

A snapshot of the watchmaking industry in England through the lens of the 1881 census.

The census offers us a glimpse of the industry in England on the night of Sunday 3rd April 1881. What was recorded then may not have been true the previous day or the day after,¹ it was literally a snapshot in time. The population was required to supply its age, gender, marital status, relation to the head of household, occupation and birthplace. Using data gleaned from these fields enables a vast amount of information to be analysed and a picture of the time to be created. It is well known that watchmaking in England experienced a steep decline during the second half of the nineteenth century and the country was gripped by a long depression, so what was left of the industry in 1881?

The 1881 census can be searched via any one of the genealogy websites; for the purpose of this article, *Ancestry*² was chosen. A database of 18,819 watchmakers was created by searching and sorting through millions of records. In addition, searches of other censuses and sources were made in some cases when further information on individuals was required. Caution was necessary; returns may not be accurate as there were no standard job descriptions, so, for example, a watchmaker could record himself in a number of ways - as a watchmaker, watch maker, in the watch trade, or by the large number of trades within watchmaking, eg. finisher, gilder, screw maker etc. It was possible even in 1881 to enhance the CV and include aspects of the trade which were infrequently or never undertaken. In looking at the original documents, some are in a beautifully legible cursive script, but others have faded, or were written in haste, and many parts are crossed through as counts were made. Spelling is also an issue, for example if one only searches for 'fusee' one could easily miss any who were recorded as 'fuzee' makers.³

There are a few points to bear in mind:

1. Where county names are used, they refer to the county boundaries as they existed in 1881. For example, all of what is now London north of the Thames was recorded as Middlesex or Essex with further subdivisions into parishes or districts. Modern London south of the Thames was within Surrey or Kent. Also at that time, the whole of Ireland was part of the UK, so those born there are not classed as being born overseas.
2. Watchmakers in the 'born overseas' field were not necessarily foreigners as Britain's colonies required huge numbers of personnel and inevitably children were born overseas and returned 'home' at a later date.
3. Many watchmakers were living in High Street, Market Street or Market Place addresses; some of these were recorded as 'Watchmaker's Shop', but in those locations, all were likely to be retail establishments. Most actual 'makers' lived in the poorer parts of our towns and cities. The large group of retailers which described themselves as 'watchmakers & jewellers' or 'jewellers & watchmakers', depending on the greater focus, add to the number of actual 'makers', thus the numbers involved in the trade of making watches would have been smaller than it at first appears.
4. It is necessary to take care when simply searching for total numbers of watchmakers, case makers etc as it was the practice to record a wife as 'watchmaker's wife', rather than having 'no occupation', or as 'housewife', 'mother' etc.; (a few wives did have a job of their own). Children also appear in such searches; even a child as young as one year old might be recorded as 'watchmaker's son. Without care, these can be counted in, and the figures are thus falsely inflated.

¹ One watchmaker has been found who died on the day following the census night. The census form was completed before the death and correctly remained unchanged when the enumerator returned to the dwelling to collect the completed census form (known as the schedule) from the householder.

² Ancestry (www.ancestry.co.uk) is freely available online for searches, but the original census returns cannot be accessed without a subscription. For research to be as accurate as possible, views of the original are essential.

³ Illegibility can cause problems, for example it is easy to confuse 'match fuse maker' with 'watch fusee maker' if the handwriting isn't very clear.

5. In this analysis 'watchmaker' is used as a blanket term for all participants in the trade.

The Long Depression, 1873-1896, affected Europe and America as well as the UK and must have had a negative effect on English watchmaking. Britain's policy of free trade positively encouraged imports of foreign watches, but tariffs on our watches going to most other countries made them expensive and unpopular. The trade journals regularly printed details of foreign imports of watches; in April 1882 the *Horological Journal* (HJ) reported that: during the first eleven months of 1881, the value of watches imported was £426,591 compared with only £91,635 worth of home produced watches exported.⁴ There was an ever-growing market for foreign watches as most watches from Europe and America were cheaper to buy here than English ones. There was also trouble within the trade owing to the number of imported movements, cases and complete watches being hallmarked here or even signed as though they were UK made.⁵

TOTAL NUMBERS OF WATCHMAKERS

Following the census, official summaries of the information collected were published. Unfortunately these cannot be directly compared with the data found for this article as their search criteria differed in geographical area and watchmaking trade job descriptions with those used here. Thus the official summary found 23,351 persons involved in watchmaking and clockmaking combined, in England and Wales.⁶

Similarly, a series of lectures on *Fourteen years' statistics of the English clock and watch trade*, delivered to the Society of Arts by Edward Rigg in 1881, gave totals for the whole of the UK and included clockmaking in the totals. His main focus was the low productivity per worker here and the increasing numbers of watches imported.⁷

The database of watchmakers collected from the 1881 census for this article includes:

Total number of persons found who were involved in the watchmaking industry in England in 1881	
Males	18,143
Females	676
TOTAL	18,819
Number of 'watchmakers & jewellers' included in total who were probably predominantly retailers	1,254
The numbers may be a little higher than this as incorrect spellings of jobs or those described in unusual ways may not yet have been found. Female watchmakers appear in most of the watchmaking trades, but by far the greatest percentage of them was concerned with burnishing and polishing as will be seen further on.	

⁴ *Horological Journal*, January 1882, page 62.

⁵ *Horological Journal*, April 1881, page 104. The way the tables have been compiled makes accurate comparisons difficult. Some hints at improvement in the trade can be seen (a decline in the hallmarking of foreign cases compared with previous years), but the figures are incomplete as only the records for Chester Assay Office are included in full, ie London and Birmingham only give total figures, they didn't distinguish between foreign and UK made watch cases. In the issue of *Horological Journal* dated January 1881 is an advertisement placed by Charles Frodsham & Co. warning dial painters and engravers against putting the Frodsham name on any watch without their signed permission. A reward was offered for information of such wrongdoing.

⁶ As already mentioned, raw data entries in the 1881 census under occupation are inconsistent. Furthermore the published official data derived from the 1881 census grouped watchmakers and clockmakers together and combined England and Wales making a direct comparison with the data in this article very difficult. Thus the official summary found 23,351 persons involved in watchmaking AND clockmaking in both countries, (see Population, England and Wales. Vol. III. Age, marriage, occupation, birth-place, 1881, page 23 viewed on www.histpop.org) Their figure is low even though it includes those in Wales and those involved in making clocks, but probably did not identify all the watchmaking trades, for example watch case polisher, watch finisher, watch pinion maker, watch jeweller, etc which do not actually have 'watchmaker' in the description.

⁷ *Horological Journal*, 8th January 1881 pages 102-107 '*Fourteen Years' Statistics of the English Clock and Watch Trade*', by Edward Rigg, (The statistics begin with 1867). A total of 24,515 workers (comprised of 23,766 males and 749 females) were involved in watch and clockmaking in the UK. See footnote 6 regarding inclusion of watch trades in these total figures.

AGE DISTRIBUTION

Male ages are spread between eleven and ninety-nine years; many lived well beyond sixty-five but only some of them described themselves as retired. Even the ninety-nine year old Abraham Hyams of Mile End, Middlesex is recorded as 'watchmaker'.⁸ National old age pensions did not exist before 1908, so many continued working well beyond the current retirement age in order to support themselves. An analysis of the ages indicates that youngsters continued to be attracted to the trade; many were still living in their family home and some were in lodgings as the tradition of apprentices living in with their master was no longer routine.

The age spread of females in the industry was from age ten years to eighty-four, but most were under thirty and were typically single or widowed women who needed to support themselves and/or their family. The two oldest, Isabella Harrison, aged eighty-four of Hexham, Northumberland described herself as a retired watchmaker and Mary Dervall, aged eighty-one, of Birmingham was a retired watch chain worker.

Age distribution of watchmakers in the 1881 census					
Females		Males		All watchmakers	
Less than 22 years	286	Less than 22 years	3,443	Less than 22 years	3,729
22 - 30	155	22 - 30	4,178	22 - 30	4,333
31 - 40	78	31 - 40	3,836	31 - 40	3,914
41 - 50	68	41 - 50	3,051	41 - 50	3,119
51 - 60	45	51 - 60	1,953	51 - 60	1,998
61 - 70	37	61 - 70	1,236	61 - 70	1,273
71 - 80	5	71 - 80	374	71 - 80	379
81 years and over	2	81 years and over	68	81 years and over	70
Unrecorded	0	Unrecorded	4	Unrecorded - these were patients in lunatic asylums.	4
TOTALS	676		18,143		18,819

WORKFORCE MOBILITY

Having records of both birthplace and residence in 1881, provides an indication of the mobility. Reasons for leaving the hometown were similar to those of today:

1. In search of employment, higher pay, opportunities to progress within the trade.
2. To be near to family members or to kinsmen who may have relocated, or, as happened in many cases, married couples lived in or near the wife's birthplace. Some of the foreign-born may have been relocating near to kinsmen who had settled here previously and there were many second or third generation descendants whose 'foreign' forebears had settled here years before.
3. Those born overseas or at sea were locating in England where there may have been greater opportunities.
4. Some of those born overseas were escaping from oppression in their home country. England had been a refuge for such people for many centuries. Catholics in the German Empire, especially in the states of Prussia, Bavaria, Hesse, Baden and occupied Poland, suffered legal disabilities, imprisonment, and exile from 1871 to 1890 under the *Kulturkampf*; Otto von Bismarck's, 'cultural war' in the name of German national pride and unity. Ditton Hall College near Prescott was established in 1872 especially to

⁸ He was living as a boarder along with eight others, mostly aged 70+ in an establishment headed by an attendant (who was also described as a nurse), his wife and family. Only two of the boarders' occupations were recorded, Abraham's and a sixty-eight year old tailor.

provide a Jesuit College and home for exiled German Jesuits. Joseph Socfflor, (23) watchmaker from Wartenburg, Bavaria, was resident there.⁹

In total, 1,150 watchmakers were born overseas; of these 801 were born in Germany. Some born there will have been the children of UK nationals who were working or travelling there, but most were German nationals, some of whom were recorded as having been granted UK citizenship. Some stayed here all their lives, for example Hamburg-born Amandus Schierwater who was recorded in Garston, Liverpool in 1851, died there in 1912, and Robert Kiefer who was living in Camberwell in 1881, died there in 1928 aged seventy-four.

Aliens entering any port in the country had to be registered by ships' masters with the Chief Officer of Customs on arrival; failure to do so led to a fine; non-payment of fines led to vessels being detained. Watchmaker James Langelaan arrived aboard the *Lion*, from Harlingen in Friesland, Netherlands on 15th September 1856. He was twenty years old and was described in the Register of Aliens as a watchmaker. By 1881, he had married a Dutch girl and was working as a watchmaker and jeweller in High Street, Godalming, which was also his residential address. He remained in this country all his life, dying in Hampstead in 1930.

Watchmakers born overseas					
Germany inc Prussia	801	Australia	8	Ascension Island	1
Switzerland	68	Canada	6	British Guiana	1
France	58	East Indies	6	Jamaica	1
Poland	40	India	5	Luxembourg	1
Russia	22	West Indies country unknown	4	Malta	1
The Netherlands	16	Born at sea	3	Mauritius	1
America	16	Hungary	3	Morocco	1
Denmark	14	Gibraltar	2	New Zealand	1
Sweden	14	Greece	2	The Holy Land	1
Austria	12	South Africa	2	Turkey	1
Italy	11	Spain	2	Illegible or unrecorded	4
Norway	10	St Helena	2		
Belgium	8	Africa, country unknown	1	TOTAL	1,150

The watchmakers who were born overseas headed for many different parts of the country, but as could be expected the majority were drawn to Middlesex. Only forty-seven chose Warwickshire as their destination despite it being the major watchmaking area. Twenty-four year old Jacob Danuss from Germany was on board the *Alster* in the Humber estuary when the census was taken, see below.

Where the overseas-born watchmakers were located in 1881					
Middlesex	505	Essex	15	Norfolk	5
Surrey	119	Somerset	13	Derbyshire	5
Lancashire	69	Sussex	11	Buckinghamshire	4
Yorkshire	59	Worcestershire	11	Cumberland	4
Kent	50	Northamptonshire	10	Dorset	4
Warwickshire	47	Berkshire	9	Nottinghamshire	4
Hampshire	28	Leicestershire	9	Suffolk	3
Devon	24	Cambridgeshire	8	Herefordshire	1
Northumberland	22	Lincolnshire	8	Rutlandshire	1
Gloucestershire	21	Cornwall	7	Shropshire	1
County Durham	18	Oxfordshire	7	On board ship	1
Staffordshire	18	Cheshire	6		
Hertfordshire	17	Wiltshire	6	TOTAL	1,150

⁹ The College was founded by the Hon. Mrs Stapleton-Bretherton who gave the hall, formerly known as The Grove. She had built a school in 1860 and went on to found St Michael's Church in 1878. The college teaching staff, all priests, were all exiles from areas affected by the *Kulturkampf*, as were most of the students of theology. Joseph Socfflor was one of a group of about twenty tradesmen, all having fled from *Kulturkampf* who were not recorded as students - their trades were given - baker, stone mason, shoemaker, gardener, watchmaker etc.

On arrival here, immigrant watchmakers often seem to have lodged with a fellow countryman in the same trade or with family members, for example:

- Rudolph Springnan (22) was lodging in Southwark with watchmaker Martin Mayer (50), his son Matthew (21) and nephew Stephen (25) who were also watchmakers. All four had been born in Baden.
- Watchmaker Louis C Bengert (16) was born in Switzerland and was living in Wardour Street, Westminster with his parents, three siblings and a cousin, none of whom worked in the same trade.
- Aslof Dilger (20) born in Basle, Germany watchmaker, was living with a family of the same name, in which the head of household Emil (39) master watchmaker, was also born in Basle. The latter had a young family in Clerkenwell. It is not clear whether Aslof was his son as he is recorded as a servant in the household (as well as a watchmaker). I think it is likely that Aslof was a family member, maybe a nephew as all Emil's children had been born in London.¹⁰ Also part of the household were four apprentice watchmakers, one of whom, Marse Kleigser (15) was also born in Basle.

Others travelled without obvious close family support, for example:

- Otto Abenden (18) born Germany was recorded as a servant living at the City Road Watch Shop, Hulme, Manchester with Otto Imberry (35) watch and clockmaker who was also German.
- Karl Bammert (21) watchmaker, born Baden, Germany was lodging with a professor of music in High Street, Worcester.¹¹
- Sales Maier (19) watchmaker from Baden, Germany was lodging with a family from Baden. The head of household was a jeweller and there was also a fifty-five year old clockmaker lodging there. The box on the census form for relation to head of household was left blank in the case of both lodgers.

Once settled here, many sought a Naturalization Certificate and the larger family groupings dispersed to different parts of England. Those with Naturalization Certificates included for example:

- John Firderer (70), born in Germany, had lived in Birmingham since at least 1851. He died there in 1888.
- Leonard Fredericks (67), born Baden, Germany had lived here with his Staffordshire born wife Ann Mary since at least 1851. He was a naturalized British subject.
- Frederick Krauth (33), born Nuremberg, Germany, was a master watchmaker employing sixteen hands. His naturalization declaration is dated 27th January 1890. Like Fredericks above, he had a Staffordshire born wife. They lived in Great Hampton Street, Birmingham and by 1890, had eight children.

The following families¹² are examples of those which dispersed over a wide area:

- The Fahrenbach family from Baden, Germany. Ten watchmakers aged from eighteen to sixty-two had dispersed to six different locations in England
- Eight watchmaker members of the similarly named Fehrenbach family from the Black Forest area had settled in seven different areas of England. The majority of these were watchmakers and jewellers with High Street addresses.

¹⁰ The oldest of these was only aged six years. Emil and his wife never became British citizens and are not recorded in this country after 1901.

¹¹ Karl Bammert had moved to Cardiff by 1891, had married a Welsh lady there in 1903 but was not shown as a British citizen in the 1911 census so may have been interned during WW1; he died in Cardiff in January 1940.

¹² Some of the watchmakers with these family names were closely related, but searches of German genealogy would be required to establish all familial links.

- Thirteen watchmakers of the name Ketterer also from Baden, Germany had settled in ten different locations as far north as Newcastle upon Tyne and as far west as Frome, Somerset.

UK-born watchmakers

The measure of mobility used with UK-born watchmakers is simply whether they were still living in the county of their birth. Some relocated over large distances within England, for example Joseph Ivey a journeyman watchmaker who was born in Cornwall moved to Sculcoates, Hull with his Cornish wife and young family for reasons unknown, whereas watchmaker James Robinson, born Spalding, Lincolnshire moved to Plymouth where his wife Harriet was born. Some moves from one county to another covered only very short distances, for example a move across the Thames from Middlesex to Surrey or Kent, moves across the Mersey from Lancashire to Cheshire, or border-hopping from one part of a village to another where the county boundaries passed through growing communities. So this measure is very broad and can be misleading.

Mobility of UK-born watchmakers + 17,669 in all			
Watchmakers still located in birth county	=	12,028 of whom, those aged under 30	= 5,292 = 44%
Watchmakers no longer in birth county	=	5,594 of whom, those aged under 30	= 1,849 = 33%
Birthplace not recorded	=	47	

In 1881 the greatest concentrations of our watchmakers were, as expected, to be found in the major centres: London, Warwickshire and South West Lancashire. However some of our ports, eg Plymouth, Portsmouth, Southampton and Newcastle upon Tyne attracted many watchmakers who were presumably satisfying a large itinerant naval or merchant population and supporting personnel.

The county with the greatest number of watchmakers was Warwickshire; Coventry had the highest number with 3,701 watchmakers, followed by Birmingham with 435 and Aston with 214. Other large towns within the county included Leamington Spa (35), Warwick (13), Kenilworth (13), Rugby (11) and Nuneaton (7). Although some watchmakers from other counties were attracted into Warwickshire, 84% of the county's watchmakers were born there. In contrast, the workforce of Surrey with its 662 UK-born watchmakers was home to only 26% who were born there. Data for all counties with watchmakers are shown below:

Watchmakers born in the UK									
County in 1881	Total number of makers	Born there	% of total	Not born there	County in 1881	Total number of makers	Born there	% of total	Not born there
Warwickshire	4,501	3,782	84%	719	Worcestershire	156	54	35%	102
Middlesex	2,815	1,881	67%	934	Derbyshire	153	76	50%	77
Lancashire	2,601	2,015	77%	575	Leicestershire	133	75	56%	57
Yorkshire	1,088	750	74%	337	Berkshire	131	64	49%	67
Surrey	662	173	26%	479	Cornwall	126	104	83%	22
Kent	527	263	50%	263	Wiltshire	118	68	58%	50
Hampshire	380	236	62%	141	Hertfordshire	112	39	36%	72
Devon	377	284	75%	93	Shropshire	106	36	34%	70
County Durham	312	171	55%	140	Dorset	103	71	69%	32
Sussex	298	178	60%	120	Northamptonshire	86	36	42%	50
Gloucestershire	295	183	62%	111	Oxfordshire	75	37	49%	37
Cheshire	277	105	38%	172	Cambridgeshire	73	39	53%	34
Lincolnshire	259	200	77%	58	Buckinghamshire	64	23	36%	41
Norfolk	257	200	80%	57	Bedfordshire	57	33	58%	24
Staffordshire	253	120	47%	133	Herefordshire	46	16	35%	30
Essex	230	77	33%	153	Westmorland	45	32	71%	13
Somerset	218	143	66%	74	Huntingdonshire	28	15	54%	12
Northumberland	206	137	67%	67	Rutlandshire	5	0	0%	5

Suffolk	178	114	64%	64	Monmouthshire	1	0	0%	1
Cumberland	159	110	69%	49					
Nottinghamshire	158	86	54%	71	Birthplace unrecorded		49		

Residential addresses were included in the data collected in the census. These were recorded in different ways. In rural areas with sparse populations, only the village name was given; in smaller towns and villages house names or numbers were sometimes recorded. In more densely populated areas house numbers and names were given. The relationship of each person to the head of household reveals those who were lodgers, boarders or family members. The majority of 'makers' lived in low status housing in the poorer areas of towns and cities, but some, generally those employing others, lived in the better areas. From these details an idea of the status of watchmakers can be deduced, for example:

- Many watchmakers throughout all but the very youngest age groups were recorded as lodgers, boarders or even paupers; for example watch jeweller Thomas King (28) was boarding with widow Jane Godfrey at Court 2, No. 4 Tower Street, Coventry; watchmaker George R Stevenson (24) was a lodger with Thomas Mason and family at Sheffield Road, Stonegravel, Chesterfield, and watchmaker Thomas Long (82) was a pauper at Holborn Workhouse.
- Many watchmakers in Coventry and Prescott lived in very low status housing in high density areas behind residential and commercial streets, for example: watch finisher George Hewitt (59) lived with his family at 7 Court, Much Park Street, Coventry, and watch frame maker Matthew Rose (36) was living with his young family at 2 Court, 1 Ward Street, Prescott.
- Some watchmakers were sufficiently wealthy to live in smarter areas, some with servants, for example: early retiree watchmaker John Judge (50) lived in Hampstead, Middlesex; fusee chain manufacturer Fred Hart (40) of High Street, Christchurch, Hampshire lived with his wife, six children and one servant, and watch manufacturer John Rotherham (42) lived with his wife, six children, a governess and eight servants at The Grange, Coundon, Coventry.

ORGANISATION OF THE WATCHMAKING TRADE

In 1881 although the watchmaking trade continued to employ large numbers of craftsmen, it was in decline following a long slump in world trade coupled with the efficient mechanisation of production in Germany, Switzerland and America which increased volumes and lowered costs. In addition, the old apprenticeship system was virtually defunct, the guilds having lost most of their powers, and the need to make money in a difficult market took precedence over time spent teaching an apprentice. Other training was provided in some areas but standards were variable and courses were not available to all. In many cases, young workers sought higher pay in jobs which required less training.¹³ Many of the young people recorded as watchmakers in the 1881 census were not described as apprentices suggesting a less formal arrangement with whoever was teaching them the trade. A close look at the data on apprentices follows:

Watchmaker Apprentices in the 1881 census							
Total number of apprentices recorded = 611 = 3% of the workforce							
Watchmakers aged 21 and under = 3,727, therefore 3,116 were not recorded as apprentices							
Watchmaker (only)	435	Tool maker	5	Barrel maker	1	Watch timer	1
Finisher	57	Gilder	4	App. assistant	1	Engine turner	1
Watch & clock maker	24	Jewel hole maker	4	Watch engraver	1	Dial painter	1
App to watch trade	12	Watch spring mkr	4	Chronometer maker	1	Electro plater	1
Watch jeweller	12	Watch hand maker	3	Escapement maker	1	Examiner	1

¹³ Watchmakers, Jewellers and Silversmiths' Trade Journal, 5th August 1880 page 17. The City & Guilds of London Institute was founded in 1878 by the City of London and sixteen livery companies to develop a national system of technical education. Students could sit City & Guilds examinations in horology. Courses were run by the Horological Institute and others, for example the Coventry Technical Institute (opened 1888).

Watch case maker	8	Pinion maker	3	Movement maker	1	Motioner	1
W/m & jeweller	8	W. case finisher	2	Jobber	1		
Fusee maker	6	W. detent maker	2	Balance maker	1		
Wheel cutter	5	W. clicker maker	2	W. manufacturer	1	TOTAL	611

It was mentioned earlier that the tradition of apprentices living with their masters was dying out, but it was still evident in some cases.

- Arthur M Jacques (18), son of a Lutterworth grocer and George Mallon (18) possibly the son of a Kensington butcher were lodging with their master William H Douglas at 59 High Street, Stourport, Worcestershire.
- George Thatcher (16) born in London, was living with his master Thomas Garlick in Newbury.
- Harry Thomas (20), was born in Exeter. He was apprenticed to Albert John Rihill (35), watchmaker in Moretonhampstead, Devon where Harry was also living.

There were still a few watchmakers who described themselves as masters, journeymen and improvers. In addition there were also jobbing watchmakers (jobbers) and those who described themselves as general watchmakers or who wrote 'watchmaker etc'.

Organisation of the watchmaking trade as appears in the 1881 census			
Watchmakers who used hierarchical definitions of their roles (females included)			
Master (inc 1 female)	346	Jobber (jobbing watchmaker) (inc 3 females)	310
Masters employing others (inc 1 female)	101	General watchmaker/hand (inc 17 females)	47
Mistress (3, all widows employing others)	3	Apprentice (inc 7 females)	611
Journeyman (inc 2 females)	98	Assistant (inc 66 females)	202
Improver (0 females)	5		

Many watchmakers who employed others did not describe themselves as masters. The practice of small watchmaking workshops employing a few workers still prevailed; of the 674 watchmakers who were reported as employing others, 559 employed 5 people or fewer. The one female watchmaker who used the descriptive 'master' was Emily Delahoy (25) of Spalding, Lincolnshire who was a master watchmaker and jeweller employing one boy. This was unusual especially as her husband was employed as a foreman tailor. Three watchmaker women chose not to describe themselves as 'master' but used 'mistress' instead; each was a widow employing a small number of watchmakers. Larger employers were based in the major centres.

Numbers of workers employed by employers			
Workforce size	Number of employers with this size of business	Workforce size	Number of employers with this size of business
0 - 5 workers	565	61 - 70 workers	0
6-10 workers	69	71 - 80 workers	0
11 - 20 workers	20	81 - 90 workers	0
21 - 30 workers	7	91 - 100 workers	1 (John Wycherley 93)
31 - 40 workers	4	100 - 200 workers	2 (Philip Cohen 100+ William Ehrhardt 125)
41 - 50 workers	2		
51 - 60 workers	3	Over 200 workers	1 (Rotherhams 209)

The table which follows details all those in the census recorded as employing more than ten workers.

Major employers								
Name	Company details if found	Total of workers	Men	Boys	Apps	Girls	Women	Hands/ Assistants
John Rotherham Manufacturer	Rotherham & Son of Coventry. Roots in mid eighteenth century. Steam power from c.1850. Bought American machinery	209	185	24				

	1880. (For an illustrated description of the factory see HJ., June 1888 pages 145-155. In the same issue, John Rotherham was mentioned as president of the committee for the foundation of the Coventry Technical Institute.) The only remaining building on this company's former site is marked with a Coventry Watchmaking Heritage Trail blue plaque.							
William Ehrhardt	Based at Barr Street West, Birmingham. Established in 1855. Making watches with interchangeable parts. Matching Waltham in price. (HJ Vol XXII, April 1880, page 103.)	125	76			49		
Philip Cohen Watch manufacturer	Based at 13 Allesley Old Rd., Coventry. Prussian by birth. Claimed every part of every watch was made on site. Former 'factory' is marked with a Coventry Watchmaking Heritage Trail blue plaque.	100+	100+					
John Wycherley Movement maker	Warrington Road, Prescot. Purpose built three storey factory. Machinery installed in 1866. In 1877 employed 120 of whom 30-40 were girls.)	93	60	8		25		
Robert Quilliam Wholesale watch manufacturer	Liverpool based. May have also made chronometers. Shop at 32 Elizabeth Street, Liverpool.	60	60					
Thomas Peter Hewitt Keyless watch movement manufacturer	Lived at Scotch Lane, Whiston, Prescot. Factory on Warrington Road, Prescot. (HJ August 1877 Vol. xix pages 158 to 160 A visit to the Watch Movement Making District of Lancashire.) Wycherley, Hewitt & Co. from 1882. In 1886 opened a factory in Coventry run by his brother Charles.	55	32		10	13		
Alfred H Russell Watch maker	Had been in partnership with Thomas R Russell at 18 Church Street, Liverpool On the night of the 1881 census Thomas R Russell was visiting Coventry. His home was Abercrombie Sq, Liverpool. He was recorded as a watch manufacturer but with no details of employees.	52	50	2				
Rowland Hill Watch manufacturer	Based in Coventry. In 1889 was a founding director of the Coventry Watch Movement Manufacturing Company Limited.	50	50					
Edward Beesley Watch movement manufacturer master	Based in Prescot. There were many watchmakers in Prescot with the name Beesley. Many will have been employed here.	43	30		7	6		
Fred Hart Fusee chain manufacturer	Based in Christchurch, Hampshire. W. Hart & Co. Fred carried on his father's company making chronometer and watch fusee chains. The business was in decline by 1881. (His father had employed 120 workers in a purpose built factory behind his house.)	40					40	
Lewis Joel Watch manufacturer	Based in Coventry	36	30	6				
Isaac J T Newsome watch manufacturer. In partnership with Frederick Samuel Yeomans	Based in Spon Street, Coventry. Bought in ebauché movements from Prescot. Newsome was the first president of the Watch Trade Association in 1888. In 1889, Yeomans was one of the founders of the Coventry Watch Movement Company (CWMC). Newsome also had some involvement with the CWMC and bought their movements for his watches. He was later director of the Roulette Cycle Company.	34	30	4				
Arthur Rogers	Based in Liverpool, Manufactured watch	34	30	4				

Watchmaker	cases.							
Henry J Norris Watch manufacturer	Based in Coventry.	28	28					
Charles J H Marlow Watch manufacturer	Based in Coventry.	25	25					
William Potts Watch and clock manufacturer	Leeds. Turret clocks were the principal business. Most watches seen by Michael Potts were finished in Coventry and were in Birmingham or London cases.	25	21	4				
William W Chadwick Watch jeweller	Based in Coventry.	24						24
Sophus Emil Nielsen	Nicole, Neilsen & Co, 14 Soho Square, London. Successor to Nicole & Capt of Switzerland. Made high quality watches for EJ Dent, Charles Frodsham and many other retailers.	22	18	4				
Thomas Winder Watch manufacturer	Based in Coventry.	22	12	10				
Thomas Saggerson Watch wheel manufacturer	Based in Prescott. (Brother, William Saggerson, also a watch wheel cutter employed 1 man and 1 boy.)	21	14	7				
James Haddell Watch manufacturer	Based in Coventry.	20	14	6				
John Hawley Watch manufacturer	Based in Coventry.	19	18	1				
William J Charles Gold and silver dial maker	Basted in Islington, London.	16	12	2		2		
C F T Krauth Master watchmaker	Located at 124 Great Hampton Street, Birmingham. He fled to England in 1870 when the Franco-Prussian War began.	16						16
Samuel Fopitt Watch jeweller	Based at Edmonton, Middlesex.	15	14	1				
John Troup Wholesale jeweller & watchmaker	Based in Hackney Was trustee of the Goldsmiths' and Jewellers' Annuity and Asylum	15	13			2		15
Daniel Kuss Watch & clock maker	Based at 520 Oxford Street, London. Eight watch & clockmakers lived at this address, including two brothers and a cousin.	14	13					1
Thomas J Mercer Watch manufacturer	Based in Coventry. Continued his father's manufacturing business. Lived in the Mercer family home at 13 Hertford Terrace, Coventry. Not known if there is any family link with Thomas Mercer, London, chronometer maker.	13	12		1			
Joseph Henry Robinson Enamel dial manufacturer	Based in 74 North Hill Street, Toxteth Park, Liverpool	12	2	2		8		
Charles Read City councillor and watch manufacturer	Based at 28 Lord Street, Coventry. Workshops on site at rear of residence. Former 'factory' is marked with a Coventry Watchmaking Heritage Trail blue plaque.	12	9		3			
Thomas Wallen Watch manufacturer	Based in purpose built steam-powered building in King Street, Coventry. Pioneered machine watch casemaking. A detailed description of this factory appeared in the Watchmaker, Jeweller & Silversmith's Trade Journal 5th July 1877, pages 6-7.	12	12					
Matthew Dodwell Watch and jewel manufacturer	Based in Coventry. Lived at 16 Hertford Terrace, Coventry. Freeman of the city of Coventry in 1867.	11	7	4				
Charles Hopkins Watch manufacturer	Based in Coventry at 93 Little Park Street, later at Hertford Terrace, Coventry.	11	6	5				
Charles Taylor	Based in Coventry at 4 Riley Street. By	11	10	1				

Watch manufacturer	1891 recorded as 'Living on own means' aged 72.							
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It was not a requirement of the census to record numbers and sexes of employees, but many chose to, as seen above. Many did not, for example, William Bragge, aged fifty-eight was in charge of the English Watch Company in Birmingham when the census was taken. He was recorded as a watch manufacturer with no mention of his employing 200 people.¹⁴ The 'missing' employees would be listed individually in the census. Any watchmaker who was out of the country on the night of the census does not appear in the census data, for example Swiss brothers Phillippe (51) and Auguste (45) Guye¹⁵ of the firm Messrs Guye & Co., 13 Northampton Square, and 14 St Bride Street, London, watch manufacturers and employers are unlisted. The famed chronometer and watchmaker Victor Kullberg was also absent.¹⁶ Some manufacturers referred to their staff as 'hands' with no reference to their gender.¹⁷

JOB DESCRIPTIONS

There were names given to the various sections of the watchmaking trade which were well known within the trade, but it was a jargon with which the public were not so familiar. This led to incorrect spelling of terms which makes searching now more challenging. Many watchmakers were involved with more than one trade, so while some used the cover-all description of 'watchmaker', others listed several branches of the trade. Totalling the raw figures therefore gives a number greater than the total workforce. For further detail of the tasks of each trade, refer to Abraham Rees's list of the principal workmen employed in the manufacture of a watch.¹⁸

In the table below those who just described themselves as 'watchmaker', 'jobbing watchmaker', 'watchmaker & jeweller' or 'general watchmaker' are not included. The numbers in the total columns includes both men and women.

Totals working in the different watch trades.					
Watch trade	Female	Total	Watch trade	Female	Total
Balance maker	1	93	Gilder	3	93
Barrel maker	2	49	Glass fitter, smoother, cutter	1	38
Case maker	18	683	Hand/index maker	23	179
Case engraver	3	42	Seconds hand maker		8
Case turner, engine turner		18	Jeweller	12	406
Case finisher	2	25	Jewel hole maker	9	57
Case joint finisher	1	14	Key maker, polisher, stamper	20	59
Case pendant maker		1	Lever and roller maker		15
Secret springer		22	Motioner, motion maker, m. polisher	4	145
Case springer	1	114	Pinion maker	2	104
Dial maker - all categories	12	179	Pivot maker		8
Dial painter	4	66	Planter		1
Dial figurer	1	1	Polisher inc. case polisher, burnisher	128	223
Dial cutter		3	Repairer	3	103

¹⁴ Horological Journal, April 1880 Vol. 22, page 103

¹⁵ Auguste Guye was referred to as 'a scientific horologist', in Horological Journal Vol 23 page v, January 1881. Their company had begun machine manufacture on a modest scale prior to 1880 and prided itself on the interchangeable parts in its watches including escapements.

¹⁶ Jacob Victor Kullberg came to England at the time of the 1851 exhibition and had a workshop at 105 Liverpool Road North, Islington. He lived there with his brother William (a dealer in firelighters) and William's wife, Prussian born Mathilde. The 1871 census shows that William had died and Victor was employing seven men and one boy making watches and chronometers. In September 1881 he was seeking a 'thoroughly skilful man, accustomed to the highest class of chronometers and other fine watches. Must be of gentlemanly address and capable of carrying out every description of work connected with watches.' (Daily Telegraph & Courier, 14th September 1881.)

¹⁷ The record of one master 'with no hands' could be puzzling at first sight! This was William Somes (43) from Margate, Kent.

¹⁸ Rees, Abraham, *Clocks, Watches and Chronometers, 1819-1820*, republished by David & Charles, 1970, pages 281-2

Dial examiner		2	Springer	3	27
Dial sinker		3	Swivel maker	9	14
Dial writer	3	8	Toolmaker (inc importer, dealer, shop)	2	110
Dial enameller	1	23	Turner, engine turner, not case	3	29
Engraver (not case engraver)	2	99	Watch cap maker	3	101
Escapement maker	5	123	Watch chain maker	45	49
Lever escapement maker		21	Watch materials: dealer/maker	8	38
Duplex escapement maker		1	Watch movement maker	10	55
Examiner		213	Watch pallet maker		26
Finisher	44	2482	Watch screw maker	6	15
Frame maker	4	49	Wheel maker/cutter/polisher	6	79
Fusee chain maker	26	32	Working with chronometer watches		59
Fusee maker	5	94	Working with keyless watches		34
<p>Note of caution. In the census, 'watch jeweller' is difficult to distinguish from 'watchmaker & jeweller'. Only those who wrote 'watch jeweller' were counted as such.</p>					

Continued in part 2.
