.Andrew's Church. But again this is not a Church of Ireland birth, and also Alice Ludgate's 1911 versus 1901 Census entries imply she was born on 1-Apr-1876 in Dublin City. There is an unexplored civil record of a birth of an Alice Walshe in 1876 (Dublin South 11843237).

In the 1911 Dublin Electoral Roll a William Walshe is listed as the inhabitant or householder of 27 Foster Terrace, Ballybough, Dublin, *next door to the house occupied by the Ludgates from 1890-98*, but in the 1911 Census he is given as Walsh not Walshe and aged 43 years, too young to be Alice's father, and married to a Catherine not Mary, and he is not resident in that house in the 1901 Census.

This all needs to be explored to ascertain whether her daughter Violet Ludgate had maternal uncles, aunts and cousins who might retain relevant material such as photographs.

Violet Ludgate was an Alomer's clerk in the Eye & Ear Hospital, and the Dublin City electoral register shows that from at least 1944 she lived at the Garden Flat, 39 Wellington Rd, Dublin. Her probate shows that she remained there after retirement until finally she died in St.Vincent's Hospital in Elmpark. She donated her body to Trinity College Dublin for medical research, finally to be interred at Caragh (Cruagh) graveyard.

The following deaths and/or death notices needs to be found (with evidence):

Date of Death	Person	Comment
---------------	--------	---------

	Michael Edward Ludgate	
2-Dec-1921	Frederick Ludgate	
22-Aug-1936	Mary Ann Ludgate	
3-Sep-1953	Alfred Ernest Ludgate	
19-Apr-1987	Violet Ethel Ludgate	
	Thomas Edward Ludgate	
	Bedelia Bridget Ludgate	

All their wills, electoral rolls, residences, employments, later census records than 1911, and burial records, need to be found.

Because there are no descendents, an interesting byproduct of this sad result is that there are no related data protection issues.

-- Percy Ludgate's paternal extended family, grandparents and ancestors

The Winchester marriage certificate of Percy Ludgate's father Michael Ludgate gives his paternal grandfather as Robert Ludgate, which tallies with the paternal family tree of Fig.3. Michael was born 1839-40 in Kilshannig (Kilshaingh or Chill Seanaigh), Mallow, Cork, a large townland 3kms south-west of Mallow (note that Kilshannig, Co.Kerry, is a different townland). Griffiths Valuation has a number of Ludgates living in Kilshannig including a Robert, who had a 40 acre farm in c.1850:

<p>Tenant: Family Name 1: LUDGATE Forename 1: ROBERT</p> <p>Landlord: Family Name 2: NEWMAN Forename 2: ADAM</p> <p>Location: County: CORK Barony: DUHALLOW (PART II) Union: MALLOW Parish: KILSHANNIG Townland: SKARRAGH Place Name: SKARRAGH Place Type: TOWNLAND</p> <p>Publication Details: Position on Page: 50 Printing Date: 1852 Act: 9&10 Sheet Number: 32,41 Map Reference: 3</p>

The main property is in Skarragh but part is in Smithfield, see Fig.54. It lies either side of the L1212 near Kilshannig GAA to the east of Glantane (browsing to [68] shows a map which is switchable between old, modern and satellite views, where red Griffiths numbers in the townland locate the exact plot). The house may be still there.

Most other Ludgates seemed to live in Ballyclough (Ballyclogh), a small village 8kms north-west of Mallow and 5kms north of the Kilshannig townland.

Trivia: the lead judge in the Ned Kelly trial, Sir Redmond Barry, was from Ballyclogh

So far as is known Percy Ludgate's family are these Ludgates of Kilshannig, relating back through Michael's birth and the marriage of Robert Ludgate and Susannah Willis.

Parishes records are available back to 1731 through 3-4 generations. Families often strayed over parish bounds and marriages were in the bride's parish before she was "carried off" to her husband's parish. The neighbouring parishes were:

Parish	Earliest Records
Kilshannig	1731
Clonmeem	1764
Rosskeen	1764
Ballyclogh	1795
Castlemagner	1810
Mallow	1776
Donaghmore	Burnt?
Mourneabbey	1807

The more wealthy could arrange marriages from further afield but the indication from Griffiths Valuation is that the Ludgates were tenant farmers.

There are microfilms of the church records and indices, some online. There is a record from one of these films on *ancestry.co.uk* for Michael Edward Ludgate born 8-Feb-1840 in Kilshannig by Mallow, son of Robert and Susanna [56]. This looks as if it may be a reconstruction following the Four Courts fire, and contains several parishes so may contain many of the Kilshannig Ludgates. The transcriptions of Kilshannig registers are held by Mallow Heritage Centre and are online via Rootsireland.

There is also a reference to the marriage of Robert Ludgate and Susanna Willis in 1837 in the Diocese of Cork and Ross, where the source is an index [67]. If the marriage licences that underlie such indexes still exist they should include ages and parents' names which help in corroboration. In those days being married by licence was quite common, usually when the bride or bridegroom lived elsewhere and would not be known in the parish when the Banns were read out in church (since the laws on marriage changed neither of those constraints remains in force). Licences were issued by the diocese and then taken to a church, sometimes specified in the licence. The earliest Kilshannig marriage register held by the parish of Mallow is for 1845, so they do not have the marriage licence for Robert Ludgate and Susanna Willis, nor do the Diocesan Office of Cork, Cloyne and Ross, who are purely an administrative office. Nor do the Mallow Heritage Centre. The National Archives of Ireland have confirmed that the original Diocesan and Prerogative Marriage Licence Bonds were destroyed in the Public Record Office explosion of 1922, but indexes survive in the NAI, and record Protestant marriages as far back as 1623. The reference to the marriage is from these indexes. **Hopefully an alternative source of information will be discovered.**

A Robert Ludgate died in 1860 aged 64 (i.e. b.1796) at Tullern Cross Dispensary, but noted as of the Parish of Kilshannig. The only Robert born around 1796 was b.1802 to John and Elizabeth Ludgate of Scarragh, Kilshannig, who had children from 1779 to 1804, so **these two Roberts may be different people.**

In addition, the 1766 Religious Census apparently lists a Matthew Ludgate in Kilshannig. The NAI guide to surviving 1766 Census material lists:

1123	Kilshannig	t	NAI	M 5036 (a)
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NAI have confirmed they do not have original returns for Cloyne (specifically Kilshannig), that 't' denotes a transcript, and that the M number is a miscellaneous reference code inherited from the Public Record Office. Indexes to these are held by the NAI. **Again, hopefully an alternative source of information will be discovered,**

perhaps in, for example, [65], or perhaps from other descendents, as Matthew Ludgate had 12 children.

Interestingly, a number of the Kilshannig baptisms are marked 'private', which was done (either by the local Rector or whoever was present in the child's home) if the child was sickly. Later the child would be received into the church (there is still a form of service for this in the Church of Ireland Book of Common Prayer of 2004).

As of 8-Sep-2017 the status of research into the paternal ancestors is:

(1) Ludgate

Matthew & Mary Ludgate: Unlikely to find anything further. May find Ludgate, Scarragh reference but no corroborating trail.

Regarding the paternal extended family, very little is known. There were five paternal uncles (Thomas, Robert, Richard, David and William) and two paternal aunts (Mary and Elizabeth), and thus far some identified paternal cousins. There are possibly surviving descendents. These all **need to be explored**:

Thomas Ludgate b.1838
Mary Alice Ludgate b.1842 d.1865 aged 23 in Cork Lunatic Asylum
Elizabeth Ludgate b.1843
Robert Ludgate b.1845 d.1856 aged 12
Richard Ludgate b.1847
David Ludgate b.1849
William Ludgate b.1853

There are possibly relevant entries in the Mallow burial registers:

Thomas son of Robert Ludgate	d.17-Oct-1838	[in 1837/38/39/40 burials]
Elizabeth 13yrs daug of Robert Ludgate	d.17-Nov-1856	[in 1855/56 burials]
Robert 12yrs son of Robert Ludgate	d.25-Nov-1856	[in 1855/56 burials]

Most of Percy's uncle William Joseph Ludgate's family in Cork worked for a newspaper in Cork by the 1911 Census, and two worked as accountants, and this combination may explain why Timothy Harrington MP was willing to help Percy Ludgate. Robert Willis Ludgate ('RW', the "Titanic" reporter) was born on 13-May-1883 in Cork. As a son of William Joseph, he was Percy's cousin. In the 1911 Census he had a son of 6 months, so there a descendent may be alive and living in Cork. This **needs to be explored**.

Uncle David, who it appears joined the army the same day as Michael Edward, also appears to have joined the civil service. A letter is said to survive from the vicar of Kilshannig confirming his age, but **this needs to be confirmed** with evidence.

-- Percy Ludgate's maternal extended family, grandparents and ancestors

The following details have yet to be found, if possible to get certs (concrete evidence). If not indicated then Irish certs have been obtained or UK GRO certs are ordered.

Thomas McMahon, b.1806, Ireland
Frances McMahon nee Reed, b.1811, Ireland
Augusta McMahon, b.1834, Kent
Thomas McMahon, b.1836, Kent
Arthur McMahon, b.1838, Kent

From the 1841 UK Census and his military records, Thomas McMahon was a soldier in the 21st Regiment of Foot. He married Frances Reed in 1834. He died a Chelsea

pensioner in 1843. She appears to have remarried to a James Clarke in 1848 who was also a Chelsea Hospital resident.

As of 8-Sep-2017 the status of research into the maternal ancestors is:

(1) Farmer

Elizabeth Famer: Two Elizabeth Farmer born the same year, one in Scarragh. Needs further investigation, need establish parents, but are on the edge of surviving BDMs, so unlikely to go further.

(2) Willis

Susanna Willis: Possibly related to William Willis ex 22nd Foot who arrives in Kilshannig c.1834. Death certificate gives birth c.1814. Some suspects need to be checked against Army records in the National Archives, e.g. William, son of William (late of 22nd Regt) and Catherine Willis of Scarragh, was baptised 21-Mar-1834 in Kilshannig, but William(snr) cannot be found in 22nd Regt, although a William Willis retired to Fermoy from the 20th Regt. Similarly for John Tuttle (22nd Regt) who married Bridget Brien on 15-Aug-1837.

(3) McMahon

Thomas McMahon: Died in Greenwich 1842/3. Service record gives birth as 1802, Kilmore, Co Armagh. No birth record on the major sites. McMahons in Kilmore per Griffiths Valuation c.1850.

(4) Reed

Francis Reed: Francis Reed born c.1811 per 1841 Census in England. Second Marriage gives Felix Reed (Reid), soldier, as father.

Felix Reed: Born c.1758 Drumall, Co Antrim, Attestation 1777, 8th Battery Royal Artillery, Married 1793 to Ann Croyley, Greenwich (possibly English), son Felix born 1801, Admitted to Pension 1812, Buried 1833 in Ballinncollig Military Cemetery, Co. Cork.

Felix Reed: Born 1801 to Felix Reed & Ann Croyley, enlisted in Cork in 1820. Need to verify musters around 1811 to find where he was in 1811.

The following images are needed:

- (1) Mallow/Kilshannig Parish Registers
- (2) Elizabeth Farmar Bapt. 23/4/1758 Scarragh
- (3) Elizabeth Farmar Bapt. 12/5/1758 Knockasweeny
- (4) Willis family Bapt. Around 1830 – 1840, especially William Willis annotated as received into the church in 1834 but Bapt. 1800

Felix Reed may be the person referred to by [66]. This needs to be explored. And his wife, Ann Reed ne Croyley, wife of Felix Reed, might be as per the General Register Office, Northern Ireland (GRONI) entry:

First name(s): Ann
 Last name: Reed
 Age at death: 90
 Birth year: 1775
 Registered year: 1865
 Registered quarter/year: 1865
 Registration district: Omagh
 Volume: 2, Page: 263
 County: Tyrone, Country: Ireland

This also needs to be explored.

Regarding the maternal extended family, almost nothing is known yet. There appear to have been two maternal uncles Thomas and Arthur, and a maternal aunt Augusta. These **need to be explored**.

UK GRO could not find certificates for:

- | |
|---|
| <p>(1) Birth: ARTHUR MCMAHON born 1838 in WOOLWICH KENT, Regimental Birth Indices Vol.658 p.106
 (2) Birth: ROBERT MCMAHON born 1843 in WOOLWICH KENT
 (3) Birth: FRANCES MCMAHON born 1846 in LIVERPOOL LANCASHIRE</p> |
|---|

These are early events in English civil registration. There was uncertainty about whether a civil registration replaced church baptism, and registration was not made compulsory until 1871. Entry (3) is unlikely to relate but **needs to be checked**. For entries (1) and (2) their births and baptisms are known and they appear in the 1841 Census (see genealogy section) but **need to be confirmed with evidence** (certificates).

Percy Ludgate's distant relations

On 4-Jul-2017, after referral by Dr.Ronald Cox, Brian Coghlan had an interesting discussion with a Norman Victor Ludgate BAI 1977 (Engineering, Trinity College Dublin), who was computer systems manager at Dublin City University c.1990.

Norman said he knew all about Percy Ludgate, that Prof.Byrne had a long discussion with him in 1973, during which he mentioned to Prof.Byrne that the only Ludgate in the Dublin telephone directory who wasn't directly related was a Violet Ludgate (i.e. Percy Ludgate's niece). So Prof.Byrne would have known about Violet and may well have talked to her before she died in 1987; his nephew (his executor) has searched his private papers but not discovered any further Ludgate-related material.

Apparently Norman's parents were from Fairview (not far from Drumcondra) and the *Ludgates Jewellers* in Upper Dumcondra Avenue (106 Drumcondra Road Upper, around the corner from Dargle Road) was owned by his uncle Ronald. Norman intends to circulate his relatives in the hope of finding more out about Ludgate's family & relatives, but is sanguine.

Probate and Wills

Of his family, only Percy Ludgate and Violet Ludgate appear to have left Wills and have probate records. Frederick appears to have died intestate. For Alice, automatic inheritance by close relatives did not apply in Ireland before the latter half of the 20th Century, so she probably didn't inherit the house they lived in, in fact they may not have owned it, and furthermore Alice and Violet could have been living with Mary, Alfred and Percy after Frederick's death, effectively homeless. Percy left his estate to his mother Mary (who was aged 82), and made Alfred his executor. Mary then appears to have died intestate, so Alfred probably didn't inherit anything from her. Mary had senile dementia, and her only other surviving child, Augusta, was resident in an asylum in England, so her assets may have been under the control of Alfred. And then Alfred appears to have died intestate.

Will and probate records, including a schedule of assets, have been found for Percy Ludgate and Violet Ludgate. The **searches need to continue for the wills and probate for Michael Edward Ludgate, Mary Ann Ludgate and Alfred Ernest Ludgate**, (which

may like Mary Ludgate's death be misspelt when registered), although it is probable that they died intestate. Searches need to be conducted for the wills and probate for Alexander J. McNeight and Dorothy McNeight (and their beneficiaries) as they inherited from Violet Ludgate. The only Alexander McNeight identified thus far was in Northern Ireland, so this may involve UK probate.

-- Percy Ludgate's will and probate

In Percy Ludgate's handwritten will of 26-Jun-1917, signed by him, appoints his brother Alfred as executor with £50 in lieu, and leaves the residue of his estate to his mother if she survived him (which she did), or otherwise to his niece Violet. Alfred then administered probate, declaring assets that include War Loans and War Savings with interest, bonds in the UK, Post Office and bank accounts plus cash, but just an estimated £10 of personal effects, and no real property. The debts included medical expenses for a local Drumcondra pharmacy and doctor, and to another doctor in Merrion Square, presumably a specialist. Also included is rent of £5.18s.8d to Miss Lennon, 78 Queen St, which for the time and place would probably represent rental for at least a month. There is no mention of the Ludgate grave, but there are funeral expenses to plus cemetery fees. After estate duty including interest was paid, the residue was £812.12s.10d. Probate was proven on 23-Jan-1923.

Assets	Nominal Value	Value at Death	Subtotal 2	Balance
War Loan 3.5%	£100. 0s. 0d	£95. 5s. 0d		
War Loan 5.0%	£71. 1s. 0d	£71. 9s. 10d		
War Savings	£387.10s. 0d	£387.10s. 0d		
Mersey Docks & Harbour Board 4% Bond (1924)	£200. 0s. 0d	£192. 0s. 0d		
War Savings Interest		£27. 1s. 8d		
War Loan (5%) Interest (2.0%)		£0.10s. 6d		
War Loan (32%) Interest (2.0%)		£1.15s. 0d		
Cash in House		£9. 0s. 0d		
Cash at the Bankers		£90. 3s. 8d		
Household goods, etc, unsold, estimated value	£10. 0s. 0d	£10. 0s. 0d	£884.15s. 8d	
Post Office Savings Bank A/C		£0.11s. 8d	£0.11s. 8d	£885. 7s. 4d
Debts	Nominal Value	Value at Death	Subtotal 2	Balance
Dr.Codd, Drumcondra Rd, medical fees		£7. 7s. 0d		
Dr.Cox, Merrion Sq, medical fees		£2. 2s. 0d		
A.H.Cliphart, 20 Drumcondra Rd, medicines		£4. 1s. 4d		
Loverett & Frye, Drumcondra Rd, groceries		£13. 0s. 0d		
Mrs.Lawler, 28 Drumcondra Rd, meat		£4. 3s. 6d		
Miss Lennon, 78 Queen St, rent		£5.18s. 8d		
Sundries		£4. 0s. 0d	£40.12s. 6d	
B.Farrell, 66 Marlborough St, funeral expenses		£11.17s. 6d		
Cemetery fees		£3. 5s. 0d	£15. 2s. 6d	£55.15s. 0d
Probate	Nominal Value	Value at Death	Residue	Balance
Assets		£885. 7s. 4d		
Debts		£55.15s. 0d	£829.12s. 4d	
Estate duty		£16.17s. 9d		
Interest on estate duty		£0. 1s. 9d	£16.19s. 6d	£812.12s.10d

Farrells Undertakers no longer exist. Robert Farrell traded as a coachbuilder from 63 Marlborough Street from at least c.1842 and by 1862 Bridget Farrell (presumably his daughter) had moved into no.64 and by c.1870 she traded from 66 Marlborough St and continued to do so at least to 1895. By 1939 Peter Farrell traded as a coachbuilder at No 66. Their archives may survive. **This may warrant investigation.**

-- Violet Ludgate's will and probate

Violet Ludgate's will was signed by her on 1-Oct-1985, only two years before she died, and with a quite shaky hand, while living at the Garden Flat, 39 Wellington Rd, Dublin. She donated her body to Trinity College Dublin for medical research, subsequently to be interred at Caragh (Cruagh) graveyard, and appointed Alexander J.McNeight and Dorothy McNeight of 14 Whitebeam Ave, Clonskeagh, as executors, bequeathing the residue of her estate to them. In the executor's oath the McNeights declared they were a retired joinery manager and housewife respectively, and that Violet was a retired Alomer's clerk in the Eye & Ear Hospital, and that she had died (aged 80) at St.Vincent's Hospital in Elmpark. Note that she was actually aged 83, and also funeral expenses included a notice in the Irish Times and Evening Herald.

The McNeights administered probate, declaring assets that include Post Office, building society and bank accounts plus cash, but nil personal effects and no real property. The debts only included groceries and electricity. There is no mention of the Ludgate grave, but there are funeral expenses. After estate duty was paid, the residue was €18557.69. Probate was proven on 11-Sep-1987.

Assets	Nominal Value	Value at Death	Subtotal 2	Balance
Cash in House		€95.73		
Cash at Allied Irish Bank		€1517.12		
Post Office savings (i)	€1296.60			
Post Office savings (ii)	€1133.17	€2429.77		
Irish Permanent Building Society	€10659.90			
First National Building Society	€5282.84	€15942.74	€19985.36	
Household goods, etc, unsold, estimated value	€0.00	€0.00	€0.00	€19985.36
Debts	Nominal Value	Value at Death	Subtotal 2	Balance
James Redmond & Sons, groceries		€267.07		
Electricity Supply Board		€150.60	€417.67	
Carnegie & Co.Ltd, funeral expenses		€974.00	€974.00	€1391.67
Probate	Nominal Value	Value at Death	Residue	Balance
Assets		€19985.36		
Debts		€1391.67	€18593.69	
Estate duty		€36.00	€36.00	€18557.69

Searches need to be conducted for the wills and probate for Alexander J.McNeight and Dorothy McNeight and their beneficiaries. North Dublin parish registers for Q3 of 1942 (Vol.2 p.311) indicate Alexander John McNeight married Dorothy Emma Chalmers. An Alexander McNeight was born on 12-Mar-1903 to William John McNeight and Esther Trimble, who lived in Ballnamagna, Banbridge, Northern Ireland. A Dorothy Emma Chalmers was born on 7-Apr-1906 in Canal House,

Tullamore, to Robert Chalmers (harbour master) and Emma Myers. By the 1911 Census the family was living at 57 Whitworth Road, Drumcondra. Violet was also born in Tullamore, and was by the 1911 Census living at 17 Carlingford Terrace (the road behind Dargle Rd). Perhaps the Tullamore and Drumcondra links are pertinent.

St.George's Parish

One of the many unknown aspects of Percy Ludgate's life was where he was buried. Exact dates for many of the major events of his family (father, mother, brothers and sister) have yet to be found, including their wills. Only the barest details of his school records are known, and almost nothing of his career records, and **need to be explored**.

Access to any related archbishopry records would potentially give access to school records and determine how to get into graveyards, and help locate graves. The Archbishop passed the request to the Librarian/Archivist of the Church of Ireland RCB Library, who explained as follows:

Dear Professor Coghlan,
 The St George's collection of parish registers and other materials is here. Please see attached handlist. You are most welcome to visit to explore this resource and I hope that it will help to answer your queries. We are open from 9.30-1.00 and 2.00-5.00 Monday to Friday.
 Kind regards,
 Susan Hood
 Dr Susan Hood, Librarian & Archivist,
 Church of Ireland RCB Library,
 Braemor Park, Churchtown, Dublin 14.
 +353-1-4923979, <http://www.library.ireland.anglican.org/>

Notwithstanding the statement by Percy Ludgate's niece that he attended St.George's Church in Temple Street, Dublin, exhaustive examination of the records (church magazine, accounts, vestry minutes, etc) showed no sign of involvement of the Ludgate family in the parish, and no evidence in burial registers of their burials in the St.George's graveyard (no Ludgate was buried there from 1921-2000). They were also absent from other Church of Ireland graveyards in Dublin: St.Thomas', St.Auden's, St.Mary's, St.Mark's, St.Mobhi's Glasnevin, and Clontarf. They were also absent from online registers for the municipal graveyards at Dean's Grange, Cruagh (where Violet Ludgate is buried), Balgriffin (there are unrelated Ludgates buried there), and Glasnevin. A non-negligible possibility arose that they and their father were buried in Balbriggan, or with their ancestors in Kilshannig, Winchester or Sussex.

St.George's in Balbriggan has yet to be checked specifically for Michael Ludgate.

Where was Percy Ludgate buried?

The 1901 Census says Percy's father Michael was 'Episcopalian Church of Ireland' so maybe they all were so inclined, suggesting they may have also attended the Unitarian Church on St.Stephen's Green, Dublin, and been buried in Mount Jerome Cemetery. In fact the latter proved to be the case. From the Mount Jerome records:

Ludgate Grave, A29-412-16113 (H/S?):
 Frederick Ludgate d.2-Dec-1921

Percy Edwin Ludgate d.16-Oct-1922

Alice Emily Ludgate d.22-Oct-1922

Mary Ann Ludgate d.22-Aug-1936

Alfred Ernest Ludgate d.3-Sep-1953

Grave purchased in perpetuity by Percy Ludgate on 6-Dec-1921, then transferred on 11-Apr-1923 to Alfred Ludgate, who appears to remain the current owner.

In fact their burial in Mount Jerome is stated in death notices. Scanned images that were previously examined are blurred and appeared not to mention burial, but an inspection of microfilm of the original newspaper showed the text in Figures 46-47.

Percy appears to have purchased the grave for Frederick's internment. Alfred appears to have claimed the grave as Percy's executor. He may also have been by then responsible for the assets of his mother, who was aged 82. Percy didn't bequeath the grave, but Alfred claimed it. The question is **whether Alfred had the right to do that.**

The grave is quite hard to find. It is in section 412 (Fig.48), reached from the church via Hawthorn Walk → Neville's Walk → North East Walk → Drummond Walk. On the latter, section 412 is on the right past between the 2nd and 3rd blue-metal paths. The grave of the Fox family (e.g. Charles Fox & Ernest Patrick Fox) is first in a row about three-quarters along section 412; the Ludgate grave is the 5th grave in the next row. 2nd in this row is the grave of the Murtagh family (Albert Murtagh & Bridget Murtagh). 7th in this row is the grave of the Bishop family (Louisa Bishop & Willie Bishop & Henry Bishop). See Figures 49-50.

One question was that if Alfred Ludgate died intestate, how did the person(s) who buried him know of the grave, most importantly were they beneficiaries of an unknown will? The Mount Jerome burial records say "William McManus of 3 Upper St.Columba's Road, Glasnevin, Friend", registered his burial. In the 1901 Census William McManus lived with his parents at St.John's Place, Larne, Antrim, while by the 1911 Census he was at 31 Dargle Rd with his wife Mary Agnes and indicated they married in 1910 and that he was born in Antrim. The 1911, 1912, 1913 and 1915 electoral registers state he remained at 31 Dargle Rd, and Thoms Directory lists him as still there in 1922 and 1929-38 (thereafter G.M.McDonagh). But Thoms Directory also lists William McManus at 3 Upper St.Columba's Road, Glasnevin, from 1936-40 and still there in 1952. It would appear he moved there in 1936 (a Mrs.Mary Jeffares was there in 1934-35), or maybe these two people were father and son, .e.g. it is possible that William McManus(snr) married Mary in 1910, had a son William(jnr) after 1911, who was married and resident in Glasnevin by 1936, and still there in 1953 when he looked after Alfred's burial. He at least would have known about the Ludgate family grave, having attended all their previous burials, although Violet Ludgate was aged 20 when her mother Alice and uncle Percy died (and registered his death), aged 33 when Mary Ludgate died, and aged 50 when Alfred died, so would also have known of the grave where her Mother, grandmother and uncles were buried. **Thoms Directory for Dargle Rd from 1937-1953, and also for Upper St.Columba's Road in 1935-1953 may clarify this, and hence need to be explored.** The above at least potentially clears up mysteries about Alfred's burial.

Who owns Percy Ludgate grave?

The grave is unmarked (which is why it couldn't be found in any index) and in a poor state, see Fig.50. It really cannot be left unmarked, as Percy Ludgate's name is honoured by the School of Computer Science and Statistics of Trinity College Dublin by an undergraduate prize each year, and his grave likewise should be honoured. This is in addition to his importance in the history of the subject. But the last owner was his brother Alfred, who died without probate. Mount Jerome state the ownership remains with the current owner Alfred Ludgate, so to erect a gravestone Trinity College would need the permission of an owner who is dead (in that very grave). **It is unclear what happens in this situation.**

In English Law *'Where a person dies intestate, or dies testate but leaving no executor surviving him, his real and personal estate, until administration is granted in respect thereof, shall vest in the President of the High Court who, for this purpose, shall be a corporation sole.'* The equivalent **Irish succession law needs to be examined.** The crux is whether the estate was too small to require the formal process. This depends on the threshold for administration in 1936, which **needs to be ascertained**, and also **whether an Administrator was appointed.** However, the National Archives of Ireland suggest that any actions by an administrator would yield a probate entry, but there is none. When Alfred died in 1953, Augusta and Violet were the only survivors. The grave was then full, so Augusta and Violet were buried elsewhere. There is no probate record for Augusta, and Violet's Will does not mention the grave (she left her body to Trinity College Dublin for medical research, to be interred in Cruagh Cemetery afterwards, see Fig.51). However, if she did inherit the grave then **the wills and probate for her inheritors Alexander J. McNeight and Dorothy McNeight and their beneficiaries need to be checked.** The only Alexander McNeight identified thus far was in Northern Ireland, so this may involve UK probate.

It is said that in the absence of any estate passing/left at death, then the State's rights of *bona vacantia* arise, so in all likelihood Alfred's estate, including grave, would revert to the State, which would lodge any proceeds to the intestate estate funds deposit account. The Attorney General would then authorise the Chief State Solicitor's Office to issue letters of administration and administer the estate. The Probate Office has been asked if they have any record of the State's rights being invoked or of the Attorney General authorising the Chief State Solicitor's Office to issue letters of administration. **This needs to be followed up.** Once the facts are known then solicitors can begin the process to formally establish ownership.

In any event, the ultimate power regarding graves possibly remains vested in the authority who appointed the land to be a graveyard. 'Ownership' of a cemetery plot in law falls well short of that found in the case of other portions of real estate, it is more like a long term lease (perpetuity) to fill and mark the grave. An approach by Trinity College Dublin as a public body to the relevant current authority might be feasible given the objective is well intended and of national importance.

That authority is likely to be the company that holds the title to the cemetery. The General Cemetery Company of Dublin established its cemetery on the lands and house of Mount Jerome in Harold's Cross from the Earl of Meath on the 23-Jan-1836. With declining burial numbers and revenue in the 1970s, the cemetery deteriorated. In 1984 it entered voluntary liquidation. By the late 1990s it had fallen into a serious state of neglect. New private owners, Orlette Ltd, took over in 1998 and opened a

crematorium in 2000, after which revenues recovered and enabled good maintenance. A search in the Land Registry & Property Registration Authority shows the land occupied by the cemetery is not a registered title but the older Registry of Deeds Title. This is likely to be a Fee Simple or Absolute title. The underlying title held by the company is therefore superior to the “burial rights” held by a Ludgate, i.e. it is not the ground occupied by the grave which Percy Ludgate purchased but the “burial rights”. The cemetery lists illustrious internees [63], so would probably welcome a memorial, as long as it followed the cemetery's rules. Orlette Ltd has its registered office at P.K.F. O'Connor, Leddy & Holmes, Century House, Harold's Cross Rd, Dublin D6W P993, their accounts are up to date, and Margaret Massey seems to be the active director.

Rathmines College of Commerce

The Rathmines College of Commerce was subsumed into the Dublin Institute of Technology (DIT) in 1992. Its former site at 143/149 Rathmines Road Lower is now one of the DIT campuses. Note that ‘Rathmines College of Commerce’ is not related to the ‘Rathmines College’, which is a nearby private college located in the Town Hall, Rathmines.

The Dublin Institute of Technology (DIT) was established as an autonomous institution by the DIT Act 1992, although its origins go back to 1887 and the establishment of technical education in Ireland. The act merged six colleges of higher education formerly under the City of Dublin Vocational Educational Committee:

- (1) College of Technology, Kevin Street, founded 1887
- (2) College of Music, Chatham Row, founded 1890
- (3) College of Commerce, Rathmines, founded 1901
- (4) College of Marketing and Design, Mountjoy Square, founded 1905
- (5) College of Technology, Bolton Street, founded 1911
- (6) College of Catering, Cathal Brugha Street, founded 1941

It is not known whether DIT preserved the Rathmines College of Commerce archives.

2018 may be an important year for DIT:

The building at 143/149 Rathmines Road has been vacated by the Dublin Institute of Technology which has relocated staff to a new extension to its Aungier Street campus.

The property is held by DIT on a 35-year lease dating from 1983 and has 14 years left to run. [*i.e. to 2018*]

From an informative article in the Irish Times 24-Mar-2004:

<http://www.irishtimes.com/business/commercial-property/former-college-of-commerce-in-rathmines-for-rent-sub-lease-1.113682>

Re-imagining Ludgate’s Analytical Engine

Prof.Luke Drury of DIAS asked ‘Was Percy Ludgate’s design ever constructed?’

The London Science Gallery did reproduce Babbage's Difference Engine (not his Analytical Engine) under the guidance of Doran Swade, who has said the analytical engine (for which extensive drawings survive) would be 'a monster' (from an

interview by Hannah Fry for the 2015 BBC4 documentary: *Calculating Ada: The Countess of Computing*). Swade said it would have a processing portion 15ft high x 6ft diameter plus a 100-variable 'entry-level' store 15ft high x 45ft long, although Babbage spoke of 1000-variable machines, which would be 15ft high x 450ft long. Others have said Babbage's engine would be 30ft wide, so 'entry-level' would be 15ft H x 45ft L x 30ft W, i.e. have a footprint of 1350 sqft and size of 20250 cuft, whereas the 1000-variable engines would be 15ft H x 450ft L x 30ft W, i.e. have a footprint of 13500 sqft and size of 202500 cuft. By comparison, Westminster Cathedral, the largest Catholic church in England and Wales, has a nave 59ft wide and 230 ft long, i.e. a footprint of 13570sqft, almost the same as Babbage's 1000-variable engine.

And yet it would have precision mechanics. Babbage built only a small part of his Analytical Engine c.1871, and his son Henry built its arithmetic unit (Mill) in c.1910. There is now a funded research project at Royal Holloway, led by Doran Swade, that is investigating the Babbage Drawings with a view to trying to build at least a virtual Analytical Engine [57].

Ludgate's engine was to be much smaller. It achieved this via a novel multiplier, but even moreso via another major advance with the store, which used two ingenious small rotating repositories for rods that stored 192 variables in total. If we extrapolate Babbage's engine to 192 variables, it would be 15ft H x 86ft L x 30ft W, i.e. have a footprint of 2580 sqft and size of 38700 cuft. By comparison Ludgate's engine was to be 2ft H x 2ft L x 2ft W, i.e. have a footprint of 4 sqft and size of 8 cuft. So Ludgate greatly 'miniaturised' the analytical engine, by a factor of nearly 5000, especially by reducing the size of the store.

The greatly reduced size of Ludgate's analytical engine could make physical or virtual reproduction a realistic proposition, but none of its plans have ever been found. There is so little detail in his papers that reproduction would mostly be 're-imagining'. What intrigues is that Ludgate stated:

1909 paper: "I've prepared many drawings"

1914 paper: "Complete descriptive drawings of the machine exist, as well as a description in manuscript, but I have not been able to take any steps to have the machine constructed"

For a machine of this complexity the complete drawings would most probably need more than 30 A2 sheets, quite probably more than 100, enough to prompt thoughts of what to do with them. Given his contact with Boys and Conway, and also his church, whether by instruction or otherwise **the drawings or other material may have been passed on and so this needs to be explored.**

In the 1970s, despite considerable effort, and help from a number of archivists at the Royal Dublin Society, The Public Record Office of Ireland, and the National Library of Ireland, no trace of any drawings or manuscripts describing Ludgate's machine could be found. In recent times Irish archivists, such as the Royal Irish Academy Archivist (Siobhan Fitzpatrick) and the Trinity College Dublin Archivist (Ellen O'Flaherty), have not found anything on Ludgate or of relevance to him on Conway or Boys. However, both conducted catalog not physical searches, and from experience items can be hiding in plain view, so **this needs to be further explored.**

Professor Charles Vernon Boys FRS

C.V.Boys published a review of Percy Ludgate's 1909 paper in Nature, where he was thanked for his encouragement. Clearly he was an interested 3rd party.

Exploration of Boys' archives is predicated on Ludgate's statements in his 1909 paper "I've prepared many drawings" and his 1914 paper "Complete descriptive drawings of the machine exist, as well as a description in manuscript, but I have not been able to take any steps to have the machine constructed". For a machine of this complexity the 'complete drawings' would most probably need 50 or more drawings of his 1909 engine, and also more his 1914 engine, large enough to prompt the thought 'what should we do with this'. It seems likely the family were proud of Percy and unlikely to have discarded his drawings, and much more likely given his contact with Prof.Boys or Prof.Conway, and also his church, whether by instruction or otherwise, to have passed relevant material on to those known interested parties.

Charles Vernon Boys FRS (b.15-Mar-1855, d.30-Mar-1944) [72, 73] was the son of Rev.Charles Boys (b.1809, d.Jun-1898, Anglican vicar of Wing, Rutland) and Caroline Goodrich Dobbie (b.1816, d.1876). Note that his father's middle name is often incorrectly stated as Parkson (*ref:* grandson John Vernon Boys). His paternal grandparents were Charles Worsley Boys (b.1779, d.1809) and Mary Vulliamy (b.1781, d.1865), and maternal grandparents Captain William Hugh Dobbie (b.1771, d.1830) and Agatha Shedden Goodrich (b.1784, d.1841). While a student he invented the mechanical *Integrator* for plotting the integral of a function. He clearly did early work in 1876, 1881 and 1883 as [80] mentions Boys' earlier work from 1876 and his papers published in 1881 and 1883: "Boys' integrator was invented during a sleepless night, and during the following days carried out as a working model, which gives highly satisfactory results. It is ingenious in its simplicity...".

He worked as a physicist at the Royal School of Mines (1889-97, now part of Imperial College London), where he invented the fused quartz fibre torsion balance, which allowed him to measure extremely small forces using super-fine fibres. He was known above all for his careful and innovative experimental work. Imperial College highlighted Boys in a recent issue of their magazine:

Like many inventors, Sir Charles relied on a healthy dose of serendipity and a little eccentricity.

One of the worst teachers who has ever turned his back upon a restive audience ... galloped through an hour of talk and bolted back to the apparatus in his private room. –H.G. Wells

Later he became a Metropolitan Gas Referee (1897-1939). He was President of the Physical Society (1916-17), and President of the Rontgen Society (1906-07). He was quite involved in the Royal Society, on the War Committee, acting as a referee for Society journals, and in their Letter Books (NLB, letters to and from the Society's secretary). His obituary notice in the Proceedings of the Physical Society in Nov-1944 stated that his papers "were found well-preserved and in meticulous order at his death". These papers are now in the care of his grandson John Vernon Boys, who has given very generously of his time and effort in assistance.

There is limited material related to C.V.Boys in the UK National Archives, the Royal Society, the Imperial College Archives, the Science Museum Library and Archives, and Cambridge University Library Department of Manuscripts and University

Archives [74]. Although none of this has been physically inspected, it appears unlikely to be relevant to Percy Ludgate.

He married Marion Amelia Pollock (b.1866, d.1920) in 1892, and had a son Geoffrey Vernon Boys (b.1893, d.Mar-1945) and a daughter Margaret Angela Boys (b.1897, d.1937) (m.Mitchell-Carruthers), but they divorced in 1910 and she remarried to the Cambridge mathematician Andrew Forsyth. The Royal Society obituary (by Lord Raleigh) [75] implies Boys' divorce was fairly good natured on both sides, whereas the reality may have been different [76]:

In 1910 the ostracism Edwardian Cambridge meted out to Forsyth for allowing the estranged and badly mistreated wife of C.V.Boys to move in with him made Forsyth decide to resign not only his professorship, which he surely would have had to forfeit, but also his Trinity fellowship, which was unassailably his for life. (He became a Professor at Imperial College, and married the former Mrs.Boys.)

Boys did quite a bit of work on various analogue calculating instruments [78, 79, 80, 81, 82, 83, 84, 85, 86], and was said to be a prolific reviewer and inventor, for example, three weeks after his 1909 Nature review of Ludgate's paper he published in Nature on his design for a new navigational instrument [87] (copies of these papers are in the associated folder in this catalog). The Royal Society obituary makes clear Boys' pleasure in building his own instruments and his abilities as a machinist, but doesn't say anything about his abiding interest in calculating machines, except maybe via his role as examiner in all the major related patent applications. His comments on the details of calculating machines crop up regularly, e.g. in Whipple's article in the Napier Tercentenary Handbook, and his work on calculating machines is mentioned in [78], and [86] is often referenced regarding calculating with addition as basic operator.

It is not clear whether or not he volunteered to review the 1909 Ludgate article, but he was evidently very enthusiastic about it. However his review gives no indication of any knowledge of Ludgate or his machine beyond what is in the paper, and whether he was a mentor or just a reviewer is also unknown. [77] needs to be explored, as it is in the right timeframe in relation to Ludgate's 1909 paper.

Enquiries continue to need to be made regarding Boys' archives and whether they include relevant material.

Professor Arthur William Conway FRS

As with C.V.Boys, any exploration of Conway's archives is predicated on Ludgate's statements in his 1909 paper and his 1914 paper and whether relevant material may have been passed on. The front page of Ludgate's 1st paper in the Sci.Proc.RDS of 1909, says 'Communicated by Professor A.W.Conway', which normally means that Conway was what we would now call the referee on the paper, so it is doubtful that he would have had actual plans, but this avenue nevertheless needs to be explored.

Arthur William Conway FRS [90, 91] was born on 2-Oct-1875 in Wexford to Myles Conway and Teresa Conway ne Harris. His father died in 1877 and his mother later remarried. He had two siblings, Arthur and Bridie (who became a very gifted musician). He married Agnes Christina Bingham (b.1882, d.1929) on 19-Aug-1903, and they had three daughters (Teresa Mary Conway b.1905, Verna Marguerite

Conway, and Orlaith Conway) and one son (Morgan Felix Conway b.1910). He was Professor of Mathematical Physics at UCD for 1901-1940 (40 years), FRS 1915, the President of Royal Irish Academy 1937-1940, the President of University College Dublin 1940-1947 (the Conway Institute is named in his honour), President of the Royal Dublin Society 1941-44, and was involved by DeValera in creating the Dublin Institute for Advanced Studies (DIAS), and was first Chairman of DIAS 1940-50 when Schrodinger was there and published his famous little book "*What is Life?*" in 1944. A.J.McConnell (who with Conway edited Hamilton's writings) edited some of Conway's writings in 1947 to be published by DIAS, and there was a detailed Royal Irish Academy obituary in 1951. He died on 11-Jul-1950, and probate stated:

CONWAY ARTHUR W. (1533) 27 November Probate of the Will of Arthur Wulliam Conway late of Colamore Lodge Coliemore Road Dalkey Co. Dublin President U.C.D. (retired) who died 12 July 1950 granted at Dublin to Very Reverend William Shiggins Catholic Clergyman Effects £13537: 5: 7.

Given Conway's prominence the question is whether his descendents know whether his papers survived and if so whether they referred to Ludgate's plans.

Charles Mollin published a comprehensive review of Conway and his works [92].

UK Research Notes

The current trend amongst archives is to image, index and the store the originals in some climate controlled, fire-proof mountain with imaging paid for by commercial genealogy companies. In the UK all the old ledgers have been removed and replaced with online access.

The UK National Archives' role is to hold documents created by the government departments such as the War Office, Ministry of Heath, Foreign Office, etc. It also acts as the standards body for archives and its search engine, *Discovery*, holds the catalogue for almost all registered archives in England and Wales. These hold a mixture of records generated by the various national and local government departments, as well as personal and other records. The Discovery Catalogue is at: <http://discovery.nationalarchives.gov.uk/>

UK parliamentary papers are held in their archives at:

<http://www.parliament.uk/business/publications/parliamentary-archives/>

This is mostly acts of parliament, committee reports and similar. Day to day business is reported in Hansard.

Both have online catalogues but the index is limited, information may be buried in committee reports act. The National Archives also includes a search of the county archives and other. Archives are released usually after no more than 70 years, mostly earlier, unless there is some paramount security issues or they contain personal details not in the public domain (for 100 years).

A typical search, for example, for "Boys", returns thousands of documents (relating mostly to the UK Ministry of Education and schools). A search for "Charles Vernon Boys" returns only the summary of his divorce, although there are a number of his papers in other archives. Percy Ludgate was co-opted on to a committee that advised the War Office in WW1. To find if anything was deposited would need the formal name of the committee and, if possible, the chairman. This is about all that would be

in the index entry. There are no hits for Percy. There were several committees advising the Ministry of Munitions, one of which was to advise on technologies and instruments and this merits a closer look.

For post-1911 UK census, there is a movement to get the 1926 census released as this is the first census taken in the "new" republic. In 2012 the cabinet approved the digitisation and committed to enabling legislation by 2016. The returns may be with the Central Statistics Office along with later Census returns. They probably have not yet been indexed.

The UK probate office is at:

<https://probatesearch.service.gov.uk/Calendar#calendar>

The name and date can be entered then the document ordered (£10).

UK BMD certificates are available online from the UK General Records Office (UK GRO). As many of their certificates will still be covered by data protection it will cost £10 a certificate unless GRO have arrangements for academic research. Indian certificates are held by the UK National Archives but may be ordered through the UK GRO as army records. Overseas births, etc, including military, are held in a separate register by the Registrar General. The Indian Births would most likely be noted in the Regimental or Company records and so may be in Military Archives.

The Society of Genealogists has genealogical records plus members' lists and similar publications in its Library Catalogue at:

<http://s10312uk.eos-intl.eu/S10312UK/OPAC/Index.aspx>

As well as genealogical records it has members lists and similar publications.

The commercial facility 'Ancestry' at <http://www.ancestry.co.uk/> has a great deal of UK genealogy information. MyHeritage at <https://www.myheritage.com/> is not as slick as but does address several additional databases.

When searching image archives (e.g. London Gazette), the search engines invoke OCR scans of images of the originals, and look for a series of characters. Often the OCR does not do any quality checks, so can come confused, e.g. a search for "Percy Ludgate" would not find "Percy E" or "Perhgf Ludgate", but can find "Ludgate Hill" or "Ludgate Circus". Very rarely, such search engines allow searches to match logical expressions, and even options to exclude some terms. A very common flaw is that they are case sensitive and/or strict. For example, the LG archive search is strict, so "Percy E. Ludgate" will not find "Ludgate, Percy E." or indeed any other variations.

Irish Research Notes

The main Dublin BMD office in Lombard Street does not support research, which is done at its research annex in Werburgh Street. The idea that it is 'free for academics' is a myth. It costs €2 per index, or €20 for carte blanche searching, and €4 per research certificate.

If visiting the Dublin BMD research annex it is suggested to photograph everything with a 10Mpixel or better camera, even if the images are on microfilm. The free *Photo* program on Windows10 can be used to later clean up the image. The best

policy is not to be diverted, to adhere to the 80:20 rule and save further investigations for a second visit.

Ireland in particular has been keen to increase access to encourage tourism (and reduce the cost of archiving), and has followed the current trend to image, index and store the originals elsewhere. Many of the original registers have been handed over to the National Archives of Ireland for safekeeping in a controlled environment, and enquiries are directed to the 'familysearch.org' microfilms (or images); other records are thought to be kept in Co. Roscommon.

But before going to the Dublin BMD research annex it is wise to examine the civil records plus images of civil registrations released online by the Irish Government at <http://irishgenealogy.ie/>. These records currently cover counties Cork, Kerry and Dublin. They show if a free image is available or give you a link to order one online.

The commercial facility <http://www.rootsireland.ie/> was a result of the Irish Family History Foundation initiative; it does not include images, and much of what is on 'rootsireland.ie' is available free and with images on 'irishgenealogy.ie'. In addition <http://findmypast.ie/> has a large collection of non-BMD records, and Genuki Ireland at <http://www.genuki.org.uk/big/irl/> has church records and civil registrations. A very good source for Irish BMD indexes is Familysearch at <https://familysearch.org/>, which microfilmed the ledgers and indexed them online. For searches in Cork, the IGRS has transcript copies of many Cork parish register collections, see <http://www.irishancestors.ie/>. Overall, these sites cover most of what is available.

The Dublin Probate Office is in Phoenix House, Smithfield, Dublin, telephone +353-1-8886174/6728.

Public appeal for information

When there are diminishing returns from further research, it would be worthwhile to make a public appeal via a widely read and/or syndicated journalist. At that time it may be useful to contact Findmypast Ireland, as it is the sort of thing they like to feature in their publications and they have agreements to publish certificates, etc..

SCSSTreasures Catalog entry

This document is to be placed online in the SCSSTreasures Catalog at: <https://www.scss.tcd.ie/SCSSTreasuresCatalog/hardware/TCD-SCSS-X.20121208.002/TCD-SCSS-X.20121208.002.pdf>

And the related documents and evidence in the related folder in our catalog:

<https://www.scss.tcd.ie/SCSSTreasuresCatalog/hardware/TCD-SCSS-X.20121208.002/>

Extra evidence (e.g. certificate images) has been collected but needs permissions to publish from the official sources.

Investigating Team

Dr. Brian Coghlan, Prof. Brian Randell, David McQuillan, Paul Hockie, Reddy O'Regan

Percy Ludgate's family

The following pages (courtesy Paul Hockie) state the known genealogical facts about Percy Ludgate, his siblings, his parents, and his paternal and maternal families.

Accession records, References, Figures and Evidence

The final pages are the accession records, references, figures, and table of evidence.

DRAFT

First Generation



1. **Percy Edwin Ludgate** was born on 2 Aug 1883 at Townsend Street in Skibbereen, Cork, Ireland.¹ Father Michael Ludgate, mother Mary Ludgate formerly McMahon. Fathers profession Pensioner. Registered 20th September, informant Mother

He was educated on 15 Sep 1890 at St George's Infants in Dublin, Ireland.² Age 7. Living at 28 Foster Terrace. Father a Shorthand Teacher. Member of the Established Church.

He was educated on 31 Mar 1891–31 Mar 1892 at St George's Infants in Dublin, Ireland.³ Established Church, father a teacher. Living at 28 Foster Terrace, Dublin. Transferred from Taft? Hall.

On 4 Nov 1898 Percy was a Civil Service Temporary Boy Copyist (New Class) in Dublin, Ireland.⁴ He appeared in the census on 31 Mar 1901 at 30 Dargle Road in Glasnevin, Dublin, Ireland.⁵ Age 17 Church of Ireland born County Cork occupation Civil Servant National Education Office (Boy Copyist) Read and write Not Married Also present mother Mary (age 60) and brother Alfred (age 19)

On 13 Mar 1903 he was a Civil Service Open Competitive Examination for situations as Assistant Clerks (Abstractors) in Dublin, Ireland.⁶ He was the **top Irish candidate** being placed nineteenth in the Order of Merit.

On 18 Oct 1904 Percy was a Civil Service Open Competitive Examinations for Clerkships in the Second Division of the Civil Service in Dublin, Ireland.⁷ Percy competed successfully for this more senior graded clerkship but failed the medical examination. Consequently his certificate was not issued

On 20 Feb 1905 he was a "Case of Mr. Percy Ludgate – Irish Civil Service" was raised during Questions in the House in London, England.⁸ Mr. T. HARRINGTON (Dublin Harbour)

I beg to ask the Secretary to the Treasury whether he is aware that Mr. Percy E. Ludgate, of Drumcondra, passed the Civil Service examination for assistant clerkship, abstractor class, in October, 1903, and was medically examined by the physician selected by the Civil Service Commissioners and declared fit for the service; that, without having received an appointment as assistant clerk, he competed successfully for a second division clerkship, but failed to satisfy the examining physician as to his fitness; that, in consequence of the latter medical examination, Mr. Ludgate's certificate of qualification given in the former case has been cancelled, thus penalising him for one appointment by reason of his success in securing another; and, if so, whether he will take steps to have him medically examined with the view to his securing one or other of the above

1. , , Skibbereen Registration District Page 67 No 335, ; , .

2. , "Ireland National School Registers," Roll Number 11624, ; , .

3. , "Ireland National School Registers," Ireland National School Registers No 11624.

4. *Newspapers*, , London Gazette. 4th November 1898 Pages 6454 & 6455.

5. Census, ; Census Ireland 1901 Household Return.

6. *Newspapers*, , London Gazette 17th March 1903 page 1779 & Weekly Irish Times 21st March 1903 (London Correspondence).

7. *Newspapers*, , London Gazette 23rd August 1904 pages 5419 and 5420.

8. , Hansard 20th February 1905 Vol 141.

appointments, and will he say whether there is any difference in the medical standard of qualification required for assistant clerkship or second-division clerkship.

THE FINANCIAL SECRETARY OF THE TREASURY (Mr. VICTOR CAVENDISH,) Derbyshire, W.

The facts are substantially as stated in the hon. Member's Question, except that Mr. Ludgate's certificate as assistant clerk was never granted, and therefore was not cancelled; and that the date of the examination referred to was February, 1903, and not October, 1903. As nearly a year had elapsed since Mr. Ludgate's medical examination for an assistant clerkship, it was necessary to re-examine him before issuing him a certificate for a second-division clerkship. The result of the medical examination proving unsatisfactory the Civil Service Commissioners were unable to grant certificate for either position. The medical requirements are practically the same in both cases.

On 28 Apr 1909 he was a "On a Proposed Analytical Machine at Royal Dublin Society in Dublin, Ireland.⁹ I propose to give in this paper a short account of the results of about six years' work, undertaken by me with the object of designing machinery capable of performing calculations, however intricate or laborious, without the immediate guidance of the human intellect.

Percy appeared in the census on 2 Apr 1911 at 30 Dargle Road in Glasnevin, Dublin, Ireland.¹⁰ Age 27 Church of Ireland born Co Cork Commercial Clerk (Corn Merchant) Living with mother Mary (age 70) and brother Alfred (age 29)

He was educated Accountants Examinations in Jun 1917 in London, England.¹¹ Results for the June Examination of the Corporation of Accountants Limited. In the final all passed, Percy E. Ludgate, William Codd and Thomas sanderson, Dublin taking Honours

He died on 16 Oct 1922 at the age of 39 at 30 Dargle Road in Glasnevin, Dublin, Ireland.¹² Bachelor age 38, profession Accountant. Cause of death Catarhal Pneumonia 21 Days certified. Informant Violet E. Ludgate, Niece, in attendance, of 1 Tolka Villas, Richmond Road.

Percy had his estate probated on 23 Jan 1923 at 30 Dargle Road in Glasnevin, Dublin, Ireland.¹³ Probate granted at Dublin to Alfred E. Ludgate, Accountant, Effects £885 7s 4d.

He had his estate probated on 12 Feb 1923 at Court of Chancery in London, England.¹⁴ Probate Dublin to Alfred Ernest Ludgate, accountant. Effects £192 in England. Sealed London 12 February (1923)

9. , Scientific Proceedings Royal Dublin Society 12,9 (1909) pp 77-91.

10. Census, , .

11. *Newspapers*, Sept 10, 1917 Birmingham Daily Gazette, Birmingham Evening Despatch. Sept 11, 1917 Yorkshire Post and Leeds Intelligencer, British Library Newspaper Collection.

12. , , Registration District Dublin, Finglass and Glasnevin 04388107 No 215, .

13. , Dublin Callendar Court of Chancery, .

14. , Will Calendars, Court of Chancery, London.

Second Generation

2. **Michael Edward Ludgate** was christened on 8 Feb 1840 in Kilshannig by Mallow, Cork, Ireland.¹⁵ Place described as Kilshannig by Mallow. Parents Robert and Susanna Ludgate

He appeared in the census in Apr 1861 at Shorncliff Camp in Cheriton, Kent, England.¹⁶

Relationship Quartered In Camp At Shorncliff

Marital status Single

Gender Male

Age 22

Birth year 1839

Occupation Serjeant 2/21 Regiment

Birth place (other) Ireland

Parish Cheriton

County Kent

Country England

Parliamentary borough Hythe

Registration district Elham

In 1891–1897 he was a Ludgate, Michael Edward, son and daughter, teacher of shorthand at 28 Foster Terrace in Dublin, Ireland.¹⁷ Fredrick and Augusta, teachers of shorthand

Michael Non payment of debt on 8 Sep 1899–19 Oct 1899 at Kilmainham Prison in Dublin, Ireland.¹⁸

Prison Number: 1076

Names: Michael Ed Ludgate (Debtors) (Army Pensioner)

Description:

Age: 60

Height Ft & Inch: 5' 11¾"

Hair/Eyes: Grey/Blue

Complexion: Fresh

Marks on Person: Bald and Moles on Chest and right side of stomach sore with left part of back.

Left eye impaired Lost his upper teeth except three.

Weight on Admission/Discharge: 179/

Where Born: Mallow,Co Cork

Last Residence: Balbriggan

Trade or Occupation: Nil

Religion: C.I.

Degree of Education: R+W

When committed: Sept. 8

Offence: Non-paymentof Debt

By whom committed: TheHon Mr Justice Kenny, High Court of Justice, Ireland 16.8.99

Sentence: 6 Weeks or £5:2:0

Fine, Bail or Hard Labour: impt (Imprisonment)

Expiration of Sentence: 22 Sept 1899

15. , Parish Registers, Familysearch Film FHL 874437 Item 7.

16. Census, , .

17. , Thom's Directory, 1891 Dublin Street Directory 1891-1897.

18. , FMP DUBLIN-KILMAINHAM PRISON GENERAL REGISTER 1898-1903 Bk 1/10/21 Item 2.

In Sep Q 1900 he was a Traveller in Dublin, Ireland.¹⁹ He appeared in the census in Apr 1901 at 14 Quay Street in Balbriggan, Dublin, Ireland.²⁰ Episcopalian Church of Ireland age 61 Pensioner from 60th Rifles, born Co Cork

Mary Ann McMahon and Michael Edward Ludgate were married on 15 Aug 1863 in Winchester, Hampshire, England.²¹ First name(s) Michael

Last name Ludgate

Name note -

Age 23

Marriage year 1863

Marriage date 15 Aug 1863

Marriage place Winchester

Father's first name(s) Robert

Father's last name Ludgate

Spouse's first name(s) Mary

Spouse's last name Mac Mahon

Spouse's age 22

Spouse's birth year 1841

Spouse's birth date 1841

Spouse's father's first name(s) Thomas

Spouse's father's last name Mac Mahon

3. **Mary Ann McMahon** was born in Dec Q 1840 in Iden, Sussex, England.²² She was christened on 20 Dec 1840 at All Saints in Iden, Sussex, England.²³ She appeared in the census in Apr 1841 at East Street in Plumstead, Kent, England.²⁴ Thomas McMahan Male 35 1806 Ireland

Francis McMahan Female 30 1811 Ireland

Augusta McMahan Female 7 1834 Kent, England

Thomas McMahan Female 5 1836 Kent, England

Auther McMahan Male 3 1838 Kent, England

Mary Ann McMahan Female 0 1841

-

Mary appeared in the household of Frances "Fanny" Reed in the census in 1851 at Royal Hospital Chelsea in Chelsea, Middlesex, England.²⁵ She appeared in the census in 1851 at Royal Hospital Chelsea in Chelsea, Middlesex, England.²⁶ Age 10 Scholar b Rye, Sussex. Living with Mother

She appeared in the census in Apr 1861 at Royal Hospital Chelsea in Chelsea, Middlesex, England.²⁷ Relationship Nurses Daughter

Marital status Unmarried

Gender Female

Age 20

Birth year 1841

Occupation Dressmaker

19. , Marriage Certificate of Fredrick Ludgate and Alice Walsh 3q 1900.

20. Census, , .

21. , , , ; , .

22. Ibid.

23. , Familysearch FHL Film 1067258.

24. Census, , .

25. Ibid.

26. Ibid.

27. Ibid.

Birth town Rye
Birth county Sussex

Living at this address²⁸ Living at this address²⁹ Mary died on 22 Aug 1936 at the age of 95 at 2 Belvidere Ave in Dublin, Ireland.³⁰ Died St.Kevin's Hospital, Dublin. Cause of Death Senile Decay Cardiac Arrest. Informant Hospital

Michael Edward Ludgate and Mary Ann McMahon had the following children:

- i. **Arthur Edward Ludgate** was born in Sep Q 1864 in Winchester, Hampshire, England.³¹ He died in Dec Q 1864 at the age of 0 in Winchester, Hampshire, England.³²
- ii. **Thomas Edward Ludgate**³³ was born in Sep Q 1865 in Winchester, Hampshire, England. He died on 11 May 1945 at the age of 79 at Victoria Hospital in Cork, Cork, Ireland.³⁴ Residence Lombardstown, Mallow, married age 76, a farmer. Cause of death Myocardial ??? and ??? 14days (Certified)
- iii. **Walter Samuel Ludgate** was born in Dec Q 1867 in Winchester, Hampshire, England.³⁵ He died in Dec Q 1868 at the age of 1 in Winchester, Hampshire, England.³⁶
- iv. **Albert William Ludgate** was born in Mar Q 1869 in Winchester, Hampshire, England.³⁷ He died on 24 Jun 1870 at the age of 1 at Bellary in Madras, India.³⁸ Hydrocephalus. Buried 25th June 1871
- v. **Augusta Ludgate** was born on 3 Mar 1871 at Bellary in Madras, India.³⁹ First name(s) Augusta
Last name Ludgate
Birth year 1871
Birth date 05 Mar 1871
Baptism year 1871
Baptism date 4 May 1871
Place Bellary
Presidency Madras
Father's first name(s) Michael
Father's last name Ludgate
Mother's first name(s) Mary
Mother's last name -
Archive reference N-2-52
Folio 68
Page -

She was christened on 4 May 1871 at Bellary in Madras, India.⁴⁰ She appeared in the census in Sep 1939 at London County Council Mental Hospital in Abbots

28. Census, , Census Ireland 1901 Household Return.

29. Census, , .

30. , , , .

31. Ibid.

32. Ibid.

33. Ibid.

34. Ibid.

35. Ibid.

36. Ibid.

37. Ibid.

38. Ibid.

39. Ibid.

40. Ibid.

Langley, Hertfordshire, England.⁴¹ b 1874 Female Incapacitated Single

Augusta died in Mar Q 1955 at the age of 83 in Watford, Hertfordshire, England.⁴²
Age 80

- vi. **Fredrick Ludgate** was born in Sep Q 1875 in Chatham, Kent, England.⁴³ He died on 2 Dec 1921 at the age of 46 at 1 Tolka Villas, Richmond Road, Dublin in Dublin, Ireland.⁴⁴ Married , 45 years a clerk. Cause of death Pulmonary Tuberculosis, informant Alice E. Ludgate of 1 Tolka Villas
- vii. **Alfred Ludgate** was born on 1 Apr 1881 at Townsend Street in Skibbereen, Cork, Ireland.⁴⁵ Informant Michael Ludgate

Living at this address⁴⁶ Living at this address⁴⁷ He died on 10 Sep 1953 at the age of 72 at Royal Victoria Eye and Ear Hospital in Dublin, Ireland.⁴⁸ of 10 Emmet Street, N.C.R. single, age 72 a clerk. Cause of death Larynx (1 year) Heart failure 1 day, certified.

- 1 viii. **Percy Edwin Ludgate**, born 2 Aug 1883, Skibbereen, Cork, Ireland; died 16 Oct 1922, Glasnevin, Dublin, Ireland.

41. , FMP 1939 Register RG101/1674G/006/15.

42. , , , .

43. Ibid.

44. Ibid.

45. Ibid.

46. Census, , Census Ireland 1901 Household Return.

47. Census, , .

48. , , , .

Third Generation

4. **Robert Ludgate** was christened on 16 Aug 1802 at Scarragh in Kilshannig by Mallow, Cork, Ireland.⁴⁹ **Susanna Willis** and **Robert Ludgate** were married in 1837 at Diocese of Cork & Ross in Cork, Ireland.⁵⁰

5. **Susanna Willis** was born about 1814. She died on 15 Aug 1894 at the age of 80 at Incurable Home in Cork, Cork, Ireland.⁵¹ Widow age 80, no occupation, Coronary H??? one year, Exhaustion. Informant H McLaine, occupier Incurable Home

Robert Ludgate and Susanna Willis had the following children:

- 2
 - i. **Thomas Ludgate** was christened on 29 Jul 1838 in Kilshannig by Mallow, Cork, Ireland.⁵²
 - ii. **Michael Edward Ludgate**.
 - iii. **Mary Alice "Alice" Ludgate** was christened on 26 Jan 1842 in Kilshannig by Mallow, Cork, Ireland.⁵³ She died in 1865 at Cork Registration District in Cork, Ireland.⁵⁴
 - iv. **Elizabeth Ludgate** was christened on 28 Sep 1843 at Scarragh in Kilshannig by Mallow, Cork, Ireland.⁵⁵
 - v. **Robert Ludgate**⁵⁶ was christened on 13 Oct 1845 in Kilshannig by Mallow, Cork, Ireland.⁵⁷
 - vi. **Richard Ludgate** was christened on 19 May 1847 in Kilshannig by Mallow, Cork, Ireland.⁵⁸
 - vii. **David Ludgate**⁵⁹ was christened on 6 Aug 1849 in Kilshannig by Mallow, Cork, Ireland.
 - viii. **William Joseph Ludgate** was christened on 7 Jul 1853 in Kilshannig by Mallow, Cork, Ireland.⁶⁰ In 1887–1932 he was a Journalist in Cork, Cork, Ireland.⁶¹ He died on 25 Nov 1936 at Victoria Hospital in Cork, Cork, Ireland.⁶² Widower age 84, journalist, Senile Decay, myocardial congestion. Informant Gertrude Taylor, Occupier Victoria Hospital

6. **Thomas McMahon** was born about 1803 in Kilmore, Armagh, Ireland. CoI records start 1789 but no McMahon. Earliest records for other denominations start 1815

He served in the military Royal Sappers & Miners in 1841 in Woolwich, Kent, England.⁶³ Rank Private
Unit or regiment Royal Sappers & Miners
Sub unit 7th Company
Year 1841

49. , Mallow Heritage Centre/Familysearch.

50. , (: ,), FMP Ireland Diocesan And Prerogative Marriage Licence Bonds Indexes 1623-1866.

51. , , , .

52. , Familysearch Film FHL 874437 Item 7.

53. Ibid.

54. , Cork Registration District 1865 vol 2/10/82.

55. , Mallow Heritage Centre Index/Familysearch.

56. , Familysearch Film FHL 874437 Item 7.

57. Ibid.

58. Ibid.

59. Ibid.

60. Ibid.

61. , , , .

62. Ibid.

63. , , National Archives WO11/92.

He appeared in the census in 1841 at East Street in Plumstead, Kent, England.⁶⁴ Occupation
Soldier
Age 35
Birth year 1806

Thomas served in the military Admitted to the Pension List on 10 Oct 1843 in Woolwich, Kent, England.⁶⁵ Age 40
Total Service 18 years 6 months
Rate of Pension 9d
Cause of Discharge Chronic cough & palpitations of the heart
Place of Birth Kilmore, County Armagh
Place of Residence London

Frances "Fanny" Reed and Thomas McMahon were married on 4 Nov 1834 at Saint Luke's in Charlton, Greenwich, Kent, England.⁶⁶

7. **Frances "Fanny" Reed** was born about 1811 in Ireland. Possibly Kinsale or Ballincollig where he father may have been stationed,

Living at this address⁶⁷ She appeared in the census in 1851 at Royal Hospital Chelsea in Chelsea, Middlesex, England.⁶⁸ Marital status Married
Gender Female
Age 40
Birth year 1811
Occupation Nurse
Birth place Ireland

She appeared in the census in 1861 at Royal Hospital Chelsea in Chelsea, Middlesex, England.⁶⁹
Nurse age 50

Fanny appeared in the census in 1861 at Bowater Crescent in Woolwich, Kent, England.⁷⁰ Annuitant
Age 60 born Ireland living with:
Frances M Clarke Daughter - Female 17 1854

She appeared in the census in 1881 at Upper Market Street in Woolwich, Kent, England.⁷¹ Living with William Scott and Wife a Pensioner
Relationship Lodger Head
Marital status Widow
Gender Female
Age 71
Birth year 1810
Occupation Pensioner

64. Census, , .

65. , , FMP National Archives WO23/15.

66. , FMP Thames & Medway Marriages.

67. Census, , .

68. Ibid.

69. Ibid.

70. Ibid.

71. Ibid.

Birth town -
Birth county -
Birth place Ireland
Living with daughter, Augusta, single a domestic servany

Thomas McMahon and Frances Reed had the following children:

- i. **Augusta McMahon** was born on 13 May 1834 in Woolwich, Kent, England.⁷² She was christened on 7 Sep 1836 at Saint Mary Magdalene in Woolwich, Kent, England.⁷³ She appeared in the census in 1841 at East Street in Plumstead, Kent, England.⁷⁴ Augusta appeared in the census in 1851 at Belgrave Road, Saint Georges Hanover Square, in London, England.⁷⁵ First name(s) Augusta M
Last name Mabone
Relationship Servant
Marital status Unmarried
Gender Female
Age 16
Birth year 1835
Occupation House Servant
- ii. **Thomas McMahon** was born on 7 Apr 1836 in Woolwich, Kent, England.⁷⁶ He was christened on 7 Sep 1836 at Saint Mary Magdalene in Woolwich, Kent, England.⁷⁷ He appeared in the census in 1841 at East Street in Plumstead, Kent, England.⁷⁸
- iii. **Arthur McMahon** was born on 28 May 1838 in Woolwich, Kent, England.⁷⁹ He was christened on 24 Jun 1838 at Saint Mary Magdalene in Woolwich, Kent, England.⁸⁰ He appeared in the census in 1841 at East Street in Plumstead, Kent, England.⁸¹
- 3 iv. **Mary Ann McMahon**, born Dec Q 1840, Iden, Sussex, England; died 22 Aug 1936, Dublin, Ireland.
- v. **Robert McMahon** was born on 18 Aug 1843 in Woolwich, Kent, England.⁸² He was christened on 17 Sep 1843 at Saint Mary Magdalene in Woolwich, Kent, England.⁸³

72. , Included on Baptism Record.

73. , Familysearch Indexing Project C05594-2.

74. Census, , .

75. Ibid.

76. , Entry in Parish Register.

77. , Familysearch Indexing Project C05594-2.

78. Census, , .

79. , Entered into Register.

80. , Familysearch Indexing Project C05594-2.

81. Census, , .

82. , Entered in Baptism register.

83. , Family Serach.

Fourth Generation

8. **John Ludgate** was christened on 29 Feb 1752 at Scarragh in Kilshannig by Mallow, Cork, Ireland.⁸⁴ **Elizabeth Farmar** and **John Ludgate** were married in 1778 in Cork, Ireland.⁸⁵

9. **Elizabeth Farmar** was born (date unknown).

John Ludgate and Elizabeth Farmar had the following children:

- i. **Mary Ludgate** was christened on 25 Jul 1779 at Scarragh in Kilshannig by Mallow, Cork, Ireland.⁸⁶
- ii. **Katherine Ludgate** was christened on 25 Nov 1781 at Scarragh in Kilshannig by Mallow, Cork, Ireland.⁸⁷
- iii. **Matthew Ludgate** was christened on 10 Jun 1784 in Kilshannig by Mallow, Cork, Ireland.⁸⁸
- iv. **Michael Ludgate** was christened on 12 Jul 1786 at Scarragh in Kilshannig by Mallow, Cork, Ireland.⁸⁹
- v. **Elizabeth Ludgate** was christened on 17 Oct 1790 at Scarragh in Kilshannig by Mallow, Cork, Ireland.⁹⁰
- vi. **John Ludgate** was christened on 24 Feb 1793 at Scarragh in Kilshannig by Mallow, Cork, Ireland. He was buried on 6 Sep 1794 in Kilshannig by Mallow, Cork, Ireland.⁹¹
- vii. **Jane Ludgate** was christened on 22 Mar 1795 at Scarragh in Kilshannig by Mallow, Cork, Ireland.⁹²
- viii. **David Ludgate** was christened on 2 Apr 1797 at Scarragh in Kilshannig by Mallow, Cork, Ireland.⁹³
- ix. **John Ludgate** was christened on 19 May 1799 at Scarragh in Kilshannig by Mallow, Cork, Ireland.⁹⁴
- x. **Margaret Ludgate** was christened on 1 Jul 1801 at Scarragh in Kilshannig by Mallow, Cork, Ireland.⁹⁵
- 4 xi. **Robert Ludgate**.
- xii. **Thomas Ludgate** was christened on 30 Mar 1804 at Scarragh in Kilshannig by Mallow, Cork, Ireland.⁹⁶

14. **Felix Reed** was born about 1758 in Drummaul, Antrim, Ireland.⁹⁷ Parish registers only exist from 1823

He served in the military Enlist 8th Battalion Royal Artillery on 16 Mar 1777.⁹⁸ He served in the military Promotion to Master Gunner 7th Battalion on 22 Feb 1805 in Ballincollig, Cork, Ireland.⁹⁹

Stations, Combats & Commanders – 4th Company

1810: Ballincolig

1811: Ballincolig

84. , Mallow Heritage Centre.

85. , FMP Ireland Diocesan And Prerogative Marriage Licence Bonds Indexes 1623-1866.

86. , MallowHeritage Centre/Family Search.

87. , Mallow Heritage Centre/Familysearch.

88. Ibid.

89. Ibid.

90. Ibid.

91. Ibid.

92. Ibid.

93. Ibid.

94. Ibid.

95. Ibid.

96. Ibid.

97. , Srvce Records WO97 /1257 National Archives.

98. Ibid.

99. Ibid.

1812: Ballincolig

Felix served in the military To Pension on 16 Jan 1812 at Fort Charles in Kinsale, Cork, Ireland.¹⁰⁰ He died on 16 Jan 1833 at the age of 75 at Ballincollig Military Cemetery in Ballincollig, Cork, Ireland.¹⁰¹ Died when 77 years old. Served as Master gunner.

He was also known as Reid. Ann Cropley and Felix Reed were married on 9 Jul 1793 at St Alphege in Greenwich, Kent, England.¹⁰²

15. **Ann Cropley** was born (date unknown).

Felix Reed and Ann Cropley had the following children:

- i. **Mary Ann Reed** was christened on 6 Oct 1799 in Norwich, Norfolk, England.¹⁰³
- ii. **Felix Reed** was christened on 5 Aug 1801 at Saint Thomas in Portsmouth, Hampshire, England.¹⁰⁴
Possibly private in the 67th Foot. Died Poona, Bombay 29 Jul 1824
- 7 iii. **Frances "Fanny" Reed**, born abt 1811, Ireland.

100. Ibid.

101. , , Find A Grave Memorial# 143414831.

102. , London Metropolitan Archives P78/ALF item 034.

103. , Familysearch Film 1526854.

104. , Familysearch Film 919726.

Fifth Generation

16. **Matthew Ludgate** appeared in the census in Apr 1766 at 1766 Religious Census in Kilshannig by Mallow, Cork, Ireland.¹⁰⁵ **1766 RELIGIOUS CENSUS OF KILSHANNIG**

Protestant Families - 61. Popish Families - 409. Total - 470

One Popish Priest - David Cahil - and no Fryer that I can hear of. - Given under my hand this 21, April, 1766 - James Hingston, Curate

Pr. – Protestant

Ludgate, Mattw. - **Pr.**

17. **Mary** was born (date unknown).

Matthew Ludgate and Mary had the following children:

- i. **Jane Ludgate** was christened on 4 Feb 1740 at Scarragh in Kilshannig by Mallow, Cork, Ireland.¹⁰⁶
- ii. **Ann Ludgate** was christened on 11 Mar 1743 at Scarragh in Kilshannig by Mallow, Cork, Ireland.¹⁰⁷
- iii. **Mary Ludgate** was christened on 30 Oct 1746 in Kilshannig by Mallow, Cork, Ireland.¹⁰⁸
- iv. **Mary Ludgate** was christened on 4 Oct 1747 in Kilshannig by Mallow, Cork, Ireland.¹⁰⁹ **Burial**
Page 247 of Register
- v. **Margaret Ludgate** was christened on 3 Dec 1749 at Scarragh in Kilshannig by Mallow, Cork, Ireland.¹¹⁰
- 8 vi. **John Ludgate.**
- vii. **Robert Ludgate** was christened on 31 Aug 1755 at Scarragh in Kilshannig by Mallow, Cork, Ireland.¹¹¹

18. **Robert Farmar** was born (date unknown).

19. **Elisabeth** was born (date unknown).

Robert Farmar and Elisabeth had the following child:

- 9 i. **Elizabeth Farmar.**

Preparer:

105. , Religious Census 1766 Return No 1123 Reference M 5036 (a).

106. , Mallow Heritage Centre/Familysearch.

107. Ibid.

108. Ibid.

109. Ibid.

110. Ibid.

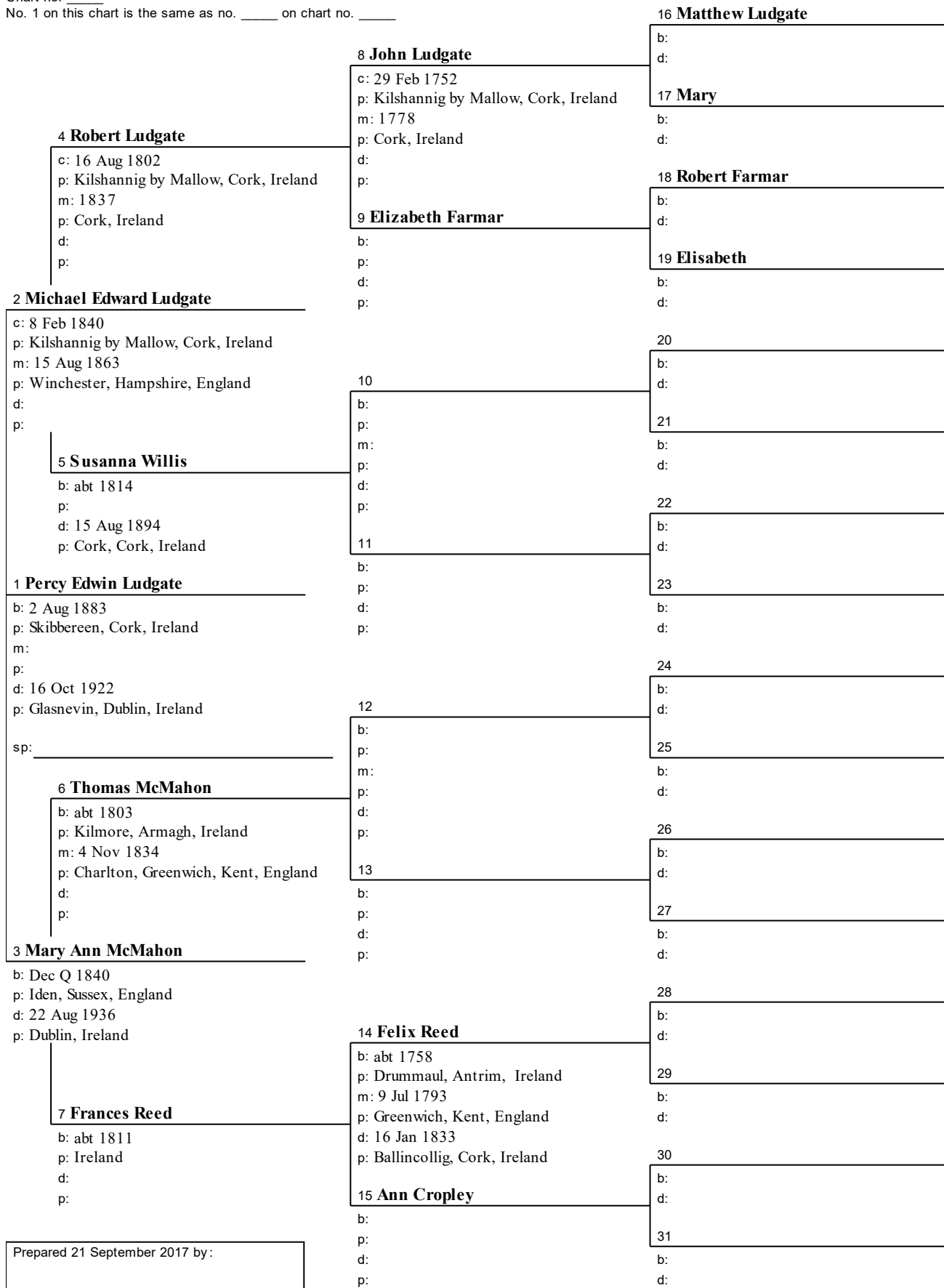
111. Ibid.

Pedigree Chart - Percy Edwin Ludgate

21 September 2017

Chart no. _____

No. 1 on this chart is the same as no. _____ on chart no. _____



The homepage for this catalog is at: <https://www.scss.tcd.ie/SCSSTreasuresCatalog/>
 Click 'Accession Index' (1st column listed) for related folder, or 'About' for further guidance.
 Some of the items below are more properly part of the Literature category of this catalog, but are listed here for convenience.

Accession Index	Object with Identification
TCD-SCSS-V.20121208.873	Percy E.Ludgate, 'On a Proposed Analytical Machine', offprint of article in Scientific Proceedings of the Royal Dublin Society, Vol.12, No.9, pp.77-91, 28-Apr-1909.
TCD-SCSS-V.20170217.001	Reprint of 1909 RDS Proceedings that includes article on Percy Ludgate's analytical engine, Scientific Proceedings of the Royal Dublin Society, Vol.12, No.9, including: Percy E.Ludgate, 'On a Proposed Analytical Machine', pp.77-91, 28-Apr-1909, reprinted 2016.
TCD-SCSS-V.20170124.001	Nature volume that includes review of article on Percy Ludgate's analytical engine, Nature, Vol.81, including: C.V.Boys, 'A new analytical engine', pp.14-15, Jul-1909.
TCD-SCSS-V.20170221.001	Napier Tercentenary Celebration Handbook that includes article by Percy Ludgate, Handbook of the Napier tercentenary celebration or modern instruments and methods of calculation, Ed: E.M.Horsburgh, including: Percy E.Ludgate, 'Automatic Calculating Machines', 1914.
TCD-SCSS-X.20121208.001	Charles Babbage's Engines, Irish interactions with Charles Babbage regarding his Difference Engines and Analytical Engine, c.1843.
TCD-SCSS-V.20121208.870	Ada Lovelace's famous translation with an 'Addition', Prof.J.G.Byrne's offprint of Ada Lovelace's translation of L.Menabrea's 'Sketch' of the Analytical Engine, incorporating an offprint of Charles Babbage's 'Addition', c.1843.

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*Figure 1: Photograph of Percy E. Ludgate
Courtesy Prof. Brian Randell*

ON A PROPOSED ANALYTICAL MACHINE.

2.4.

By PERCY E. LUDGATE.

(COMMUNICATED BY PROFESSOR A. W. CONWAY, M.A.)

[Read FEBRUARY 23. Ordered for Publication MARCH 9. Published APRIL 23, 1909.]

I PURPOSE to give in this paper a short account of the result of about six years' work, undertaken by me with the object of designing machinery capable of performing calculations, however intricate or laborious, without the immediate guidance of the human intellect.

In the first place I desire to record my indebtedness to Professor C. V. Boys, F.R.S., for the assistance which I owe to his kindness in entering into correspondence with me on the matter to which this paper is devoted.

It would be difficult and very inadvisable to write on the present subject without referring to the remarkable work of Charles Babbage, who, having first invented two Difference Engines, subsequently (about eighty years ago) designed an Analytical Engine, which was shown to be at least a theoretical possibility; but unfortunately its construction had not proceeded far when its inventor died. Since Babbage's time his Analytical Engine seems to have been almost forgotten; and it is probable that no living person understands the details of its projected mechanism. My own knowledge of Babbage's Engines is slight, and for the most part limited to that of their mathematical principles.

The following definitions of an Analytical Engine, written by Babbage's contemporaries, describe its essential functions as viewed from different standpoints:—

“A machine to give us the same control over the executive which we have hitherto only possessed over the legislative department of mathematics.”¹

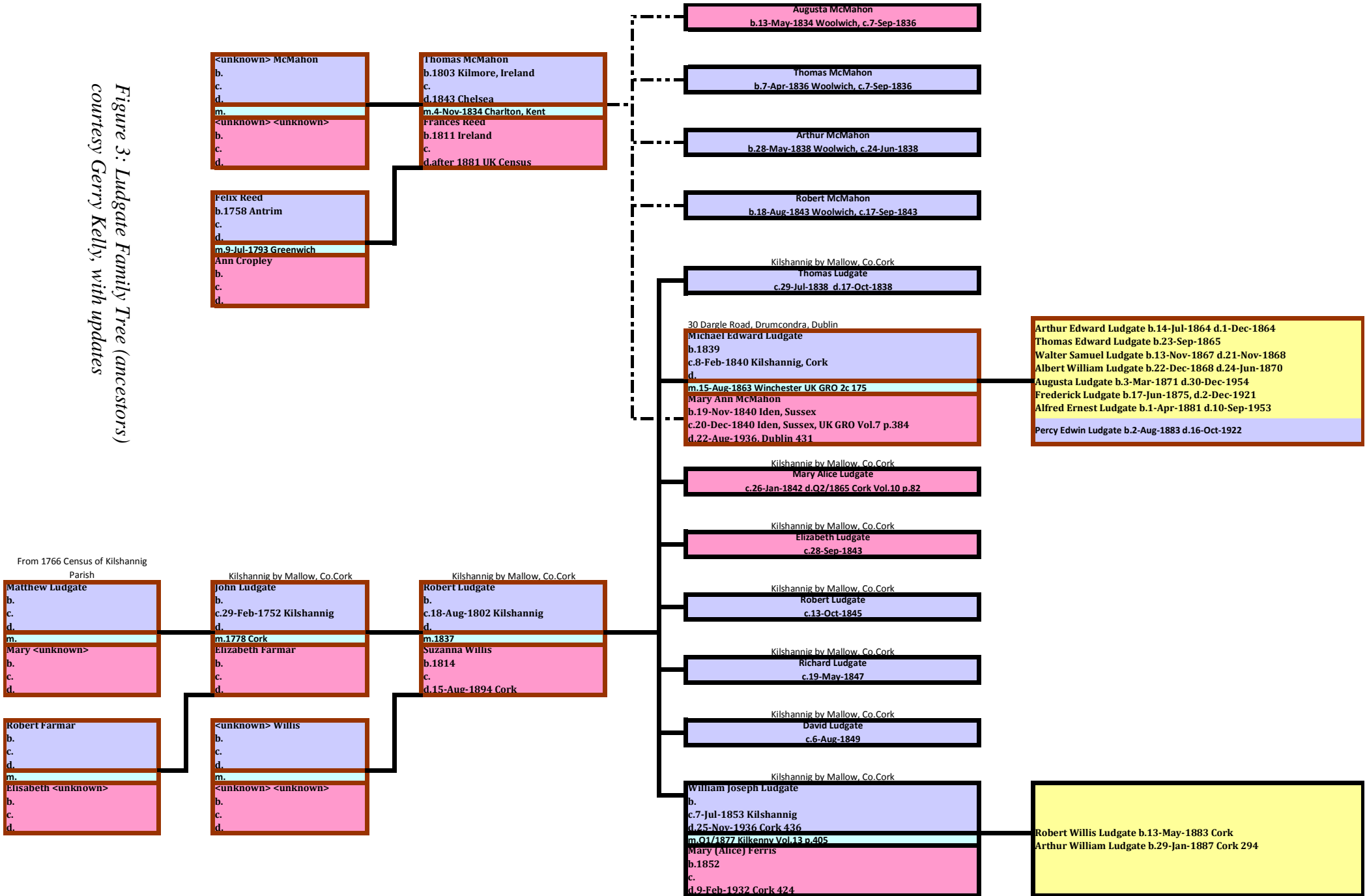
“The material expression of any indefinite function of any degree of generality and complexity, such as, for instance:— $F(x, y, z, \log x, \sin y, \&c.)$, which is, it will be observed, a function of all other possible functions of any number of quantities.”²

¹ C. Babbage: “Passages from the Life of a Philosopher,” p. 129.

² R. Taylor's “Scientific Memoirs,” 1843, vol. iii., p. 691.

Figure 2: Percy Ludgate's published description of his Analytical Engine [2]

Figure 3: Ludgate Family Tree (ancestors)
courtesy Gerry Kelly, with updates



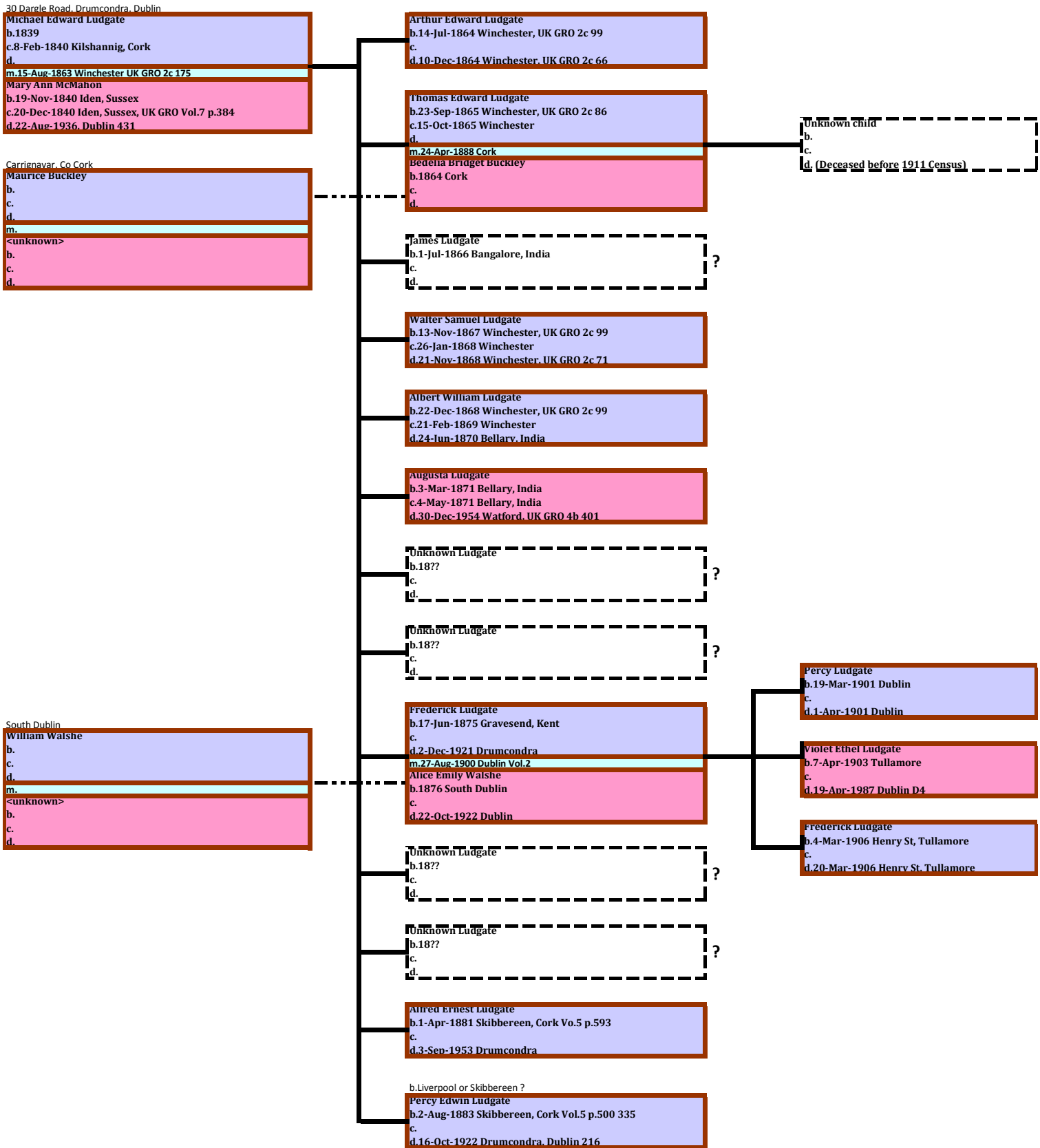


Figure 4: Ludgate Family Tree (parents and siblings), courtesy Gerry Kelly, with updates

Dublin	2697	Keogh, Park., Grocer & Purveyor	31 Bachelors' Walk
Dublin	2294	Keogh Bros., Premier Photographers	53 Talbot Street
Dublin	2902	Keogh, David & Co., Grocers, Wine Merchants	75 Lower Dorset Street
Ballsbridge	312	Keogh, J. P. & Co., Sack Merchants	83 Morehampton Road
Dublin	496	Keown, Jas. "Cuil Crannac"	2 George's Quay
Rathmines	256	Kerlin, P., House Painting Contractor	Leeson Park
Dublin	2007	Kernan, P. P., Phoenix Metal Works	108 Francis Street
Dublin	3067	Kernan & Co., Mineral Water Manufacturers	Blessington Street
Dublin	1497	Kerr, James, Electrician & Plumber	88 Camden Street
Dublin	1417	Kerr, Samuel, Solicitor	29 Eden Quay
Dublin	3710	Kettle, Laurence J., M.R.C.E.I.	66 Dame Street
Ballsbridge	318	Kevans & Son, Chartered Accountants	6 St. Mary's Road
Dublin	550	Kidd, Fredk. Wm., Dr.	31 Dame Street
Dublin	629	Kidney, Robt J., Incorporated Accountant	17 Lower Fitzwilliam Street
Dublin	3726	Kiernan, C., Brush Manufacturer	39 Westmoreland Street
Dublin	2549	Kiernan, Jas., Builder & Contractor	96 Capel Street
Dublin	1379	Kiernan, Bernard & Co., Merchants	North Richmond Street
Dublin	892	Kilbride, Valentine, Solicitor	8 Little Britain Street
Dublin	1207	Kildare House, Merchant Tailors	1 Dame Street
Dublin	3719	Kildare Polo Club	13 Westmoreland Street
Leixlip	11	Kildare St. Club	Leixlip
Dublin	188	Kildare St. Club (Secretary only)	Kildare Street

Figure 5: 1913 Telephone Directory entry for Kevans & Son

CORPORATE ACCOUNTANTS

Results of the June Examination

The following are the results of the June Examination of the Corporation of Accountants, Limited:—

Thirty-three candidates entered—7 for the Final, 23 for the Intermediate, and 3 for the Preliminary. In the Final all passed, Percy E. Ludgate, William Codd, and Thomas Sanderson, Dublin, taking Honours.

Eleven passed in the Intermediate, 3 failed, 3 did not sit, and 6 Indian candidates were not reported upon. All passed in the Preliminary.

Other Dublin candidates who were successful are:—

Final—Jas Heaney Sanderson and Jas. V. N. MacDonagh.

Intermediate—Robt McGregor St. Amond, Fredr. W. J. Rickards, Thos. Jos. Taylor, John Jos. Stafford, Geo. Robt. Fitzgerald, Robt. Black Robertson, Saml. Geo. Young, Joseph Carroll.

On account of the Examination Papers, on their way to India, having gone down in the Mediterranean, and the lac of communication, the number of Indian candidates is not given, and the number who entered for the examinations in Bombay has not been ascertained.

Figure 6: Results of the June Accountancy Examination, Freeman's Journal, p.2, 15-Sep-1917 with Percy E. Ludgate taking Honours

First name(s)	Michael
Last name	Ludgate
Name note	-
Age	23
Marriage year	1863
Marriage date	15 Aug 1863
Marriage place	Winchester
Father's first name(s)	Robert
Father's last name	Ludgate
Spouse's first name(s)	Mary
Spouse's last name	Mac Mahon
Spouse's age	22
Spouse's birth year	1841
Spouse's birth date	1841
Spouse's father's first name(s)	Thomas
Spouse's father's last name	Mac Mahon
County	Hampshire
Country	England
Volume	2C
Page	175

*Figure 7: Marriage of Percy Ludgate's parents
Note the marriage is recorded as in the parish of St.Thomas, Winton, Co.Southampton
'Winton' is the ecclesiastical name for Winchester
Courtesy Paul Hockie*

9/6/1858	Enlists 2 btn 20 th Foot	Promoted Corporal 15/6/1858, Sergeant 1/4/1859	Winchester
30/9/1861	Transfers 3 btn 60 th Rifles	3 rd Class Sergeant Instructor of Musketry	
1871	British Army Worldwide Index	Sergeant Instructor In Music	Bellary, India
29/11/1876	To pension		3 years overseas service East Indies
1882	Collects pension Skibbereen		

*Figure 8: Summary of Military Service of Percy Ludgate's father Michael Ludgate
Courtesy Paul Hockie*

28 Ludgate, Michael Edward, teacher
of shorthand, 107.
„Ludgate, Fred, teacher of shorthand
„Ludgate, Miss Augusta, teacher
of shorthand 18
19

Figure 9: Thom's Irish Almanac 1891 Dublin Street Directory entry for 28 Foster Terrace (off Foster St) showing Percy Ludgate's father Michael, brother Frederick, and sister Augusta (Courtesy Paul Hockie)

First name(s)	Michael Edward
Last name	Ludgate
Year	1894
Town/street	Foster-Terrace
County	Dublin
Section	Dublin Street Directory
Record set	Thom's Official Directory Of The United Kingdom Of Great Britian And Ireland, 1894. Irish Section
Category	Directories & Social History
Subcategory	Directories & almanacs
Collections from	Ireland

*Figure 10: Thom's Directory 1894, showing Michael Ludgate
Courtesy Paul Hockie*

First name(s)	Michael Ed
Last name	Ludgate
Age	60
Birth year	1839
Where born	MALLOW CO CORK
Birth county	Cork
Residence	BALBRIGGAN
Residence county	Dublin
Year	1899
Date	08-Sep-1899
Role	Prisoner
Offence	NON PAYMENT OF DEBT
Prison	Kilmainham
County	Dublin
Register title	DUBLIN-KILMAINHAM PRISON GENERAL REGISTER 1898-1903
Book no	1/10/21
Item no	2
Record set	Irish Prison Registers 1790-1924

*Figure 11: Imprisonment of Michael Ludgate
Courtesy Paul Hockie*

1883	2nd	August	Percy	Edwin	335	Johnston & Co. Dublin	Michael Spudgate	Mary Spudgate	Moyle Spudgate	Sept 1883	Registrar
1883	Nineteenth						London St.	W. Mahon	Bentley	London St.	Registrar

Figure 12: Birth of Percy Edwin Ludgate, 2-Aug-1883
 Courtesy Paul Hockie, from <https://www.irishgenealogy.ie/en/>

1922	16th	October	Percy	Edwin	216	30 Dargle Road	Mr Bachelor	38	Accountant	Catarhal	Violet E. Ludgate	October 1922	Registrar
1922	16th	October								Certified	Brother in attendance	October 1922	Registrar
1922	16th	October								Pneumonia	Wife in attendance	October 1922	Registrar
1922	16th	October								21 days	1/20th	October 1922	Registrar
1922	16th	October								Certified	Richardson Road	October 1922	Registrar
1922	16th	October								Melaena	Joseph Byrne	October 1922	Registrar

Figure 13: Death of Percy Edwin Ludgate, 16-Oct-1922
 Courtesy Paul Hockie, from <https://www.irishgenealogy.ie/en/>

LUDGATE Percy Edwin [45] 23 January Probate of the Will of **Percy Edwin Ludgate** late of 30 Dargle Road **Dublin** Accountant who died **16 October 1922** granted at **Dublin** to Alfred E. Ludgate Accountant Effects £885 7s. 4d.

Figure 14: Will of Percy Edwin Ludgate, Dublin
 Courtesy Paul Hockie

LUDGATE Percy Edwin of 30 Dargle-road **Dublin** died 16 October 1922 Probate **Dublin** to Alfred Ernest Ludgate accountant. Effects £192 in England. Sealed **London** 12 February.

Figure 15: Will of Percy Edwin Ludgate, London assets
 Courtesy Paul Hockie

Title	Ludgate, Violet: will and associated papers
Reference	2008/1/6769
Date	1987
Creator	Probate Office
Scope and Content, Address of deceased:	Garden Flat, 39 Wellington Road, Dublin; date of death: 19/04/1987; date of grant: 11/09/1987
Extent	1 file
Language	English
Archival history	Transferred by the Probate Office in August 2008

Figure 16: Will of Violet Ludgate, Dublin
 Courtesy Paul Hockie

First name(s)	Percy
Last name	Ludgate
Denomination	Established Church
Age	7
Birth year	1883
Year	1890
School	St George's Infants
Roll number	11624
Parish	St George's
Parent/guardian occupation	Shorthand Teacher
Residence	28 Foster Terrace
County	Dublin
Archive	National Archives of Ireland
Category	Education & work
Subcategory	Schools & education
Collections from	Ireland

*Figure 17: Percy Ludgate, 1890 school record
Courtesy Paul Hockie*

First name(s)	Percy
Last name	Ludgate
Denomination	Established Church
Age	7
Birth year	1884
Year	1891
School	St George's Infants
Roll number	11624
Parish	St George's
Parent/guardian occupation	Teacher
Residence	28 Foster Terrace
County	Dublin
Archive	National Archives of Ireland
Category	Education & work
Subcategory	Schools & education
Collections from	Ireland

*Figure 18: Percy Ludgate, 1891 school record
Courtesy Paul Hockie*

CENSUS OF IRELAND, 1901.

(Two Examples of the mode of filling up this Table are given on the other side.)

FORM A. No. on Form R. 24

RETURN of the MEMBERS of this FAMILY and their VISITORS, BOARDERS, SERVANTS, &c., who slept or abode in this House on the night of SUNDAY, the 31st of MARCH, 1901.

No.	NAME and SURNAME.		RELATION to Head of Family.	RELIGIOUS PROFESSION.	EDUCATION.	AGE.			SEX.	RANK, PROFESSION, OR OCCUPATION.	MARRIAGE.	WHERE BORN.	IRISH LANGUAGE.	If Deaf and Dumb; Blind; Imbecile or idiot; or Lame.
	Christian Name.	Surname.				Years on last Birth-day.	Months on last Birth-day.	Write "M" for Male and "F" for Female.						
1	Frederic	Ludgate	Head of Family	Irish Church	Read & Write	25		M	Commercial Traveller (Chemicals)	Married	England			
2	Alice	Ludgate	Wife	Irish Church	Read & Write	24		F		"	Dublin City			
3	Percy	Ludgate	Son	Irish Church				M		Not Married	Dublin City			
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														

I hereby certify, as required by the Act 63 Vic., cap. 6, s. 6 (1), that the foregoing Return is correct, according to the best of my knowledge and belief.

I believe the foregoing to be a true Return.

Matthew Keenan (Signature of Enumerator.)
Frederic Ludgate (Signature of Head of Family.)

Figure 19: 1901 Irish Census: Frederick Ludgate, Alice Ludgate, Percy Ludgate, 24 Dargle Rd, Drumcondra
 NB: This Percy Ludgate is a baby who died shortly after, a nephew of Percy Edwin Ludgate
 From <http://www.census.nationalarchives.ie/search/>

CENSUS OF IRELAND, 1901.

(Two Examples of the mode of filling up this Table are given on the other side.)

FORM A. No. on Form R. 30

RETURN of the MEMBERS of this FAMILY and their VISITORS, BOARDERS, SERVANTS, &c., who slept or abode in this House on the night of SUNDAY, the 31st of MARCH, 1901.

No.	NAME and SURNAME.		RELATION to Head of Family.	RELIGIOUS PROFESSION.	EDUCATION.	AGE.			SEX.	RANK, PROFESSION, OR OCCUPATION.	MARRIAGE.	WHERE BORN.	IRISH LANGUAGE.	If Deaf and Dumb; Blind; Imbecile or idiot; or Lame.
	Christian Name.	Surname.				Years on last Birth-day.	Months on last Birth-day.	Write "M" for Male and "F" for Female.						
1	Mary	Ludgate	Head of Family	Church of Ireland	Read & Write	60		F		Married	England			
2	Alfred	Ludgate	Son	Church of Ireland	Read & Write	19		M	General Clerk (Engineering Trade)	Not Married	County Wick			
3	Percy	Ludgate	Son	Church of Ireland	Read & Write	17		M	General Clerk (Engineering Trade)	Not Married	County Wick			
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														

I hereby certify, as required by the Act 63 Vic., cap. 6, s. 6 (1), that the foregoing Return is correct, according to the best of my knowledge and belief.

I believe the foregoing to be a true Return.

Matthew Keenan (Signature of Enumerator.)
Mary Ludgate (Signature of Head of Family.)

Figure 20: 1901 Irish Census: Mary Ludgate, Alfred Ludgate, Percy Ludgate, 30 Dargle Rd, Drumcondra
 From <http://www.census.nationalarchives.ie/search/>

CENSUS OF IRELAND, 1911.
Two Examples of the mode of filling up this Table are given on the other side.

FORM A.

No. on Form B. 17

RETURN of the MEMBERS of this FAMILY and their VISITORS, BOARDERS, SERVANTS, &c., who slept or abode in this House on the night of SUNDAY, the 2nd of APRIL, 1911.

NAME AND SURNAME.	RELATION to Head of Family.	RELIGIOUS PROFESSION.	EDUCATION.	AGE (last Birthdays) and SEX.		RANK, PROFESSION, OR OCCUPATION.	PARTICULARS AS TO MARRIAGE.			WHERE BORN.	IRISH LANGUAGE.	If Deaf and Dumb; Blind; Imbecile or Idiot; or Lunatic.
				Males.	Females.		Whether "Married," "Widowed," "Widow," or "Single."	Completed years the present Marriage has lasted. If less than one year, write "under one."	Children born alive.			
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Frederick Ludgate	Head of Family	Protestant (P.C.)	Read & Write	35	—	House & Pension Agent	Married	—	—	—	England	—
2. Alice Ludgate	Wife	"	"	—	35	"	Married	10	3	1	City of Dublin	—
3. Violet Ludgate	Daughter	"	"	—	8	Scholar	Single	—	—	—	London	—
4.												
5.												
6.												
7.												
8.												
9.												
10.												
11.												
12.												
13.												
14.												
15.												

I hereby certify, as required by the Act 10 Edw. VII, and 1 Geo. V., cap. 11, that the foregoing Return is correct, according to the best of my knowledge and belief.

I believe the foregoing to be a true Return.

Edward P. Dwyer, Signature of Enumerator.

Frederick Ludgate, Signature of Head of Family.

Figure 23: 1911 Irish Census: Frederick Ludgate, Alice Ludgate, Violet Ludgate, 17 Carlingford Tce, Drumcondra
From <http://www.census.nationalarchives.ie/search/>

CENSUS OF IRELAND, 1911.
Two Examples of the mode of filling up this Table are given on the other side.

FORM A.

No. on Form B. 30

RETURN of the MEMBERS of this FAMILY and their VISITORS, BOARDERS, SERVANTS, &c., who slept or abode in this House on the night of SUNDAY, the 2nd of APRIL, 1911.

NAME AND SURNAME.	RELATION to Head of Family.	RELIGIOUS PROFESSION.	EDUCATION.	AGE (last Birthdays) and SEX.		RANK, PROFESSION, OR OCCUPATION.	PARTICULARS AS TO MARRIAGE.			WHERE BORN.	IRISH LANGUAGE.	If Deaf and Dumb; Blind; Imbecile or Idiot; or Lunatic.
				Males.	Females.		Whether "Married," "Widowed," "Widow," or "Single."	Completed years the present Marriage has lasted. If less than one year, write "under one."	Children born alive.			
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Alfred Ludgate	Head of Family	Church of Ireland	Read & Write	29	—	Scientist (black glass)	Single	—	—	—	Co. Cork	—
2. Mary Ludgate	Wife	"	"	—	70	"	Married	48	13	5	England	—
3. Percy Ludgate	Brother	"	"	27	—	Commis. (C.R.M.S.)	Single	—	—	—	Co. Cork	—
4.												
5.												
6.												
7.												
8.												
9.												
10.												
11.												
12.												
13.												
14.												
15.												

I hereby certify, as required by the Act 10 Edw. VII, and 1 Geo. V., cap. 11, that the foregoing Return is correct, according to the best of my knowledge and belief.

I believe the foregoing to be a true Return.

Edward P. Dwyer, Signature of Enumerator.

Alfred Ludgate, Signature of Head of Family.

Figure 24: 1911 Irish Census: Mary Ludgate, Alfred Ludgate, Percy Ludgate, 30 Dargle Rd, Drumcondra
From <http://www.census.nationalarchives.ie/search/>

CENSUS OF IRELAND, 1911.

Two Examples of the mode of filling up this Table are given on the other side.

FORM A.

No. on Form B. *173*

RETURN of the MEMBERS of this FAMILY and their VISITORS, BOARDERS, SERVANTS, &c., who slept or abode in this House on the night of SUNDAY, the 2nd of APRIL, 1911.

Number.	NAME AND SURNAME.		RELATION to Head of Family.	RELIGIOUS PROFESSION.	EDUCATION.	AGE (last Birthday) and SEX.		RANK, PROFESSION, OR OCCUPATION.	PARTICULARS AS TO MARRIAGE.			WHERE BORN.	IRISH LANGUAGE.	If Deaf and Dumb; Blind; Imbecile or Idiot; or Lunatic.	
	Christian Name.	Surname.				Age of Males.	Age of Females.		Whether "Married," "Widowed," "Single," or "Servant."	Completed years the present Marriage has lasted.	Children born alive to present Marriage.	Total Children born alive.	Children still living.		
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1	Thomas Edward	Ludgate	Head of Family	High Church	Read + write	45	—	Land Agent's Clerk	married	20	4	4	England	—	—
2	Bedelia	Ludgate	Wife	Roman Catholic	Read + write	—	46	—	—	married	22	1	none	County Cork	—
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

I hereby certify, as required by the Act 10 Edw. VII. and 1 Geo. V., cap. 11, that the foregoing Return is correct, according to the best of my knowledge and belief.

James Mahony
Signature of Enumerator.

I believe the foregoing to be a true Return.

T. Ludgate
Signature of Head of Family.

Figure 25: 1911 Irish Census: Thomas Edward Ludgate, Bedelia Ludgate, 173 Gurteenaspig, Bishopstown, Cork
 From <http://www.census.nationalarchives.ie/search/>

Figure 26: 1901 Irish Census summary, courtesy Gerry Kelly

Date	Address	Christian Name	Relationship	Religion	Age	Year Born (est.)	Occupation	Marriage Status	Where Born
Census Date 30th. March 1901	30 Dargle Rd Glasnevin	Mary	Head of Family	Church of Ireland	60	1840/41	None Stated	Married	England
		Alfred	Son	Church of Ireland	19	1881/82	Commercial Clerk (Engineering Trade)	Not Married	County Cork
		Percy	Son	Church of Ireland	17	1883	Civil Servant National Education Office (Boy Copyist)	Not Married	County Cork
	24 Dargle Rd Glasnevin	Fredrick	Head of Family	Irish Church	25	1875/76	Commercial Traveller (Chemicals)	Married	England
		Alice	Wife	Irish Church	24	1876/77	None Stated	Married	Dublin City
		Percy	Son	Irish Church	under 1	1900/01		Not Married	Dublin City
	13 Mardyke (Cork Urban No. 7 Cork)	Thomas Edward	Head of Family	Information Refused	35	1865/66	Cashier - Land Agent's Assistant & Income Tax Recovery & Adjustment Agent	Married	England (Winchester)
		Bedilia	Wife	Roman Catholic	37	1863/64	None Stated	Married	County Cork
	14 Quay Street Balbriggan Urban North County Dublin	Michael Edward	Head of Family	Episcopalian Church of Ireland	61	1839/40	Pensioner from 60th. Rifles	Married	County Cork

Figure 27: 1911 Irish Census summary, courtesy Gerry Kelly

Date	Address	Christian Name	Relationship	Religion	Age	Year Born (est.)	Occupation	Marriage Status	Where Born	Completed years married	Total Childred born alive	Children still living
Census Date 2nd April 1911	30 Dargle Rd Glasnevin	Mary	Mother	Church of Ireland	70	1840/41	None Stated	Married	England	48	13	5
		Alfred	Head of Family	Church of Ireland	29	1881/82	Solicitor's Clerk (General)	Not Married	County Cork			
		Percy	Brother	Church of Ireland	27	1883	Commercial Clerk (Corn Merchant)	Not Married	County Cork			
	17 Carlingford Terrace Glasnevin	Fredrick	Head of Family	Protestant (IC)	35	1875/76	Flour & Provision Agent	Married	England	10	3	1
		Alice	Wife	Protestant (IC)	35	1875/76/77	None Stated	Married	City of Dublin			
		Violet	Daughter	Protestant(IC)	8	1903/04	Scholar	Not Married	Kings County			
	173 Gurteenaspig, (part or rural) Bishopstown Cork	Thomas Edward	Head of Family	High Church	45	1865/66	Land Agent's Cashier etc.	Married	England	22	1	None
		Bedilia	Wife	Roman Catholic	46	1863/64/65	None Stated	Married	County Cork			
	Unknown Location	Unknown Child of Michael & Mary Ludgate	Son or Daughter		between 30 & 44 est.	between 1867 & 1880	Unknown	Unknown	Unknown			

First name(s)	Thomas
Last name	McMahan
Marriage year	1834
Marriage date	04 Nov 1834
Place	Charlton
Spouse's first name(s)	Frances
Spouse's last name	Reed
County	Kent
Country	England
Source	St.Lukes Charlton 1813-1837
Record set	Thames & Medway Marriages
Category	Birth, Marriage & Death (Parish Registers)
Subcategory	Marriages & divorces
Collections from	England, United Kingdom

Figure 28: Marriage of Percy Ludgate's maternal grandparents Thomas McMahan and Frances Reed

Name	Mary Ann McMahan
Event Type	Christening
Event Date	20 Dec 1840
Event Place	Iden, Sussex, England
Father's Name	Thomas McMahan
Mother's Name	Frances McMahan
First name(s)	MARY ANN
Last name	MC MAHAN
Birth year	1840
Birth quarter	4
Registration month	-
Mother's last name	-
District	Rye
County	Sussex
Country	England
Volume	7
Page	384
Record set	England & Wales Births 1837-2006
Category	Birth, Marriage & Death (Parish Registers)
Subcategory	Births & baptisms
Collections from	United Kingdom, England

Figure 29: Sussex Parish Register showing birth of Percy Ludgate's mother Mary Ann McMahan

Last name	First name	Born	Died	Event	Record set	Location
McMahon	Frances	1846	—	1846	England & Wales Births 1837-2006	Liverpool, Lancashire, England
McMahon	Mary Ann	—	—	1840	England Births & Baptisms 1538-1975	Iden, Sussex, England
MacMahon	Augustus	1834	—	1836	England Births & Baptisms 1538-1975	Woolwich, Kent, England
MacMahon	Thomas	1836	—	1836	England Births & Baptisms 1538-1975	Woolwich, Kent, England
Mc Mahan	Arthur	1838	—	1838	England Births & Baptisms 1538-1975	Woolwich, Kent, England
Mc Mahan	Robert	1843	—	1843	England Births & Baptisms 1538-1975	Woolwich, Kent, England

Figure 30: Births of possible maternal aunts and uncles of Percy Ludgate (possible siblings of his mother Mary Ann McMahon)

The first and last entries could be for siblings who died in childhood

<<< CHECK BMD >>>

431	1936	Mary Anne Ludgate	F	Widow	96 years	House Keeper	Senile Decay Cardiac failure Certified	RMacLanerty occupier St. Kevin's Hospital	Twenty fourth August 1936	MToher Asst

Figure 31: Death of Percy Ludgate's mother Mary Ann McMahon on 22-Aug-1936 aged 96 years
The spelling of 'Ludgate' was transcribed into the BMD indexes as 'Leedgate'

Courtesy Paul Hockie

Thomas	McMahan	Male	35	1806	Ireland
Francis	McMahan	Female	30	1811	Ireland
Augusta	McMahan	Female	7	1834	Kent, England
Thomas	McMahan	Female	5	1836	Kent, England
Auther	McMahan	Male	3	1838	Kent, England
Mary Ann	McMahan	Female	0	1841	-

Family member first name	Thos, Francis, Augusta, Thomas, Auther, Mary
Family member last name	McMahan
First name(s)	Thomas
Last name	McMahan
Occupation	Soldier
Gender	Male
Age	35
Birth year	1806
Birth county	-
Birth county as transcribed	IRELAND
Birth place (other)	Ireland
Street	East Street
Parish or township	Plumstead
City or borough	Greenwich
Town	-
County	London, Kent
Country	England
Registration district	Lewisham
Archive reference	HO107
Piece number	484
Book number	18
Folio number	45
Page number	17
Record set	1841 England, Wales & Scotland Census
Category	Census, Land & Substitutes
Subcategory	Census
Collections from	United Kingdom, England

Figure 32: 1841 UK Census showing Percy Ludgate's maternal grandparents and family

Name	Arthur McMahan
Event Type	Census
Event Date	+1851
Event Place	Chelsea, Middlesex, England
Registration District	Chelsea
Gender	Male
Age	12
Occupation	Soldiers Son
Relationship to Head of Household	Boys In The Institution
Institution	Royal Military Asylum For Children Of Soldiers Of The Regular Army
Birth Year (Estimated)	1839
Birthplace	Woolwich, Kent
Page Number	12
Registration Number	HO107
Piece/Folio	1472 / 565
Affiliate Record Type	Household

*Figure 33: 1851 UK Census showing Percy Ludgate's maternal granduncle Arthur McMahan
This implies Arthur was an orphan in a military orphanage
His age (12 years in 1851, i.e. born 1838/39) tallies with expectation*

First name(s)	Alfred
Last name	Ludgate
Registration year	1881
Registered quarter/year	Apr - Jun 1881
Registration district	Skibbereen
Volume	5
Page	593
Mother's last name (original)	-
County	Cork
Country	Ireland
Record set	Irish Births 1864-1958
Category	Birth, Marriage & Death (Parish Registers)
Subcategory	Births & baptisms
Collections from	Ireland

Figure 34: Cork register showing birth of Percy Ludgate's brother Alfred Ludgate

First name(s)	Percy Edwin
Last name	Ludgate
Registration year	1883
Registered quarter/year	Jul - Sep 1883
Registration district	Skibbereen
Volume	5
Page	500
Mother's last name (original)	-
County	Cork
Country	Ireland
Record set	Irish Births 1864-1958
Category	Birth, Marriage & Death (Parish Registers)
Subcategory	Births & baptisms
Collections from	Ireland

Figure 35: Cork register showing birth of Percy Ludgate

Surname	First name(s)	Age	District	Vol	Page
Marriages Sep 1863					
Ludgate	Michael		Winchester	2c	175
Births Sep 1864					
Ludgate	Arthur Edward		Winchester	2c	99
Deaths Dec 1864					
Ludgate	Arthur Edward		Winchester	2c	66
Births Dec 1865					
Ludgate	Thomas Edward		Winchester	2c	86
Births Dec 1867					
Ludgate	Walter		Winchester	2c	99
Deaths Dec 1868					
Ludgate	Walter Samuel	1	Winchester	2c	71
Births Mar 1869					
Ludgate	Albert		Winchester	2c	99

Figure 36: Winchester records of Ludgate births and deaths

Last name	First name	Born	Died	Event	Record set	Location
Ludgate	Albert William	1869	1870	1870	British India Office Deaths & Burials	Bellary, Madras
Ludgate	Augusta	1871	—	1871	British India Office Births & Baptisms	Bellary, Madras

Figure 37: Indian records of Ludgate births and deaths

Surname	First name(s)	Age	District	Vol	Page
<i>Births Mar 1873</i>					
Ludgate	Harry		Shiffnal	6a	647
<i>Births Jun 1874</i>					
Ludgate	Edith Mary		Shiffnal	6a	626
<i>Births Sep 1875</i>					
Ludgate	Frederick		Shiffnal	6a	624
<i>Births Mar 1877</i>					
Ludgate	Joseph Thomas		Shiffnal	6a	661

Figure 38: Shiffnal records of Ludgate births and deaths

Surname	First name(s)	Age	District	Vol	Page
<i>Births Sep 1875</i>					
Ludgate	Frederick		Gravesend	2a	412
<i>Births Dec 1876</i>					
Ludgate	Dora Louise		Gravesend	2a	448
<i>Births Dec 1877</i>					
Ludgate	Lionel James O		Gravesend	2a	453

Figure 39: Gravesend records of Ludgate births and deaths

First name(s)	Augusta
Last name	Ludgate
Birth year	1871
Birth date	3 Mar 1871
Baptism year	1871
Baptism date	4 May 1871
Place	Bellary
Presidency	Madras
Father's first name(s)	Michael
Father's last name	Ludgate
Mother's first name(s)	Mary
Mother's last name	-
Archive reference	N-2-52
Folio	68
Page	-
Catalogue descriptions	Parish register transcripts from the Presidency of Madras
Record set	British India Office Births & Baptisms
Category	Birth, Marriage & Death (Parish Registers)
Subcategory	Births & baptisms
Collections from	United Kingdom, UK None

*Figure 40: Birth and baptism of Percy Ludgate's sister Augusta Ludgate
Transcription from British India Office Ecclesiastical Returns - Births & Baptisms*

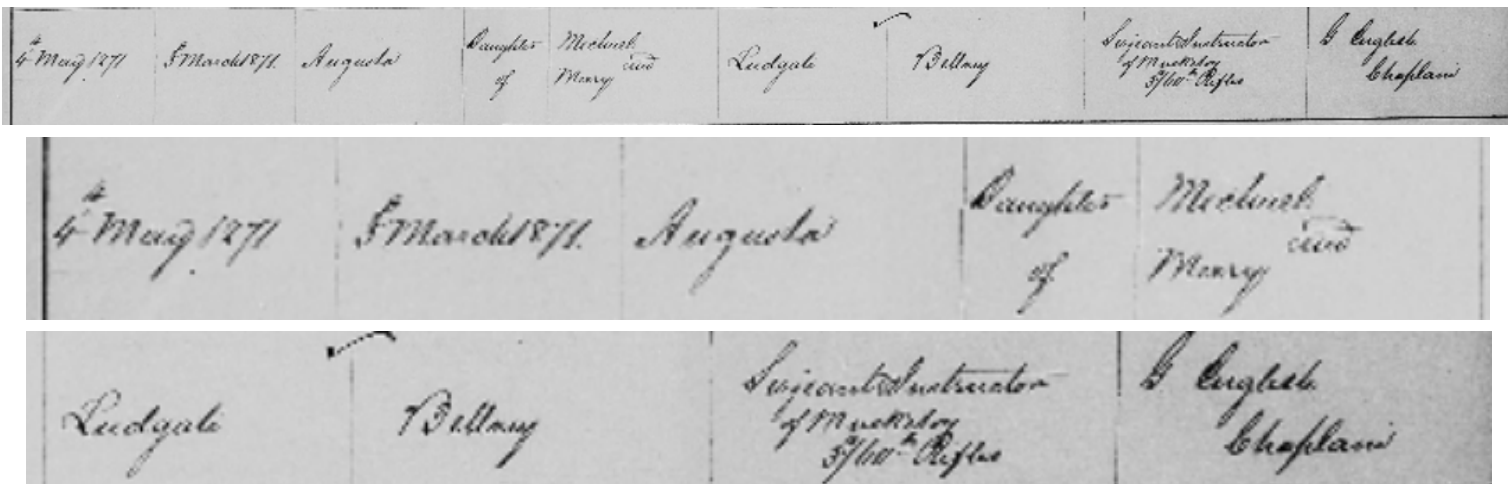


Figure 41: Birth and baptism of Percy Ludgate's sister Augusta Ludgate

First name(s)	Last name	Relationship	Marital status	Gender	Age	Birth year	Occupation	Birth place
Augusta	Ludgate	In Charge Visitor	Single	Female	30	1871	Deaconess (Missionary)	India
Marie	Futty	Visitor	Single	Female	18	1883	Deaconess (Missionary)	Yorkshire, England
Katie	Manion	Servant	Single	Female	19	1882	Housemaid (Domestic)	Liverpool, Lancashire, England
Margaret	Hooper	Servant	Single	Female	32	1869	Housemaid (Domestic)	Liverpool, Lancashire, England

Figure 42: 1901 England and Wales Census, showing August Ludgate aged 30 years

Name	Augusta Ludgate
Event Type	Census
Event Date	1911
Event Place	St Pancras, Pancras W C, London, England
	Boarding House
County	London
Parish	St Pancras
Sub-District	South St Pancras
Registration District	St Pancras
Gender	Female
Age	UNCERTAIN
Marital Status (Original)	SINGLE
Occupation	PRIVATE MEANS
Birthplace	India Mysore Resident
Relationship to Head of Household	BOARDER

Figure 43: 1911 England and Wales Census, showing August Ludgate aged 40 years
 Note this shows residence in India, so presumably indicates was visiting UK in 1911

First name(s)	Last name(s)	DOB	Sex	Occupation	Marital status	Schedule	Schedule Sub Number
Augusta	Ludgate	?1874?	Female	Incapacitated	Single	79	9

Figure 44: 1939 Register of Leavesden London County Council Mental Hospital, Abbots Langley, Watford R.D., Hertfordshire, England, showing Augusta Ludgate as 'Incapacitated' patient aged 68 years

First name(s)	AUGUSTA
Last name	LUDGATE
Gender	Female
Birth day	-
Birth month	-
Birth year	1875
Age	80
Death quarter	1
Death year	1955
District	Watford
County	Hertfordshire
Volume	4B
Page	401
Country	England
Record set	England & Wales Deaths 1837-2007
Category	Birth, Marriage & Death (Parish Registers)
Subcategory	Deaths & burials
Collections from United Kingdom, England	

*Figure 45: Death of Percy Ludgate's sister Augusta Ludgate
Transcription from England & Wales Deaths 1837-2007
She actually died in Leavesden Hospital on 30-Dec-1954 aged 83*

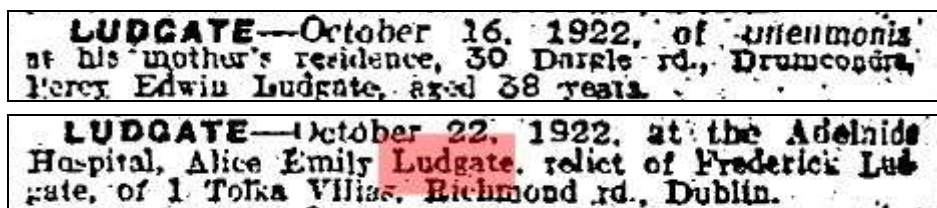


Figure 46: Truncated death notices for Percy and Alice Ludgate, in Irish Times 18-Oct-1922 and 24-Oct-1922

<p>LUDGATE – October 16, 1922, of pneumonia, at his mother's residence, 30 Dargle Rd, Drumcondra, Percy Edwin Ludgate, aged 38 years. Funeral tomorrow (Thursday), 9 o'clock, to Mount Jerome, no flowers.</p>
<p>LUDGATE – October 22, 1922, at the Adelaide Hospital, Alice Emily Ludgate Relict of the late Frederick Ludgate, of 1 Tolka Villas, Richmond Rd, Dublin. Funeral (private), this (Tuesday) morning, to Mount Jerome.</p>

Figure 47: Full death notices for Percy and Alice Ludgate, in Irish Times 18-Oct-1922 and 24-Oct-1922

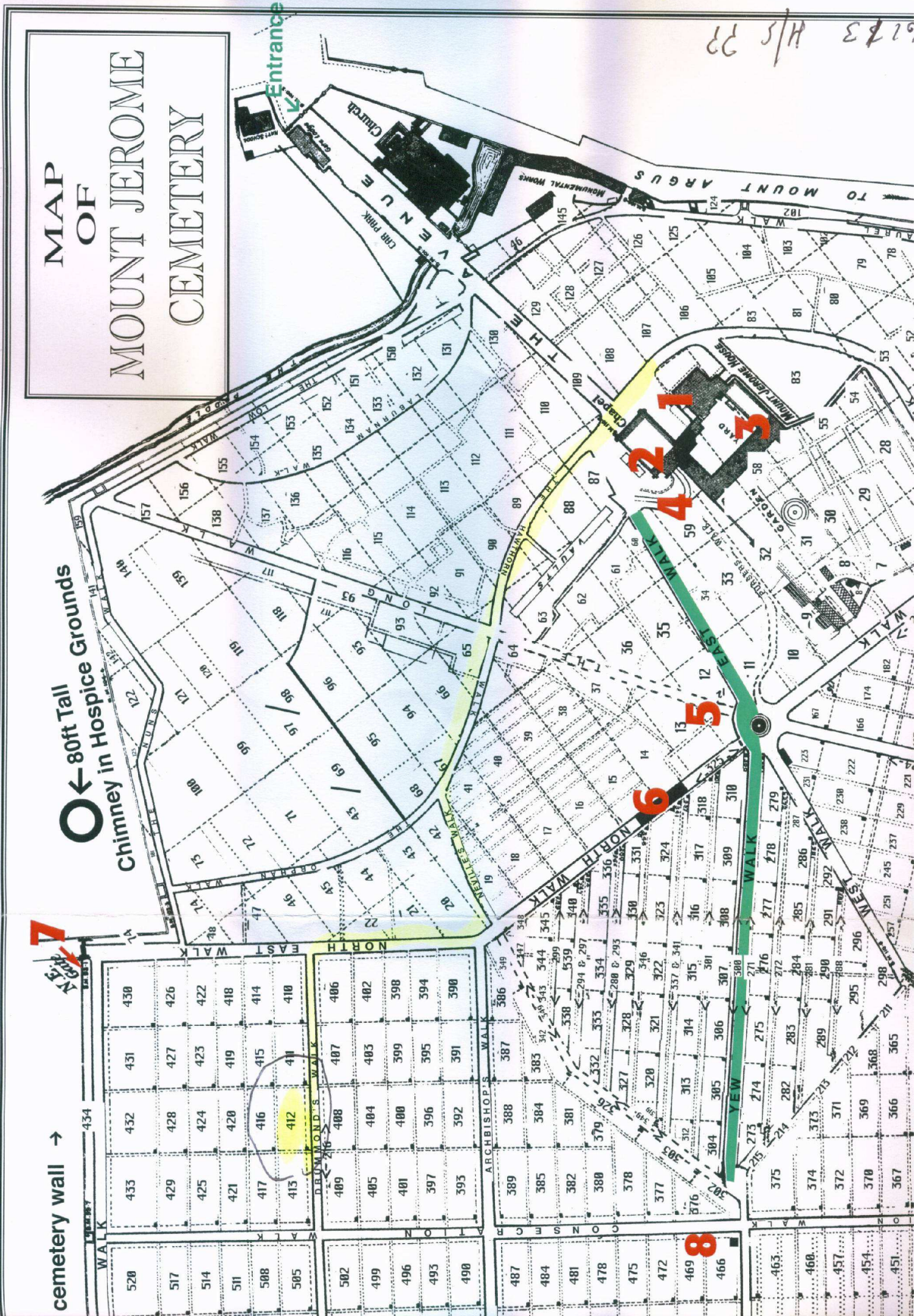


Figure 48: Mount Jerome Cemetery map showing Percy Ludgate's family grave



Figure 49: Mount Jerome Cemetery location of Percy Ludgate's family grave showing graves 1-7

Grave 1 (foreground) is unmarked

Grave 2 is Murtagh grave

Grave 3 is unmarked

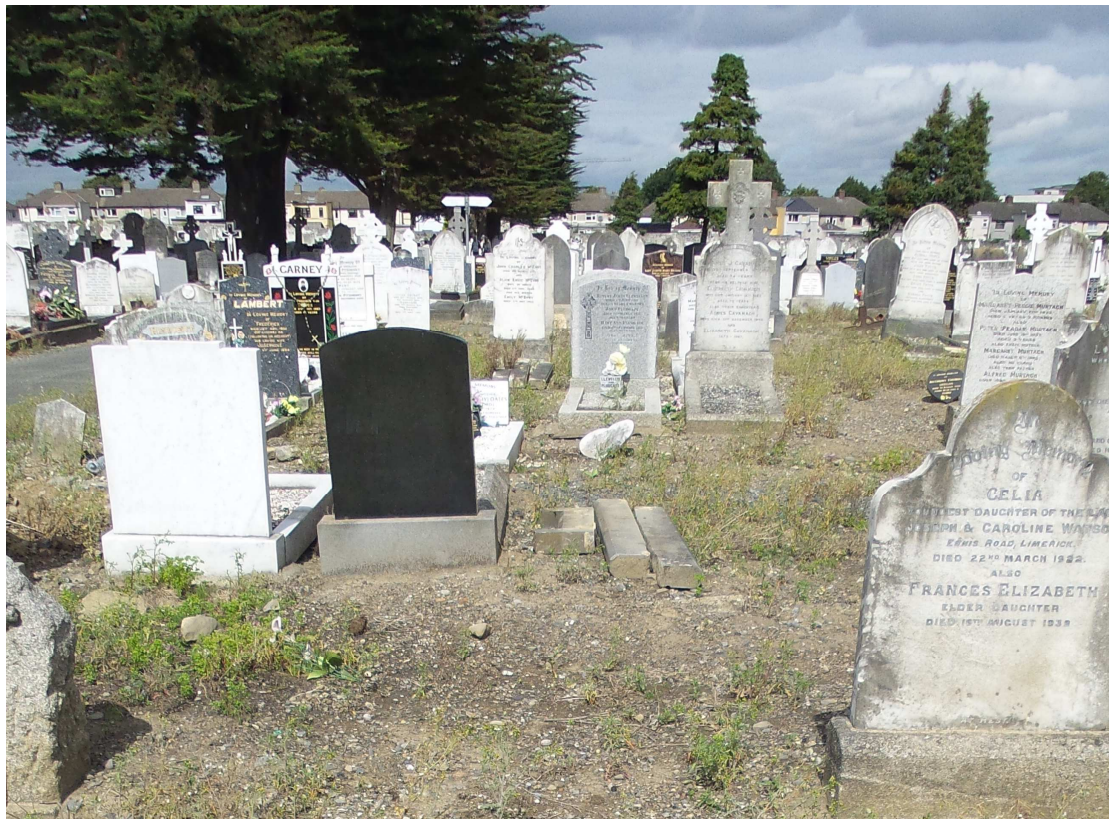
Grave 4 is unmarked

Grave 5 is unmarked Ludgate grave

Grave 6 is unmarked

Grave 7 is Bishop grave

Grave 1 in right-hand foreground and shown in upper picture is Fox grave



*Figure 50: Grave of Percy Ludgate's family (excepting his father)[towards viewer from stone beams]
From the records of Mount Jerome Cemetery, Harold's Cross, Dublin:*

Ludgate Grave, A29-412-16113 (H/S?):

Frederick Ludgate d.2-Dec-1921

Percy Edwin Ludgate d.16-Oct-1922

Alice Emily Ludgate d.22-Oct-1922

Mary Ann Ludgate d.22-Aug-1936

Alfred Ernest Ludgate d.3-Sep-1953

*Grave purchased in perpetuity by Percy Ludgate in Dec-1921,
then bequeathed in his Will granted 1923 to Alfred Ludgate, who remains the current owner*

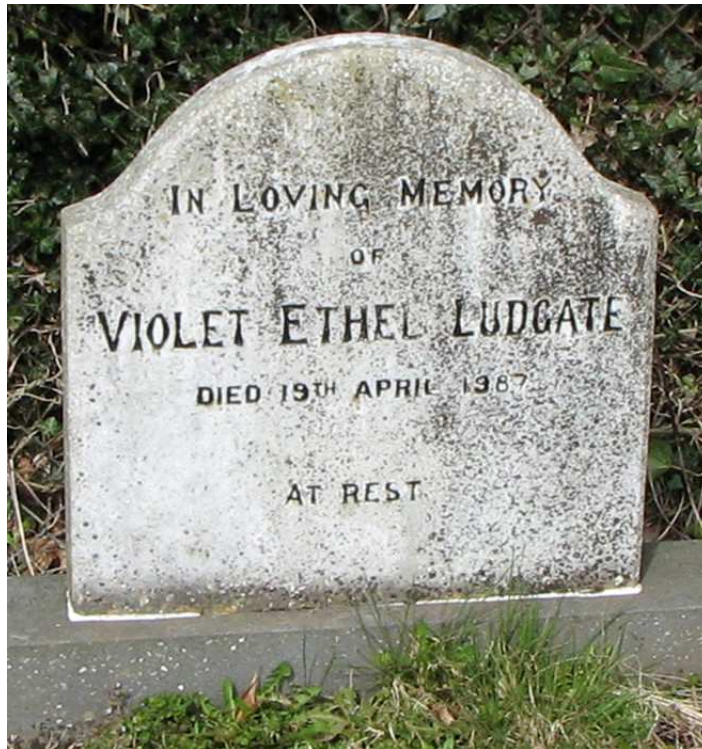


Figure 51: Gravestone of Percy Ludgate's only cousin Violet Ethel Ludgate on 19-Apr-1987
 Grave No.426, Cruagh Cemetery, Rockbrook, Rathfarnham, Dublin
 From: <http://www.igp-web.com/IGPArchives/ire/dublin/photos/tombstones/dublin-cruagh-3/>

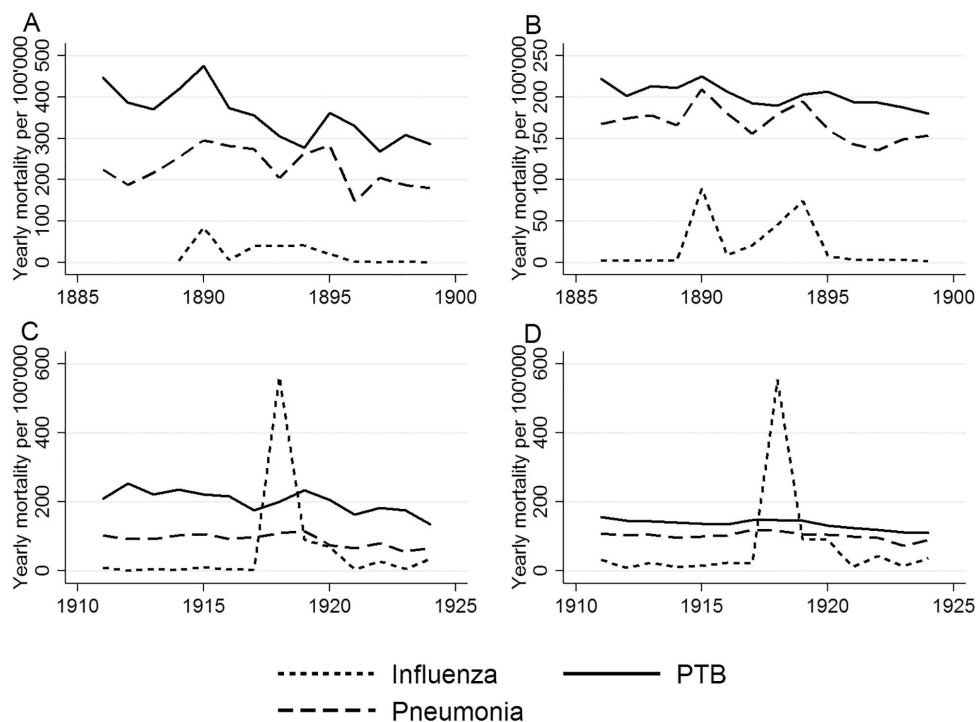


Figure 52: Yearly trends in pulmonary tuberculosis (PTB), influenza, and pneumonia mortality per 100,000 people during the Russian and Spanish influenza pandemics in the city of Bern (A and C) and in Switzerland (B and D). From [52]

VITAL STATISTICS.

DEATHS IN DUBLIN AREA.

The Registrar-General's weekly returns for the week ending October 23, 1922, states that the deaths from all causes appertaining to the undermentioned areas for last week and for the past four weeks, respectively, were equal to the following annual rates per 1,000 of the population:—Twelve town districts, 11.6 and 15.3; Dublin registration area, 11.2 and 12.2; Dublin City, 12.4 and 12.9; Cork, 12.9 and 15.5; Limerick, 10.9 and 15.6; and Waterford, 7.8 and 14.7.

The deaths from certain epidemic diseases registered in the twelve town districts during last week were equal to an annual rate of 0.3 per 1,000. Among the eight deaths from all causes for Limerick is one from influenza; and one of the six deaths from all causes for Wexford is from measles.

In the Dublin registration area the total number of births registered during the week amounted to 239—122 boys and 117 girls—and the deaths to 108—44 males and 64 females.

The deaths registered, omitting the deaths (numbering 16) of persons admitted to public institutions from localities outside the Dublin registration area, represent an annual rate of mortality of 11.2 per 1,000 of the population. During the forty-two weeks ending with Saturday last, the death-rate averaged 17.5, and was 2.7 below the mean rate for the corresponding portions of the ten years 1912-1921. The rate for all deaths registered during the forty-two weeks was 19.0, and for the corresponding period of the preceding ten years 21.6.

Included in the 92 deaths appertaining to the area are one from diphtheria and two from diarrhoea and enteritis of children under two years. In the three preceding weeks deaths from diphtheria were 0, 1, and 0; and deaths from diarrhoea and enteritis of children under two years 4, 7, and 2.

There were three deaths from pneumonia, comprising one from broncho pneumonia, one from lobar pneumonia, and one from pneumonia (not otherwise defined).

Tuberculous disease caused 15 deaths, including 10 from pulmonary tuberculosis and from tuberculous meningitis, one from tuberculous tuberculosis, and one from general tuberculosis, as against 14, 11, and 26 for all forms of tuberculous disease in the six weeks preceding.

Nine deaths were caused by cancer, and by organic disease of the heart, and six by bronchitis.

Two accidental deaths were registered, of which one was caused by burns and one by drowning.

Seventeen of the deaths registered during the week appertaining to the area were those of children under 5 years of age, 14 being infants under one year, of whom eight were under one month old; and 25 deaths were those of persons aged 65 and upwards, of whom 19 were 70 years of age or over.

Of the 92 deaths recorded, 32 occurred in hospitals and other public institutions.

The mortality among civilians for the week ended 21st October in 108 large English towns (including London, in which the rate was 10.0) was equal to an average annual death-rate of 10.3 per 1,000 of the estimated civil population.

The average death-rate for 16 principal towns of Scotland was 12.2 per 1,000 persons living, the rate for Glasgow being 12.4 and for Edinburgh 11.7.

Figure 53: Irish Times October 1922 analysis of deaths statistics (enhanced)

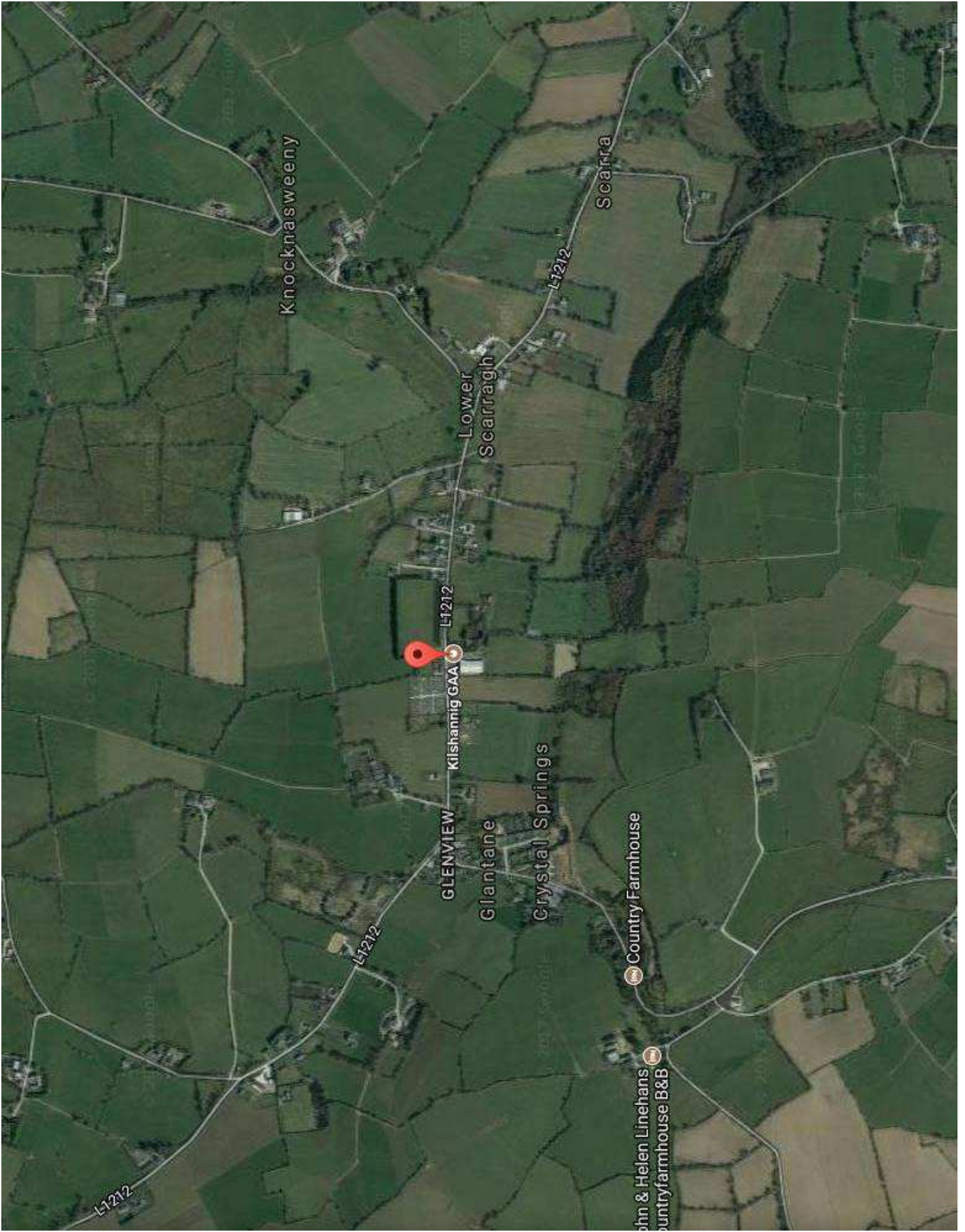


Figure 54: Satellite map showing Skarragh



*Figure 100: The Grubb "Optical and Mechanical Works", Rathmines, Dublin, 1875
Photo: Universitätssternwarte, Vienna, extract from document by I.S.Glass, see [49]*



Figure 101: Leinster Sports Club, on the site of the former Grubb "Optical and Mechanical Works", Rathmines, Dublin

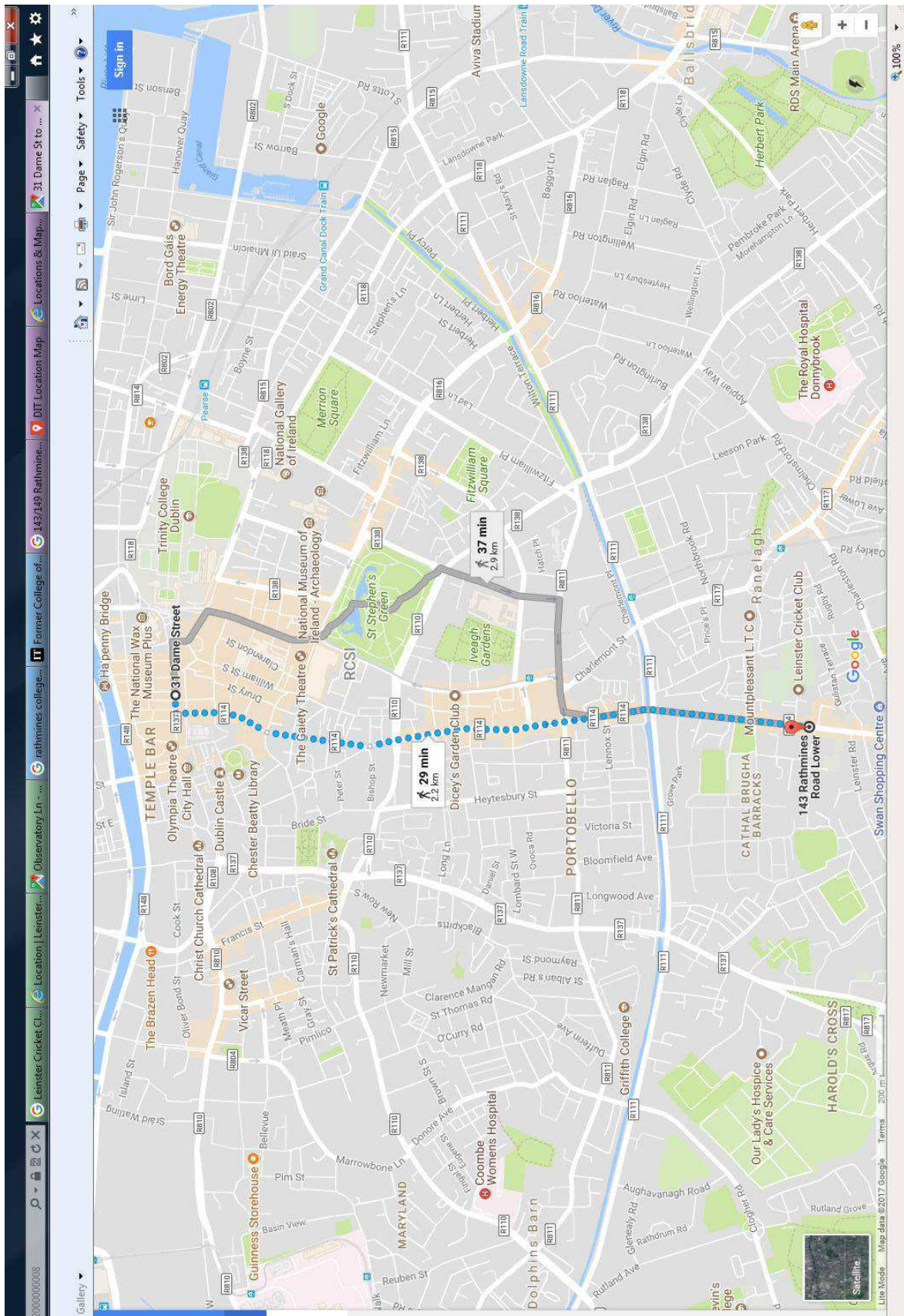


Figure 102: Map of walk from Kevans and Sons to Rathmines College of Commerce

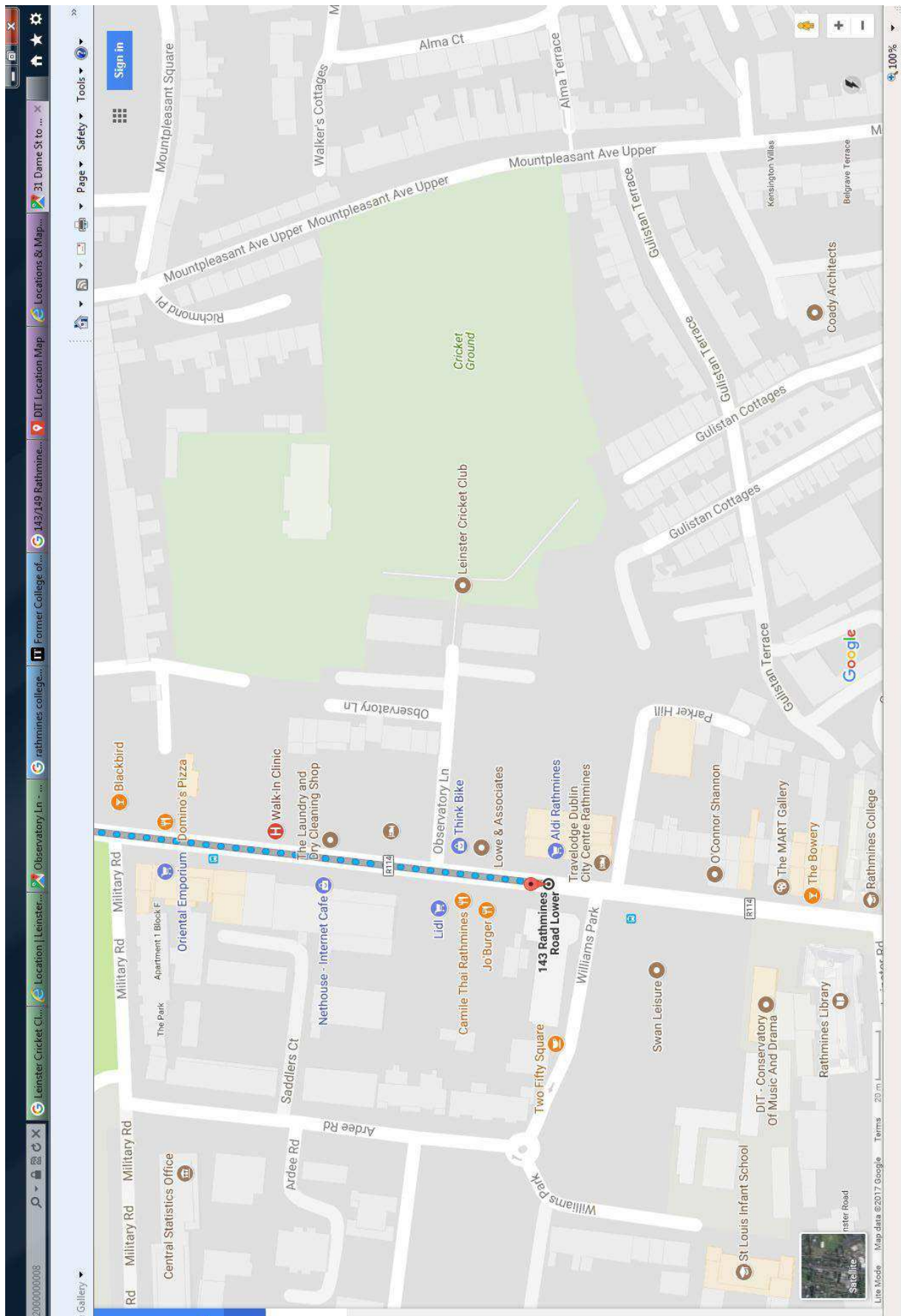


Figure 103: Map of end of walk from Kevans and Sons to Rathmines College of Commerce



Figure 104: Satellite map of end of walk from Kevans and Sons to Rathmines College of Commerce showing Leinster Sports Club 170 metres away



Figure 105: Satellite map of end of walk from Kevans and Sons to Rathmines College of Commerce showing military barracks 400 metres away



*Figure 107: Percy Ludgate's home, 30 Dargle Road, Drumcondra, Dublin, Ireland
(house with grey door)*

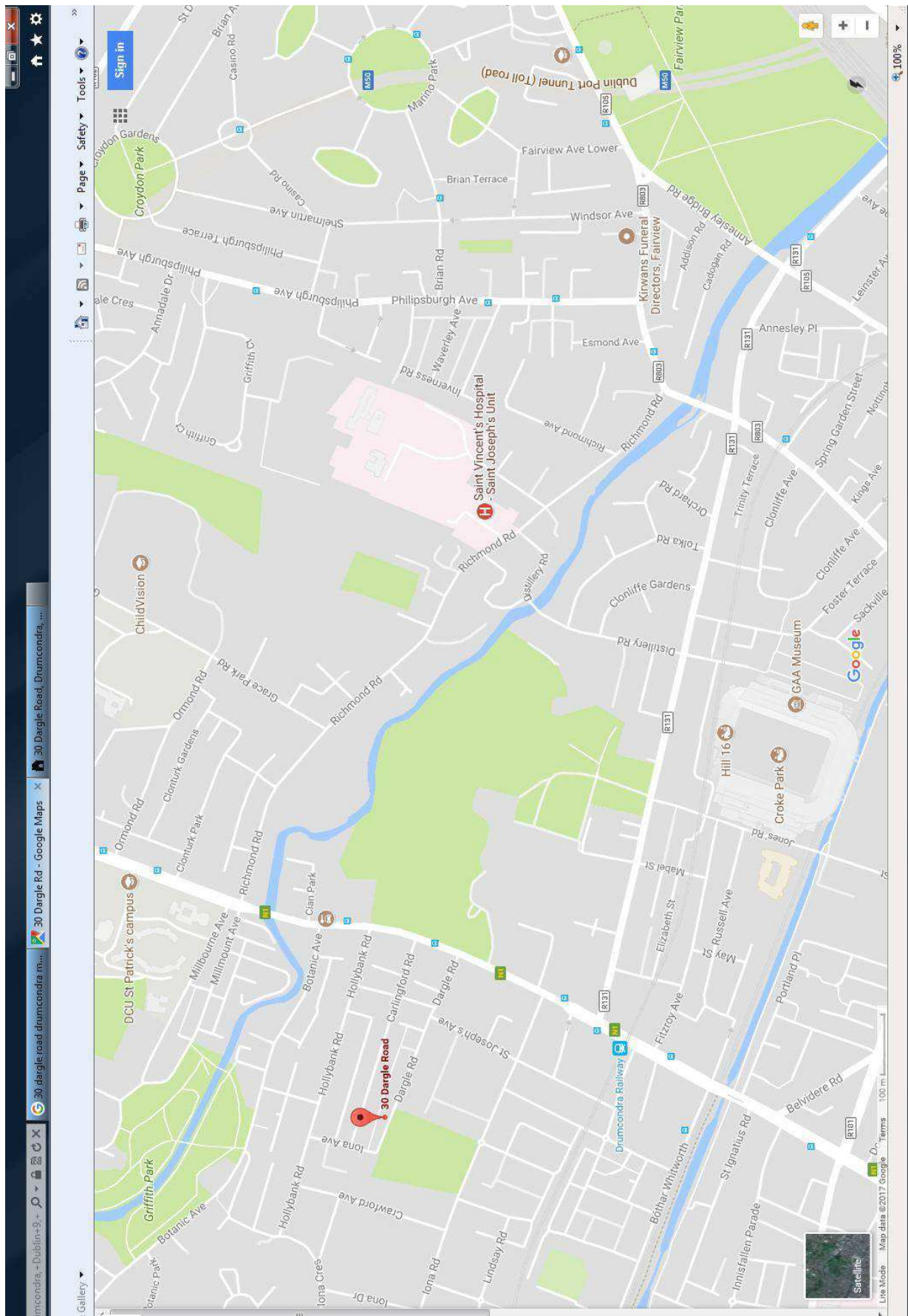


Figure 108: Map showing Percy Ludgate's home, 30 Dargle Road, Drumcondra, Dublin, Ireland

TCD-SCSS-T.20121208.124 Evidence											
Category	Evidence	Year	Qtr	Date	Persons	Place	Subcategory	Contributor	Origin	Copyright	Permissions
BMD	image	1837			Robert Ludgate Susanna Willis	Diocese of Cork & Ross	Marriage	Paul Hockie	FindMyPast Ireland Diocesan and Prerogative Marriage Licence Bonds Indexes 1623-1866	Diocese of Cork & Ross	PRIVATE
BMD	image	1840	Q2	8-Apr-1840	Michael Edward Ludgate	Scarragh, Kilshannig	Baptism	Canon Eithne Lynch	Canon Eithne Lynch	Diocese of Cork & Ross	PRIVATE
BMD	image	1840	Q4	19-Nov-1840	Mary Ann McMahon	Iden, Sussex	Birth	Brian Coghlan	UK General Register Office	UK General Register Office	PRIVATE
BMD	image	1863	Q3	15-Aug-1863	Michael Edward Ludgate Mary Ann McMahon	Winchester	Marriage	Brian Coghlan	UK General Register Office 2c 175	UK General Register Office	PRIVATE
BMD	image	1864	Q3	14-Jul-1864	Arthur Edward Ludgate	Winchester	Birth	Brian Coghlan	UK General Register Office 2c 99	UK General Register Office	PRIVATE
BMD	image	1864	Q4	10-Dec-1864	Arthur Edward Ludgate	Winchester	Death	Brian Coghlan	UK General Register Office 2c 66	UK General Register Office	PRIVATE
BMD index	image	1865	Q4		Thomas Edward Ludgate	Winchester	Birth	Brian Coghlan	ancestry.co.uk	ancestry.co.uk	PRIVATE
BMD	image	1865	Q1	3-Jan-1865	Ann Reed	Gartacclare, Omagh, Northern Ireland	Death	Brian Coghlan	GRO Northern Ireland	GRO Northern Ireland	PRIVATE
BMD	image	1865	Q3	23-Sep-1865	Thomas Edward Ludgate	Winchester	Birth	Brian Coghlan	UK General Register Office 2c 86	UK General Register Office	PRIVATE
BMD	image	1867	Q4	13-Nov-1867	Walter Samuel Ludgate	Winchester	Birth	Brian Coghlan	UK General Register Office 2c 99	UK General Register Office	PRIVATE
BMD	image	1868	Q4	21-Nov-1868	Walter Samuel Ludgate	Winchester	Death	Brian Coghlan	UK General Register Office 2c 71	UK General Register Office	PRIVATE
BMD	image	1868	Q4	22-Dec-1868	Albert William Ludgate	Winchester	Birth	Brian Coghlan	UK General Register Office 2c 99	UK General Register Office	PRIVATE
BMD	image	1870	Q2	24-Jun-1870	Albert William Ludgate	Bellary, India	Burial	Paul Hockie	FindMyPast British India Office	British India Office	PRIVATE
BMD	image	1871	Q1	3-Mar-1871	Augusta Ludgate	Bellary, India	Birth	Paul Hockie	FindMyPast British India Office	British India Office	PRIVATE
BMD	image	1871	Q2	4-May-1871	Augusta Ludgate	Bellary, India	Baptism	Paul Hockie	FindMyPast British India Office	British India Office	PRIVATE
BMD	image	1875	Q3	2-Aug-1875	Alice Walsh	South Dublin	Baptism	Brian Coghlan	National Library of Ireland	Irish Govt	PRIVATE
BMD	image	1875	Q3	3-Aug-1875	Alicia Walshe	South Dublin	Birth	Brian Coghlan	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1875	Q2	17-Jun-1875	Frederick Ludgate	Gravesend	Birth	Brian Coghlan	UK General Register Office	UK General Register Office	PRIVATE
BMD	image	1881	Q2	1-Apr-1881	Alfred Ernest Ludgate	Skibbereen	Birth	Reddy O'Regan	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1883	Q2	13-May-1883	Robert Willis Ludgate	Cork	Birth	Paul Hockie	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1883	Q3	2-Aug-1883	Percy Edwin Ludgate	Skibbereen	Birth	Reddy O'Regan	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1887	Q1	29-Jan-1887	Arthur William Ludgate	Cork	Birth	Paul Hockie	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1887	Q1	29-Jan-1887	Arthur William Ludgate	Cork	Birth	Brian Coghlan	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1888	Q2	24-Apr-1888	Thomas Edward Ludgate Bedelia Bridget Buckley	Cork	Marriage	Brian Coghlan	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	ancestry.co.uk	1888	Q2		Thomas Edward Ludgate Bedelia Bridget Buckley	Cork	Marriage	Brian Coghlan	ancestry.co.uk	ancestry.co.uk	PRIVATE
BMD	image	1900	Q3	27-Aug-1900	Frederick Ludgate Alice Emily Walshe	South Dublin	Marriage	Reddy O'Regan	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1901	Q1	19-Mar-1901	Percy Ludgate	North Dublin	Birth	Brian Coghlan	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1901	Q2	01-Apr-1901	Percy Ludgate	North Dublin	Death	Brian Coghlan	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1903	Q1	12-Mar-1903	Alexander McNeight	Banbridge	Birth	Brian Coghlan	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1903	Q2	07-Apr-1903	Violet Ethel Ludgate	Tullamore	Birth	Reddy O'Regan	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1906	Q1	04-Mar-1906	Frederick Ludgate	Tullamore	Birth	Brian Coghlan	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1906	Q1	20-Mar-1906	Frederick Ludgate	Tullamore	Death	Brian Coghlan	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1906	Q2	07-Apr-1906	Dorothy Emma Chalmers	Tullamore	Birth	Paul Hockie	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1921	Q3	02-Dec-1921	Frederick Ludgate	North Dublin	Death	Brian Coghlan	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	ancestry.co.uk	1921	Q3		Frederick Ludgate	North Dublin	Death	Brian Coghlan	ancestry.co.uk	ancestry.co.uk	PRIVATE
BMD	image	1922	Q4	16-Oct-1922	Percy Edwin Ludgate	North Dublin	Death	Reddy O'Regan	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1922	Q4	22-Oct-1922	Alice Emily Ludgate	North Dublin	Death	Reddy O'Regan	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1932	Q1	09-Feb-1932	Mary Alice Ludgate ne Ferris	Cork	Death	Brian Coghlan	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1936	Q3	22-Aug-1936	Mary Ann Ludgate	South Dublin	Death	Paul Hockie	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1936	Q3	22-Aug-1936	Mary Ann Ludgate	South Dublin	Death	Brian Coghlan	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1936	Q4	25-Nov-1936	William Joseph Ludgate	Cork	Death	Paul Hockie	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1936	Q4	25-Nov-1936	William Joseph Ludgate	Cork	Death	Brian Coghlan	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1945	Q2	11-Jun-1945	Thomas Ludgate	Cork	Death	Brian Coghlan	irishgenealogy.ie	Irish Govt	PRIVATE
BMD	image	1953	Q3	03-Sep-1953	Alfred Ernest Ludgate	North Dublin	Death	Reddy O'Regan	irishgenealogy.ie	Irish Govt	PRIVATE
BMD index	image	1955	Q1		Augusta Ludgate	Watford	Death	Brian Coghlan	ancestry.co.uk	ancestry.co.uk	PRIVATE
BMD	image	1954	Q4	30-Dec-1954	Augusta Ludgate	Watford	Death	Brian Coghlan	UK General Register Office 4b 401	UK General Register Office	PRIVATE
Census	image	1901			Augusta Ludgate	Liverpool	1901 UK Census	Brian Coghlan	ancestry.co.uk	UK Public Records Office	PRIVATE
Census	image	1901			Frederick Ludgate Alice Ludgate Percy Ludgate	Drumcondra	1901 Irish Census	Brian Coghlan	Census of Ireland	National Archives of Ireland	PRIVATE
Census	image	1901			Mary Ludgate Alfred Ludgate Percy Ludgate	30 Dargle Rd, Drumcondra	1901 Irish Census	Brian Coghlan	Census of Ireland	National Archives of Ireland	PRIVATE
Census	image	1901			Michael Edward Ludgate	Balbriggan	1901 Irish Census	Brian Coghlan	Census of Ireland	National Archives of Ireland	PRIVATE

Census	image	1901			Thomas Edward Ludgate											
Census	image	1911			Bedelia Ludgate	Mardyke Rd, Cork		1901 Irish Census	Brian Coghlan	Census of Ireland	National Archives of Ireland	PRIVATE				
Census	image	1911			Augusta Ludgate	St.Pancras, London		1911 UK Census	Brian Coghlan	ancestry.co.uk	UK Public Records Office	PRIVATE				
Census	image	1911			Frederick Ludgate Alice Ludgate Violet Ludgate	Drumcondra		1911 Irish Census	Brian Coghlan	Census of Ireland	National Archives of Ireland	PRIVATE				
Census	image	1911			Mary Ludgate Alfred Ludgate Percy Ludgate	30 Dargle Rd, Drumcondra		1911 Irish Census	Brian Coghlan	Census of Ireland	National Archives of Ireland	PRIVATE				
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Parish Register	image				listing 01, Kilshannig Ludgates	Kilshannig	Baptism	Canon Eithne Lynch	Canon Eithne Lynch	Canon Eithne Lynch	Diocese of Cork & Ross	PRIVATE				
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Parish Register	image				listing 03, Kilshannig Ludgates	Kilshannig	Burial	Canon Eithne Lynch	Canon Eithne Lynch	Canon Eithne Lynch	Diocese of Cork & Ross	PRIVATE				
Parish Register	image				listing 04, Kilshannig Ludgates	Kilshannig	Burial	Canon Eithne Lynch	Canon Eithne Lynch	Canon Eithne Lynch	Diocese of Cork & Ross	PRIVATE				
Parish Register	image				listing 05, Kilshannig Ludgates	Kilshannig	Marriage	Canon Eithne Lynch	Canon Eithne Lynch	Canon Eithne Lynch	Diocese of Cork & Ross	PRIVATE				
Parish Register	image				listing 06, Kilshannig Ludgates	Kilshannig	Marriage	Canon Eithne Lynch	Canon Eithne Lynch	Canon Eithne Lynch	Diocese of Cork & Ross	PRIVATE				
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Parish Register	image				listing 12, Kilshannig Farmers	Kilshannig	Baptism	Canon Eithne Lynch	Canon Eithne Lynch	Canon Eithne Lynch	Diocese of Cork & Ross	PRIVATE				
Parish Register	image				listing 13, Kilshannig Farmers	Kilshannig	Baptism	Canon Eithne Lynch	Canon Eithne Lynch	Canon Eithne Lynch	Diocese of Cork & Ross	PRIVATE				
Parish Register	image				listing 14, Kilshannig Farmers	Kilshannig	Baptism	Canon Eithne Lynch	Canon Eithne Lynch	Canon Eithne Lynch	Diocese of Cork & Ross	PRIVATE				
Parish Register	image				listing 15, Kilshannig Farmers	Kilshannig	Baptism	Canon Eithne Lynch	Canon Eithne Lynch	Canon Eithne Lynch	Diocese of Cork & Ross	PRIVATE				
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Parish Register	image				Front cover No.35	Kilshannig	Burial Vol.2	Canon Eithne Lynch	Canon Eithne Lynch	Canon Eithne Lynch	Diocese of Cork & Ross	PRIVATE				
Parish Register	image				Front cover No.36	Kilshannig	Marriage Vol.3	Canon Eithne Lynch	Canon Eithne Lynch	Canon Eithne Lynch	Diocese of Cork & Ross	PRIVATE				
Parish Register	image	1731			Envelope and Page 1	Kilshannig	Burial Vol.2	Canon Eithne Lynch	Canon Eithne Lynch	Canon Eithne Lynch	Diocese of Cork & Ross	PRIVATE				
Parish Register	image	1772				Kilshannig	Baptism p36-37	Canon Eithne Lynch	Canon Eithne Lynch	Canon Eithne Lynch	Diocese of Cork & Ross	PRIVATE				
Parish Register	image	1817				Kilshannig	Baptism p120-121	Canon Eithne Lynch	Canon Eithne Lynch	Canon Eithne Lynch	Diocese of Cork & Ross	PRIVATE				
Parish Register	image	1854				Kilshannig	Baptism p11-12	Canon Eithne Lynch	Canon Eithne Lynch	Canon Eithne Lynch	Diocese of Cork & Ross	PRIVATE				
Parish Register	image	1837				Kilshannig	Burial p57-58	Canon Eithne Lynch	Canon Eithne Lynch	Canon Eithne Lynch	Diocese of Cork & Ross	PRIVATE				
Parish Register	image	1853				Kilshannig	Burial p74-75	Canon Eithne Lynch	Canon Eithne Lynch	Canon Eithne Lynch	Diocese of Cork & Ross	PRIVATE				
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Parish Index	screenshot	1873	Q3	23-Feb-1873	William Walsh	Dublin	Marriage	Brian Coghlan	irishgenealogy.ie	Irish Govt	PRIVATE					
Parish Index	screenshot	1875			Alice Walsh	Dublin	Baptism	Brian Coghlan	irishgenealogy.ie	Irish Govt	PRIVATE					
Miscellaneous	image	1917	Q3	10-Sep-1917	Percy Edwin Ludgate	Dublin	Accountancy Exam Results	Paul Hockie								
Burial Register	image	1921	Q4	06-Dec-1921	Frederick Ludgate	Mount Jerome Cemetery	Burial	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE					
Burial Register	image	1921	Q4	06-Dec-1921	Frederick Ludgate	Mount Jerome Cemetery	closeup1	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE					
Perpetuity Register	image	1921	Q4	06-Dec-1921	Ludgate Grave	Mount Jerome Cemetery	Grave Owner	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE					
Perpetuity Register	image	1921	Q4	06-Dec-1921	Ludgate Grave	Mount Jerome Cemetery	Grave Owner	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE					
Burial Register	image	1922	Q4	19-Oct-1922	Percy Edwin Ludgate	Mount Jerome Cemetery	Burial	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE					
Burial Register	image	1922	Q4	19-Oct-1922	Percy Edwin Ludgate	Mount Jerome Cemetery	closeup1	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE					
Burial Register	image	1922	Q4	19-Oct-1922	Percy Edwin Ludgate	Mount Jerome Cemetery	closeup2	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE					
Burial Register	image	1922	Q4	24-Oct-1922	Alice Emily Ludgate	Mount Jerome Cemetery	Burial	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE					
Burial Register	image	1922	Q4	24-Oct-1922	Alice Emily Ludgate	Mount Jerome Cemetery	closeup1	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE					
Burial Register	image	1922	Q4	24-Oct-1922	Alice Emily Ludgate	Mount Jerome Cemetery	closeup2	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE					
Burial Register	image	1936	Q4	25-Aug-1936	Mary Ann Ludgate	Mount Jerome Cemetery	Burial	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE					
Burial Register	image	1936	Q4	25-Aug-1936	Mary Ann Ludgate	Mount Jerome Cemetery	closeup1	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE					
Burial Register	image	1936	Q4	25-Aug-1936	Mary Ann Ludgate	Mount Jerome Cemetery	closeup2	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE					
Burial Register	image	1953	Q4	07-Sep-1953	Alfred Ernest Ludgate	Mount Jerome Cemetery	Burial	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE					
Burial Register	image	1953	Q4	07-Sep-1953	Alfred Ernest Ludgate	Mount Jerome Cemetery	closeup1	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE					
Burial Register	image	1953	Q4	07-Sep-1953	Alfred Ernest Ludgate	Mount Jerome Cemetery	closeup2	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE					
Probate Index	image	1893	Q4	28-Oct-1893	Thomas Ludgate	Rathnadarrihy, Castletownroche	Probate	Brian Coghlan	National Archives of Ireland	National Archives of Ireland	PRIVATE					

Electoral Register	image	1915		Alfred Ludgate William McManus	30 Dargle Rd, Drumcondra 31 Dargle Rd, Drumcondra	Dublin City Electoral Register	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE
Thoms Directory	image	1922		T.Walsh	2 Belvidere Rd, Dublin	Dublin City Directory	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE
Thoms Directory	image	1935		M.Walshe	4 Belvidere Rd, Dublin	Dublin City Directory	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE
Thoms Directory	image	1936		M.Walshe	4 Belvidere Rd, Dublin	Dublin City Directory	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE
Thoms Directory	image	1952		M.Walshe	4 Belvidere Rd, Dublin	Dublin City Directory	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE
Thoms Directory	image	1953		M.Walshe	4 Belvidere Rd, Dublin	Dublin City Directory (full page)	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE
Thoms Directory	image	1953		M.Walshe	4 Belvidere Rd, Dublin	Dublin City Directory	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE
Thoms Directory	image	1922		Alfred Ludgate William McManus	30 Dargle Rd, Drumcondra 31 Dargle Rd, Drumcondra	Dublin City Directory	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE
Thoms Directory	image	1929		Alfred Ludgate William McManus	30 Dargle Rd, Drumcondra 31 Dargle Rd, Drumcondra	Dublin City Directory	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE
Thoms Directory	image	1930		Alfred Ludgate William McManus	30 Dargle Rd, Drumcondra 31 Dargle Rd, Drumcondra	Dublin City Directory	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE
Thoms Directory	image	1931		Alfred Ludgate William McManus	30 Dargle Rd, Drumcondra 31 Dargle Rd, Drumcondra	Dublin City Directory	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE
Thoms Directory	image	1932		Alfred Ludgate William McManus	30 Dargle Rd, Drumcondra 31 Dargle Rd, Drumcondra	Dublin City Directory	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE
Thoms Directory	image	1934		Alfred Ludgate William McManus	30 Dargle Rd, Drumcondra 31 Dargle Rd, Drumcondra	Dublin City Directory	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE
Thoms Directory	image	1935		Alfred Ludgate William McManus	1-5 Dargle Rd, Drumcondra 30 Dargle Rd, Drumcondra 31 Dargle Rd, Drumcondra	Dublin City Directory	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE
Thoms Directory	image	1935		Alfred Ludgate William McManus	30 Dargle Rd, Drumcondra 31 Dargle Rd, Drumcondra	Dublin City Directory	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE
Thoms Directory	image	1936		William McManus (30 vacant)	1-26 Dargle Rd, Drumcondra 31 Dargle Rd, Drumcondra	Dublin City Directory	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE
Thoms Directory	image	1936		William McManus	3 St.Columba's Rd Upr, Drumcondra	Dublin City Directory	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE
Thoms Directory	image	1952		William McManus	3 St.Columba's Rd Lwr, Drumcondra	Dublin City Directory	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE
Thoms Directory	image	1952		William McManus	3 St.Columba's Rd Upr, Drumcondra	Dublin City Directory	Brian Coghlan	Dublin City Archives	Dublin City Archives	PRIVATE
Griffith Valuation	image	1852		Robert Ludgate	Shanvoher and Skarragh	Parish of Kilshannig	Paul Hockie	askaboutireland.ie	askaboutireland.ie	PRIVATE
Griffith Valuation	image	1852		Robert Ludgate	Skarragh and Smithfield	Parish of Kilshannig	Paul Hockie	askaboutireland.ie	askaboutireland.ie	PRIVATE