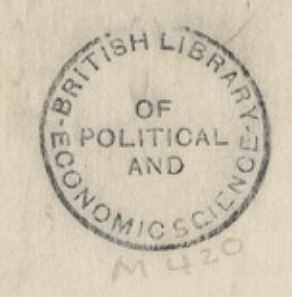


91
 91
 91

See Booth, Life and Labour 1902-3. 3001-891
 Second Series, Vol. II, Part I.
 Chap. III: surgical, scientific and electrical instruments.

Census returns, 1891.	Persons.
① Surgical Instruments.	976
② Philosoph. Optician.	2352
③ Electrical Appliances.	4930
	<u>8258</u>



Included in above are:

- ①. Surgical bandages: Trusses.
Respirators: list: artificial limbs.
- ②. Horseshoes: opera glasses: photo app: ships compasses: spectacle makers.
- ③. Lightning conductors: telegraph tapes.
Electricians.

PS Those ticked will send
 special wages returns.

R COLL VI.

Surgical, scientific & electrical B91 [i]
 Chapter iii. Section 22.

Name	Occupation	page.
J.A. Arnold	Surgical instruments.	1
Masters & Co.	Surgical appliances.	6
F. Sutton.	Scientific instruments	10
Casella	Scientific instrument	14
J.J. Hicks.	Barometers & Thermometers.	16.
New Thompson	Surgical instr.	17.
Spagnolotti & Co.	Electricians	19.
Crompton & Co.	Electrical work.	23.
Crouch.	Microscopes & Magic Lantern	25
Perren	Surgical Instruments (dentistry)	27.
W. Sligo	Electrician in chief, Peoples Palace	30.
Horace Darwin	Scientific Instr. (Cambridge)	33.
Wm Pye	" " (London work).	35 & 50
W. T. Eoulden	Electrical Engineers.	38.
Harvey & Peck.	Scientific Instr.	44.
T. Dobson.	St James & Pall Mall Electr. Light	45.
S. J. Chiver.	Chelsea Electricity. Co	54.
Frank Jago.	Westminster Electr.	57.
Crouch's works.	Microscopes.	59.
Conrad Bach	Photo & microscopes.	61.
Brush Electr. Co.		66.
Foxley Waring Cables Co.	Manfr. of cables.	66.
C.H. Gray.	India Rubber. Electr. cables.	67. 83.

June 15th

G.H.D.

J. Arnold. Surgical instrument & Appliance maker.
West Smithfield on an introduction from
Dr. Norman Moore of St Bartholomew's Hospital.

There are very few actual Instrument makers in
London. Bailey. Trussmakers. Weiss in
the Strand are actual manufacturers.
Kaw & Slomson in Aldersgate street
are only factors who buy from Germany
& Sheffield but do not manufacture
themselves. This was how it was that
in an exhibition not long ago they
got no medal although they made a
great show & spent much money over
it.

Trade is divided into.

1. Edge workers.
2. Blunt.
3. Deformity.
4. Artificial limbs.

But few actual makers
in London.

Divisions of the Trade.

Edgeworkers. £2 - £4.

Blunt workers. 35/- - 50/-

Deformity men. £2 - £3

Artificial limb makers. £7 - £8

All week workers.

Regular work.

No busy + slack seasons.

Edge workers. is those who make anything which will cut. earn. from £2 to £4 per week.
Eye instrument makers. are those in this branch who earn the higher wage.

Blunt workers. is Forceps makers etc.
earn 35/- to 50/-

Deformity men. those who will make a good spine can earn £3. others only £2.

Artificial limb makers. wages vary.

The Artificial hand maker who is proficient can earn £7 to £8 for each hand which takes about 1 week to make.

These men do not live on the premises.

They are by themselves & make a speciality of this branch.

Men are paid by the week.

All have regular work. A good man on leaving a good house can be certain of having work on the very afternoon on which he leaves.

There are no busy + slack seasons. Demand is equal, a slightly greater demand for dissecting cases each time 'Barts' opens.

Hours of work.

$$\begin{array}{r} 9\frac{1}{2} \\ 19 \times 5 = 2 \\ \hline 47\frac{1}{2} \\ 5 \\ \hline 52\frac{1}{2} \end{array}$$

Chambermasters

Has never employed a foreigner.

Apprentices.

Hours of work: 8-1 then an hour for lunch.
2-6.30 ie 9½ hours per day.
& until 2 on Saturday.

Mr Arnold offered the men ½ hour for tea or to leave off work ½ hour sooner, they were unanimous for leaving off ½ hour sooner.

Chambermasters: A great deal of the work is done by these. They lease their own small shop with one or two men & boys & agree to do work only for 3 or four hours agreed upon, the masterhouses agreeing to keep the chambermasters fully employed.

Mr Arnold has never employed a foreigner, said they were industrious workers & ingenious but he never wd have a word to say to them: Germans often taken by garmentmasters.

Apprentices: Mr A. receives none - more bother than they were worth, had been warned against them by his father.

Men do not shift from one employment to another: they will sometimes as an obligation turn to repairing but wd much rather not.

Cutting edges are
peculiar to England.

Diff. bet Eng & foreign
work & provincial.

A cutting edge is an English speciality, every foreigner over here takes back cutting instruments. One of their best workmen went over to work in Paris, ordered steel from Sanderson in Sheffield & coal from Reckitt Smith but still it not produce the same edge that he did in London: Mr A said his father thought it was perhaps the diff. in the water used but had not told his former workman so.

Foreign work is much cheaper to buy & looks well but it has not the stability of English work.

Sheffield workmen were kept only to one part of the business & were useless to recruit his own trade where one man must know how to make one instrument through-out.

No Unions as far as he knew

Boys are started in the office, then put in the shop to see what they can make of it: the requirements are so varied there is always more to be learnt.

The only men Mr A. has in the shop are those working for special orders, the other work being done by chambermasters.
 He will send introductions to chambermasters.
 Is a healthy trade.

- How many does he employ.
- Over time Rate.
- Age of fleet capacity.
- Clubs.
- Rents in neighborhood.

Division of Trade.

Wood workers.

metal.

Finishers.

June 19th

S.H.W.

Mr Masters No. 240 New Kent Road. Surgical
appliances maker.

He makes wooden legs, arms & hands
principally.

Trade divided into:

1. Wood workers.

2. Finishers.

3. metal workers.

Wood workers. make the wooden leg or hand.

Metal workers. make the joint.

Finishers or leather workers. cover the wood
with leather & do the padding, fit on
the straps etc. They are also called in-
provers.

Wages. paid week ending June 17th a good average
week.

64/- to working foreman who can & actually
does wood & metal work & instructs
the others.

57/- a wood worker. lost 2 hours by not
working up to time.

Actual wages paid in
week ending June 17th

- 52/- to foreman of the finishers who besides helps in the base rent free.
has been 17 years with the firm.
- 40/- wood worker.
- 40/- metal ...
- 33/- finisher (standing pay is 30/- but 3/- for over)
- 36/- } wood workers.
- 36/- }
- 30/- Finisher.
- 24/- wood worker (is still learning)
- 15/- apprentice in last year (is only working approx.)
- 8/- 2nd
- 13/- improves in finishing.
- 8/- boy taken in as wood worker to learn.
- 8/- metal

- 15 men.

The 2 brother masters besides directing the business themselves work at the board, design & take orders & all profit that remain after paying wages.
The weeks wages for the last 3 months seemed to vary from \$19 to \$25
(they showed me their books.)

These are good wages.

No shifting.

Apprentices.

The woodworkers are the most highly paid: the rates given before the master said might be taken as representative of good average wages prevailing in the trade.

There is no Union: the good men will not join one if it were suggested & the bad workmen dare not suggest such a thing.

There is no busy season & all men have regular work. Overtime is looked by the men in preference to taking on more hands & the men voluntarily declared against an 8 hours' day.

The business is flourishing in 19 years. it doubled in the first 6 & has since doubled itself again.

Shifting: a woodworker will sometimes shift to metal working but it is impossible vice versa.

1891. a very busy year.

1892. s. still busier with the exception of a few weeks just before Xmas.

Apprentices. these are taken with a premium for 7 years. They work very hard for themselves but not enough for their masters. An apprentice will devote himself to perfection

4 will not press himself to think of the pockets of his master.
Workhouse boys. are generally taken on in preference to Apprentices for they can be dismissed if they do not work for their master as well

We say we pay the men according to their ability, the men say we pay them as little as they will take.

Other Houses in the Trade.

Will give info on making Master's name.

- Gray of Maddox st Regent st.
- Leavis. George st. Easton Sq.
- Grossmilk. 175 Fleet st.
- Flanklow. 101. Shakespeare rd Brixton (maker of abdominal belts).
- Ferris. 28 Great Russell st.
- Whiting. Broad st. Blenheim Sq.

These are all actual makers: Whiting is a chamber master

Hours of work 54 for time workers.

Hours of work.

Divisions of the work.

Wages & hours.

Busy & slack season.

Regularity

June 20th

S.H.S.

F. Dutton, scientific instrument maker & opticians,
142 St John Street Clerkenwell Road.

The work is divided into.

- | | |
|----------------------------|-----------------------------|
| 1. Scientific instruments. | at 9 ^d per hour. |
| 2. Spectacle makers. | .. 8 ^d .. |
| 3. Thermometers " | .. 8 ^d .. |
| 4. Barometers .. | .. 9 ^d .. |

A working week consist of 55 hours
Busy & slack season.

Busy from Oct. to June. ∴ people wish ^(scientific) to work: they need spectacles: there is less light & generally prefer to pursue serious scientific studies in winter time, & magic lanterns.

Slack in the summer when people are out of doors & have light.

Regularity: 90 pc have regular employment & could have a full 52 weeks work in the year but besides the usual Bank

holidays the men will stay away 2 to 6 days at Xmas & Easter: no complaints are made at this because they are so difficult to replace.

Threat. is 10 per cent get 5 days a week all the year through: there is work for them for 6 days but they are generally drinkers: a man who drinks can never be so fit for his work the next morning. Glass blowers generally suffer from this failing, they get good wages & generally drink.

Shifting. men do not shift: the very best workmen generally could do some work other than his own specialty but the other men do not like it & laugh at any one who attempts another branch & consider it to be unfair.

Trade. was good in 91. & has been getting better ever since, Mr Denton believes in placing himself well before the public & has succeeded in making his business grow through this means (he made no special reference to the special excellence of his goods).

Shifting.

Trade in 91.

Apprentices.

Healthiness.

Glassblowers.

To make a thermometer.

The workshop.

Apprentices. The business is taught & recruited by this means. Mr. Datta will not now take apprentices with premiums, they consider themselves as above the other workmen & consent to earn errors only as a favour. Errors boys are taken at 14 years & after being employed as such are put to work in the shop.

Healthiness. There is nothing unhealthy except the dealing with the mercury. Men get the 'mercury jumps'. Mr. Datta said it came from drink & mercury & that ^{the lead} mercury alone was not very unhealthy in itself.

Glassblowers. generally drink: they are employed in making thermometers; The long glass tubes are sold by the glass maker with the small hole down the middle; the end is heated & melted, another piece of glass is melted on & then blown to make the bulb; the whole is then heated & put into mercury which fills the tube of itself.

The shops were very ~~ex.~~ glass blowing shops wh. were
dark

Division of work.

Hours wages.

Very regular work.

Busy & slack seasons.

& team.

All men work a time &
are unwilling to work on piece.

June 20th

Sat.

Casella. scientific instrument maker to the
Admiralty. 147. Holborn Bars. an
introduction from Mr Horace Darwin.

The work is divided into

1. Meteorological.
2. Surveying.
3. Optical (not spectacle).

The men earn from 25/- to 50/- per week.

They work from 8 AM until 8 PM.
an hour being taken for lunch & nearly
as much for tea.

& from 8 to 1 on Saturdays
making 58 hours per week.

Regular work for every man who is willing to
take it: men will take 4 or 5 days at
Xmas & Easter.

The winter is busy for serious work: people like to
return: tourists & mountaineers make this demand.
Slack season after Xmas & spring in which
work is done for stock.

Shifting electricity

Many great masters.

Against premiumed apprentices

Trade in 91

Work confined to London

Effect of present Govt:

Shifting. Some men go off to electrical work for which they are fitted.

Garret masters. much is done by these who are often old hands who have set up by themselves.

Apprentices. never taken but one with a promise & will never do so again.

'Apprentices must work for me, I am not here to do everything for them.'

Spring 91. fairly good: since then worse the Basing crash affected a great many of his customers.

The business is entirely recruited by apprentices, high class work is confined to London: is 3 parts an Italian: used once to be an industry largely carried on by Italian masters & men (cf Negretti & Zambra).

Men have been much upset by the present Govt: & rather lose their wages than vote against Wey. 'that wicked old man who was leading the country to destruction.'

Was friendly but did not show me over his factory.

with orders to explain every process.

range finders explained why he begged that nothing should be written about them. He is the only maker to the Govt.

Mr. Hicks was for many years with Casella. On his entry the whole trade was monopolised by Italians. Negretti & Zambra were practical men but who did not make, but had set up retail businesses all over London.

On his entry he had to sign a paper saying that he would never work at more than 1 branch; but as this was signed among foreigners for foreigners was the trade gradually passed to Englishmen he disregarded it & perfected himself in every branch; he now has the largest business in London. All his men have 52 weeks work. There is no shifting from one to another dept. The best men on the boys he train in his own shop.

July 20th

J. J. Hicks. 8-10. Hatton garden. ^{Barnet} ^{the market?}
maker. an introduction for Horace Darwin.

Mr. Hicks was at Chicago; his ^(Mr. Abley) manager saw me instead. Men work from 50 to 60 hours at wages varying from 6^{1/2} per hour to 1/-. There is no shifting from branch to branch. The best work is done in London.

A very few garment makers work for them.

Business when ^(in Dept.) hospitals open or during a war & especially during the influenza.

Does gov't work.

Will not show me over shops in absence of his maker.

July 26th

Mr. Hicks will fill in employer's form & send details of wages & hours for 2 given weeks.

He has no busy or slack season.

All his men work on Time, he will not allow any piecework; such care is necessary.

Sent a man into the all round the factory.

Apprentices

Ask a regularity?
shifling

Foreign & English work

- Regularity
- Shifling
- Age
- Clubs
- Rents
- Overtime Rate

Men w^d like to work all night if they could
Busy season each Oct. when hospital opens.
Paet ... news, can work for stock.

Business recruited by former apprentices: spoke agin
them, are paid 18/- in their last year & will
not work beyond more than 10/-: the week
after they are freed they will work worth
46/-

Emp. 400 men in Aldersgate St.
30 Station Garden

Winter is rather more busy than summer: very busy when
there is a war.

Foreign work is not nearly so desirable: admitted they
w^d import a great deal if they were allowed
by law to put their name on it.

^{the firm} said to import a great deal & not to do the
very best work, they certainly did not seem to have
really enough men ^{to work} to keep this stock going.

Workshops. good & airy.

Spagnolatti & Crooke.

Various branches:

Wages & system of
giving out work on
piece.

June 21st

G. H. D.

Spagnolatti & Crooke. Goldhawk Works, Goldhawk
Road, near Shepherd Bush station.
Electricians, railway (electr.) signal makers.

Divisions. Fitters: Turners: Brassfinishers: Carpenters
Polishers: Lacymen: stcoatwinders

Wages are paid by the piece.

In being given a job a bargain as to
the price is entered into by master & man
& the agreement is signed by either side.

A man has two ratings in the firms
books: 1. as to piece work 2. as to time work
Thus he is put down as 8⁰/₁₀₀ per hr. time & 10²/₁₀₀ piece.

This means that when he is working on
piece ^{his money} ~~work~~ will be paid him at 10²/₁₀₀
per hour.

If he takes longer hours than the contracted
price allows of, to finish a job then there
will be a balance against him, if shorter
then there will be something over in his
favour

System of piecework
& plus.

Time work only for small
peculiar jobs.

eg. A man is given a job & the price agreed
is say £7.10.

He is rated at 10^d per hour on piece &
this sum is paid to him before the com-
pletion of the job. If he completed the job
in 180 hours he would have no balance
either way: $10 \times 180 = £7.10$ but supposing
he can get it done in 150 hrs. then he
w^d only have been paid $150 \times 10^d = \frac{1500^d}{12} = £6.5.0$.

but he contracted to do the job for £7.10.
so there is a balance to be paid him of $£7.10 - £6.5.0$
= £1.5.0.

Again supposing he took 200 hours he w^d
still be paid his 10^d an hour during the
work: but $200 \text{ at } 10^d = £8.6.8$: so that
there w^d be a balance at the end of
 $£8.6.8 - £7.10.0 = 16/8$ & this he w^d have
to return to the firm.

(There was only one man on the books who was
considered worth 8^d at both time & piece)
Time work is only given when a peculiar job for
a particular thing comes in.

Men on piece will
work such irregular hours.

Shifting.

No seasons.

Apprentices.

Rents in the neighbourhood.

7/- per wk for 3 or 4 rooms.

A man who was called up (2. VIII. 98) said
that he rented his own house of 9 rooms
let 5 of them & credited that the rest cost
him 7/- per wk. rates & taxes included.
Gave further returns.

Men refuse to begin before 7.30 AM factory can be open until late

Y All men have regular work if they wish for
it but the difficulty is to get them to come in.
The work per day was most irregular as shown
by the books.

The normal time work week is 54 hours
but in this shop men wd work all hours
from 20 to 60 per week as it suited themselves
wd not work at all one day & then do
a double amount the next.

Y Every man loses on an average 4 hrs a week.
They are difficult to replace, are skilled & know
it.

Shifting. As they are all handy men they do shift
according to pressure in different departments,
with few exceptions.

Season. There is no busy or slack season: it depends
rather on the condition of trade.

Apprentices. Work is taught to apprentices for 3 years.
They are paid for at 2/- per hour.
after 3 years they are called 'Improvers' & work
for 4/- or 6/- per hr.

Men who understand machines can soon pick up the
electrical part.

Die young.

Irregular work habits.

Irregular earnings.

They do work for GWR. & CNR.
men are replaced by advertising for others.

Pressure.

There is also an outside gang of men
attending to electric lighting paid about 7 or 8' per
hour for 54 hrs.

Evils of piece system.

Age Men do not live very long - there is nothing
much that is unhealthy in the trade.
but the men drink & generally die in poverty
or from paralysis.

23 | Though earning good wages, not one of the men
saved, their work is irregular & so are
their habits.

The one regular man in the shops worked
48 to 50 hours per week & earned £4 6s. 8d.
regularly (over a period of 3 mths).

The earnings of the rest varied from 9/6
17/ 2.10. 3.10. & even 4. There were instances
of one man having earned these different
sums for one week's work, according as he
had taken holiday or closed.

There was a great air of pressure in the shops
which were tight & healthy: the work
had to be up to a certain standard but was
never above it. Many of the benches were
empty.

All the evils of the 'piece' system seemed rife.
Mr. Cook was extremely obliging: had out all his books
allowed me to see them & will send the years earnings
for 6 chosen men (2 bad 2 medium 2 good). & offered any
further help in his power.

Crompton & Co.

The wages will be accurately
sent in about a week.
These are given for memory.

Branches of work.

Machine men.	24/-	to	28/-
Fitters	26/-	to	34/-
Labourers	18/-	to	20/-

June 22nd

S.H.D.

Crompton & Co. The Arc Works. Chelmsford.
Electrical engineers & apparatus makers.
was shown round by H.L. Colman, pupil.

Divisions.

Patternmakers. (few emp.) supply own tools. (56/- 58/-)
Carpenters.
Gun metal founders. piece work.
Fitters. (30/- 33/-)
Armature & former makers.
Instrument makers.
Engine drivers }
Labourers } -20/-
Apprentices.
Pupils.
Machinemen. 26/- 28/-

He employs about 300 men & pays them at the
same rate as in his other works.
Season. There is one. business depends on general
trade. Things will be very slack & very

Hours.

Shifting.

Training.

by the firm tries to keep orders back in order to fill up slack times or work for stock.

Hours. 54 per week.

6-8.15 : 9-1 : 2-5.30 :

leave off at 12 on Saturdays.

Overtime is worked to meet extra demand: new men are not always to be found in Chelmsford.

Shift. men do shift: a fitter will be able to turn his hand to almost any dept.

Training. by apprentices for 5 years at 5/- per week. Pupils who pay £50 for 1 year & 300 for 3 years.

They are all skilled men.

The shops are large ranging to the whole process of making motors: generators is carried on in the shop.

The gunmetal founders work a piece at so much per pound of metal cast.

Henry Crouch. Optician

Divisions

Framers

Turners

Glass grinders

Hours & wages

Winter business

June 23rd & 28th

G.H.D.

H. Crouch. microscope & magic lantern mfr
86. Barbican. EC. on an introduction from
Horace Jarwin.

There are only 4 or 5 big houses ^(H. & K.) in London
& 1 in Birmingham.

Germany is the chief maker, turn out very
good work.

Divisions

1. Framers. 2 Turners. 3 Glass grinders

Framers earn - from 7^s to 1/3. lowest & highest.

Turners. 7^s to 10^s.

Glass grinders 7 to 1/3 1/4. per hour.

54 hours per week : & all work on piece.

7 AM to 6 PM in summer.

8 7 winter

with 1 1/2 hours for meals.

Busy & slack. Summer is slack owing to the long
vacation. July & August the men are ^{on} great
holiday short time. The foreign demand
helps the slack season from being very slack.

Shifting.

Trade.

Mr. Couch w^d make masters combine
not let men continually raise wages: only
1 man in his employ belongs to Union.
His father was a tank maker (will give introduction
to tank makers).

Training

Offered every assistance, will send actual earnings
of chosen men. refer introd to Pickard
& Curry opticians.
London is center: a little cheaper work
done in Sheffield.

Employers about 37 men, whom can be
sure of regular work though they must
work short ^{time} & overtime in winter.

Shifting. a great many have deserted to the electrical
trade. when they get paid higher wages for
less skilled work.

Others are taken on as gunsighters & rangefinders
at Woolwich or Enfield.

Trade was good in 1891. but is very bad now. Microscopes
are objects of luxury. They are very well made in
Germany & more cheaply. There men work because they
are poor, here men are lazy: they are rich. The
workman is being ruined by high wages & recreation,
he likes to work in the morning & play cricket in the
afternoon. Consequence is the trade is leaving England
& will soon exist no more.

Training. does not favor premiumed Apprentices: taught by
Apprenticeship for 5 or 7 years a minimum of 5 necessary.
Highest skill required: work to the 1000th part of an inch is
required.

Chambermaster: not so many now as formerly: trade slightly
expanded 20 years ago: men used to drink but now are
sober, wonderful change in his lifetime.

Capacity depends on health wh. depends on regularity of life.

E. Parren - Chambermaster

Divisions of work.

Hours & conditions

June 23^d

G.H.S.

E. Parren. Surgical instrument maker.

1st Bowling Green Lane E.C. or an intro.
duction from Mr. Arnold (see page 1.)

Mr. Parren is a 'Chambermaster' or as he pre-
ferred to call it 'a wholesale manufacturer'.
He works exclusively for certain houses in
London.

Divisions of work.

Blunt & Edge work.

The steel is received in long steel strips
is forged & hammered & then filed up &
then polished.

Mr. Parren himself & 5 men & 6 apprentices
make up the establishment.

Hours of work. 54 hours for men & 52 for boys.

Conditions of work. The men work standing, at benches
each man has a vice in which the
article to be filed is fixed.

There are 3 rooms, 1 where the forging is
carried on with an ordinary blacksmith's
furnace.

Steel polishing.



polishing steel.

Regularity.

where the filing & edging of the tools is carried out & knives made & handles fixed. (Knives being made of aluminium^{platinum?} on account of its lightness.)

Polishing is carried on in the other room by boys sitting over polishing wheels: it is only when using the dry wheel that there is dust which is very unhealthy, this is seldom used & not for more than 15 min at a time (though there are men in Sheffield who never do anything else all their lives & seem to get inured to the work).

The polishing wheels are of different hardness they are covered with a mixture of emery dust, wax & tallow, melted together which form a fairly hard cake when cold, this cake is rubbed against the wheel before polishing begins.

The final high polish is put on with a soft wheel & crocus powder.

Regularity. a man can here be certain of 52 weeks work, there are no seasons, the men get 2 weeks holiday.

Apprentices

the apprentices go through every branch of the work ~~work~~ for 5 years as such they then set up for themselves or seek ^{work} apprentices as men elsewhere.

Mr. Perren had so much work that he could not answer questions but let me look round.

He has promised to write answers to employes for & send the total earnings of his men for a year.

Answers recd July 10.

Wages. av. \$2.5.0 per wk.

Regularity. Trade as a rule regular. July & August are sometimes quiet, Surgeons getting out of town. All have regular work.

Trade much better in 1911

Lads are apprenticed: much skill required.

.. .. for 6 years but it takes

10 or 12 years to make a skilled workman.

Age. Men go on until 70. Two recently over 80 years of age.

W. Slings.

Employees & wages.

Hours of work.

Holidays.

Regularity.

June 26th

G.H.D.

W. Slings. chief electrician to the Peoples' Palace
Mile End Road: 65 Chesham St. Clapham.
Engineers in charge. at 57/-
Driver. 35/-
Firman. 32/-
Boy 20/-

This is the staff & wages paid at the Peoples' Palace.

The Driver & Firman are paid extra for 5 hours on Sunday or 4/-

They also work $\frac{1}{2}$ day extra per week at cleaning boilers, making altogether 7/- + 5/- above the given rates: thus the Driver earns 42/- & the Firman 37/- per week.

Time: 9 working hours per day, in reality rather less say 8 $\frac{1}{2}$ -. The men take it in turns to have 1 hr per week off.

Holidays: fortnight for each man who is paid just the same as if he was doing his work.

Regularity: Regular employment. all the year round though there is less work in summer than

The different branches
at a central lighting station

Shifting & Trades Unions.

31.
in winter. The busy time is when the nights
are longest & there are fogs in from Michael
mas to Whitson.

At a general lighting station the work is
divided as follows.

Engineer

Assistant engineers (3 or 4) to take the shifts in turn.
Dynamo attendants or Switchboard men.

Drivers. from 35/- to 45/-

Fitters. from 25/- to 30/- average 28/-

Wiremen. from 5/- per hour (out doors).

Boys (Greasers).

The trade is chiefly recruited from engineers who
soon learn the essentially electrical part
of the business.

Shifting & Trade Union men who can hardly see & do
shift but the unions deprecate the practice.
eg. a mfr. would rather have a good
carpenter & a wireman ^{& fitter} to do the whole
of one room but the union wishes there
to be fitters also although a carpenter c.
often manage without one. The union try
to prevent men from following more than

Condition of trade.

Pupils

Dividends paid out of
premiums.

Condition of Trade. The trade is suffering from a period of hesitation following on one of glut: people have raked it having electricity in their houses there have been many failures, now they are hesitating.

Pupils from large firms are now swamping the trade, pupils pay for a year & more to learn the business, & still worse, pupils from Technical schools (in Finsbury place). They know a great deal of theory but very little practice.

Before receiving one of these you must find out where he comes, all depends on the character of the training shop & whether he has been put through every branch thoroughly or only kept at one particular part. Crompton had received more from pupils than he paid out as dividend last year.

Mr. Slings gave an introduction to Mr. Dobson of the St James' & Pall Mall Supply.

Horace Darwin
Scientific Instruments.

Hands wages & hours

Regularity.

How trade is taught

June 26th

Information supplied by Horace Darwin. The Grove
Cambridge in relation to the Scientific Instrument
Company at Cambridge of which he is the
head.

1 man	at	10 ^s $\frac{1}{2}$	
1	"	10 ^s	men paid by the hour
1	"	9 ^s	for a full week of
3	"	8 ^s	54 hours.
1	boy	6 ^s	
1	"	5 ^s	
1	"	3 ^s $\frac{1}{2}$	
2	"	3 ^s	
1	"	2 ^s $\frac{1}{4}$	
1	"	4 ^s	per week.

Very little variation from season to season no definite cause can be given.

Regular work all the year round

When men leave us they usually go to other instrument
makers but sometimes they get employment in other
similar trades.

Trade about the same before & since 1891.

Boys come between 13 & 15 at 4^s per week, cleans up

the shop + does what he is told ; after a year or 18 months he is put to the bench & begins to learn the trade.

After the age of 20 the boy will soon be able to get from 7¹/₂ per hour or more according to his skill. When the age of 19 is reached we pay from 5¹/₂ to 6¹/₂ per hour.

Few men older than 60 will be found in instrument making shops.

William Pyc. Scientific Inst.

Wages.

Regularity.

Shifting.

June 26th

Communicated by William Pyc with reference to the manuf of scientific instruments in London where he was for long engaged, before becoming acting manager of the Cambridge Co where he now is.

Wages. vary in diff^t establishments according to the class of work turned out by them.

In many where a cheap & common quality of instruments is sold wages w^d be as low as 6^d or 7^d per hour, the hands usually being youths, Improvers, Old men, or men lacking in ability.

In good shops 8^d to 10^d w^d be paid & in many cases piecework w^d command it.

Regularity. In many shops the work is very regular employers not mindng a fairly large stock of goods as stock, other branches such as Telgr. Instr. makers make but little stock, consequently trade varies as Contracts are plentiful or scarce.

Shifting. In several branches of the trade there is a continual changing about. Among Telgr. Instr. makers particularly so, governed by where Contracts are placed, but in some establishments

Training

Apprentices

32

36

where a more general trade is carried on men sometimes spend their whole lives in one Firm, this however is much less frequent than formerly.

Training. This has undergone great changes of late years influenced probably by the introduction of machinery more & more into the trade, hence the difficulty in finding good all-round men. Methods differ in most shops, boys who should be getting a progressive training in the ^{various branches} ~~most shops~~ are kept at machines or only employed in producing one kind of work, hence only the precocious & the fortunate attain to any degree of efficiency.

How taught Apprenticeship used to be always the absolute rule but scarcely exists at the present day. Intelligent boys are usually secured & work for a comparatively low wage for a few years in lieu of paying a premium as with a bonded apprentice. To do some of the ~~preliminary~~ parts of the work requires but a short time but I should say life itself is too short to learn all there is; a person can not be very accomplished with less than 5 or 6 years experience.

Age at which capacity
is lost.

57.
Have known & still know a few men of 65 & even 70
still at work but men of 60 are a rarity
whether that is from loss of capacity on the
part of the man or from a desire among
employers to secure the youthful & energetic I
cannot say. Suffice it to say old men are an
exception in our trade.

W. T. Goolden.

3 Divisions.

Electrical Instrument makers.

Hours & wages.

Regularity

Shifting

Trade.

June 27th

W. T. Goolden. electrical Engineer. Woodfield,
works. Westbourne Park.

- Divisions
1. Electrical Instrument making.
 2. Electrical Engineering
 3. Electric Wiring

The Electric Instrument makers.

earn. 9^d per hour time work.
10^d hr^d . . . piece. } 54 hrs.

Regularity Work is fairly regular. There is perhaps a variation of 30 pc between highest & lowest. All men have practically regular work the whole year through. The slack times are met by not letting the men come to work before breakfast. Some of the lazy ones even prefer it. There is very little overtime.

Shifting. Men do not either from master to master or from job to job.

Trade. about the same in Spring 91. as compared

Training

No age

Electric Engineering

Wages & hours.

with before or since.

Training. Most of the men have been apprenticed in the Clerkenwell clock & watch trades. There is no regular system in the trade of apprenticing or training.

Some of the work is very fine eg. a Curlew Voltmeter needs jewelling like a watch.

The Trade is recruited in a very irregular manner by lads gradually picking it up. A workman's son is taken on or an errand boy who has shown himself to be a sharp lad.

Age. The eyeight in the finer branches no doubt is strained but there is nothing in the trade itself to determine the age beyond which a man can hardly continue to be a good workman.

Electrical Engineering

This is practically mechanical engineering & the men employed are & would call themselves mechanics.

Wages. 8½ per hour. For 54 hrs per week.

over time 1¼ for 1st 2½ hrs.

Double time on Sundays & holidays.

Regular work.

Shifting.

Trade in 1891

Training.

Electric wiring iii

Wages & hours.

Work is steady the trade being now under going expansion & all men can get regular work.

There is a great deal of overtime at times.
Shifting: There is not much either from master to master or from job to job: a good engineer will have been through the whole shop & will be able to turn his hand to most parts.

Trade. Busy in 1891. & still so, though not quite so brisk as then when everyone was rushing at electric light.

Training Apprentices bound from about 16-17 years of age to 21. The skill required is about the same as that of an average fitter or mechanic.

Healthiness. Nothing to affect a healthy man.

Electric Wiring

is for the wiring of shops & houses. This is an outdoor trade.

Wiresman 8^d to 9^d

Wiresman's labourer 7^d - 8^d per hr.

Very irregular work.

Shifting.

Good Trade in 1891.

No system of training

Not skilled

This is a very irregular Trade due to season, when houses are occupied or not. Shops will wish to have their light arranged in August & Sept when there are fewer customers about. Houses must either be wired for the season or the winter generally for the former.

Mr. Golden gave as an opinion that 75% had regular work, the rest wd often be out for a month or two at a time.

Shifting. men shift constantly from one contractor to another, as masters will go to another & say 'Will you let me have some men for a month after that they shall come back to you.'

Trade was good in 1891 & has on the whole been increasing.

Training. There is no system of training, a wireman's labourer gradually picks up the work & becomes a wireman. No great skill required, is more than that of a plumber.

Age. Are not affected.

Some opinions & remarks
of Mr Golden.

Against overtime

Mr Golden. was very friendly. knew of Mr
Book's work & said he thought that
most employers must be waiting eagerly
for a book of this kind.

He will send the actual earnings for a
year of 2 men in each dept.

He had tried to introduce an 8 hours
day in two shifts instead of a 9 hrs. one as
at present. [so on Chelsea Eng. Supply Co. was refused].

Now the men come at 8-9. 9 to 9.30 for
breakfast. 9.30-1. lunch. 2-6.30.

He offered them the same wages for an 8
hours day. if they wd come at 9 having
had their breakfast, then work straight till
1 & again from 2 till 6. The men refused
saying it wd put out their wives so much.
Mr G. did not believe in the hour before break-
-fast.

He was strong against overtime & wd not let me
of their own choice work more than 60
hrs. on piece. One man had worked 90. He
week before was going to be sacked for it.
He said he had found by experience that

36
Is a fair wages clause.

The County Council &
effect of the Fair wages clause.

43.
the output was greater for 3 weeks after overtime had been started but that after that time a 10 hours day produced no more than an 8 had done before.
He showed papers which had been sent him by the Electrical Trades Union saying that they considered that he paid fair wages & asking him to tender for the County Council who were putting up electric light.
He refused to do so as he said he had tried before, when the job had been given to a firm who notoriously paid the lowest wage & who only raised it in certain branches in order to get the contract.
Another time a contract had been placed in Birmingham where the Union rate was 10^s in hour: here it was 7^s 8^d.
This is what the 'Fair wages' clause comes to in the County Council's resolution which they passed not long ago.
Now Mr Golden refuses to tender for this work.
He has made a specialty of electric pumps for mines in S. Africa.

Harvey & Peck

Time & piece

June 27th

S.H.D.

Harvey & Peck manufacturing Scientific Instr.

56 Charing X Road. WC

Seasons. Winter for the schools: summer is
slack though foreign orders in March
help to tide over.

Works both on time & piece.

Recruited from philosophical instrument makers

Was very unwilling to talk, but will consider the
paper with his partner, & probably send the
actual wages of given men.

St James & Pall Mall
Electric Lighting Co.

Divisions

Engine Room.
Out door Staff.
Main Staff.

Wages & Hours.

June 29th

G.H.D.

Mr Dobson Electrician in charge of the ^{James} Pall Mall
Electricity Company. Cursey Street. Golden Sq.
& Mason's yard. Duke St. James. on an etc.
ductin fr. Mr Slingo.

The two functions of the Company are
1. the Generation of Electricity
2. the Distribution

Divisions.

1. Engine Room Staff.
2. Out door Staff.
3. Main Staff.

The Engine Room staff.

Leading Drivers . rated at 40/- for 54 hrs but
actually earn £28.0 to £2.12.0

Assistant Drivers rated at 35 but earn 38/-

Engine cleaners. 6/- per hr.

Machine cleaners. 4/- 5/- 6/- per hr. (boys).

Boiler Room. Leading stokers 32/- but earn 35/-

Trimmers.

Leading Filtes 50/-

Ordinary " 40/-

The outdoor Staff

Main staff.

Regularity.

52. wk work incl. holidays.

Overtime.

Outdoor Staff. do make connections with the main for House work & read the meters.

Foremen 60/-

Inspectors 45/ 30/ 20 25/

Carpenters 9^d per hr (Union rates)

Wissmen 9^d 9^d

Wissmen labourers. 4^d 5^d (Boys)

Main staff. for street work. 11 men in all.

Foreman 60/-

3 Service Layers. 7^d 8^d

Bricklayers 9^d (Union Rates)

Labourers. 5^d 6^d (permanent are 8^d)

There are 32 men on the station & the wages paid last week amounted to £99. 15. 11.

Regularity. all men are regularly employed, that is they get 52 weeks wages in the year. The Foremen get 1 weeks holiday & the lower men 4 days with wages. When necessary they work overtime & are down to 54 hrs some week in slack times. 62. 52. 55. 60. were 4 casual gangs read at

Trade in 1891 before & since.

Cost of light.

Competition

74

in the census as mechanics & not as electrical engineers.

Trade. in 1891 was very good said to be the only flourishing business at that time: It has been as good & better since. The Co pays 8pc & puts by 5000 a depreciation each year.

Cost of light. Customers are charged 6d per unit a unit ^{force for} is 16 lamps at 16 candle power for 1 hour burning.

For big customers (eg clubs) the cost is 5d ^{or 4d}. In the last 5 years the cost per unit has fallen from 8d to 6d.

If you pay 3/4 for 1000 feet of gas you pay 5p for electric light: this is the ratio of price between the two.

In 5 years more the price of electric light will probably be 4d per unit.

Competition. The Electricity Supply Co of Deptford is at present trying to cut the prices. The work there is high pressure work is 2 to 4000 volts. The St James Co. is a low pressure at 200 volts pressure.

The efficiency of St. James
v. the Deptford Co.

How the cost per lamp
is divided.

49.
But their efficiency is only 40 pc.

The efficiency of the St. James is 95 pc.

Under high pressure system you have your
works in the country & save in rent you
send your current at high pressure to be
distributed at low pressure at diff^t stations.

The men are well paid: the rooms airy & new: the
work is hard.

The saving can only now be effected in increased
efficiency: many more lamps could be lighted at
no increase of cost.

per lamp costs. 5^s. divided into.

2 ^s - staff.
2 ^s - coal.
1 ^s - labour.
1 ^s - profit ^x .

^x including interest?

He has promised to make returns of actual wages
of given men month by month.

Sick men with a doctor's certificate are allowed half
rates.

Mr. Pige was a boy with Roy Bealy
was a man with Casella

What is usually understood
by Scientific Instrument?

June 29th

S. H. D.

In answer to questions sent by me to W. Pige
of the Cambridge Instrument Co. with exclusive
reference to the London industry of which he is
supposed to have a reliable acquaintance.

1. What is usually understood by Scientific Instrument?

"The term as usually understood in the Trade is the
production of such instruments as are used in scien-
tific research & original investigation & apparatus
used in teaching; it differs from Engineering in the
magnitude & quantity of its production but not
in its variety; it may be said to have had to do
with almost each & every scientific & mechanical
production — the sewing-machine was a scientific
& explains a mechanical novelty, the locomotive
again in embryo was the production of a scien-
tific instrument maker, but when any production
by its utility or some other cause assumes suf-
ficient magnitude it constitutes a trade of its
own: the two for instance I have named & many
others I do not mention, & they in their turn absorb
the best hands from the source of their own origin.

& continually make vacancies in the scientific Instrument
 trade that have to be filled up from outside in the
 shape of improvers or apprentices. The rule however
 is not inflexible. The Telegraph Instr. trade originated
 with Scientific Instr. makers & Clock makers but the
 line of demarcation is so thin they might be charac-
 .terised as one & the same thing although their methods
 of trade differ very much. - in this wise, Telegraph
 Instruments are usually sold in very large quantities
 hence they are contracted for by Employers who
 only make the number required when that is
 done there may be a slackness & discharge of hands,
 which as a rule does not follow so quickly in the
 old scientif. instr. trade because of the variety of kinds
 made & the necessity of the employes holding a fair
 stock.

Are they generally all made under one roof?

No, it has from the nature of it. Proprietors
 broken up into a variety of branches, one making a
 speciality of one branch & one of another, the sub-
 .divisions however in those branches are generally
 carried on in one factory but in diff. departments,
 & the general rule is to keep the various operations dis-

Are they generally all made under one roof?

From what other Industries is
the trade recruited?

Are there shiftings.

tinct, hence the difficulty in finding a good allround hand.
From what other Industries (if any) is this trade generally
recruited & are there other openings for men brought up
in this line & if so what?

This I find I have generally answered in No. 1. The
exigencies of trade make openings however for other
branches, for instance, in busy times the superior hands
from the clock & watch trades, light engineers, brass
finishers & in fact any clever man ^{accustomed} to lathe
& metal work might eventually tuck themselves into
the trade & if possessing ability soon forget the pit
from whence they were dugged.

In no factory in what branches are there or can there be
shiftings from branch to branch.

The nature of the answer to No. 2. will apply less.
I may add such changes even when they could,
do not happen, for instance I have never known a
glass grinder in a lens or prism maker to change over
to brass worker &c in a solitary instance which showed
great enterprise on the part of the individual & was brought
about by himself not by the employer whose aim
is when a man excels at one thing to keep him at that,
for as a rule every branch requires some time of training

Time or piecework.

before a person can excel in it.

Is time or piecework the more general?

In the original scientific but trade time work still holds but in some of the newer branches piece work obtains.

June 30th

S.H.S.

The Chelsoa Electricity Supply Co. Draycott Place. near
Stoan Square station - S.J. Chas. sec.

Divisions.

- 1. Engine Drivers.
- 2. Out door men.

Engine Drivers: earn 34/ 30/ per week.
 Fitter: 8 1/2 : 9/ per hour.
 Boilers: { Stokers. 6 1/2.
 { Drimmers. 3 1/2

These men work 7 days a week + 12 hour shifts
 They refused to work 3 shifts of 8 hours.
 In summer the work is lighter than in
 winter when overtime must also be worked.
 A great deal of overtime All time wk (exc. clearing time).

Out-door men for the mains & making joints for
 the houses.

A good wireman (who is also a jointer) will make
 7 1/2 : 8/ per hr. time

Hours - 54 . leave off. 1. Saturdays.
 All time work.

Divisions.

Hours & wages.

Out-door men.

House wiring is all done by contractors. There is no overtime rates. The men must & do not mind working overtime for the ordinary rates, except on Sundays when time & 1/2 is paid.

Regularity. Engine House. all hands are regular. get 52 week work.

The skilled wiremen are regular but the other men & boys are taken on as occasion requires.

The labourer gets 6 1/2 hr. Union rate wh. used to be 6⁰ until lately.

Shifting. no shifting in any branch ex. labourers.

Recruiting. Locomotive & other engine drivers for the engine house.

Accumulator attendants come generally from the boys engaged to help.

The charge here is 8^d per unit. if people w^d burn 8 candle instead of 16 candle lamps electricity w^d only be 50 per. dearer than gas in most cases it is 150 per. dearer.

There is no competition.

Regularity.

Shifting.

Difference of cost as compared
with gas.

Said that they could only just scrape along charging
8¢ per unit & that the Jones must be losing
heavily now that they only charged 1¢.
This is a low & high pressure station: current is
delivered at high pressure to some stations &
distributed at low, loss of 15-20% efficiency &
considerably more where batteries were used.

General want of smartness noticeable: Mr. Chas not
friendly & he promised to send the year's earnings of
1. Carpenter of Wisconsin of Filler: by in driver: Stokes.
Accumulator attendant.
Has sent return. (July 2nd).

July 30th

S.A.D.

Westminster. Elect. Supply Assoc.

Davies Street Station. Mr. Johnson chief Engineer
on an introduction from Mr. Chas.

Boiler, Engines, Switchboard were the the
departments at this station wh. wa the
largest Engine station of the Co but not
the central Station as far as books &
clerical staff were concerned.

Work is done on 3 shifts of 8 hours.
Every other Sunday is off. so work is then
done in two shifts of 12 hrs.

Engine room wages.

1. Drivers. 8⁰ hr.

2. " 7¹/₂.

Engine Cleaners. 6¹/₂.

Boiler room.

1. Stokers 7¹/₂ (can also drive).

2. " 7⁰.

Drummers. 6⁰.

Carpenter 9⁰ hour.

Divisions.

Wages per hour.

Seasons.

Regularity.

cost. 6^d per unit. perhaps twice
as much as gas.

Switchboardmen's duties.

Switchboard man. 9^d per hour.

Then there is a resident engineer with two
Assistants who are paid salaries.

Season. Sept. Oct. March are busy.
August is the slackest.

Regularity. work is regular for all hand all
the year round. There

Switchboard men are the only ones who would
return themselves as especially electric.
The other men would be as mechanics.

Good drivers are also fitters. They generally come
from locomotive driving.

There is at the central station (Euston Place S.W.)
a Mains Dept. Meter Dept. & Wiring Dept.

A switchboard man has to regulate the engines, he sees by
his regulators what pressure is on, if a shop suddenly
turns on its lights pressure goes down & the
switchboard man has to see that another engine
is ready to keep up the guaranteed pressure.
He was v. friendly sent me on to the central office.

Croach's works.

Women belong to Union.

The Busy months.

German competition

Glass grinding

July 5th

Mr Croach Works. 56. Barbican.

Mr Croach & managers were both out so I was taken round by the foreman.

None of the men belong to a Union.

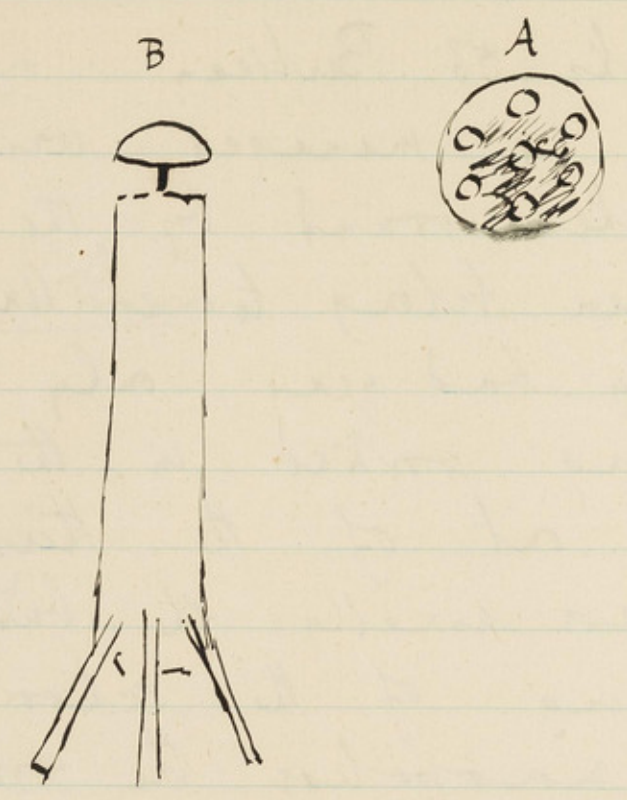
This is a very bad year only 26-44 hours are being worked in the week & only 16 men out of the thirty are employed.

May & Oct. are usually the busy months for the opening of the schools.

Germans now monopolise the greater part of the microscope work, there is a fad in the favour shown them, they are well made but even more expensive than English made goods.

The Glass for the making of the lenses all comes from Germany where the Govt gave a grant in aid of the experiments which led to its discovery.

Glass grinding is all done by hand, the rough glass is first cut to about the shape required & then roughly polished



The rough lenses are then fixed in pitch on the inside of a hemisphere which is then rubbed continually over a brass tool until the desired polish is obtained.

CC. are the lenses fixed in pitch in the hemisphere A which is then rubbed over the stand B.

Lubrication is done by spitting + oil + earth.

Barry & Paxton spectacle makers. 195. Great Portland Street. W.

On an introduction for Mr. Croach.

Will send in wages form for whole no of hands employed.

was very busy. will be there on Tuesday.

11th July.

Conrad Beck microscopes & photographic.

Employs. 100 men.

27. vii. 91. At their workshops, Kentish Town.
Machines here do all that most shops do by
hand. Mr. Beck thought that the surface of the
metal was just as good if it was well hammered
before being worked on. Machines worked more
truly: every ^{part} instrument was tested by foremen
before being accepted.

The glasses for photo & microscopes were tested &
given back if they were not true, the men always
accepted the master's decision though all work
was strictly on piece.

The factory is open for 55 hours in the
week. Work never falls below this & very
seldom is extra time allowed.

Works on time & piece.

A man may not work more than
10 hrs per day except as an exception.

July 7th.

G.H.D.

Conrad Beck Microscopic & photographic Insts
maker. 68 Cornhill on an introduction
from Theodore Norris.

He employs about 300 men of whom about
half are glass grinders.

The rest are brassfinishers & cabinet makers.
(3 women & 5 boys) are also employed.

There is always a busy season for the opening
of the schools in May & Oct.

In the summer there is a demand for
Photographic cameras of which they
make a specialty.

Summer as a whole is slack to winter
which is busy.

In summer they make for stock so
that the men are continually employed.

Most work is on piece: some work time &
piece & some on time work only.

Taking the whole factory including women &
boys \$160 was last week's wage for the
100 men

Busy Time.

Slack.

A Small trade.

One house busy while another
is slack.

Generally work for all.

All men can ^(this year) have a full year's work if they wish it, many do not care to work a whole week, can earn enough in 5 days & take a holiday on the 6th one man had been content to work only 2 days but he has now been sacked. In slack times a certain number are turned off. The time is not shortened all round unless it appears that the slackness will endure 8 years ago slackness was met by reduction but this is no more the case. The Trade is so small (there are probably no more than 200 glassgrinders in all London that one house may be busy while another is slack; (this is now the case Beck is very busy & all others are very slack). But generally the whole is busy together eg. 6 years ago when everybody rushed at photo cameras. There is generally work for a good man, the longest time that Mr Beck had ever heard of a man being unable to get work was last Xmas when some men were

Shifting from microscopic
to photo lens work.

Trade in 91.

Effect of hitting public taste.

Business is taught to lads.

out for 6 to 8 weeks.

Shifting. A certain number of the men are trained especially to grind both camera & microscope glasses. These turn to me or the other as each Dept is busy or slack, otherwise men do not shift.

Trade in 91. was very bad but has been better since & was better before. So much depends upon particular inventions suiting the public, now (July 1893) they have got a new camera of which they sell 50 per week at £5. This increases the receipts considerably.

It does not pay them to work out specialists ideas singly as is done by the Cambridge Scientific instruments Co for that takes up all the foremans time & he cannot attend to anyone else.

Business is taught to lads who come in at 1^d per hour, foremaned apprentice used to be taken but they do not work hard enough & now he will have no work. These boys are generally kept

Age

Drink

among glass grinders.

Foreign competition

There are 2 systems of apprenticeship in vogue of 3 or 7 years: with seven years a man expects to be put through every branch. Men work till any age, one died the other day who had been with the firm 50 years.

There is still one man at 75 who can earn from 12/- to 13/- at piece work & so keeps himself from the workhouse.

Drink is not so general as it used to be, Mr. Beck we rather like to speak on this point & not only say that they had gone because they turned every drinker out at once. It used to be current in the trade that a man could not be a good glass grinder unless he drank for they all spit to lubricate the lenses, but he did not think the belief was so strong now though the men still spat at their ^{kind} work.

Foreign competition he said the Germans had got in and did good work & cheaper because their labour was so cheap, but he certainly sold as many microscopes in England as

How to beat a German.

Garretmasters for
magic lantern work.

Said to be sweated

16.72

they did & declared that you could always beat a German by introducing machinery. Their labour is so cheap & the uncertainties of machines succeeding at first are so great that they wd not put any in. English labour is so expensive that it is worth while to run the risks for the increase in trade & profits that will follow & also :: if you don't it is no good your attempting to compete at all. The machinery once in & at work you can defeat a German.

Magic lantern work. is done almost entirely by garretmasters. The work is given out to some man who professes but is known not to manufacture them himself. He collects work from the diff^t small houses run by small men or families who get cheap lenses from Paris, fit them up, send them to cabinetmakers & again to a third man to fit the whole together. They work very cheaply & this part is always considered to be a sweated industry.

Negratti & Lambra do some of this work themselves.

Mr. Beck will make special return

July 5th

S.H.W.

Mr. Havor manager of the Fowler-Waring cable company will answer employers form & will make ^{special} return of all his leads (300) for a given slack & busy week & also forward some facts on the whole Silvestra & Woolwich industry of which his own is a representative part.
 Says he can let me have them by July 15.

July 11th

The Brush Electr. Co. will send special forms filled in within a week. & also employers form for each division of their work.
 Employ.
 Mr. Sellen, joint manager was unable to keep apppt. saw H. Sullivan instead.

C. H. Gray. Silveston.

Manufacture of India Rubber.

67.

July 4.

G.H.D.

C. H. Gray. manager of the Electric & India Rubber works at Silveston or an introduction from his father to whom I was originally introduced by Mr. Howard Darwin.

He will send regular answers to questions with reference to each of the 8 depts. & also the actual wages & hours for each hand in a busy & slack week.

India rubber. The India rubber trees are tapped & bleed, the cautchouc is collected in pans & then put into a vessel & smoked with the smoke of burning ^(?) areca nut.

It is then exported in large flat bars. In the manufactory it is first crushed between rollers & comes out looking like a large & frothed tree fungus. It is then put through more rollers & sulphur & other things are pressed

Vulcanised rubber.

Waterproofing.

Tubing.

Jennis balls.

Is lubricated by water.

into it & the different qualities of rubber are produced.

Rubber to be vulcanised is submitted to the action of steam.

To make India rubber cloth the rubber is pressed through rollers going at diff. speeds into stuff.

Tubing is made by wrapping cloth round a long rod made of leather & then pressing rubber round it by mach.

Jennis balls are made in moulds, a large lump is left in one side, they come out of the mould squashed, they are then pierced in the lump, filled with air when the needle is taken away the lump closes of itself.

Rubber is lubricated by water, the whole system seem to be in mixing it with foreign bodies by means of crushing rollers running at diff. speeds.

A great number of women & boys are employed. the machinery was of the newest & chiefly worked by boys.

Men v. women.

Cables.

Braiding.

German competition.

Men v. women. women earn about 17/- per week. men double that amount often for less work result.

It seems unfair but the rate of 17/- will command any number of women. They were tidy & looked very respectable. There were cases of Father, mother, son & daughter being employed, the manager encouraged this.

Men & women worked together.

Cables. made entirely by machinery the gutta percha is poured on & the different sized wire bound on ^{the same} by machinery.

Braiding wire. by machinery tended by women, very noisy.

The competition of Germany in making gutta percha stoppers has been destroyed by the introduction of stamping machinery. The German still work by hand, they have not suff. capital to be able to run the risk

200 millions of soda water bottle rings were turned out last year, special machinery for stamping them with owner's name.

72.11

July 12.

S.H.W.

Krohn & Seaman, surgical instruments maker to
the Labor Hospital - Mile end Road.

Wages. run from 36/- to 50/- & 6/- shillings per wk
The highest paid are those who can make
eye instruments.

Most work is done on Time, there is not sufficient demand
in turning the instruments needed to enable much
to be turned out on piece.

Men work from 7-7 with 2 hours for meals.

Divisions. Edge workers.

Blunt ..

Brass workers.

Deformity.

Artificial limbs.

There are no seasons: the influx of new students in
October makes a slightly greater increase in the
demand for dissecting cases.

Trade is bad now was much better in 91. People
now go for the commonest operation to specialists
or hospitals according to this means what
before the family doctor or local practitioners

Wages:-

Time work.

Divisions:-

Trade now bad with reason

||

11
Regularity.

Drink.

Shifting.

Training

Workmen travel much

14

71
sufficed. There is not therefore so great a demand as formerly.

Every man in their employ gets 52 weeks work in the year, unless he of his own accord takes a day off after a drink.

Drinking is not very bad but is the same as 10 years ago.

Shifting. There is very little either to or from kindred trades, cases occur but they are exceptions though the men are perfectly fitted to do electrical work.

A blunt worker will sometime try edgeworking but not often.

Training by apprentices in their West End houses though they have none in the Mile End road. for 7 years.

There is nothing unhealthy & men live as long as their constitution permits.

The men are great travelers & go from Paris to Berlin ^{Breslau} with ease, they go in search of the new dodges employed by foreign surgeons. They meet men out there & recommend them to houses in London. Their good propitiation

Great many Chambermasters.

Competition, provincial otherwise

of the men in London are foreigners. French, German & Italian

Chambermasters do much of the work for the big London houses, as many as 50 in London alone working entirely for wholesale houses. Those workmen who leave their shop generally become chambermasters, & hardly ever touch the retail trade.

Competition - a good deal of German work is imported & most houses have some in order to be able to satisfy those who insist on very cheap goods - Sheffield supplies most of the scissors & heavy blunt work.

London is the centre for the finest work. Each house in London generally has its own speciality & supplies the whole trade. Each hospital does not of necessity have its own privileged maker but generally gets the ordinary goods from that maker which gives receipt.

In the Deformity Dept there is always somebody to go round to the hospital & see patients & suggest how their wants can be met.

Jack: Logical Instrument maker.

Chambermaster.

All piece work.

Each man works his
job throughout

July 13.

S.H.W.

Jack. 200 Goswell Road. Logical Instrument maker. on a card from Krohn & Co. man.

Does blunt & edge work, chiefly Blunt.

He is a chambermaster working with his two sons and an apprentice for, Thaw & Thompson & Down & for some else.

All work is done on piece & this is the rate throughout the Trade.

A fair blunt or edge workman can earn 40/- 50/- per week.

Hours of work are from 9-9.

In big factories they are from 8-6.

Work is very regular they have always as much work as they can do.

There are no seasons.

Each man in the shop - he said in most London shops. took a piece of steel forged it & worked it throughout doing the polishing & everything themselves.

Sheffield & German
work.

Shifting.

Foreign workmen in London.

cheap work comes from Sheffield but London Rich Doctors do not favour it, but all the finer work is done in London.

German turn out very cheap work, they sell for 1/6 what you cannot get made in London under 4/-: but they do not much affect the trade as there is a strong feeling against German work & Surgeons have been known to destroy instrument at once on which there was no name: you cannot be certain of the stability of a German instrument.

Shifting. there is not much either from trade to trade or branch to branch. The small men can make an instrument throughout when in a factory there will be greater subdivision but blunt & edge workers are generally distinct.

Foreigners. there are but few and they are not the good many: masters have a prejudice against them which accounts for it.

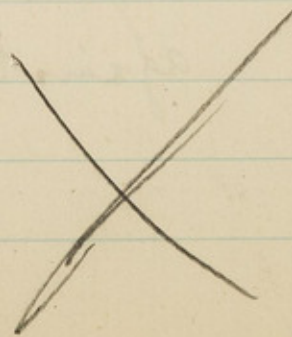
Droughton & Sims: math. instruments

Hours of work.

Number of men.

No seasons.

Trade will soon revive.



July 31.

G.H.D.

Messrs Droughton & Sims, mathematical, surveying
telescope instrument maker - 340 Sea Wool-
-wich Road, Charlton on an introduction
from Horace Darwin.

56 hours is the regular week, paid as 57
54 over 54 are paid as one hour extra
anything under 54 is only paid for the
actual hours worked.

They employ 80 to 100 men, of whom more
than $\frac{3}{4}$ are on piece work.

Most of the work is done for foreign Governments.
There is no season for the firm as the
different seasons in the different parts of
the world balance one another.

But a general depression does affect them
not so much surveying is done on railway
or mines started: on the other hand
they feel a rise much before other trades
& this rise they feel now & speak with
assurance as to a revival of trade in

Regular work for all.

Shifting.

Trade.

Skill & effect of machinery.

the next two years.

All men have regular work i.e. 52 weeks minus the regular holidays. (6 days in year).

This is generally true throughout the trade a good workman can always be certain of a job.

Shifting is not encouraged in the works though it might be possible, it is only with the clambermasters that a man can learn his trade throughout.

When the men wish to leave they can always get a place elsewhere, they often go to telegraph works & very often return.

Trade was good in the beginning of 91. but falling towards the end, was bad in 92 & the beginning of 93. It is better now & appears to be rising steadily.

The industry is getting less & less skilled with the introduction of machinery which can be managed by boys.

Glass grinding which used to need much skill & a particular movement of the wrist can now be helped by having the pedestals

Poor Boys & not
Apprentices are taught.

No foreigners (exc. 1).

Sick club.

House rents in neighbourhood.

slowly turned by machinery: the wrist movement
Mr Sims said could be learnt by anyone in
18 months

The Business is taught to boys, workmen's son etc
he does not approve of apprentices who
wish to learn every part & work for their
own & not for their master's interests.
Foreigners used to be employed but they had
a way - esp Germans - of going round to the
diff: houses & in each learning a par-
ticular branch of the trade. This is now
being discovered & few houses will admit
them.

The Barometer & Thermometer part was once in the
hands of Italians but the mathematical
instruments not.

Sick club to which the firm contributes & to
which each man pays 4^d weekly. is
managed entirely by the men.
They get 10^d for 12 weeks in case of sick-
ness.

So of the men belong.

X The 8 roomed houses on the main Street with two

Bow-windows & garden are let by Mr Sims as 2 flats at 6/- a week with half a garden behind the house.

Houses in the back streets are perhaps a shilling cheaper, but this is a fair sample of rents in the neighbourhood.

All the men live within two miles of their work

Mr Sims said there were an immense number of chambermasters engaged in London by most of the leading spectacle, optical & scientific instrument makers. He used at one time to employ them himself and he finds it is cheaper to work in his own Factory. These men are under agreement only to work for certain houses & it is to their interest never to let their name appear, they will not give any information nor will their employers but they are known to exist.

There has been a great improvement as to sobriety among the men. They used at one time to be great drinkers

Men live near their work.

Chambermasters in the trade.

Improvement in drink.

Machinery used everywhere

Boys.

The works were large & busy: everything that was possible was made by machinery & a great deal managed by boys. In the carpenters room all the dovetails were cut by machines. This is necessary to have any trade at all, things were being made for the Italian, French, Spanish Governments, & for England & foreign observatories & mines & S. Africa.

Boys earn 7/- per week to begin with & then have a rise of 3/- a year - 1/- in March & 2/- in July. They begin about 14 or 16 years of age.

Will send wages of 2 men in each dept. with the exact number of men in each dept. has got papers.

Curry & Paxton. Spectacle & eye instruments.

Wages.
Hours.

Divisions of Business
with the average earnings
& hours.

August 2.

G.H.D.

Messrs Curry & Paxton. Spectacle makers. 195
Great Portland Street.

Wages. 7^d to 1/2 per hour.

Hours. Full time is 55 hours.

Division of Trade.

25. Spectacle makers. av. earnings. 37/5. av. hours. 45 1/25
 Folder makers

8. Optical Turners & fitters. 42/10 1/2 48.

12. Glass grinders 33/11 1/4 53 1/24.

4. Odd men. 41/8 1/2 55.

18. Girls. 10/3 48 *

25. Boys. 9/9 55.

92

Each girl works 44 ^(sic) hours: Commencing at 5s. per week & going up to 15s. The average is reduced by new girls having been engaged.

Boys must work full time but are allowed to stay away occasionally without losing pay.

Full time is 55 hours, but time is men's own

Have sent (10. viii. 93.) further
wages return

fault
Rates. 7^d to 1/2. per hour.
Seasons. have never had a slack time.
Regularity. All have regular work
Shifting. men do not shift.
Trade. We have steadily increased since we
started in 1878. Since 1911 the increase
has been in the same ratio as before.
Training 7 years apprenticeship.
How taught By men & foremen.
Capacity. Do not know of anyone losing capacity
He gradually gets slower after 55.

Aug. 2.

G.H.W.

Mr. Sella. of the Brush Co.

Regularity. certainly 10 & perhaps 35% do not get regular work.

Shifting none.

Trade. has been very regular in spite of the existing depression.

Skill. Wires are the only men employed who are exclusively electrical & do not return themselves as mechanics. They are glorified labourers. They have just founded a strong union. They earn 50¢ a week & are scouted at by the artificers & equally scouted at the ordinary labourers. They are chiefly seamen who are left with their fingers, or good young labourers are chosen.

At 65 many men are still good wires.

Wires. the only exclusively electrical part of the business.

Aug. 15th

C. H. Gray Silveston.

will send further wages forms + his lat 75 sent him + 25 employees form.

Rents in Silveston.

Rents in Neighbourhood.

The men + women employed live in Canning Town + Tidal Basin + on other side of the River.

They pay 4/6. for bedroom, parlour kitchen, washhouse + small garden i.e. $\frac{1}{2}$ a house. 19/- for a whole one.

This in cottages built by the company + run on commercial lines i.e. paying recognized rates of interest. They are always full, they are better built + drier + cheaper than the rest of the houses in the neighbourhood.

A man in their employ^{ment} called up said he used to live in a good room + get board + lodging for 5 days for 1/- (this included 2/- he spent going up to Town one a week). The other 2 days he passed with his parents in the country.



This man knew of girls in the Factory who paid 5/- to 7/- to their parents for keep according as the parents were independent or no. 7/- was perhaps what a girl could manage on by herself for a week.

Sick clubs. There were two in the whole firm.
1. in Sundries Dept.
subs. 6/- weekly. 8/- benefit for first 5 weeks. 5/- for next 5.
Boys subs. 3/- for 5/- benefit.
40 members belonged.

2. There was another in the Packing⁽²⁾ Dept.
3. There was a lazy club to which you paid 1/- for every quarter hour you came late to work. Those who never came late paid 5/- per month. (This man who never lost time had ceased to belong.)

The money was divided up every holiday.

Difference bet. Ebonite & Soft Rubber. Ebonite is rubber treated with sulphur when it takes up 20 parts soft rubber will not take up more than 3 - at lower heat.

Sick clubs.

The Difference between Ebonite & Soft Rubber.

In praise of the small
shopkeeper.

The Magic Lantern
a sweated trade.

Wrench I went to on Aug 4. they refused to give any information what ever. but called themselves manufacturers.

Aug. 18th

85

S.H.D.

Robt. Buck. 36. Cornhill. Optician.

The successful workman generally turns a small shopkeeper, & it is always the best of them who succeed. Mr. B. has a very high opinion of the small shopkeeper: it is the fashion for both capitalist & workman to cry him down but in reality he has generally been a workman & of more than average ability at least that is Mr. Buck's experience in his own trade.

The Magic lantern is generally a sweated one: it is all done in garrets. Wrench & Newton the two great professedly makers in London do nothing themselves: perhaps they put a little together: but the separate pieces are made in garrets at prices which would only be possible by liberal beer & coffee: they are so cheap that no man has yet attempted to cut them out by means of machinery.

All opera glasses are
made in France.

sent to
Newton's Magic Lantern maker. 24 VIII 93

Opera glasses & Field glasses are made entirely
in France; Steward & Dollond^{sons} who adver-
tise as the largest makers do not make a
thing themselves. Since the merchandise war
acts a few have been made in London but
practically none; the French make very
good glasses indeed & at prices which the
English cannot touch, but their centring &
adjustment is not perfect & in the best is
corrected in London.

Gave an introduction to a former workman in his
shop who is now working for himself and
now makes magic lanterns.

Scientific Instr. Trade Soc

Organisation

Proportion of Union to Non Union men

They do work together

Relations fair

Wages

Hours

Aug. 28th

G.H.D

Mr Fennell, 94. Prince of Wales' Road. Kentish
Town. Secretary to the Scientific Instru-
ment Makers' Trade Society.

Organisation : Since 1887. (founded)
6 Branches in London.
450 members in London only.
They propose to organise the provinces
next year.

Unionists to Nonunionists stand in a prop of $\frac{1}{2}$ to $\frac{1}{2}$
There are perhaps 1000 possible members
in London was above, 450 belong.

The U & Non U. men do work together.
Relations bet employees & men good, some prefer
& others refuse Society men.

There are no req. boards of conciliation.

Wages

Minimum 8^{sh} a day.
Some earn $\frac{1}{2}$ daywork. (max. time rate)

Hours. No standard hours.

Majority is Piecework.

No overtime rate.

Age of capacity.

Regularity.

Effect of Govt work.

Overtime.

in
Govt depts.

There is v. often system of being paid day work wages then the balance at the end.

No overtime rate, in some shops there is but it depend on the shop.

Eyesight is apt to fail at 50. Masters rather duble to take a new hand who is young.

Regularity. Photo. is a season trade.

The Trade as a whole is slack from Xmas to April is less busy ∴ the Govt work causes the busier time.

As soon as the estimates are out (Jan in April) & the Govt contracts given out which affect the majority of workers in the trade then work is busy.

Overtime. there is overtime to a great extent especially in Government work

The post office Telegraph stores employ 130 hands & make & repairs the instruments for the whole of the Kingdom. There is a great deal of overtime. Mr F. King of one case in which a man had worked 2hrs per day overtime for last 7 years.

One house busy while another
is slack.

Shifting.

Training.

Conditions of admission.

There is no system of double shifts.
One house is very often busy while another is
slack even in the busiest times.
In slack times the best men are often fully emp.
& others not at all the work is very seldom
shared.

Shifting to all branches. a man who can handle
a lathe & vice can shift to every dept. of
the trade.
& to diff. employers because one house is so
often busy while another is slack.

Training Apprentices system is very nearly dead.
men generally learn ev. branch & go from shop
to shop to do so.
The two branches which used to be separate are
Turners i.e. those who do lathe work.

Frames. i.e. - - - - - vice work & are
what engineers w^d call Filters.

Conditions of admission. A man must prove he has worked
5 years in the trade, he must now be getting
8^d & his proposed recorder must speak as
to his abilities.

Clubs.

magic lanterns.

Opera Glasses.

The Inquiries of the G.P.O.

Casella (p. 74) employs perhaps 5 men.
he has a very large shipping trade. he
employs garret menter chiefly.

Clubs. Only some houses have sick clubs.
They have no list of fair shops: many
become fair when they get contracts & it's
very difficult to make one.

magic lanterns are made by garret menter who lease
them round to the diff shops.

Watson.

Starley. } the chief maker. only make their v. best
Newlin } themselves.

This is a sweated trade.

Opera glasses. chiefly made in Paris: very few
made in London though all are marked with
London names.

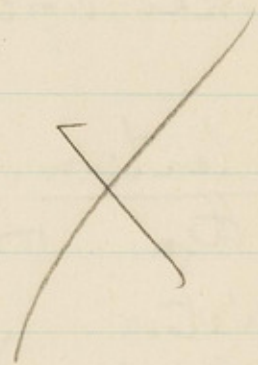
Post Office. is perhaps the worst employer.

They give out repairs on piece & perhaps
a man may not get more than 15/- per
week. It is just a chance if there are
many repairs to be done to his lot or not.
Some shop they have 40 Germans or Swiss

Drink.

Now.

formerly.



Movements are imported from abroad (for horse telegraph) & stamped with English names. The forgings are a soft and durable metal & the pivots have often to be 'bashed'.

Drink. Employes are strict about it now. in old times there was more work than workers & it was no uncommon thing to send round a man with a bike to the 'posts' to get a man to come in. "He was used even to borrow a horse from the Governor to go out for a booze & get it."

Best time to catch Mr W. is the morning between 10.30 & 11.30. or after 2.30

Head Offices are now The Club & Inst. W. G.

3 branches with 250 members in
London

(17. vii. 94)

Sept 2/93
8/8

Mr A. J. Walker, Gen. Sec. Electrical Trades Union.
59 & 60 Chancery Lane W.C. + 19 Claude Road, Peckham S.E.

Registered as Trade Union No 640.

Organization This Union was established in Nov. 1889.
Amalgamated with the Telegraph & Telephone
Construction Union in Dec. 1890 (+ Manchester Society)

Branches & Members It has now 31 branches + 1700
members, of which 6 branches + 500 members
are in London.

Members' Qualification Candidates must be competent
workmen in one or more of the following sections
of the trade: Armature, magnet or transformer
winders; erectors & fenders; installation linesmen
& wiremen (indoor or out) battery & accumulator
makers, filters & inspectors; telegraph & telephone
wiremen & linesmen; instrument & electrical appliance
makers & labourers who have been employed
for 6 months & upward in telegraph, telephone
or electric light construction & maintenance.

The proportion of Unionists to non unionists is about 1/6
in London. There are quite 3000 men working here
& of these 500 are in the Union. The Society was

started by the winders & telephone wire men & of the winders every man in London is a member & only 11 in the provinces are non-members.

Unionists & non unionists work together.

~~The~~

The present relations between employers & employed are very good so far as electrical engineers are concerned. Ironmongers & sanitary engineers and similar men are very bad employers. Usually employ a man and speak of him as "our electrician"

Boards of Arbitration. Union is represented on the Conciliation & Board of the London Chamber of Commerce.

Wages. Union rates are as under:

See Card A	{	Winders : 8 ^d per hr.	9 1/2 hrs per day for 5 days + 6 1/2 hrs Sat = 54 hrs	per week
		Chargemen : 10 ^d ..	" ..	
See Card B	{	Wiremen : 9 ^d ..	" ..	"
		Chargemen : 10 ^d ..	" ..	

Overtime - Time & a quarter for first 2 hours & time & a half after. For further details see ~~card~~ workmen's trade cards.

Non-unionists do not always get these rates;

there are men working at $4\frac{1}{2}$ & 5 per hour side by side with men getting 9^d.

The Age at which capacity is lost is unknown. Being a new trade all the men are young.

Busy Season for men working at installation is the autumn & spring. For men working for the "Supply" companies, the winter.

There is not much overtime. In the City & banks men usually work night shifts so as not to interfere with business. The only branch ~~in~~ in which there is much overtime is amongst the dynamo constructors - caused by the ~~an~~ insufficient number of men.

Shifting from one Branch of the Trade to another is discouraged by the Union - It would not allow a winder to take a linesman's place unless there were no winders available. Assistants of Telephone men & electric light men become wiremen.

Shifting from one Employer to another. Those engaged on electric light wiring shift somewhat but Telephone men not at all as the National Telephone Company has a monopoly. Companies change their men frequently - take a man on just for one job.

Methods of Training. None yet recognized & the practice varies.

Conditions (as to Skill) of admission to Union. Candidates must have worked at the trade for 6 months and in the case of wiremen ~~the~~ proposer & seconder have to vouch for their ability. In the case of assistants, they only vouch for respectability.

For questions asked of candidates see Proposition Form marked C/22.

From a copy of the Rules (piper ruled & marked D/22) the following additional information is taken:

Government. The central authority is a Grand Executive Council of 9 members who must reside within 10 miles of Charing Cross. This body decides all appeals, takes a ballot of the members if

it thinks levels are needed for any purpose; has the right to examine the books of any branch & can draw upon any branch for the money needed for its expenses. Only appeal against its decisions is to a grand council or delegate meeting.

Branches shall be ruled by a president & 2 to 6 other officers according to the number of members which in no case shall exceed 300. The Branch Committee shall ~~contain~~ consist of these officers & 5 to 7 other members, each member elected serving 6 months.

Subscription is 9^d per week & entrance fee 2/6

Benefits Out of work - 12/- per week for 12 weeks. Accident benefit - 12/- per week for 14 weeks & 7/- per week for a second 14 weeks. Funeral - of member £10; member's wife £5. Contingent or strike benefit - as arranged by the council.

Piecework "the Union considers one of the greatest evils it has to contend with" and in a rule regulating it ~~it~~ urges members to oppose its introduction where it is not in vogue

Subscription was raised from 6^d to 9^d per week by which change 300 overhead workmen working for the National Telephone Company were lost.

26

and where it is already worked to endeavour to dispense with it. At the same time it imposes a fine upon any member taking piecework and not sharing surplus equally with other men engaged on the job as well as on any member working under a piecemaster & not receiving an equal share of any surplus, if he refuses to leave the employ of such piece master.

Mr Walker gave some notes about the growth of the trade & the manner in which workmen were brought into it.

Siemens when they started preferred men who had been engaged at the Post Office (Telegraph Dept) but some of the arc & incandescence light companies took the first men they could get hold of & ~~take~~ taught them the trade.

One American company used to pick up out of work professionals (municipal engineers etc) from outside the York Hotel Waterloo Road (known as "Poverty corner") & teach them. When these men learnt the winding, they would be

attracted to other companies by higher wages. so that this firm was constantly recruiting. By the increased demand wages were raised from 7^d to 9^d per hour sometimes because all the men were engaged, ~~and~~ ⁺ other by strikes. — strikes have seldom lasted more than a few hours. Today there are many men in the trade earning 9^d to 11^d per hour who were formerly 'waiting for sometime to turn up' at Waterloo Road.

Thrift Does not think the men are better off with 9^d than with 7^d per hour. Money came easy + was spent easy.

Piecework. One or two firms have started piecework but it is opposed. Insurance companies do not like it. Several cases of fire through defective electric fittings have been hushed up by the companies. There is a strong tendency to fire with either high or low tension currents where the fittings ~~are~~ + insulation are imperfect especially if water is near ~~to~~ it may complete the circuit.

Electrical

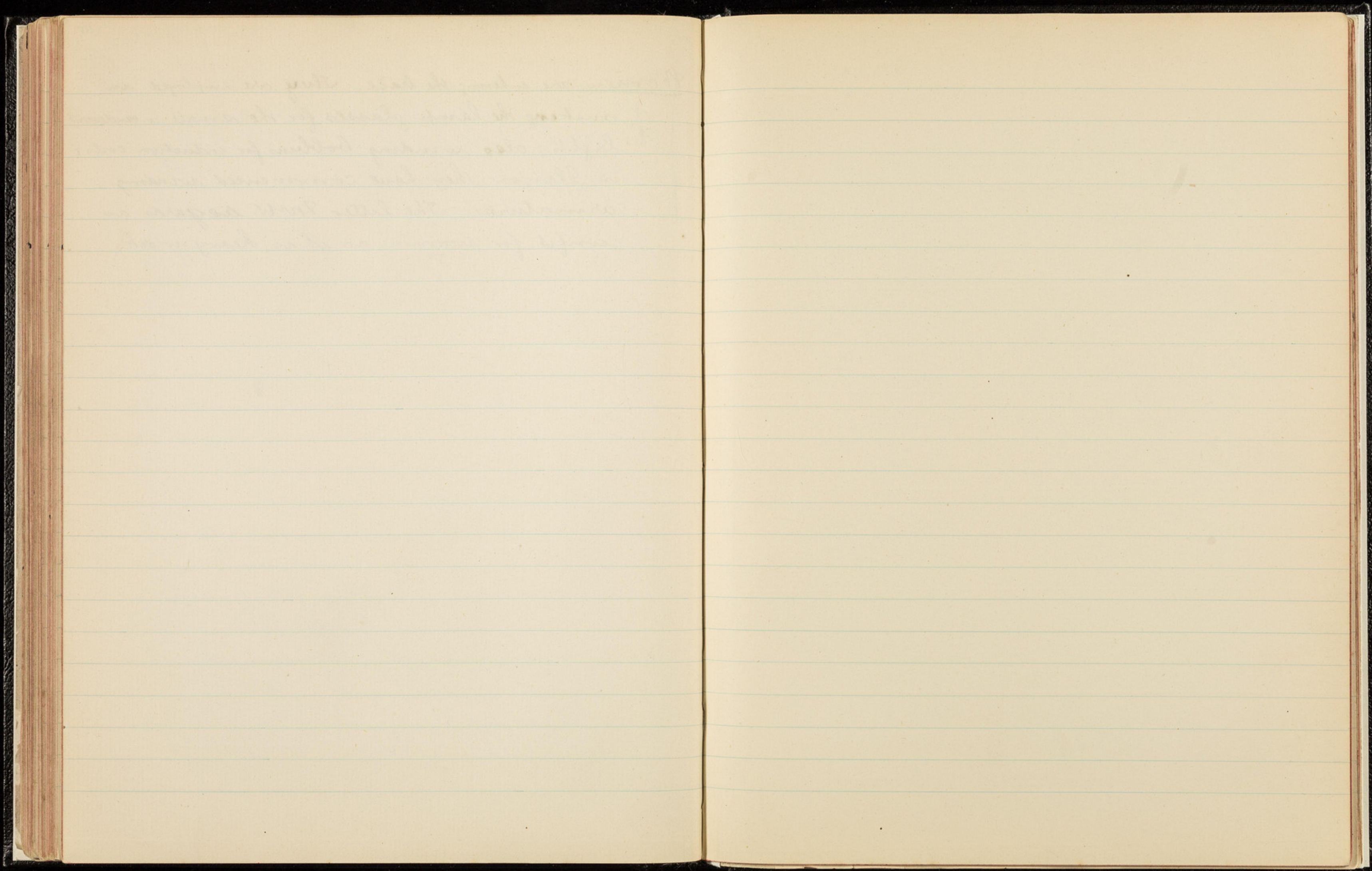
The so-called Schools are injuring the trade. He instanced one near London Bridge - The Kent School - as no good at all. They turn young men on the market without a competent knowledge - many of the paying apprentices are of this class.

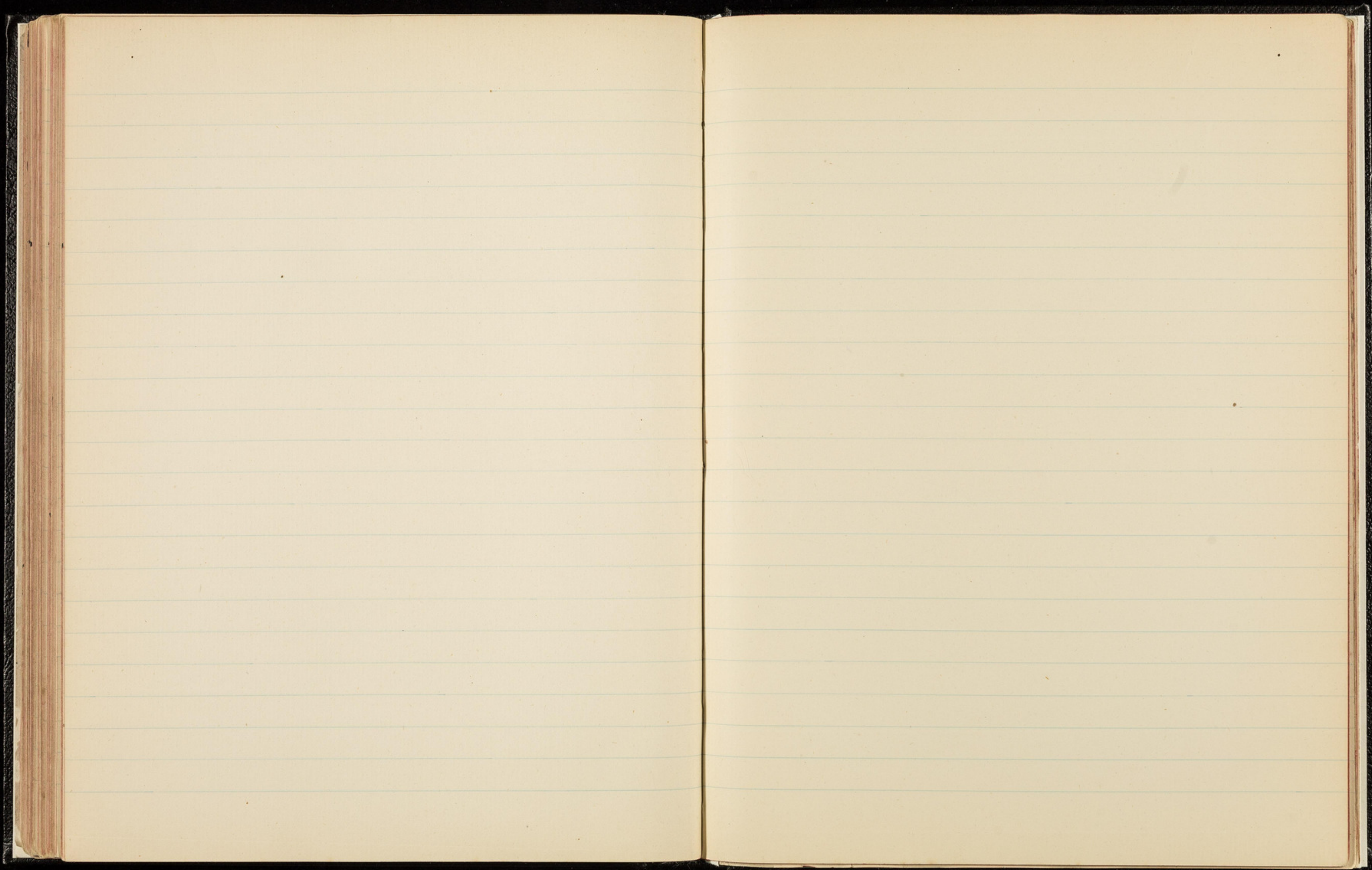
Miscellaneous. - Building Federation refuses to work with any non-union man so that firms who do have work on a building where union men are employed, are obliged to have union electricians for such work even if they are non-union employers. No combination amongst employers. They are cutting each others throats e.g. so far as regard installation fittings etc.

If Further Information is wanted from another point of view Mr W said that Mr Gosson, Manager of Gulcher Electric Light Coy. Wellington Rd Battersea would be a good man to see

[T.T.O.]

Women are entering the trade. They are employed in making the lamp glasses for the small incandescent lights; also winding bobbins for induction coils & in Glasgow they have commenced winding armatures. The latter I think regards as unfit for women as it is heavy work.





891

clocks, Helig.

