It's Not Over Until The Fat Lady Sings

or

Why Did The Lancashire Watch Company Fail?

Richard Watkins, 2018

1: Introduction

This article could not have been written without the work of John Platt.[1] His massive, 528-page book includes a compilation of many transcripts and facsimiles of documents that trace the history of the Lancashire Watch Company (the LWC) from its beginning in 1888 until its machinery was auctioned in 1911. However, he presents the evidence without any analysis or comments, stating:

> *I prefer to 'paint a picture' of the conditions of the time and the reader can decide on his/her own interpretation. ... One reason for this approach is that I am trying to avoid retelling 'facts' which have appeared in more modern journals and books over the years, and which have been subsequently proved to be incorrect.*[2]

But my interest in the LWC is based on the question:

> *Why did the LWC, a large watch manufacturer, fail?*

But that is the wrong question. The correct question is:

> *Why did the LWC, a large watch manufacturer, fail four times? In 1897 (discovered in 1898), then in 1906 (when control of the company changed), then in 1908 (when the LWC went into receivership), and finally in 1911 (when the assets were sold and the company was liquidated).*

And these questions cannot be answered unless the evidence presented in the documents is analysed and interpreted.

Unfortunately, any interpretation must be open to criticism, because the documents are incomplete and many important details are unknown. But I believe that enough is known for a credible explanation to be possible.

The main relevant documents form four groups:

(a) *Financial documents:* These are mainly reports of Annual General Meetings (AGMs). These reports are, naturally, based on profit & loss statements and balance sheets. However, none prior to 1897 have been found, and often their contents cannot be deduced from the AGMs.

In addition, shareholder registers exist that provide some indication of the main supporters of the company.

(b) *Watch ledgers:* There are five ledgers, each of which has space for 200,000 watches; 200 double page spreads with 1,000 entries on each spread. Each entry gives the serial number of a watch and information about the customer (usually a retailer) to whom the watch was allocated, including dates. However, many pages are incomplete (some are totally blank)

1 Platt, John, 2016, *Lancashire Watch Company, History and Watches*, England: Inbeat Publications.

2 Platt, page 10.

and some existing watches do not have a corresponding entry in the ledgers. Normally, each spread refers to a single watch model; of course the LWC did not make 1,000 different watch models and many models occupy several pages.

In addition, there is a sixth ledger containing information about the *John Bull* watches.

(c) *Machinery:* John Platt's book does not discuss the machinery used by the LWC. However, it includes a facsimile of the 1911 auction sale of the LWC machinery that gives an insight into the LWC's manufacturing.

In addition, two books include some consideration of the machinery.[3]

(d) *Catalogues and price lists:* Platt provides facsimiles of seven price lists and another price list is reproduced in Smith & Abbott.[4]

This article examines the four failures of the LWC. All four were caused by financial problems:

(a) The first failure in 1987, discussed in section 3, concerns the financial management of the LWC, and it is based on the reports given at AGMs that are summarised in Appendix 1. Appendix 4 gives additional information of the share holdings.

(b) The second failure in 1906, discussed in section 4, was the result of the company being unable to pay off its debts, and it is based on the financial reports at the London Stock Exchange that are given in Appendix 2.

(c) The third failure in 1908, discussed in section 5, was also the result of the company being unable to pay off its debts. But in addition the types of watches made by the company and, consequently, the machinery used to manufacture them becomes important. The discussion is based on the catalogues and the auction sale.

(d) The fourth failure in 1911, considered in section 6, occurred because it became obvious that the company could never be successful and, in addition, because of the John Bull watch.

The LWC manufactured two types of watches:

(a) *Rough movements*: Before the LWC was created, Prescot was the center of the rough movement trade in which movements were made by traditional methods.

Many workshops made unfinished watch movements that were sold, primarily to London, and finished elsewhere. Finishing involved planting the train correctly, jewelling and making the escapement. When the LWC was created, it purchased most of these workshops and continued to produce rough movements.

(b) *Complete watches*: The aim of the founders of the LWC, motivated by the success of Waltham and Elgin, was to make complete, finished watches, including cases, by machinery. So, in parallel with the rough movement trade, it created the facilities necessary to manufacture everything under the one roof.

Unfortunately, most of the contemporary documents fail to distinguish between these two activities. In particular, the financial statements from the AGMs lump together the sales and expenses, and it is impossible to determine the relative contributions of these two activities.

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3 Cutmore, M, 1989, *Watches, 1850-1980*, London: David & Charles; and Smith, Alan and Henry Abbott, *The Lancashire Watch Company 1889 - 1910*, USA: Ken Roberts.

4 Smith & Abbott, pages 47-65.

What was it worth?

Understanding the significance of prices in the 19th and early 20th centuries helps us put them in perspective. But estimating the value of currency in the 19th century in terms of today's values is difficult.[5]

For example, in 1898 the trade price for a LWC key-wound watch in a gold filled case was £2-19-6.[6] What would we expect to pay for this watch today?

The most conservative method is using the inflation rate or *retail price index*. In that case the 2016 value, the latest year with complete data, is about £304.

A better measure is to compare the values as they are related to *wages* at the two times. That is, how many days a person needed to work to buy the watch. In this case the watch would be worth about £1,199 in 2016.

The difference is, in part, due to changing expectations. The worker in 1898 did not buy white-goods, cars, mobile phones, etc. that are now considered essential, and consequently wages were relatively lower. At present, skilled workers earn about £24,000 and semi-skilled workers about £19,300.[7] This corresponds to £60 and £48 respectively in 1898.

Also, in 1897 provincial artisans earned 34/- per week, or £85 per year.[8] This fits well with the skilled and semi-skilled figures.

Information on wages is scarce, but in 1901 an employee working on case joints was paid £1 17s 9d per week, about 6s per day.[9] This corresponds to £700.90 per week in 2016.

All of these figures are rough approximations, but they enable useful comparisons to help the reader understand costs at different times in the life of the LWC.

In addition we need to consider *discretionary spending*; in 1898 how much income was available to buy desirable, but unnecessary items after paying for the essentials of food, rent, heating, etc? For a skilled worker, the LWC watch cost about 2½ weeks income, but there was little available money. A reasonable guess is that at most 10% of income was discretionary and so it would take about 6 months to earn the price of the watch. (Actually it is a lot worse, because I am using the trade price and not the retail price.)

In the following I give some of the 2016 values. These are based on wages (and not on the retail price index) as I believe that wages give a more representative measure than the retail price index.

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5 Lawrence H. Officer and Samuel H. Williamson, "Five Ways to Compute the Relative Value of a UK Pound Amount, 1270 to Present," MeasuringWorth, 2018 (https://www.measuringworth.com/ukcompare/).

6 Platt, page 353. For those who are not familiar with English currency and its notations, see https://en.wikipedia.org/wiki/Pound_sterling

7 https://www.reed.co.uk/average-salary/manufacturing

8 Bowley, Arthur, 1900, *Wages in the United Kingdom*, Cambridge: The University Press, page 70. (https://ia800203.us.archive.org/19/items/wagesinunitedki02bowlgoog/wagesinunitedki02bowlgoog.pdf)

9 Platt, page 148.

2: The arithmetic of accounts

Basic principles

A brief summary of some aspects of accounting may be helpful.

A *profit & loss statement* summarises the income and expenditure of a company up to a specific point in time, today, and only covers a *single financial year*: It consists of a single column of numbers, some of which are treated as positive numbers and others as negative numbers. The sum of these numbers is not zero, or anything else in particular; see Profit & loss 1.

Income	£200
Expenses	£100
Profit	***£100***

Profit & loss 1

A *balance sheet* is a snapshot of value of a company at a particular point in time and is the state of the company from its inception. It has two columns of numbers and, at the end of each financial year, the sum of the numbers in the left column *must* be the same as the sum of the numbers in the right column; see Balance sheet 1.

Assets	*Liabilities*
Bank: £1,000	0
	Equity
	£1,000
£1,000	***£1,000***

Balance sheet 1

The left column consists of *assets*, what the company owns; in this case nothing except money in the bank. The right column has *liabilities*, what the company owes to others, and *equity*, the value of the company; so equity is *assets - liabilities*.

Accountants dislike plus and minus signs, and consequently a number such as 100 might represent +£100 or -£100 depending on where it appears, for example, as an asset or a liability.

Ignore the fact that these numbers represent actual business transactions and view them simply as numbers. Then we are allowed to do three things:

(a) Changing a number within a balance sheet requires changing another number in the balance sheet by the same amount, so that the two columns still add up to the same figure.

For example in balance sheet 1 above, if we increase the bank by £1,000 then the left column totals £2,000. So we have to add a liability of £1,000 or change equity to £2,000, as in balance sheet 2. This can be both arithmetically and logically correct if, for example, the company borrowed £1,000 and put the money in the bank.

Assets	*Liabilities*
Bank: £2,000	Loan: £1,000
	Equity
	£1,000
£2,000	***£2,000***

Balance sheet 2

(b) Changing a single number in a profit & loss statement requires changing a number in the balance sheet by the same amount; and vice versa. At this point the balance sheet is out of balance and, at some time before the end of the financial year, another number must be changed. For example, if stock is bought then this will be recorded as an expense in the profit & loss statement and a corresponding decrease in the bank account. At the same time or later this decrease in assets must be balanced by another entry in the balance sheet.

(c) Changing two numbers in a profit & loss statement is possible, provided the amounts are the same but of opposite sign, so that the "bottom line" profit remains the same.

That is, all transactions use *double-entry bookkeeping* where the one amount is entered in two different places, and both the balance sheet and the profit & loss statement are being continually updated, day by day.

As suggested, the numbers we are manipulating have meaning, and consequently the changes should be rational and represent the way in which money moves about a business. So the *expense* of £100, in profit & loss 1 above, could be moved to a different account *interest* if that more truly reflects the purpose of the payment. But, unless there are additional sales, it would be wrong to increase both *income* and *expense* by 100, even though this produces the same *profit*.

However, there is actually nothing to prevent accountants changing balance sheets and profit & loss statements arbitrarily.

Both may be the result of human error, but both may be the result of deliberately changing the apparent worth of a company. That is, it is possible to create arithmetically correct accounts that do not correctly describe the business.

The profit & loss statement 1 is after some transactions:

(a) £100 is removed from the balance sheet (the bank) to pay expenses. Now assets are only £1,900 and the balance sheet does not balance.

(b) Items are sold providing £200 income and this money is put into the bank.

We now have the balance sheet 3.

Assets	*Liabilities*
Bank: £2,100	Loan: £1,000
	Equity
	£1,000
£2,100	***£2,000***

Balance sheet 3

Assets	*Liabilities*
Bank: £2,100	Loan: £1,000
	Equity
	£1,000
	Earnings: £100
£2,100	***£2,100***

Balance sheet 4

The difference is, not surprisingly, the profit, and the balance sheet can be balanced by adding £100 of *retained earnings* to equity, as in balance sheet 4.

Usually items are bought and sold using invoices, and the actual payments occur some time later. In balance sheet 5, there is a liability of £100 for goods purchased and invoiced, shown as *accounts payable*. Some time later the amount will be paid by moving £100 from the bank to the liability, resulting in accounts payable becoming £0.

Assets	*Liabilities*
Bank: £2,000	Payable: £100
Receivable: £200	Loan: £1,000
	Equity
	£1,000
	Earnings: £100
£2,200	***£2,200***

Balance sheet 5

The goods sold appear in accounts receivable. When the customer pays the £200 it will be transferred to the bank.

Accounts receivable is not money, it is potential money that will hopefully be received. But the customer might die or be bankrupted and then the £200 would have to be written off as a bad debt.

Normally, the state of a company is reported once a year, at the end of the financial year, and at this point both the balance sheet and the profit & loss statement are published. (Obviously it takes time to enter data and check it, so the AGM is held a few months later.)

Income	£200
Expenses	£100
Profit	***£100***
Retained earnings	£100
	£0

Profit & loss 2

At the end of the year, retained earnings are transferred to the balance sheet, the sum of the profit & loss statement is now zero, and so at the start of the next year all accounts are set to zero.

As a concrete example, the following discussion uses the balance sheet and the profit & loss statement of the LWC from the first AGM after the company had been created; that is, the state of the company as at 31 December 1889.[10]

Profit & loss statement:

As noted above, a profit & loss statement summarises the income and expenditure of a company during a *single financial year,* in this case 1 January to 31 December 1889:

Income	**Sales**	**£21,983**
	Opening stock	£4,703
	Materials	£1,957
	Wages	£17,394
	Repairs	£45
	Closing stock	£7,924
	Cost of sales	**£16,175**
	Trading profit	**£5,808**
Expenses	Interest	£877
	Salaries	£816
	Services	£387
	Office	£565
	Total expenses	**£2,645**
Net profit		**£3,163**

LWC Profit & Loss, December 1889

(a) *Sales*: This is the amount of money received (or to be received) from customers.

(b) *Cost of sales*: These are those expenses *directly* related to manufacturing goods.

In addition to materials, wages etc. to manufacture new goods, the *opening stock* is the value of goods manufactured but not sold in the previous year, and it is part of the inventory in the previous year's balance sheet. (As well as finished goods, the inventory also includes materials and part-completed goods.) *Closing stock* is the value of goods manufactured but not sold in the current year, and this amount will be transferred to the inventory. So *opening stock - closing stock* is the amount of stock that has been sold in addition to new manufacture. In this example *opening stock - closing stock* is negative; that is, there were more unsold goods at the end of the year than at the beginning of the previous year and their costs will be reported in the next year.

(c) *Trading profit* is *sales - cost of sales*.

(d) *Expenses*: These are expenses that are not directly related to the manufacture and selling of goods. They include management salaries, office expenses (printing, stationery, postage, etc.) and services (such as coal, gas, taxes, etc.).

This statement is the first for the LWC after it was created and the LWC had not yet made any complete watches. So the opening stock is the stock of rough movements that the LWC obtained when it purchased the old workshops in Prescot. In addition, the majority of the materials and wages would be for rough movements.

Balance sheet:

The balance sheet is a snapshot of value of a company at a particular time, usually the end of a financial year. It is divided into *assets*, *liabilities* and *equity*:

(a) *Assets:* Assets are primarily money and physical objects, such as buildings. Included is the amount of money that customers owe the company (accounts receivable) and the inventory.

10 Platt, pages 80-81. Here and elsewhere the amounts are rounded and small differences may appear when compared with the original data.

The company bank account can contain considerably more than the reported cash, because other assets can be cash held in the bank. For example, the £96 bank account could have £496 in it if it includes the allowance for the Managing director's fees.

Buildings and machinery wear out and their value diminishes over time, and each year the profit & loss statement should include this *annual depreciation* as an expense. That amount is transferred to the balance sheet and added to the *total depreciation*, which is the depreciation over a number of years. So the current value of machinery is *initial cost - total depreciation*.

Assets		**Liabilities**	
Cash	£96	Accounts payable	£1,133
Accounts receivable	£4,150	Other payable	£97
Inventory	£7,925	Mortgage	£6,500
Buildings	£7,376	Deposits	£0
Machinery	£13,361	Total liabilities	**£7,730**
Total depreciation	£0		
Office	£37		
Goodwill	£5,928	**Equity**	
Managing director's fees	£400	Shares	£29,177
Formation expenses	£797	Retained earnings	£3,163
	£40,070		**£40,070**

LWC Balance Sheet, 1889

(b) *Liabilities:* These are amounts that the company owes. If, for some reason, a customer cannot pay, then that amount is transferred to *bad debts* in the profit & loss statement.

(c) *Equity*: First, the value of the company is *assets - liabilities*, in the example it is £32,340. This is the amount that the owners *should* get if the company was sold. The main part of the equity is the amount that shareholders have contributed by buying shares. It also includes retained earnings, the profits and losses that have not been spent during the previous years.

As mentioned above, transferring the profit or loss from the profit & loss statement to retained earnings, the profit & loss statement adds up to £0. So at the start of the next financial year all values in the profit & loss statement are set to zero.

The LWC moved the *net profit* to the balance sheet as *retained earnings* so that all accounts in the profit & loss statement could be set to zero at the start of the new year. The company then moved the retained earnings back to the profit & loss statement as *carried forward* income. So the 1890 profit & loss statement began with a "profit" of £3,163. This is clearly dubious as the 1890 figures will then suggest that the profit in that year is £3,163 higher than it actually was. The effect of this is shown in the tables on page 32 and page 35.

Balance sheets usually involve one, intangible fudge factor, *goodwill*. Assume, for example, a company is purchased for £100,000, the owners' equity, but when the assets are valued they add up to only £90,000. In order to balance the books the asset called goodwill is created with a value of £10,000.

There are often other *intangible* assets, such as trademarks, and the LWC lumps together goodwill and trademarks. Although goodwill could be used to account for changes in values, there is a serious danger of misrepresenting the value of the company.

A useful way to view accounts is to note that there are *only a few accounts* that are real, and they are the accounts in the balance sheet that explain how much money is in the bank. The rest of the balance sheet and the profit & loss statement are explanations of why that much money exists. Of course the other accounts should be sensible and provide rational information, but that is not absolutely essential!

For example, *accounts receivable* is the amount of money owed by customers and it is an abstract ideal; some accounts may never be paid or paid only in part. Similarly, *machinery* is (hopefully) what the machinery cost, but it may actually be worth a lot less. Depreciation (for wear and tear) may not be sufficient and it is possible that in the future some machinery will have to be written off. So the machinery account is based more on hope than reality.

Below are the 1889 profit & loss statement and balance sheet with equivalent 2016 figures. At this time the LWC was a small business.[11]

Income	**Sales**	**£10,290,000**
	Opening stock	£2,202,000
	Materials	£916,200
	Wages	£8,143,000
	Repairs	£21,070
	Closing stock	-£3,710,000
	Cost of sales	**£7,573,000**
	Trading profit	**£2,719,000**
Expense	Interest	£410,600
	Salaries	£382,000
	Services	£181,200
	Office	£264,500
	Total expenses	**£1,238,000**
Net profit		**£1,481,000**

LWC Profit & Loss, December 1889, 2016 Values

Assets		**Liabilities**	
Cash	£44,940	Accounts payable	£530,400
Accounts receivable	£1,943,000	Other payable	£45,410
Inventory	£3,710,000	Mortgage	£3,043,000
Buildings	£3,453,000	Bad debts	£0
Machinery	£6,255,000	Deposits	£0
Office	£17,320	Total liabilities	**£3,619,000**
Total depreciation	£0		
Goodwill	£2,775,000	**Equity**	
Managing director's fees	£187,300	Shares	£13,660,000
Formation expenses	£373,100	Retained earnings	£1,481,000
	£18,760,000		**£18,760,000**

LWC Balance Sheet, 1889, 2016 Values

11 https://www.rsmuk.com/ideas-and-insights/accounting-thresholds-what-size-is-a-small-business

As mentioned above, accountants have a hatred of minus signs and normally they will not appear in accounts; for example, the above profit & loss statement erroneously includes the entry -£3,710,000 when it should be £3,710,000. To overcome the problem of minus signs, accountants use two tricks:

(a) The names of accounts and their positions indicate whether the amounts should be treated as positive or negative. Obviously all entries under the heading *Expense* in a profit & loss statement are actually negative numbers, as are liabilities in a balance sheet.

(b) If a negative number appears in a balance sheet, then it can be moved to another place in the balance sheet and converted to a positive number. For example, if a company makes a loss and retained earnings are -£1,000, then £1,000 can be added to retained earnings, making it £0, and that amount added to an *asset* account.

Shares and debentures:

As suggested above, a company creates capital by selling shares to shareholders.

To compensate shareholders for their money, companies pay dividends to shareholders out of profits. *Preference shares*, usually with a fixed dividend, are shares of a company with dividends that are paid out before *ordinary shares* are paid dividends. So if profits are small preference shareholders might receive a dividend but ordinary shareholders might get nothing. If profits are too small, no one gets a dividend.

All LWC shares were valued at £10 (£3,935 in 2016).

Preference shares can be cumulative. For cumulative shares, if a company fails to pay a dividend, that dividend is owed at some point in the future; the shares accumulate outstanding dividends.

Hopefully the book value, the purchase price of the shares, is reflected in the value of the company. If a company is sold, the money received for the assets is distributed to the shareholders, with preferred shares being entitled to be paid from company assets first. If a company fails shareholders might receive very little for their investments other than dividends.

Normally shareholders never receive the capital value of their shares, just dividends, unless the shares are traded on a stock exchange.

In the context of the LWC, when it purchased eight rough movement workshops it had very little cash. So the vendors were paid with 1,507 *vendor shares*, taken instead of cash, and £4,662 in cash, a total of 19,732. When TP Hewitt, the driving force behind the creation of the LWC, sold Wycherley Hewitt & Co. to the LWC he received 1,366 ordinary shares, valuing his company at £13,660 (*£6,395,000*). The other seven companies were valued at £4,662 plus 141 shares, at total of £6,072 (*£2,843,000*); that is an average of only £867 (*£406,143*) for each business.

The figures do not add up. The workshops were valued at £20,762[12] and so 1,610 shares should have been given to the vendors. As the shares are correct, presumably the valuation was reduced to £19,732.

Although these vendor shares are sometimes listed separately, they are part of the ordinary shares issued by the LWC.

In addition to mortgages and bank loans, companies can borrow money by issuing *debentures*. Often they are not secured by any specific assets or property and are riskier than shares, but generally earn a higher interest rate to offset the risk. In the event of a liquidation, the holder of a debenture is viewed as a general creditor and must wait to be repaid until all the secured creditors have been repaid.

12 Platt, page 71.

3: Something rotten in the state of Lancashire, 1888-1898

A sudden reversal

Throughout the period 1889-1896 the LWC accounts recorded trading profits every year (see page 35) and these were announced at the AGMs. And on the basis of them, dividends were paid to all shareholders every year.

This rosy picture of the company becomes somewhat bleaker if we ignore the profits carried forward year by year, the annual profit. Then, after paying dividends, the company regularly reported a loss on that year's trading; indeed, during the years 1890 to 1896 the company *lost* £78 on average!

In 1897, apparently as a result of a decision in the Chancery Court,[13] the company was restructured, presumably to remove doubt about the cumulative dividends on preference shares. In that year the company reported a profit of £5,416 (page 38). This is much higher than in previous years because no dividends were paid, but there is no explanation for why this happened.

However, at this point the company was successful and everyone was happy! Until ...

In 1899, at the AGM reporting the 1898 financial statement, the chairman dropped a bombshell:

> *The accounts showed that there was a loss on the year's trading of £12,454 8s 7d. The discounts, allowances, and bad debts in respect of the trading year to 31st December, 1898 had exceeded the reserve ... by £9,018 3s 4d, thus reducing the credit balance of £5,416 17s 1d brought forward from the previous year into a debit balance of £3,601 6s 3d ... making a total balance to the debit of ... £16,055 14s 10d.*[14] *(page 39)*

Ignoring the profit carried forward from 1897, the actual loss in 1898 was £21,472 (£8,655,000)!

As I have noted above (page 6), the numbers in balance sheets and profit & loss statements can be changed arbitrarily, provided a few rules are followed. However, the entries must have meaning in terms of the business being conducted, and arbitrary changes may not be meaningful. As a result, such "creative accounting" changes may seriously misrepresent the company.

To understand what happened in 1897 and 1898 we need to look at five examples of creative accounting that were used: goodwill, reducing costs, boosting assets, deferring bad debts and boosting profits.

Goodwill

First, in 1898, the assets of the rough movement part of the business were devalued by £5,955 (£2,343,000) and:

> *... this amount has been added to the goodwill account ...*[15]

This is an unacceptable fiddle because, by moving the money from one asset account (presumably machinery) to another asset account (goodwill), it kept the value of the company the same even though it was worth £5,955 less. The amount should have been treated as depreciation (or a write-off) and moved to the profit & loss statement, in which case the true loss in 1898 was £27,427 (£11,060,000).

In 1889, at the end of the first year, goodwill was £5,928 (page 7), and in 1891 it had decreased to £5,428 (page 33), because £500 had been deducted in 1890. Why did it increase by £24,182 to £29,610 (£11,890,000) from then to the end of 1897? Surely this was not spent on trademarks and patents? So, although there is no published information to explain this amount, it is hard to

13 Platt, page 130.
14 Platt, page 138.
15 Platt, page 139 (8 May, 1899).

avoid the suggestion that goodwill had been used several times to inflate the book value of the LWC. And it may have been used to hide other problems.

It is interesting to note that goodwill stayed the same (£35,565) from 1898 to 1909.

Reducing costs

Second, in 1891 and without any explanation, £2,745 was transferred from *cost of sales* in the profit & loss statement (an expense on the business) to an *asset* in the balance sheet! (See page 33.) This is irrational, but possible. For example, normally money (in this case £2,745) is removed from the assets (the bank) to pay for materials, etc. and becomes an expense in the profit & loss statement. This transaction is simply the reverse, not buying materials and so returning the money to the "bank". But how can you not buy something which you have probably already bought?

It is clear that this was done because paying dividends in that year *depended* on increasing profit; without it the profit would have been only £1,626, but £2,953 was needed for dividends. And what better way to create this amount than decreasing costs?

Boosting assets

A third, related problem is how losses were reported. To avoid negative numbers, in 1899, 1903 and 1909 *losses* of £12,993 (£4,959,000), £8,869 (£3,270,000) and £112,952 (£41,020,000) were transferred from the profit & loss statements to *assets*, artificially inflating the book value of the company in the same way that goodwill was used; see page 40 and page 44. In 1899 the board valued the LWC at £309,398 when it was actually worth only £296,405. In 1903 the board valued the LWC at £309,141 when it was actually worth only £300,272. And in 1909 the LWC was valued at £361,495 when it was actually worth only £248,543, because there were accumulated losses of £112,952! Again, the transactions are arithmetically correct, but they are deliberately misleading.

Deferring bad debts

Fourth, bad debts occur when customers fail to pay their bills. Consequently, the accounts receivable must be decreased by the amount of the bad debts and the debts moved to an expense in the profit & loss statement. The LWC combined bad debts with discounts (reducing the amount owed and so they are partial bad debts) and allowances.

Allowances are predicted bad debts in the future and are handled in the same way as actual bad debts.

From 1889 to 1896 the LWC accounts do not include bad debts. Bad debts probably existed, but presumably they were ignored and the defaulting customers still appeared in accounts receivable.

During the period 1899 to 1903 bad debts are recorded in the profit & loss statements. With two exceptions they vary from £734 to £1,484. First, in 1900 the bad debts were exactly £0, probably to decrease expenses and make the profit look better. Second, in 1902 bad debts were £4,054, but they includes "expenses opening up Colonial trade" that should have been reported separately. There is no information after 1904.

The years 1897 and 1898 are exceptional.

In 1897 the balance sheet recorded bad debts of £7,000 and the profit & loss statement recorded bad debts of £500 (page 38), a total of £3,085,000 today:

(a) These figures are exact pounds, when other bad debts are given with odd shillings and pence. Clearly they are estimates of some sort, and may not have been related to actual bad debts in the accounts receivable.

(b) If the bad debts had been correctly written off, then the profit & loss statement would show a loss of -£1584 instead of a profit of £5,416.

(c) 1897 is the only year when bad debts are reported in the balance sheet instead of the profit & loss statement. They are recorded as a liability when they should have been recorded as deduction from the accounts receivable with a corresponding expense in the profit & loss statement.

What has happened is that

the bad debts were deferred to a subsequent year to enable the accounts to show a profit.

In 1898, the annus horribilis, the bad debts in the profit & loss statement amounted to £9,018 (£3,635,000). Assuming this includes the £7,000 carried forward from 1897, the bad debts in 1898 were £2,018. But the report to the AGM states that the bad debts *"had exceeded the reserve ... by £9,018 3s 4d"*, and this implies that the bad debts were £9,018 + £7,000 = £16,018 (£6,456,000)! Either figure is catastrophic.

Boosting profits

Finally, as I have noted on page 7, the LWC accounts artificially boosted profits by returning the previous year's retained earnings to the current profit & loss statement. Although the transfers were often small (page 32) they were often necessary so that enough money was available to pay dividends. The table of profits (page 35) more clearly illustrates what was happening.

The reports at the AGMs specified the trading profit, and then the net profit after dividends and expenses, which is the amount carried forward to the next year. This showed the accounts in an artificially favourable way. The annual profits, the profits ignoring the amounts carried forward, are frequently negative; that is, the dividends relied on the amounts carried forward. The final column in the table of profits shows that if dividends had not been paid then the company *appeared* to have accumulated £47,826 (about £20,210,000). But the accounts showed a false view of the company and in reality the losses were far greater.

Sales or consignments?

None of the above "errors" explains the 1898 loss. However, at the AGM the following statement was made:

> *Then, in former years a great many watches were sent out on sale or return. Unfortunately, these transactions appeared on the books as sales. A lot of these watches had come back. They appeared in the books at 35s, but in the stock at 33 per cent less, and that meant a further loss of £2,000 ...*[16]

This must refer to complete watches and not rough movements. In 1893 TP Hewitt stated that:

> *... since this company took over the old movement making business we have manufactured 300,000 movements, which have realised nearly £100,000, out of which we have secured a profit of between £14,000 and £15,000, or about 15 per cent on the turnover.*[17]

So the rough movements cost about £0-5-8 were sold for about £0-6-8 with a profit of 1 shilling.

As the 1899 statement refers to complete watches it probably applies to the 6 years 1893 - 1898. (Throughout the life of the LWC, the accounts do not distinguish between rough movements and complete watches, and it is not possible to estimate their relative contributions.)

So a large number of watches were on consignment. That is, they remained the property of the LWC and should have appeared at cost in the inventory. If a watch was returned it simply remained

16 Platt, page 138.

17 Platt, page 96. The rough movement trade continued until at least 1898.

in the inventory. If a watch was sold, it was removed from the inventory, its cost became part of the cost of sales, and the income was recorded as a sale. But in addition to appearing in the inventory (the balance sheet) they also appeared as a sale (in the profit & loss statement)! The distinction is important, because each of these watches appeared twice and, because I assume no cost of sales figure was entered, the full value of 35s must have been treated as profit.

The following tables demonstrate this type of accounting. Assume 6,000 watches were manufactured for £4,000 and they had a sales value of £6,000. Of these watches half are actually sold and half are sent out on commission. So the *correct* accounts would be:

Profit & Loss Statement			Balance Sheet	
Sales		£3,000	Receivables	£3,000
Costs	£4,000			
To inventory	£2,000		Inventory	£2,000
Cost of sales		£2,000		
Profit		£1,000		

Here the *actual* sales are shown for 3,000 watches, and they are billed to the customers in accounts receivable, and the other 3,000 are transferred at cost to the inventory.

However, the accounting used by the LWC is something like:

Profit & Loss Statement			Balance Sheet	
Sales		£6,000	Receivables	£6,000
Costs	£4,000			
To inventory	£2,000		Inventory	£2,000
Cost of sales		£2,000		
Profit		£4,000		

All 6,000 watches are listed as sold and billed to the customers, but the cost of 3,000 watches is still transferred to the inventory! The *actual* profit if all 6,000 watches had been sold would be £2,000, the sales price of £6,000 minus the cost, at one third less, of £4,000.

This is exactly the same as the 1891 "reducing costs", except then it was spelled out in the criticism of that report. So this method of accounting might also have been applied to the old rough movement trade.

Where the "further loss of £2,000" comes from is not clear, and it seems to be too low.

How much money was involved? It is impossible to know, because the information is not available, but we can make a sensible guess.

In the 1899 financial year the trading profit was reported as about £16,000 and this figure can be used as an estimate of the 1898 trading profit. That is, a possible profit of £16,000 turned into a £21,472 loss, and so we can estimate that about £37,472 was written off (*£15,100,000*). This corresponds to 21,412 watches at 35 shillings each.

The table of *accounts receivable* (opposite) supports this interpretation.

This account suddenly jumps by £16,146 from 1891 to 1893, and a further £21,800 from 1893 to 1897 (a total increase of £37,946 or £15,610,000). And that is what we would expect from incorrectly accounting for consignments.

Year	Receivables
1889	£4,150
1891	£3,071
1893	£19,217
1897	£41,017
1899	£23,705
1903	£8,280
1909	£7,643

Accounts receivable

In 1898 the previous years' accounts had been verified by the auditor, approved at the AGMs and, for at least 1897, copies sent to the Liverpool and London stock exchanges.[18] Consequently they could not be altered, and any adjustments to the accounts receivable would have to be in the 1898 and later accounts. So, using the second table in the example above, the accounts receivable can be reduced by £3,000 and this amount transferred to the profit & loss statement as bad debts. The accounts receivable could also be reduced by transferring £3,000 to cost of sales, or a lesser amount to both bad debts and cost of sales.

Three other points need to be made:

(a) William Harris stated that: "the directors estimated that £10,500, the sum put down in the statement of accounts, would cover all bad and doubtful debts and discounts."[19] And Colonel Pilkington added that: "... the balance sheet was of a character to cause the gravest apprehension ... The £10,000 for bad and doubtful debts was frightful."

These statements suggest making allowances for future bad debts, and the only way to defer bad debts is to use the balance sheet. However, other than a high accounts receivable, the 1899 balance sheet and profit & loss figures are normal with very small bad debts (page 40). It is not possible to determine if this is correct.

(b) In 1894 to 1896 reserves of £4,000 were transferred to the balance sheet (page 32). But in 1897 the only reserve was £2,500 in the debenture fund (page 38). Where the £1,500 had gone is unknown.

(c) Harris also stated that: "... last year they had ... increased costs in production of the movements of £6,000 and cases £1,625. As they would understand, in a factory like theirs, expenses went on the same whether they made a hundred or a hundred and fifty cases a week."[20] This recognition of the problem of fixed costs is interesting (see Appendix 5, page 51), but the increases in costs are not explained.

How and why?

How was this creative accounting discovered? The most likely reason is that when the new company was formed in 1897 William Harris was appointed to the board. He lived in London, was a chartered accountant, and was probably added to the board to represent debenture holders, debentures that were created from 1895 onwards. In 1897 a much lower profit was declared (£5,416 compared with £9,605 in the previous year) and we can presume that Harris became suspicious about this time, particularly with the handling of bad debts. And in 1899 Harris was the person who announced the creative accounting at the AGM presenting the 1898 results.

Why was this creative accounting perpetrated? The obvious answer is to profit from share dividends.

Throughout the period 1889-1896, the LWC paid a 6% dividend to both preference and ordinary shareholders. As a result, about £44,334 was siphoned off (see page 36); this is about £17,870,000 today.[21]

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18 Lancashire Watch Company, 1897, *Memorandum and Articles of Association*, Article 117 (Provided by John Platt.)

19 Platt, page 139.

20 Platt, page 138.

21 1897 was the first year when dividends were not paid. There was no explanation at the AGM but, despite the manipulation of the bad debts, the profit of £5,416 was not sufficient.

It is important to realise that:

Throughout the period 1889-1896, the directors of the LWC received about 38% of the dividends, primarily from ordinary shares.

The following table shows the share holding of the directors of the LWC with some 2016 figures in italics for comparison:

(a) Nominal shares: The number of £10 shares issued.

(b) Total shares: The number of shares actually allocated to shareholders.

(c) Directors' ordinary % and Directors' preference %: The percentage of the total number of allocated ordinary and preference shares that were held by the directors.

(d) Share value: The value of the shares held by the directors.

(e) 6% dividend: The dividend received by the directors.

(f) Total estimate: A cumulative estimate of the total values of the dividends over the 8 years 1889 to 1896.

(g) No dividends were paid in 1897. This column is included to show the trend in share holding, and the dividends that the directors would have expected.

	1889	1894	1897	Total estimate
Nominal shares	5,000	15,500	15,500	
Total shares	2,931	11,759	15,500	
Directors' ordinary %	59	45	45	
Directors' preference %	0	29	19	
Share value	£17,160	£42,290	£43,730	
	£8,034,000	*£17,970,000*	*£17,990,000*	
6% dividend	£1,030	£2,537	£2,624	£16,740
	£482,200	*£1,188,000*	*£1,079,000*	*£6,886,000*

Directors' Dividends 1889 - 1896

It should be noted that the people who held shares and their numbers of shares were quite stable. This is undoubtedly because the shares were earning significant amounts of money and there was no reason to divest.

The first clue that explains what happened is in the above table. The directors held 45% of all ordinary shares and only about 20% of the preference shares. Surely preference shares would be better, considering that they are more likely to receive dividends? No, and the reason is simple:

Ordinary shareholders get voting powers of one vote per share at AGMs.

Preference shareholders cannot vote.[22]

Now we can see that the directors had 45% of the votes and, unless every other shareholder was present at a meeting and voted in a block, the directors had an absolute majority and could run the company as they saw fit. Indeed, this was true throughout the life of the LWC, as the following table shows:

22 Lancashire Watch Company, 1897, *Memorandum and Articles of Association*, Articles 58 - 63 (Provided by John Platt.)

	1889	1894	1897 old	1897 new	1902	1907	1911
Total ordinary shares	2,931	5,111	5,500	6,557	6,571	6,571	6,571
Directors ordinary shares	1,716	2,674	2,493	2,962	3,011	3,015	3,015
Directors % shares	58.5	52.3	45.3	45.2	45.8	45.9	45.9
Number of directors	5	6	5	5	7	6	6
Top 4 directors shares	1,616	2,284	2,492	2,492	2,992	3,013	3,013
Top 4 directors % shares	55.1	44.7	45.3	38.0	45.5	45.9	45.9

Directors' Ordinary Share Holding 1889 - 1911

The "Top 4" directors were Houghton (chairman), Menzies (vice-chairman), TP Hewitt and Dennett; they are the only directors who were on the board throughout the whole life of the LWC, from 1888 to 1911.

The situation is even more interesting when we look at the ordinary, voting shares held by two people, TP Hewitt, the managing director, and AA Menzies:

	1889	1894	1897 old	1897 new	1902	1907	1911
Total ordinary shares	2,931	5,111	5,500	6,557	6,571	6,571	6,571
Hewitt shares	1,366	1,384	1,492	1,492	1,625	1,646	1,646
Hewitt % shares	46.6	27.1	27.1	22.8	24.7	25.0	25.0
Menzies shares	100	700	800	800	918	918	918
Menzies % shares	3.4	13.7	14.5	12.2	14.0	14.0	14.0
Hewitt + Menzies shares	1,466	2,084	2,292	2,292	2,543	2,564	2,564
Hewitt + Menzies % shares	50.0	40.8	41.7	35.0	38.7	39.0	39.0

Hewitt and Menzies Ordinary Share Holding 1889 - 1911

Ignoring 1889, these two people had between 35% and 42% of the votes at meetings and, by themselves, could control the company.

But the ordinary shares could not receive dividends unless the preference shares also received dividends, so the LWC had to make enough profit to enable all shares to get dividends. At the 1894 AGM there was an attempt to reduce the dividend on ordinary shares from 6% to 5%. It was opposed by Alderman Smith (who had a little less than 10% of the issued ordinary shares worth about £2,113,000 today) and J Ledson. Not surprisingly the motion failed.

The second clue that explains what happened is that in 1893 TP Hewitt stated that:

> *With regard to the financial operations I do not propose to say anything, as our vice-chairman will doubtless say something on that head. He has been the financial genius ...*[23]

The vice-chairman was AA Menzies, who was a chartered accountant and was vice-chairman of the board of directors from 1888 to 1911. In addition,

> *Menzies was the only accountant on the board until William Harris joined the board of the new company in 1897.*

The LWC would have had a bookkeeper, to write up the daily activity of the company, but nowhere have I found any mention of a company treasurer or a company accountant. And so it is reasonable to presume that Menzies, who lived in Liverpool, about 9 miles from Prescot, acted as the company accountant, using the account books to create the balance sheets, the profit & loss statements and the reports delivered at the AGMs. And so, it is reasonable to assume that Menzies deliberately used creative accounting, perhaps amounting to fraud, to benefit himself and Hewitt.

23 Platt, page 96.

The third clue is in the annual reports from 1897 on. As part of the articles of association of the new company, formed in 1897, these reports were sent to the London Stock Exchange, and each report is *signed* by Houghton, Menzies and TP Hewitt. (The reports were printed and the names of these three signatories appear on the first page.) So we can be confident that these three people were responsible for the finances of the LWC from 1889 to about 1906.

From about 1893 Houghton had 100 ordinary shares and 1,200 preference shares, worth £13,000 (£5,321,000 today) and producing an annual dividend of £780 (£319,300). And by the start of 1897 he had 100 ordinary shares and 1495 preference shares; that is 1,595 shares when TP Hewitt held 1,587 shares. Indeed, Houghton, Hewitt and Menzies had 4077 shares out of 15,500 shares, or 26.3% of the total number of all shares.

Houghton, having preference shares, had little to gain from the creative accounting, and his involvement in it is unclear. But, as one of the signatories, he was either an ignorant figurehead or he was at least aware and did nothing.

Silence is golden

Why did no one on the board complain? In 1897 there was a trading profit of £16,702, and in 1898 there was a trading loss of -£12,454, a change of £29,156 (or £11,750,000 today). And there was no clear explanation, although presumably the difference is related to accumulated losses over the previous years.

There might have been some complaints privately, but the board was in a difficult position. First, nothing could be done other than clean up the accounts and continue. Second, all the board members had failed in their duty of care and due diligence and any action would harm everyone. And third, all had profited from the dividends that they should not have received. So there was no point doing anything. In addition, TP Hewitt was essential as he ran the company and Menzies was one of the founders and probably the company accountant. Neither could be removed from the board without serious consequences.

And so the company continued on.

4: Deeper and deeper into debt, 1898-1905

A spending spree

The seeds for the second failure of the LWC had been sown in 1895 when debentures are mentioned for the first time.

In 1892 the 3-story building was constructed and machinery built and purchased to equip it. This is the building that exists today and it was not expanded during the life of the company.

In 1893 there was a new share issue specifically for the purpose of buying case making machinery from Switzerland and America.[24] But £22,471 had to be borrowed from a bank because not enough shares had been taken up (and the shares were still under-subscribed in 1894).

Unfortunately there are no balance sheets in the period 1892 to 1896 and it is not possible to determine how much money was spent on machinery each year. However, in 1891 the machinery was worth £38,444 and, with the case making machinery, at the end of 1893 it must have been at least £60,915. In 1897 the machinery was worth £128,244, an increase of £67,329, and in 1899 £134,245, a further increase of £6,001.

Borrowing £22,471 in 1893 tells us that all the capital had been used up and there was no money available to buy or make machinery. So where did the £67,329 come from? Certainly not from profits as most of the much-needed cash had been distributed to the shareholders as dividends.

The source was borrowing money in the form of £100 debentures. Although two dates are not precise, the debentures were:

(a) 800 "A" debentures, £80,000 in 1895 at 4% interest. (£33,550,000)

(b) 180 "B" debentures, £18,000 in 1896 at 5% interest. (£7,476,000)

(c) 400 "C" debentures, £40,000 on 26 April 1897 at 6% interest. (£16,450,000)

The bank loan of £22,471 was presumably paid off from the "A" debenture issue and the amount of new capital that was available was £115,529. This appears to be £48,200 more than was needed, but in 1893 the inventory was £34,028 and in 1897 it was £81,987, an increase of £47,959, £241 more than was raised. That is, the LWC probably used part of the money to make goods for sale.

There are three important features of these debentures:

First, it is apparent that the "A" series debenture income was spent in 1895 and 1896, and again the company had no cash. To solve this problem the LWC issued the "B" series debentures. If share dividends had not been paid, then the LWC should have had £35,655 in cash (page 36) and would not have needed to borrow so much money.

Likewise the "B" series income must have been spent in 1896 and 1897, again the company had no cash and again, to solve this problem, the company issued the "C" series debentures.

Second, during this period bank interest rates were between 3% and 4%.[25] The debenture interest rates probably increased because the lenders were concerned about the increasing risk they were taking.

And third, the LWC would have to make *net profit after all expenses*, of more than £27,000 per year every year for five years in order to bank enough money to pay out the debentures. But from 1899

24 Platt, page 115. Case making has always been a separate activity from movement making, because it has a different set of skills, tools and machinery. The LWC decision to manufacture cases was unwise as they probably could have sourced cases from Dennison, Wigley & Co., who were making 50,000+ cases per year. In 1905 the LWC sold watches in Illinois Watch Case Co. silver, gold filled and metal cases (1905 price list, Platt, pages 406-410). Why is unknown.

25 https://www.economicshelp.org/blog/1485/interest-rates/historical-real-interest-rate/

to 1904 the LWC made an average *net loss* of -£7,744 (page 37) and almost no money was put aside to fund debenture redemption; £2,500 in 1899 and an additional £410 by 1903. That is, the LWC should *never* have borrowed money because the company was incapable of paying back the debt; the best that it could do was pay interest on the loans. So it should have been obvious to the board that the debentures were a ticking bomb that would eventually destroy the company.

As a result of the inadequate profits, the payment dates for the debentures were missed and extended. For example, "C" series debentures were due on 30 June 1900 and this date was extended to 1903, and then 1905 and finally to 1910.[26] And no share dividends had been paid since 1896.

So the LWC was in debt to the extent of £303,710 (debentures and shares) and had absolutely no prospect of being able to repay even a small part of the debt (worth about £122,400,000 today).

At this point the shares were effectively worthless. There was no indication that the company could keep running and, if it was sold, there would probably be not enough money to pay out everyone. And even if it kept running there was no way that it could pay the accumulating debt owed to the preference shareholders since 1897. So it would have been impossible to trade shares and even more impossible for the company to get money from the shares that had not been allocated.

And at this point the debenture holders, despite interest payments, would have become increasingly nervous about their capital. So it was just a matter of waiting until the LWC was forced into receivership.

Also, a mysterious thing happened. The total value of the debentures was £138,000. But in 1898 on the debenture total is reported as £135,000 and in 1899 the total was £134,000. Where did the 40 debentures worth £4,000 go? The debentures had a *fixed* redemption date and could not normally be cashed in until then. But the 1897 new company accounts (page 38) refer to a "redemption premium on £2,000 "B" debentures, £100",[27] and the other 20 "B" debentures were redeemed in 1898, but we do not know who owned them or why they were redeemed. Although a guess, considering the past failures it is quite likely that these debentures were owned by one or more of the board members, and, realising the inevitable receivership would happen one day, they preferred cash to worthless paper.

The above view of the LWC does not consider the annual reports, and they show a different picture.

First, the interest payments for the years 1899 to 1903 are given below. Assuming that the debentures received interest of £6,300 (about £2,339,000) per year, a total of £31,500 over the five years, the bank interest corresponds to loans of £53,300 in 1899, dropping to £20,017 in 1903.

Year	Interest	Purpose	Ex debentures	Loan value 6%
1899	£9,498	Bank interest, mortgages, loans	£3,198	£53,300
1900	£8,461	Bank interest, mortgages, loans	£2,161	£36,017
1901	£8,392	Debenture interest, bank interest	£2,092	£34,867
1902	£8,325	Debenture interest, bank interest	£2,025	£33,750
1903	£7,501	Debenture interest, bank interest	£1,201	£20,017
	£42,177		£10,677	

LWC interest payments, 1899 to 1903

However, there is *absolutely nothing* in the 1897 to 1904 balance sheets that corresponds to a large liability to the bank. If, for example, we add a £53,300 liability to the 1899 balance sheet (page 40), then we *must* add a balancing amount somewhere else. The obvious thing to do is to reduce the equity by that amount, so that the company was now worth only £99,353 instead of £152,653.

26 Platt, pages 134 - 135.

27 Platt, page 137.

Second, from 1897 preference shares accumulated unpaid dividends, and from 1897 to 1903 these amounted to £41,994 or about £15,590,000 today (page 50). Again, there is *absolutely nothing* in the 1897 to 1904 balance sheets that corresponds to this liability. So, for example, the 1903 balance sheet should include two liabilities, for loans and cumulative dividends totalling £62,011! And this amount is too large to be hidden from view in other accounts.

We do not know how the accounts were manipulated.

By 1904 the LWC was sinking under a massive debt that it could not pay back, and it again seems to have resorted to creative accounting to hide the true picture from debenture and share holders.

The second catastrophe

1903 was a very bad year, when an annual profit of £2,826 in 1902 became an annual loss of -£16,098 in 1903, a turn-around of -£18,924 (page 37). This was blamed on reduced purchases of watches in Britain and consequential reductions in trade prices. Although this reason is supported by the very high inventory and relatively low accounts receivable it seems unlikely that it could explain such a large loss.

1904 was the second annus horribilis, with an annual loss of -£23,424 and the losses for these two years combined was £39,522 (£14,540,000). At the AGM on 17 April 1905 the directors attempted to sugar-coat the pill by stating that from 1897 to 1902 the company had an average profit of £16,483.[28] Which is true for the *trading profit* (actually *£18,597,* page 37), but the average *annual profit* was only *£1,845*. They also stated that the *trading losses* in 1903 and 1904 amounted to -£22,065, but my figure is -£16,578, and correctly state the *annual losses* as -£39,523 (see page 44).

The LWC made trading profits in every year except for 1898, 1903 (a tiny loss) and 1904 (page 35 and page 37). The trading loss in 1898 would have been caused by correcting the profit & loss statement to allow for the wrong accounting in previous years of goods on consignment. But the losses in 1903 and 1904 cannot be easily explained.

How can these two trading losses be created? Only by making the cost of sales larger than the sales. There are three options:

First, this can be done by selling goods at less than their cost. It has been estimated that the LWC produced about 80,000 watches per year.[29] That is, if these watches were sold for a profit of 5 shillings then the trading profit would be £20,000. And if they were sold at a loss of 5/- there would be a trading loss of £20,000.

However, such a large discount is unlikely. The 1903 price list gives a trade price of watches in silver cases of about £1-8-0. For the above example, the watches would have to cost £1-3-0 and be sold at a discount for £0-18-0. That would involve a very unlikely fire-sale.

Second, a high opening stock and a low closing stock could create a large cost of sales (see page 6); for example, an opening stock of £50,000 and a closing stock of £30,000 would increase the cost of sales by £20,000 and lead to a trading loss. But this requires that none of the £20,000 worth of watches were sold, because that would negate the costs by increasing sales by £20,000. That is, the watches would have to be written off and scrapped and that is very unlikely to have happened.

Third, a high cost of sales could be achieved by including some irrelevant expenses that should appear elsewhere in the profit & loss statement. But there is nothing to suggest such a large expense that could be moved into the cost of sales.

28 Platt, page 160.
29 Platt, page 179.

What is more important is that over the full period 1897 to 1904 the average net profit and average annual profit are negative; the LWC was consistently haemorrhaging money.

The directors were aware of the situation with the debentures to be redeemed later in 1905:

> *In these circumstances the company will be unable to continue to carry on business, and will be compelled to allow the first debenture holders to take possession unless further capital can be found at once.*[30]

So, at the 1905 AGM, after reporting the huge loss in 1904, they put forward a scheme to restructure the finances of the company:

(a) *The ordinary shareholders to consent to one-half (£32,855) of the capital represented by the ordinary shares being written off as a loss, and thereby the debit balance on the profit and loss account extinguished.*

This is simply a rearrangement of the books, transferring £32,855 from equity to the profit & loss statement. It involves no money and just makes the books look nicer. There is no effect on voting power, assuming all shares are halved in value.

(b) *The preference shareholders to consent to write off all arrears of dividend up to December 31, 1904, and to a reduction of the rate of dividend from 6 to 5 per cent.*

As the arrears of dividend do not feature in the balance sheets, and it is certain that dividends would not be paid in the foreseeable future, this is a meaningless proposal.

(c) *The first debenture holders to consent to renew their debentures for a term of ten years at 4½ per cent per annum.*

This *increases* the interest rate for "A" debentures from 4%.

(d) *The second debenture holders to accept in exchange for their debentures £14,000, part of an issue of £40,000 second debentures to be created by the company.*

The new second (and third) debentures were to receive 5% interest and so there is no change in conditions for the existing "B" debenture holders.

(e) *The shareholders and others interested in the company to subscribe in cash for £20,000, further part of such second debentures payable by instalments.*

This is the only proposal that involves cash and it is hopelessly inadequate when seen in the light of the existing losses. It is simply an attempt to get the cash needed to keep the company running for a while longer.

(f) *The third debenture holders to accept in exchange for their debentures the like amount of new third debentures to be created by the company. ... The second and third debentures ... repayable at the expiration of twenty years ...*

The rearrangement of the "B" and "C" debentures achieves nothing except to extend their life, deferring the inevitable problem of redeeming them to the distant future.

(g) *If the proposal could be carried out, then the company would be provided with £20,000 cash capital and the issued capital would amount to £286,855:*

5% cumulative preference shares	£100,000
Ordinary shares	£32,855
1st debentures	£80,000
2nd debentures	£34,000
3rd debentures	£40,000

30 Platt, pages 160 - 161.

According to the report "a general discussion took place on the reconstruction scheme of the directors, which it is understood was in the end agreed to."

It is probable that none of these proposals were implemented:

(a) There exist shareholder registers for 1907 and 1911 that show the number of nominal shares and actual shares taken up did not change.

(b) The 1909 balance sheet (page 48) confirms the number of shares and shows that the "A", "B" and "C" debentures had not changed.

In January 1906 three series of debentures were registered for £14,000, £80,000 and £14,000,[31] and these contradict the proposed debenture issues.

However, there is no indication that these debentures were actually created and, in the light of the 1909 balance sheet (page 48), they were never subscribed.

So, although the scheme might have been approved none of it was implemented.

The LWC survived for a little longer. Then, on 19 October 1906 the Lancashire Watch Company was dissolved.[32]

31 Platt, pages 162 - 164.

32 Platt, page 166.

5: When in doubt try again, 1906-1908

The 1906 take-over

Having lost control of the assets, the board of directors could do nothing, and it stopped overtly acting for the company. Consequently there are no financial reports or AGMs after that held in 1905. (The London Stock Exchange archives cover the period 1897 to 1904, but there are no reports for 1905 and 1906.)

What happened when the LWC was dissolved is not clear. The most likely scenario is that the board of directors decided that, without implementing their scheme for restructuring, the company was no longer viable and the board dissolved it in preparation for disposing of the assets.

Of course that would mean that the debenture holders would get nothing.

Apparently:

> *The LWC was dissolved on 19 October 1906 and on 13 November 1906 the London & Provincial Trust appointed Messrs Dodds Fairbairn and Winfield as receivers.*[33]

However, there is no other information about receivers at this time and they probably were not appointed. So, as predicted at the 1905 AGM, in November or December 1906 the first ("A") debenture holders took possession of the assets of the company with the intention of continuing the business, without forcing it into receivership.[34] The aim was to keep the company going and recover as much of their money as possible. And, as part of this takeover, the dissolution of the company must have been rescinded.

Is variety the spice of death?

It has been suggested that the LWC failed because it made too many different models, which probably created many problems and a reduction of potential profits.[35] For example, the 1898 price list describes eleven models with each in six sizes, requiring 66 separate sets of tooling.[36]

Each model is a different design. Smith describes the process of creating a model.[37] Large drawings, about 25 inches in diameter, were made and these were used to make a single prototype. The prototype was tested, changes made, and then a master plate with every hole drilled in it was made on a large, precision lathe. This master plate was then used to make secondary masters which were used to manufacture watches. Obviously the drawings were also used to create punches, for different bridges and cocks, and other guides.

In addition, "insufficient capital was poured into advertising media of an attractive kind to capture public interest," and only two advertisements in 1908 and 1909 are known.[38] This was mainly due to selling watches to the trade:

> *The Company, owing mainly to the want of capital, was never able to deal direct with the Public or to any considerable extent to put its watches on the Market under its own name, and,*

33 Platt, page 169.
34 Platt, page 167.
35 Smith, Alan and Henry Abbott, *The Lancashire Watch Company 1889 - 1910*, USA: Ken Roberts, pages 38-39.
36 Platt, pages 352-377. In addition these were made either open-face or hunter and with either 7 or 15 jewels. These variants would require some separate tooling.
37 Smith, Alan and Henry Abbott, *The Lancashire Watch Company 1889 - 1910*, USA: Ken Roberts, page 36.
38 Smith & Abbott, page 39. See http://lancashirewatchcompany.co.uk/lancashire-watch-company-prescot/new-information/new-information-history/

in consequence, its output had, speaking generally, to be sold to British Factors and Shopkeepers, who resold the watches under their own names ...[39]

But these problems were relatively minor.

First, it appears that the LWC had no problem selling watches. It made about 790,000 watches during its existence. And it sold about 790,000 watches during its existence. However, the lack of advertising and LWC identification might have become important if the company made significantly more watches.

Second, the cost of machinery was not a major problem.

Each watch model was made in different sizes and each size required a complete set of masters, punches, etc, and at the 1911 auction there were six lots of these accessory tools.[40] For example:

928 Set of accessory tools, etc. for 16, 18, 20, and 22 size watches, full plate and three-quarter plate, hunter and open face, comprising about ... sub-presses, ... quills, master plates, jigs, gauges, drawings, etc. (The numbers were not specified.)

Quills are tool holders inserted into the tail stock of a lathe. They would mainly have been used with turret and capstan lathes; some of those lathes would be at least semi-automated, rotating the capstan to present different tools successively to the piece in the head stock, but some were operated manually.[41]

The other lots of accessory tools were for:

(a) 15 size watches.

(b) 10, 12 and 14 size watches.

(c) 0 and 6 size watches.

(d) 18, 20 and 22 size center seconds stop watches.

(e) John Bull watches.

There are no lots for half-plate watches, described in the 1905 price list,[42] but these may have been considered split three-quarter plate watches.

The factory had 214 general purpose lathes, 61 capstan and turret lathes, 119 general purpose precision drills, and more than 177 other general purpose machines,[43] and the accessory tools were used to convert these general purpose presses, lathes, drills, etc into machines to make parts for specific watches. So changing watch models did not require a large capital outlay.

In addition to these 571 general purpose machines there were 316 special purpose machines and tools, ranging from fully automatic screw cutting machines to manual tools, such as wig-wag polishers.[44]

One consequence of using general purpose machines was that:

... it required a good deal of time, patience, and intelligence guidance to initiate the workers into the proper and useful and efficient production from the machinery at which they worked.[45]

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39 Platt, page 179.

40 Platt, lots 923-928, page 461.

41 Cutmore, *Watches, 1850-1980*, London: David & Charles, page 188.

42 Platt, pages 412-432.

43 My analysis of the machinery at the 1911 auction sale; see Platt, pages 435-505.

44 Illustrated in *The Lancashire Watch Company, its Rise and Progress*, 1893, page 118, and Smith & Abbott, page 77.

45 Platt, page 116.

That is, some workers had to be more highly skilled than those in comparable American factories.[46] Because the raw materials are cheap, the cost of production is dominated by labour, the number of man-days required to make a watch. Although the information is not available, the types of machinery suggest that the LWC could not reduce the man-days per watch sufficiently to reduce the trade prices of its watches.

TP Hewitt was aware of this problem, and in 1887 he:

> *... referred to the very great number of special designs in use among English watchmakers, and to this cause may undoubtedly be traced the increased cost of production as compared with a system in which a few uniform patterns, capable of economical duplication, are adopted.*[47]

Also at the same time it was stated that:

> *[For a factory] to be successful would mean the entire abandonment of old prejudices, and the application of the latest and most efficient mechanical knowledge in the making of the machinery.*[48]

But these principles were never applied at the LWC. It made a plethora of designs[49] on machines that required skilled labour.

The special purpose machines and division of labour enabled some unskilled workers to be employed, as this 1894 complaint makes clear:

> *... owing to the introduction of boy and women labour, it is no longer possible for skilled hands, having homes to keep up, to earn a living wage.*[50]

However, the LWC primarily used skilled or semi-skilled workers to manufacture watches by production methods that were based on traditional artisanal procedures. This failure to automate is supported by a test of the interchangeability of seven, 1901 watches:

> *... all were partly interchangeable but diameters tended to vary. Suggests much finishing, perhaps due to old-fashioned workforce. Disappointing.*[51]

The Vigil watch

In 1906, just before these events, the LWC produced a new watch, the *Vigil*.[52] The Vigil was produced in only two sizes (0 size for ladies, and 15/16 size for gentlemen[53]) in a variety of cases, although about 4,600 were sold without cases. All, with one exception, had 7 jewels; the exception was that 300 of the 0 size watches were made with 16 jewels, but these were exclusively for Lever Brothers.

The Vigil was first sold in May 1906 and continued to be made up to the end of 1909. (A few were sold in 1910 to 1912, even after the LWC had ceased to exist, but these were undoubtedly sales

46 Watkins, Richard, 2009, Watchmaking and the American System of Manufacturing; see http://www.watkinsr.id.au/amsystem.html

47 Platt, page 57.

48 Platt, page 56.

49 In one design there are at least 17 variations of configurations, all of which would require some separate tooling to make them. (Information provided by John Platt in a private communication.)

50 Platt, page 121.

51 Cutmore, *Watches, 1850-1980*, page 193.

52 Platt, page 433.

53 The ledger pages list both 15 and 16 size, but John Platt has informed me that these watches were exactly the same size.

of old stock.) A total of about 62,500 were made, but apparently machinery was constructed for 50,000 per year, a potential total of 200,000 watches in the four years that it was manufactured.[54]

Although the Vigil was a sensible rationalisation, it could not resolve the underlying problem. The LWC owed £134,000 and it had no way to pay off that debt. The real problems were that *the factory was too small* and the LWC *did not have enough machines and tools*.

To quantify the problem, the LWC needed to redeem the debentures after about 5 years. That is, during those 5 years it had to pay £6,300 *per year* for interest on the debentures and save £26,800 *per year* in order to accumulate the £134,000 to pay out the capital. To do this the company would have to make an *annual profit* of £33,100 every year for 5 years. The LWC never even got close to this figure.

It has been estimated that the LWC produced about 80,000 watches per year.[55] From 1897 to 1902 this yielded, after expenses and paying interest on the debentures, an average annual profit between of £1,845 and it would have taken about 73 years to redeem the debentures! Certainly market conditions and annual sales varied, but even the most optimistic estimate indicates that it would require about 25 years before the debenture holders received their capital investment.

Even if the factory was doubled in size, and machinery and workers acquired to fill it, and assuming the company could manage to sell twice as many watches, then it would take about 7 or 8 years to save £134,000. But to do that the LWC would have to borrow about £170,000 for the new buildings and machinery (based on the values of the assets at the time) and so the company would have to pay back a total £304,000, about £114,400,000. It is obvious that no one in their wildest dreams would advance £170,000 to a company that could not pay off its existing debts and only made a profit sporadically.

The company was doomed.

So why did the "A" debenture holders take over the factory at the end of 1906? Surely the accountants amongst them would realise that failure was inevitable? Presumably they ran the company, not to get back their capital, but to at least benefit from some more interest payments to soften the blow.

We do not know what happened, because there are no financial records in the period December 1906 to June 1908, but if the strange balance sheet for 1909 is any indication (page 48), they probably stripped the company of whatever cash they could get, reminiscent of the 1898 debacle.

54 Platt, page 179.
55 Platt, page 179.

6: The fat lady sings "Valhalla!", 1908-1911

The John Bull catastrophe

Richard Wagner's *Der Ring des Nibelungen* (The Ring of the Nibelung) is, I think, one of the great tragedies. At the end of the of the last opera (Götterdämmerung) the "fat lady", the valkyrie Brünnhilde, lights a funeral pyre, mounts her horse and rides into the flames. The flames flare up to Valhalla, the hall of the gods, and it and the gods are consumed.[56]

In the case of the LWC, the fire was kept under control for a few years, and the company and its "gods" were not totally consumed until the flames were fanned by the last catastrophe, the John Bull watch.

The "A" debenture holders controlled the company for a year and a half until, on 7 July 1908, the London & Provincial Trust apparently gave up on them and appointed Messrs Dodds Fairbairn and Winfield as receivers for the "B" debenture holders. These receivers produced half-yearly financial reports (page 47) and for two and a half years, from July 1908 until December 1910, they managed to produce a small profit, enough initially to pay some interest on the debentures and then to bank some money. But the total saved, about £10,500, is miniscule when compared with the company's debts.

The Vigil watch was a rational development to standardise production and produce a slightly cheaper watch; for example a 0 size in a steel case had a trade price of £0-15-0 (about £275.60 today) and the corresponding "Zodiac" watch cost £1-3-0, 8 shillings more (about £422.30).[57]

In contrast, the designers of the John Bull watch, together with the management that decided to manufacture it, acted irrationally.

The John Bull watch was the English equivalent of the American dollar watch. It had a pin lever escapement,[58] cheap construction, a gilt or nickel plated brass case, and sold to the trade for 3/9 (3 shillings and 9 pence, about £68). The trade were instructed to retail the watch for no less than 5/- (£91).[59] That is, the complete watch was cheaper than the rough movements that the LWC made (page 12).

Before looking at what happened, a few facts are needed.

First, in 1903 CJ Hewitt stated that the value of labour was 6 shillings per day and the average cost of labour on a watch was 9/-, 1½ day's work.[60] However, in 1899-1900 it was stated that the LWC made 2,000 watches per week with about 1,000 persons and 1,587 machines.[61] That is, 2 watches per week per person or 3 days per watch, double the time and cost claimed by CJ Hewitt. This is a more realistic figure.

But the cost of a watch also included the expenses of materials for the movement and the case, maintenance on the tools and machines used, and part of the cost of the accessory tools.

Assuming a profit per John Bull watch of 1/-, a substantial part of the remaining 2/9 must have been used for the expenses, and the total labour in a John Bull watch must have been less than a

56 https://en.wikipedia.org/wiki/G%C3%B6tterd%C3%A4mmerung
57 Platt, pages 433 and 424.
58 Cutmore, M, 1991, *Pin Lever Watches*, Devon: D H Bacon, pages 54-56 and page 102.
59 Platt, page 434.
60 Platt, page 157
61 Cutmore, *Watches, 1850-1980*, page 99.

third of a day, about 3 hours.[62] (If the estimate of machinery costs per watch in Appendix 5, page 52, are correct, then the John Bull watch must have been made at a loss.

Second, with a profit of 1/-, 100,000 watches must be made to get a total profit of £5,000. That is, to pay off the debt to debenture holders, 2.68 million watches would have to be made over 26.8 years.

If the profit was 1/9 and the cost 2/-, then the labour must have been about one fifth of a day or 2 hours, and 100,000 watches would produce a total profit of £8,750. So 1.5 million watches would have to be made over 15 years.

Obviously this is far too long, and to be successful at least 200,000 John Bull watch would have to be made *every year* for many years. But apparently the factory had machinery for only 2,000 watches per week or 100,000 watches per year.[63]

Again, the factory was much too small to be successful and failure was inevitable.

But reality paints a completely different, very ugly picture.

There are 51 ledger pages describing John Bull sales.[64] Analysis of these pages (the table "John Bull Sold" opposite) reveals that only 2,741 watches were sold! The first date is 28 April 1908 and the last is 11 March 1912. (Previous authors have stated that about 5,000 John Bull watches were made, and presumably this was based on an estimate of 100 watches per page. However it is clear that they did not analyse the entries.)

And these sales returned a profit of only £137 or £240, depending on the profit margin, completely useless amounts.

Year	Number Sold
1908	33
1909	2,682
1910	22
1911	4
1912	0
Total	2,741

John Bull Sold

But this is only part of the story. The ledger pages include 1,526 watches marked as "Exchange" (the table "John Bull Exchanged" opposite).

The two tables show what happened. Of the 2,741 watches sold, 1,526 were returned!

Year	Number Exchanged
1908	0
1909	117
1910	1,387
1911	15
1912	7
Total	1,526

John Bull Exchanged

These exchanges were because the design of the watch had a catastrophic fault:

> *All the handset mechanisms ... are mechanically weak and ... were broken at the rocking bar pull piece which engages the slot in the winding stem.*[65]

The left photograph below shows this unsatisfactory part highlighted by the yellow arrow.[66] If it breaks then the hands cannot be set.

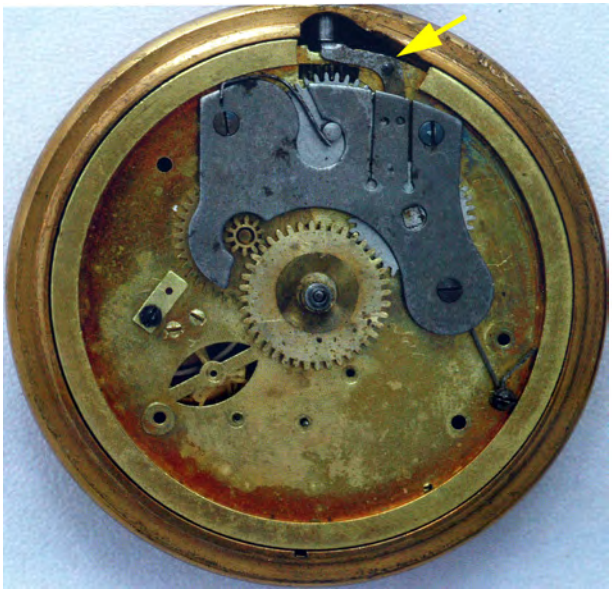
62 This estimate is based on the expenses being only 9 pence for the movement and the case, a figure that seems too low. I also assume a 10 hour work day, 6 days per week for 50 weeks in a year.

63 Platt, page 179.

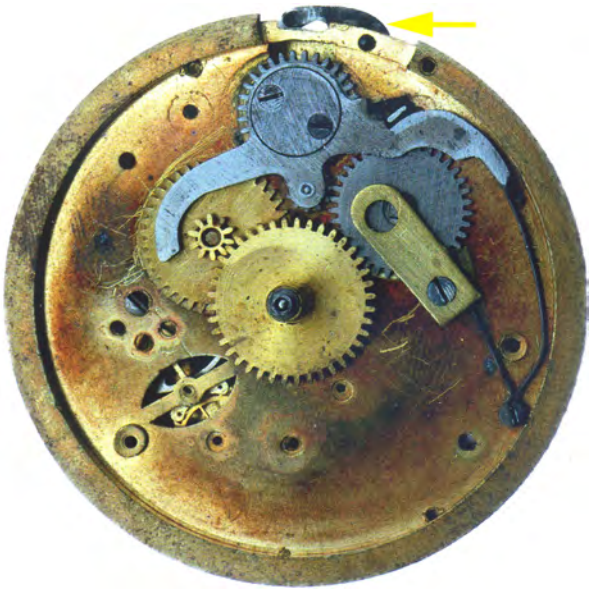
64 Page 801 of Sales Ledger 4 and 50 pages in the separate John Bull sales ledger.

65 Cutmore, *Pin Lever Watches*, page 56. In contrast, in private communication John Platt has noted that a watch repairer who has handled a few John Bull watches has never seen a broken setting lever but has suggested the barrel was a problem.

66 Platt, page 344, reproduced with permission. Right hand photograph, Platt, page 346, reproduced with permission.



Original John Bull design?



Modified John Bull design?

The right photograph above illustrates a modified design.[67]

There are two ways in which the exchanges could have happened, summarised in the table. Note that cost varies because it is sale *price - profit*.

First, the returned watches could have been repaired. If this is what happened, then only 2,741 were made and 1,526 of them were repaired. Assuming the repair cost 6 pence, then the total repairs were £38 and the net profit either £99 or £202.

Second, the returned watches could have been scrapped and replaced by new watches. In which case 1,526 extra watches were made and were *given away*, so their total cost must be written off against the profit received from the other watches.

Either way, the figures are pathetically small and the John Bull watch was an unmitigated disaster.

	Number	Profit 1/-	Profit 1/9
Cost	2741	£377	£274
Profit		£137	£240
Repair cost 6d	1526	£38	£38
Net Profit		£99	£202
Replacement cost	1526	£210	£153
Net Profit		-£73	£87

Finally:

(a) Some watches have conical balance pivots and some normal pivots, suggesting that there were at least two designs.[68]

(b) The watches have "movement numbers" that do not make sense in the light of how few watches were made.[69]

(c) The left photograph above is of a watch that winds clockwise, to the right. However, the right photograph winds anti-clockwise, to the left, because of the pinion between the winding wheel and the barrel wheel. This difference may mean that the right photograph may not be of a repaired left photograph watch.

67 David Penney has stated: "It has what appears to be improved keyless work and may be an attempt by the firm to rectify faults with the inadequate keyless work fitted to the first examples to be released."

68 Cutmore, *Pin Lever Watches*, page 56.

69 Platt, page 343 and Cutmore, *Pin Lever Watches*, page 56.

Giving up

In the first half of 1910 the "A" debenture holders, presumably still in possession of the factory, and the receivers for the "B" debenture holders realised the inevitable, and on 21 June 1910 the trustees for the debenture holders put up the LWC for auction as a going concern.

Only one bid of £15,000 was made was made for the company compared to a book value of about £170,000! Not surprisingly the property was withdrawn.[70]

The company was kept running until December 1910 (page 47) and then it was decided to get rid of it.

And, from 22 March to 3 April 1911 the machinery was auctioned.[71] Everything was sold, including about a mile of work benches and their stools, about a mile of the shafts and pulleys that had connected the engines to the machines, and nearly three miles of steam and gas piping. What was left was an empty shell. The now gutted buildings remained in the hands of the "A" debenture holders. The auction realised £7801-7-8, a loss of £128,865 on the book value of the assets, or a loss of £46,490,000 in today's values.

At last, on 24 March 1914, the LWC was finally and permanently dissolved,[72] about 17 years too late.

Finally, two further comments:

First, with the exception of one entry for two watches on page 30, all the John Bull ledger pages from page 27 to page 48 and page 50 contain nothing but exchanges. Page 49 is exceptional because it contains 24 sales between August 1910 and February 1911 and no exchanges. In addition, at the machinery auction the John Bull Finishing Department was empty except for fixtures and furniture.[73] From these we can deduce that page 49 of the ledger represents at least part of the remaining stock of watches in the factory.

Second, page 50 of the ledger list 24 exchanges between 17 February 1911 and 11 March 1912, after the factory had closed.

These sales and exchanges were probably made by AJ Huckle:

> *After the collapse of the company a small concern known as the Prescot Watch Company was established ... This small company was working for the Law Guarantee Trust and Accident Society in order to re-imburse, as far as possible, the losses of the shareholders who had suffered by the liquidation of the company.*[74]

Huckle purchased £800 worth of "plant, furniture and stock" in 1911 and paid for them in 1912.[75] So it was he who finished the John Bull watches and other LWC watches, including about 170 Vigil watches sold in 1912.

According to Smith, Huckle occupied the top floor of a small building that was used by the LWC as a warehouse. As this building and its contents were not part of the fire sale, it is possible that it housed some unsold stock.

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70 Platt, page 179.
71 Platt, pages 435-505.
72 Platt, page 183.
73 Platt, page 486; auction lots 1921-1963.
74 Smith & Abbott, *The Lancashire Watch Company 1889 - 1910*, pages 39-40. It is more likely that Huckle was working for the debenture holders.
75 Platt, page 182.

So the Lancashire Watch Company failed four times:

First in 1898, because incorrect accounting was used to favour ordinary shareholders, and that created unexpected losses. The company survived after being restructured.

Second in 1906, when the company's unpaid and unpayable debts forced the "A" debenture holders to take over. The company survived because the debenture holders did the wrong thing and kept the factory running.

Third in 1908, when "B" debenture holders forced the company into receivership.

And fourth in 1910, when all hope was lost and the company was finally liquidated.

Appendix 1: LWC financial statements, 1889 - 1896

The dates in this and the following appendixes refer to the financial year, 1 January to 21 December as reported at the AGM in the *following year*. With the exception of 1889, the reports at the Annual General Meetings provide only a few figures from the profit & loss statements, and these are tabulated below.

After the table there is additional information on each year.

Year	1889	1890	1891	1892	1893	1894	1895	1896
Sales	21,983	22,249						
Trading profit	5,808	3,108	3,200	3,761	5,016	8,288	11,424	12,720
Carried forward last year	0	***1,291***	1,334	1,081	324	87	80	885
Total profit	5,808	4,399	4,535	4,842	5,340	8,375	11,504	13,605
Dividends	1,046	2,065	2,953	4,018	4,753	7,295	8,455	8,679
Depreciation		500	500	500	500			
Debentures							1,164	2,000
Goodwill		500						
Reserve						1,000	1,000	2,000
Carried forward next year	1,320	1,334	1,081	324	87	80	885	926

LWC Profit & loss, 1889 - 1896 (old company)

1889 (Platt, pages 80-81):

The balance sheet and profit & loss statement have been given earlier (page 6 on).

The chairman stated that £1,190 would be carried forward and then modified that to £1,320.

The profit was £3,163, and the difference consists of the £797 formation expenses that were to be written off, and paying dividends and interest on the shares for the previous *eight months* since formation. With a carry forward of £1,320, £1,046 was available for dividends at 6% and interest at 5%; the figures do not distinguish the amounts to which dividends and interest apply.

1890 (Platt, pages 85-86):

There is no explanation of why the carried forward figure, highlighted, is £29 too low.

Expenses of £2,065 are for both dividends and interest. The number of shares was increased by 5,000 in October 1890, but the dividend is only enough to cover about 3,442 ordinary shares, and probably very few of the extra preference shares were taken up.

1891 (Platt, pages 88-89, 91):

As well as the report there is a criticism of it and, taken together, it is possible to construct a tentative balance sheet and profit & loss statement. Except for the interim dividend and the number of shares, both of which are estimated, both tables are based on the published data.

Profit & loss:

(a) The sales and cost of sales are based on the "new movement"; I assume this is a rough movement and not a movement for a complete watch (which were not made until about 1893). These are, of course, only a fraction of total sales. However, as the total profit of £4,535 was reported, changes to increase the sales also require a corresponding increase in cost of sales to keep that figure the same.

(b) An interim dividend was paid on preference shares during the year, and the total profit includes this. But without further details it is impossible to estimate the actual share holding.

Sales		£7,756
Cost of new movement	£6,130	
Transfer to balance sheet	£2,745	
Cost of sales		***£3,385***
Profit		***£4,371***
Less interim dividend	£1,170	
Trading profit		***£3,201***
Carried forward	£1,334	
Total profit		***£4,535***
Machinery expenses	£500	
Dividends 6%	£2,953	
Total expenses		***£3,453***
Net profit carried forward		***£1,082***

Estimated LWC profit and loss 1891

The report states that it is recommended that "the payment of ... a further dividend on the preference shares at the rate of 6 per cent ..." suggesting that the preference shares received more than 6%. However, this would mean there were only about 4,900 shares which is too few. So the profit & loss statement given here is based on preference shares receiving an interim dividend of 3% and a final dividend of 3%. Sensible figures are obtained if there were 3,900 preference shares and, consequently, 2,972 ordinary shares, making 6,872 out of 10,000 taken up.

(c) The dividends depend on the £2,745 being transferred from cost of sales to the balance sheet. Without this the total profit would be only £1,790 and that is not enough to pay the dividends.

Balance sheet:

Assets:			Liabilities:		
Cash	£1,783		Accounts payable	£6,067	
Accounts receivable	£3,071	***£4,854***	Other payable	£2,952	
			Other debts	£6,865	
Inventory old	£11,953		Total liabilities		***£15,884***
Inventory new movement	£3,384				
New costs from P & L	£2,745	***£18,082***	Equity:		
			Shares	£68,720	
Buildings	£16,192	£16,192	Profit carried forward	£1,082	
Machinery	£38,444	£38,444	Arrears	-£2,686	
			Equity total		***£67,116***
Good will	£5,428	£5,428			
Total		***£83,000***			***£83,000***

Estimated LWC balance sheet 1891

Except for the value of buildings, all assets come from the criticism of the report. And, except for the share holding (and consequently the other debts), liabilities and equity come from the report and its criticism.

1892 (Platt, pages 113-114):

Again an interim dividend on preference shares was paid during the year, and the board recommended "the payment of ... a further dividend on the preference shares at the rate of 6 per cent." Assuming the preference dividend was split and that all 5,000 preference shares had been taken up, then the dividend corresponds to a total of 9,197 shares.

1893 (Platt, pages 115-118):

An additional 5,500 shares was created in May 1893, to pay for case making machinery, and the total number of shares was now 15,500 representing a nominal capital of £155,000. The report notes that 3,900 shares had not been taken up, leaving 11,600 shares and forcing the LWC to borrow from a bank.

Again an interim dividend was paid during the year and, assuming 7,000 of the 10,000 preference shares had been taken up, my crude estimate of the total shares is 11,422. Four entries in the balance sheet were also reported:

Assets:		Liabilities:	
Accounts receivable	£19,217	Bank debt	£22,471
Inventory	£34,028		
Perfecting watches	£11,993		

The amount for "perfecting watches" was mentioned at the 1895 AGM,[76] and it was stated that this was carried forward to the machinery account. It is not clear whether this amount is for machinery or whether part or all of it was an expense that had been incorrectly moved to the assets.

1894 (Platt, pages 123-125):

The dividends of £7,295 corresponds to 12,158 shares (out of 15,500). But the report states that 1,345 shares were not allotted, suggesting that 14,155 shares had been taken up; a difference of 2,097 shares not accounted for.

The share register for March 1894 shows that there were 5,111 ordinary and 6,648 preference shares, a total of 11,759 shares at that time.[77]

1895 (Platt, pages 127-128):

Trading profit	£14,979	
Carried forward	£80	
		£15,059
Interest on loans and debentures	£3,555	
Net profit		***£11,504***
Dividends 6%	£8,455	
Debenture expenses	£1,164	
Reserve	£1,000	
Expenses total		***£10,619***
Net profit carried forward		£885

LWC profit & loss, 1895

The amount for dividends corresponds to 14,092 shares out of 15,500.

76 Platt, page 124.

77 Copies of the share registers were provided to me by John Platt.

1896 (Platt, pages 128-130):

The amount for dividends corresponds to 14,465 shares (out of 15,500) at 6%, probably 10,000 preference and 4,465 ordinary shares.

The accounts specified at the AGM are:

Trading profit	£19,280	
Carried forward	£885	
		£20,165
Interest on loans and debentures	£5,560	
Debenture sinking fund	£1,000	
Net profit		***£13,605***
Dividends 6%	£8,679	
Debenture expenses	£2,000	
Reserve	£2,000	
Expenses total		***£12,679***
Net profit carried forward		£926

LWC profit & loss, 1896

Profits of the old company, 1889 to 1896

The table below summarises the information from the individual Profit & Loss statements:

(a) *Trading profit*: This is normally *sales - cost of sales* and does not include all expenses.

(b) *Net profit*: This is *trading profit - expenses*. It includes brought forward profits.

(c) *Annual profit*: This is *net profit - brought forward profits*. That is, it the amount of money made or lost in that financial year.

(d) *Ex dividend:* This is *net profit + dividends*, the profit if dividends had not been paid.

(e) The average for 1890 to 1896 has been included to show the profits excluding the first, abnormal year.

Year	Trading profit	Net profit	Annual profit	Ex dividend
1889	£5,808	£3,163	£3,163	£4,209
1890	£3,108	£1,334	£43	£3,399
1891	£3,020	£902	-£432	£5,025
1892	£3,761	£324	-£757	£5,842
1893	£5,016	£87	-£237	£7,240
1894	£8,288	£80	-£7	£7,375
1895	£11,424	£885	£805	£9,340
1896	£12,720	£926	£41	£9,605
1889 to 1896	*£53,145*	*£7,701*	*£2,619*	*£52,035*
Average	*£6,643*	*£963*	*£327*	*£6,504*
1890 to 1896	***£47,337***	***£4,538***	***-£544***	***£47,826***
Average	***£6,762***	***£648***	***-£78***	***£6,832***
1893 to 1896	*£37,448*	*£1,978*	*£602*	*£33,560*
Average	*£9,362*	*£495*	*£151*	*£8,390*

LWC Profits, 1889 - 1896

Dividends of the old company, 1889 to 1896

The following table shows total dividends paid to shareholders. The 1889 and 1890 figures include "interest" and are a little too high. The 1891 to 1894 are estimates that include the interim dividends. In current values the total is about £18,410,000, based on comparing with 1896 values.

Year	1889	1890	1891	1892	1893	1894	1895	1896	***Total***
Dividends	1,046	2,065	4,123	5,518	7,153	7,295	8,455	8,679	***£44,334***

Appendix 2: LWC financial statements, 1897 - 1904

In addition to the newspaper reports of AGMs given in John Platt's book, financial statements for the eight years 1897 to 1904 are available; these were obtained by John Platt when he visited the Guildhall in London and photographed London Stock Exchange archives. For each of the years, the statements consist of four pages: the annual report (mostly the same as the newspaper reports), balance sheet and profit & loss statement, and a summary of issued shares and debentures with the names of the office holders.

In the London Stock Exchange reports the profit & loss statements are presented in the form of balance sheets and, due to accountants hatred of minus signs, there is no clear indication of whether the numbers are positive or negative. As a result, they are confusing and can be difficult to interpret. The original report for 1903 is included for comparison with my analysis.

The following pages summarise the information from these sources. For the above reason, the profit & loss statements are given here in a different layout. There are some rounding errors.

Profits of the new company, 1897 to 1904

The report at the 1905 AGM states the progress of the new company from its formation in 1897. The table below summarises the information from the individual Profit & Loss statements:

(a) *Trading profit*: This is normally *sales - cost of sales* and does not include all expenses.

(b) *Net profit*: This is *trading profit - expenses + brought forward* amounts.

(c) *Annual profit*: This is *net profit - brought forward profits*. That is, it the amount of money made or lost in that financial year.

Year	Trading profit	Net profit	Annual profit
1897	£16,702	£5,416	£5,416
1898	-£35	-£16,057	-£21,474
1899	£16,665	-£12,994	£3,063
1900	£23,380	-£8,788	£8,049
1901	£28,222	£4,404	£13,192
1902	£26,649	£7,229	£2,825
1897 to 1902	***£ 111,583***	***-£20,790***	***£11,071***
Average	***£18,597***	***-£3,465***	***£1,845***
1903	-£5,813	-£8,870	-£16,099
1904	-£10,765	-£32,293	-£23,424
1897 to 1904	***£95,005***	***-£61,953***	***-£28,452***
Average	***£11,875***	***-£7,744***	***-£3,557***

LWC Profits, 1897 - 1904

The 1904 report stated that the average profit up to 1902 was £16,483; that is, the report uses the ***t****rading profit* and not the much more important figure of net profit. My estimated average is £18,597 and I do not know why the two figures are different.

1897 New company (Platt, pages 137-138):

Assets		Liabilities	
Cash	£4,239	Accounts payable	£4,869
	£1,744,000		*£2,003,000*
Accounts receivable	£41,017	Other payable	£3,241
	£16,470,000		*£1,301,000*
Inventory	£81,987	Debentures	£138,000
	£33,730,000		*£56,770,000*
Buildings	£32,534	Bad debts	£7,000
	£13,060,000		*£2,811,000*
Machinery	£128,244	Deposits	£2,256
	£52,750,000		*£905,900*
Goodwill	£29,610	**Equity**	
	£11,890,000	Shares	£165,710
Debenture fund	£2,500		*£66,540,000*
	£1,004,000	Retained earnings	£5,416
Formation expenses	£6,296		*£2,175,000*
	£2,528,000	Arrears	-£65
			£26,100
	£326,427		**£326,427**
	£131,100,000		***£131,100,000***

LWC Balance Sheet, December 1897

For comparison, the numbers in italics are the 2016 values for the entry above.

Income	Trading profit	£16,702	
	Transfer fees	£1	
			£16,703
Expense	Fees	-£463	
	Interest	-£6,286	
	Guarantees	-£553	
	Machinery	-£3,384	
	Redemption premium	-£100	
	Bad debts	-£500	**-£11,286**
Profit			**£5,417**
Brought forward		£0	**£5,417**
Carried forward		£5,417	**£0**

LWC Profit & Loss, December 1897

The trading profit is *sales - cost of sales*, but nowhere are any details provided (except for the 1889 accounts, page 6).

The net profit is recorded as retained earnings, and the whole of it (£5,416) was carried forward to the 1898 profit & loss statement, and no dividends were paid.

1898 (Platt, pages 138-139):

Assets		**Liabilities**	
Cash	£136	Accounts payable	£5,165
Accounts receivable	£17,608	Debenture interest	£3,193
Inventory	£70,255	Debentures	£136,000
Buildings	£32,534	Deposits	£2,057
Machinery	£131,245	Bank	£582
Goodwill	£35,565		
Debenture fund	£2,500	**Equity**	
Formation expenses	£6,743	Shares	£165,710
Profit & loss account	*£16,057*	Retained earnings	£0
		Arrears	-£64
	£312,644		**£312,644**

LWC Balance Sheet, December 1898

The accounts receivable was actually £28,108, but £10,500 was written off as "bad and doubtful debts and discounts. Also, to avoid using a minus sign, the balance sheet treats the £16,057 loss for the year as an asset instead of a negative *retained earnings*.

The assets of "the old movement trade" were decreased by £5,955 and, instead of making this an expense in the profit & loss statement, it was moved to goodwill; an absurd fiddle.

Income	Trading loss	-£35	
	Transfer fees	£1	
			-£34
Expense	Fees	£649	
	Interest	£7,046	
	Guarantees	£564	
	Machinery	£2,935	
	Redemption premium	£100	
	Bad debts	£1,128	
	Bad debts prior years	£9,018	**£21,440**
Loss			**-£21,474**
Brought forward		£5,417	**-£16,057**
Carried forward		-£16,057	**£0**

LWC Profit & Loss, December 1898

Again to avoid a minus sign, the original accounts report the trading loss as an expense of £35, so that the only income for the year were the transfer fees!

The report states that the trading loss was £12,454 when the actual trading loss was only £35. The difference is that the reported loss includes, rather irrationally, all expenses except *bad debts prior years* and the profit *brought forward*, totalling £3,602; that is, it is the annual loss ignoring the accounts used to fix the previous years' errors.

I assume that the company, without the previous years problems, should have made a trading profit of about £16,000; that is, the unreported *cost of sales* must have been about £16,000 greater than normal. So the total cost of fixing the errors was about £25,000 (about £10,040,000 today).

1899 (Platt, page 146):

Assets		**Liabilities**	
Cash	£3,888	Accounts payable	£5,313
Accounts receivable	£23,705	Debenture interest	£3,050
Inventory	£57,224	Debentures	£134,000
Buildings	£32,534	Deposits	£1,389
Machinery	£134,245		
Goodwill	£35,565		
Debenture fund	£2,500	**Equity**	
Formation expenses	£6,744	Shares	£165,710
Profit & loss account	*£12,993*	Retained earnings	£0
		Arrears	-£64
	£309,398		**£309,398**

LWC Balance Sheet, December 1899

As in 1898, in order to avoid a minus sign, the AGM report treats the £12,993 loss as an asset instead of a negative *retained earnings*. Again, the effect of this is to artificially inflate the assets and the owners' equity from £296,405 and hide the loss.

Income	Trading profit	£16,663	
	Transfer fees	£2	
			£16,665
Expense	Fees	£233	
	Interest	£7,601	
	Special interest	£1,897	
	Guarantees	£563	
	Machinery	£2,574	
	Bad debts	£734	**£13,602**
Profit			**£3,063**
Brought forward		-£16,057	**-£12,994**
Carried forward		-£12,994	**£0**

LWC Profit & Loss, December 1899

The *special interest,* "bank interest on special account" is not explained, except to note that "the sum of £1,896 19s 6d ... has been paid to the bankers for accumulated interest on liabilities incurred for the benefit of the company." The balance sheet must be incorrect, because there is nothing in it to explain this account. This is the only year for which special interest was paid.

1900 (Platt, pages 149-150):

Assets		Liabilities	
Cash	£1,956	Accounts payable	£8,518
Accounts receivable	£23,519	Debenture interest	£2,993
Inventory	£64,348	Debentures	£134,000
Buildings	£32,995	Bad debts	£0
Machinery	£135,053	Deposits	£1,485
Goodwill	£35,565		
Debenture fund	£2,500	**Equity**	
Formation expenses	£6,743	Shares	£165,710
Investments	£1,175	Arrears	-£64
Profit & loss account	*£8,788*	Retained earnings	£0
	£312,642		**£312,642**

LWC Balance Sheet, December 1900

Income	Trading profit	£23,379	
	Transfer fees	£1	**£23,380**
Expense	Fees	£532	
	Interest	£8,461	
	Guarantees	£563	
	Machinery	£3,356	
	Bad debts	£0	
	Legal expenses	£700	**£13,612**
Profit			**£9,768**
Brought forward		-£12,993	**-£3,225**
	Stock revaluation	-£5,563	-£8,788
Carried forward		-£8,788	**£0**

LWC Profit & Loss, December 1900

Revaluing assets is necessary from time to time, but these are probably further losses associated with the faulty accounting in previous years.

A nice example of revaluation is in *The story of a watch company* by Estelle Fallet, a history of Tissot. On page 264 there is a photograph circa 1978 showing huge crates and drums full of watch movements destined for the rubbish heap. This stock, probably worth a large amount of money at the time, had been reduced to zero!

1901 (Platt, pages 153-154):

Assets		**Liabilities**	
Cash	£4,923	Accounts payable	£10,654
Accounts receivable	£28,702	Debenture interest	£2,966
Inventory	£69,208	Debentures	£134,000
Buildings	£32,995	Bad debts	£0
Machinery	£135,048	Deposits	£0
Goodwill	£35,565		
Debenture fund	£2,500	**Equity**	
Formation expenses	£6,744	Shares	£165,710
Investments	£1,985	Arrears	-£64
Profit & loss account	£0	*Retained earnings*	*£4,404*
	£317,670		**£317,670**

LWC Balance Sheet, December 1901

Income	Trading profit	£28,153	
	Transfer fees	£2	
	Interest	£67	**£28,222**
Expense	Fees	£743	
	Interest	£8,392	
	Guarantees	£563	
	Machinery	£3,376	
	Bad debts	£1,416	
	Legal expenses	£540	**£15,030**
Profit			**£13,192**
Brought forward		-£8,788	**£4,404**
Carried forward		£4,404	**£0**

LWC Profit & Loss, December 1901

The machinery depreciation of 2.5% corresponds to a capital value of £135,040, only £795 more than in 1899. However:

> *... arrangements have been made which include the entire manufacture of a new watch ... new machinery has had to be added for the manufacture of this watch, and at the same time considerable expenses has had to be encountered.*

None of the balance sheets provide information about accumulated depreciation and they simply report the current value of the machinery. However, allowing for the 1900 depreciation, new machinery worth £4,151 (*£1,578,000*) must have been created for the new watch.

Writing off machinery over 40 years seems very optimistic, but a more realistic figure, say 20 years, would reduce the profit to almost zero.

1902 (Platt, page 156):

Assets		Liabilities	
Cash	£2,628	Accounts payable	£7,749
Accounts receivable	£24,716	Debenture interest	£2,953
Inventory	£79,816	Debentures	£134,000
Buildings	£33,400	Bad debts	£0
Machinery	£136,521	Deposits	£0
Goodwill	£35,565		
Debenture fund	£2,846	**Equity**	
Formation expenses	£6,744	Shares	£165,710
Investments	£2,085	Arrears	-£64
Profit & loss account	£0	*Retained earnings*	*£13,973*
	£324,321		**£324,321**

LWC Balance Sheet, December 1902

Income	Trading profit	£26,578	
	Transfer fees	£4	
	Interest	£67	**£26,649**
Expense	Fees	£760	
	Interest	£8,325	
	Guarantees	£564	
	Machinery	£3,376	
	Bad debts	£4,055	**£17,080**
Profit			**£9,569**
Brought forward		£4,404	**£13,973**
	Formation expenses	-£6,744	**£7,229**
Carried forward		£7,229	**£0**

LWC Profit & Loss, December 1902

The machinery depreciation is the same as in the last year, but this is bizarre! The value of the machinery in the balance sheet should be the cost value - accumulated depreciation. Ignoring a difference of £0-2-2 between the depreciations, the only way to get the 1902 figure is if machinery worth exactly £3,376 was added to the balance sheet.

More important is the write-off of the formation expenses that had been in the balance sheet, as an asset to avoid the minus sign, since 1897. That is, these *expenses* had been deferred.

1903 (Platt, page 159):

Assets		Liabilities	
Cash	£2,819	Accounts payable	£3,359
Accounts receivable	£8,281	Debenture interest	£3,006
Inventory	£77,879	Debentures	£134,000
Buildings	£33,797	Bad debts	£0
Machinery	£136,666	Deposits	£0
Total depreciation	£0	Other creditors	£3,116
Goodwill	£35,565		
Debenture fund	£2,910	**Equity**	
Special debtor	£581	Shares	£165,710
Investments	£1,779	Arrears	-£45
Profit & loss account	*£8,869*	Retained earnings	£0
	£309,146		**£309,146**

LWC Balance Sheet, December 1903

Income	Trading loss	-£5,863	**-£5,863**
Expense	Fees	£737	
	Interest	£7,501	
	Guarantees	£564	
	Machinery	£0	
	Bad debts	£1,484	**£10,286**
Loss			**-£16,149**
	Transfer fees	£1	
	Interest	£49	**-£16,099**
Brought forward		£7,229	**-£8,870**
Carried forward		-£8,870	**£0**

LWC Profit & Loss, December 1903

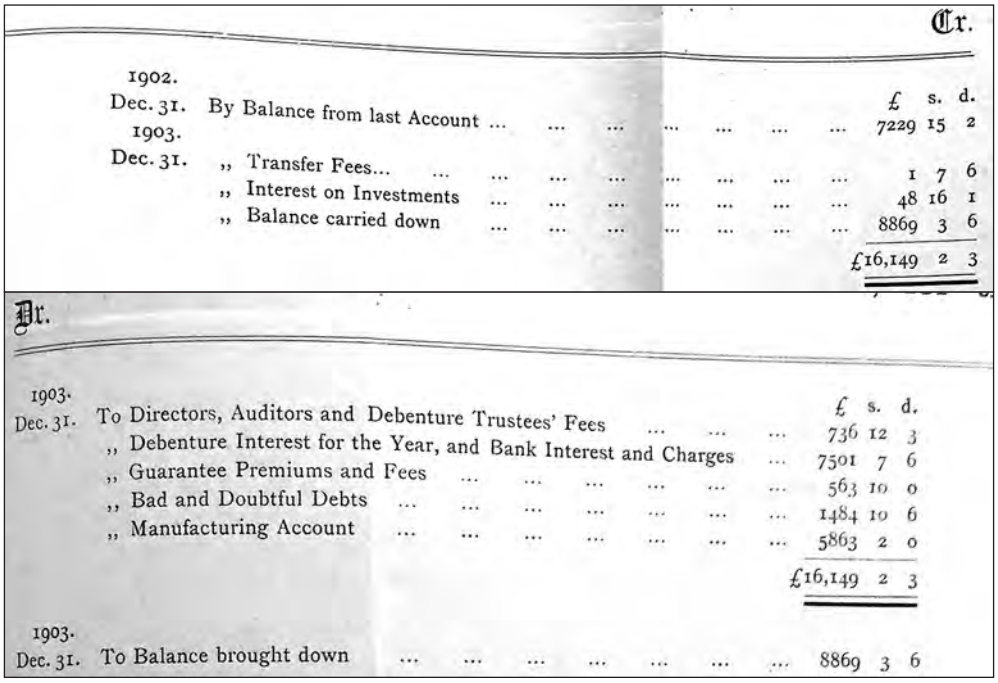
The newspaper reports of the AGM do not mention the trading profit, and the only way to balance the books, as they were publicly described, is to have a trading profit of £49, which is the interest. The only explanation for this is that the board did not want the true position, a *trading loss* of £5,863, revealed to all.

The financial report presented to the London Stock Exchange states that the loss was -£16,149, but the transfer fees and interest were not added as part of the income and, instead, were added to the loss.

At the 1905 AGM it was stated that the trading loss in 1903 was -£7,298,[78] but I have been unable to create that figure.

The opposite page has facsimiles of the 1903 profit & loss statement and balance sheet.

78 Platt, page 160.



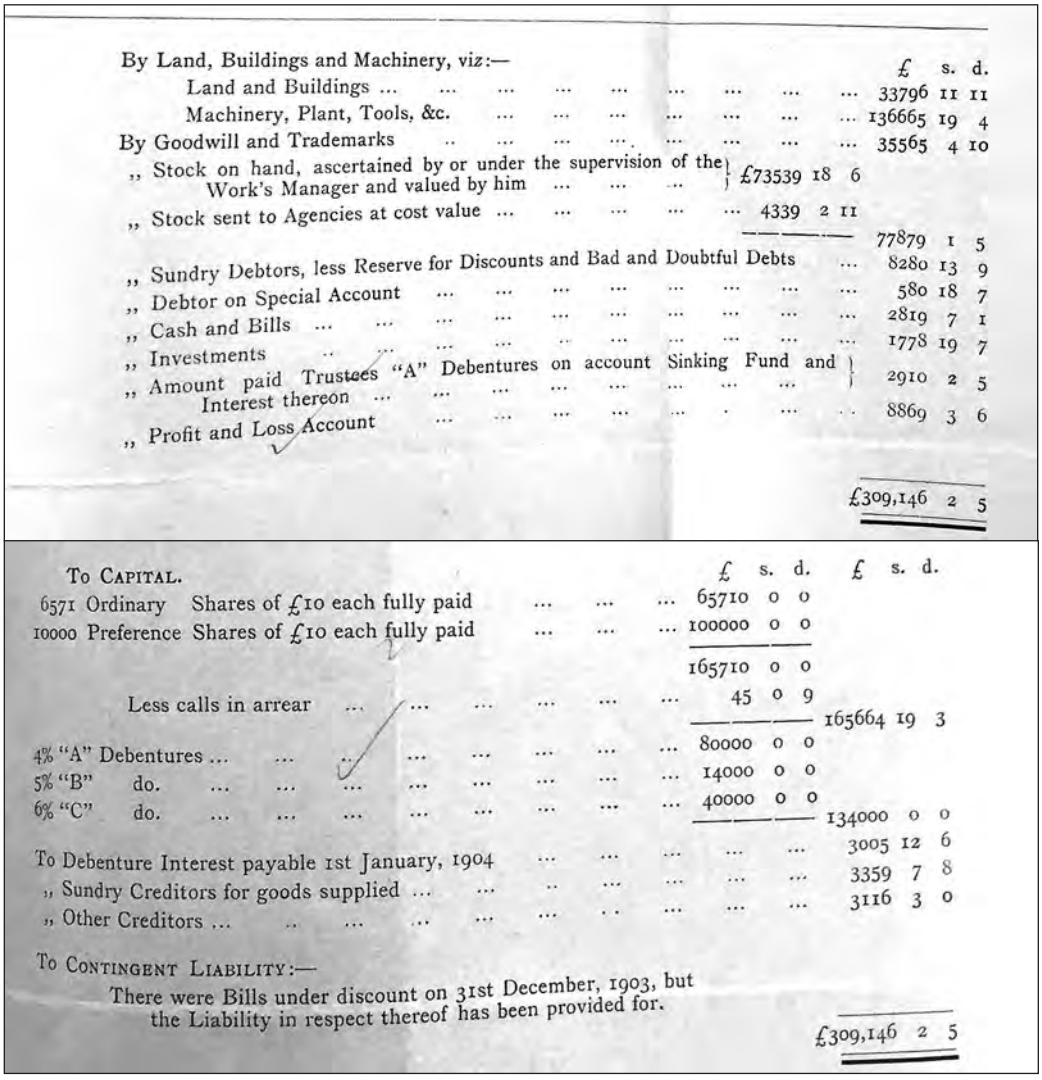
Cr.

		£	s.	d.
1902. Dec. 31.	By Balance from last Account	7229	15	2
1903. Dec. 31.	,, Transfer Fees	1	7	6
	,, Interest on Investments	48	16	1
	,, Balance carried down	8869	3	6
		£16,149	2	3

Dr.

		£	s.	d.
1903. Dec. 31.	To Directors, Auditors and Debenture Trustees' Fees	736	12	3
	,, Debenture Interest for the Year, and Bank Interest and Charges	7501	7	6
	,, Guarantee Premiums and Fees	563	10	0
	,, Bad and Doubtful Debts	1484	10	6
	,, Manufacturing Account	5863	2	0
		£16,149	2	3
1903. Dec. 31.	To Balance brought down	8869	3	6

LWC Profit & Loss, December 1903



			£	s.	d.
By Land, Buildings and Machinery, viz:—					
	Land and Buildings		33796	11	11
	Machinery, Plant, Tools, &c.		136665	19	4
By Goodwill and Trademarks			35565	4	10
,, Stock on hand, ascertained by or under the supervision of the Work's Manager and valued by him		£73539 18 6			
,, Stock sent to Agencies at cost value		4339 2 11			
			77879	1	5
,, Sundry Debtors, less Reserve for Discounts and Bad and Doubtful Debts			8280	13	9
,, Debtor on Special Account			580	18	7
,, Cash and Bills			2819	7	1
,, Investments			1778	19	7
,, Amount paid Trustees "A" Debentures on account Sinking Fund and Interest thereon			2910	2	5
,, Profit and Loss Account			8869	3	6
			£309,146	2	5

		£	s.	d.	£	s.	d.
To CAPITAL.							
6571 Ordinary	Shares of £10 each fully paid	65710	0	0			
10000 Preference	Shares of £10 each fully paid	100000	0	0			
		165710	0	0			
	Less calls in arrear	45	0	9			
					165664	19	3
4% "A" Debentures		80000	0	0			
5% "B" do.		14000	0	0			
6% "C" do.		40000	0	0			
					134000	0	0
To Debenture Interest payable 1st January, 1904					3005	12	6
,, Sundry Creditors for goods supplied					3359	7	8
,, Other Creditors					3116	3	0
To CONTINGENT LIABILITY:— There were Bills under discount on 31st December, 1903, but the Liability in respect thereof has been provided for.							
					£309,146	2	5

LWC Balance Sheet, December 1903

1904 (Platt, page 160):

Assets		Liabilities	
Cash	£900	Accounts payable	£7,098
Accounts receivable	£5,023	Debenture interest	£2,992
Inventory	£62,591	Debentures	£134,000
Buildings	£33,797	Bad debts	£0
Machinery	£136,666	Bank	£776
Total depreciation	£0	Other creditors	£0
Goodwill	£35,565		
Debenture fund	£2,973	**Equity**	
Special debtor	£0	Shares	£165,710
Investments	£722	Arrears	-£45
Profit & loss account	*£32,294*	Retained earnings	£0
	£310,531		**£310,531**

LWC Balance Sheet, December 1904

Income	Trading loss	-£10,778	
	Transfer fees	£3	
	Interest	£10	**-£10,765**
Expense	Fees	£746	
	Interest	£7,350	
	Guarantees	£564	
	Machinery	£0	
	Bad debts	£3,489	
	Investment loss	£510	**£12,659**
Loss			**-£23,424**
Brought forward		-£8,869	**-£32,293**
Carried forward		-£32,293	**£0**

LWC Profit & Loss, December 1904

First, the correct amount is brought forward from the previous year. However, the newspaper report states that "the loss in 1904 was £14,767" even though the London Stock Exchange report gives the above correct figure.

Also, it was stated that the capital of the company was £299,710, but the figure above is that which was reported.

Appendix 3: LWC financial statements, 1905 - 1910

1905 to July 1908

There are no reports of AGMs or other financial reports in this period or later.

July 1908 to December 1910 (Platt pages 177, 179-180, 182):

During this time there were half-yearly "abstracts" of accounts (1 January to 30 June and 1 July to 31 December) on behalf of the debenture holders. This is period is when the John Bull watch was made.

	1908 2nd	1909 1st	1909 2nd	1910 1st	1910 2nd	***Total***
Receipts						
Balance at start	£17	£21	£36			
Debtors	£12,947	£14,304	£17,766	£16,772	£12,448	
Law Guarantee Socy	£3,330	£9,034	£7,918			*£20,282*
Bank	£3,835	£677				*£4,512*
Sundries	£24	£41	£18	£6	£12	
Dividends				£28		
Total	£20,153	£24,077	£25,738	£16,806	£12,460	
Payments						
Creditors	£6,191	£9,496	£8,479	£6,723	£3,417	
Wages & salaries	£11,289	£10,289	£13,902	£8,629	£7,073	*£51,182*
Expenses	£763	£647	£760	£292	£260	*£2,722*
Bills	£179	£197	£56			
Debenture interest	£1,710	£3,412				*£5,122*
Bank			£2,541	£1,162	£1,710	*£5,413*
Balance at end	£21	£36				
Total	£20,153	£24,077	£25,738	£16,806	£12,460	

LWC Half-Yearly Abstracts 1908 - 1910

In 2016 values the wages in 1908 were £4,107,000 and the total wages bill over the period was about £18,460,000.

The following balance sheet for 1909 is attached to the share register for 31 December 1911, after the company ceased to exist.

As in other years, the AGM report lists total assets as £361,495, because the accounts treat the £112,952 loss carried forward as an asset instead of liability (about £41,020,000 today).

The actual equity is £52,713 and not the reported equity of £165,665, and so the shares were worth *at most* one third of their cost.

Assets		Liabilities	
Cash	£702	Accounts payable	£6,611
Accounts receivable	£7,643	Creditors of "A"	£48,024
Inventory	£28,775	Debentures	£134,000
Buildings	£34,019	Debenture interest	£7,195
Machinery	£136,666		
Bills	£1,143		
Goodwill	£35,565	**Equity**	
Debenture fund	£3,314	Shares	£165,710
Advances	£466	Retained earnings	-£112,952
		Arrears	-£45
	£248,543		£248,543

LWC Balance Sheet, December 1909

As in 1899 and 1903, the AGM report lists total assets as £361,495, because the accounts treat the £112,952 loss carried forward as an asset instead of liability (about £41,020,000 today). The actual equity is £52,713 and not the reported equity of £165,665.

In 1903 the loss was -£8,869. So the average loss in the six years 1904 to 1909 was -£17,347.

***STATEMENT** in the form of a Balance Sheet made up to the 31st day of December 1909, containing the particulars of the Capital, Liabilities, and Assets of the Company.

LIABILITIES	£	s.	d.	ASSETS	£	s.	d.
Capital				By Land & Buildings	34019	2	-
6571 Ord Shares of £10 each 65710-0-0				" Machinery & Plant	136665	19	4
10,000 Pref. " " " 100,000-0-0				" Goodwill & Trademarks	35565	4	10
165710-0-0				" Sinking Fund in hands of Trustees A Debre Holders	3314	4	6
less calls in arrear 45-0-9	166664	19	3	" Investments	250	8	-
"A" Debentures	80000	-	-	" Cash in hand & in bank	702	7	3
"B" do	4000	-	-	" Bills at Bankers for Collection	1143	7	6
"C" do	40,000	-	-	" Sundry Debtors	7642	11	9
Sundry Creditors of Cot. at 9th Nov. 1906	6610	10	1	" Amounts paid in advance, Insurance unexpired	465	14	7
Debenture Holders arrears of Interest	7195	-	-	" Stock	28774	9	4
Sundry Creditors of Trustees of "A" Debenture Holders				" Profit & Loss Account	112952	7	10
Trade	6347	14	11				
Advances	26696	17	6				
Bank	14960	15	2				
	361495	16	11		361495	16	11

In this Statement the values of the fixed assets have been arrived at as follows:—

Cost as shewn by the books.

The above figures have been duly audited by the Company's Auditors whose Certificate reads as follows:—
The last available account Do auditors in 1909.

*This Statement is not required to be supplied by a Company which is a "Private Company" within the meaning of Section 121 (1) of the Companies (Consolidation) Act, 1908.

Appendix 4: LWC share capital

Total shares

The following table gives the share capital, both nominal and actually allocated, for the years when the data is available. In 1890 the shares were increased by adding 5000 preference shares, and in 1893 the shares were increased to the 1894 figures.

No dividends were paid from 1897 to 1911 inclusive and the figures shown are the dividends that would have been paid if the LWC had made sufficient profits.

Year	1889	1890	1894	1897 old	1897 new	1898	1907	1911
Ordinary shares	5000	5000	5500	5500	10000	10000	10000	10000
Preference shares	0	5000	10000	10000	10000	10000	10000	10000
Ordinary taken up	2931		5111	5500	6557	6571	6571	6571
Preference taken up	0		6648	10000	9990	10000	10000	10000
Dividend ordinary £	1758.6		3066.6	3300	3934.2	3942.6	3942.6	3942.6
Dividend preference £	0		3988.8	6000	5994	6000	6000	6000
Dividend total £	1758.6		7055.4	9300	9928.2	9942.6	9942.6	9942.6

Share Capital and Potential Dividends

Accumulated (unpaid) preference share dividends, 1897 to 1906

The new company's share register is dated 26 July 1897 and so the dividend in that year should have been for 5 months, but the following assumes a full year dividend.

The company went into receivership at end of 1906 and I assume the shares were suspended at that time.

The total value of preference share dividends is:

(a) 1897 new company: £5,994.

(b) 1898 to 1906: £54,000.

(c) Total accumulated dividends: £59,994.

The current value of the unpaid dividends, using 1906 for comparison, is about £22,580,000.

Appendix 5: Fixed and variable costs

Manufacturing watches involves both *fixed* and *variable* costs.[79] These costs are amounts that appear in the profit & loss statement and are annual costs. Fixed costs are usually *expenses* and variable costs are usually *cost of sales*.

Fixed costs are incurred regardless of the number of watches produced. They include management salaries, mortgage interest, depreciation and maintenance of the factory. They also include some machinery depreciation; in particular, the lathes and other machines used to make the watchmaking machinery.

Another, largely fixed cost for the LWC was power, because the company used a steam engine and a gas engine that had to run irrespective of how many machines they were driving.[80]

Variable costs are only incurred if watches are manufactured. Examples are the raw materials, consumables such as files, machinery maintenance and depreciation, and payments to piece-workers.

Fixed costs have an important influence on profitability, and a simple example will illustrate this:

Assume the LWC has fixed costs of £1500 and when a watch is made it incurs variable costs of £15. The following table shows four different situations:

(a) If 500 watches are made then the cost per watch is £1500/500 + £15 = £18 (a total of £9000) and, if they are sold for £22 then there is a profit of £4 per watch (a total profit of £2000).

(b) If the company is forced to drop the selling price by only £2 then the profit is halved.

(c) If only 200 watches are made then the cost per watch rises to £1500/200 + £15 = £22.5 (a total of £4500) and, if they are sold for £22 then there is a *loss* of 10/- per watch (a total loss of £100).

(d) If the company is forced to drop the selling price to £20 then the *loss* is £500, £2.5 per watch.

Units	Total cost	Cost/unit	Profit £22	Unit profit £22	Profit £20	Unit profit £20
500	£9000	£18	£2000	£4	£1000	£2
200	£4500	£22.5	-£100	-£0.5	-£500	-£2.5

Example of Fixed and Variable Costs

This scenario assumes all the watches are sold. But what happens if some remain in stock? For example:

(a) Year 1: The company manufactures 500 watches, but only sells 400 of them at £22. The watches still cost £9000 to make, but the income is now only £8800, potentially a loss of £200. However, the 100 unsold watches are transferred to the inventory at cost, deferring £1800 to the next year and reducing the current year expenditure to £7200, and so there is a profit of £1600, £4 per watch.

(b) Year 2: Because not all watches sold, the company decides to make only 200 and drop the price to £20. The cost of making 200 watches is £4500 and, because of the 100 watches taken from the inventory for £1800, the total cost is £6300. The 300 watches are sold for £20 and the income is £6000, a loss of £300.

79 Based on Watch Ponder, "Watch Prices are Unlikely to Change Soon", https://watchponder.com/2017/05/22/watch-prices-unlikely-change-short-term/

80 Platt, pages 439 and 454.

What happens if some machinery is a fixed cost because it makes parts of a specific model and cannot be used for any other watch? Then the cost of machinery can be used to determine how many watches *must* be made.

Assume the machinery costs £2,000 and there is a profit of £4 per watch. Then 500 watches have to be made simply to pay off the machinery, and the company has, effectively, no income until it makes the 501st watch.

And if each finished watch yields only a profit of 10/- then 4,000 watches have to be made before the cost of the machinery is covered.

In the context of the LWC, about 790,000 watches were made and the machinery cost about £137,000. That is, the cost per watch was about 3/6. This is very crude, because it does not include the cost of the building or the number of rough movements made, and a more realistic estimate is about 2/10.