De La Rue Living Timeline

3. Warren de la Rue: The Great Exhibition (1851)

Early Life

Warren de la Rue has been described as the "the quintessential Victorian wealthy amateur astronomer". The success he brought to the company both under his father and at the helm himself, was inexorably linked to his scientific 'hobbies'. In his lifetime he would work with Michael Faraday and Louis Pasteur, rub shoulders with Prince Albert, have his name listed with Isaac Newton's, and be admired by Charles Darwin. His social circles, inventiveness, and astute business sense would bring both him and De La Rue great success.

Some credit must go to his father, Thomas. He decided Warren should have a good education and sent him at 14 to the Collège St Barbé in France. The French offered more scientific learning than humanities-focused Britain, and Warren, after learning some French, wrote to his father "I perceive now that the French education is much superior to the English".

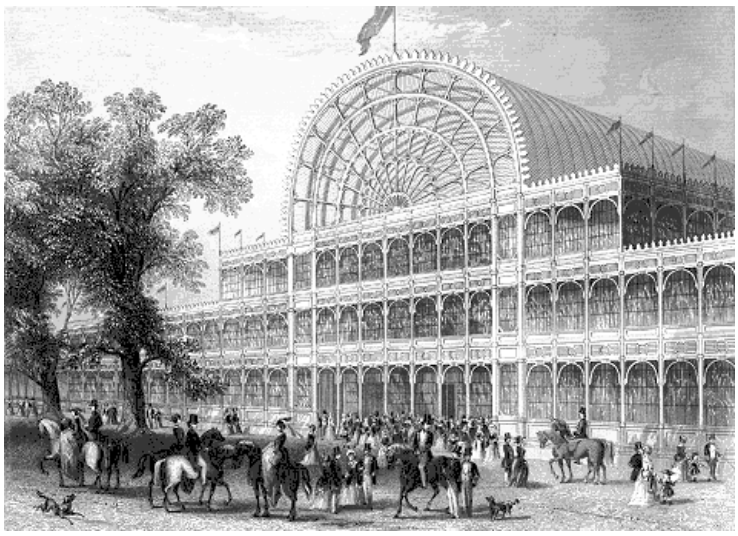
In 1830, the July Revolution brought Warren back home, and he began to work in the family business. From evidence in the archive, we can see that Warren was already fascinated by the technicality of the printing world, writing out recipes for colours and textures.

However, Warren was also able to develop a serious hobby in Chemistry outside of his work for De La Rue. In 1836, at just 21 years old, Warren published his first chemistry paper, about the Daniell cell (one of the first practical batteries). Warren's work in science was to help the company many times. The first occasion it proved useful was in 1837, when a wider financial crisis had led

Thomas into debt, a debt that even landed him in debtor's prison for one night! Two major events were to resuscitate the stumbling company. The first was Thomas's white lead patent, a great development which reduced the price of lead significantly. The second, was the timely investment of a Mr Charles Button.

Button was a wealthy amateur chemist, who had developed a strong working relationship with the young Warren. In 1843, the two published a paper together: "A Series of Tables of the Elementary and Compound Bodies Systematically Arranged". Button, convinced by the younger De La Rue's scientific mind and good business sense, was happy to put forward an investment.

The Great Exhibition



By the 1840s, things were going much better. Warren, now receiving a decent salary, got married, De La Rue was the subject of several articles, and Thomas's playing cards were increasingly renowned. In 1850, Warren's efforts at the College of Chemistry were rewarded by an election to Fellow of the Royal Society. This was a high honour for Warren - the Royal Society was the haunt of scientists both professional and amateur, from Charles Darwin to Prince Albert! The event which really put De La Rue on the map was in 1851: *The Great Exhibition of the Works of Industry of All Nations.*

The Great Exhibition was the first international exhibition of manufacturing, and it was hosted in the specially built Crystal Palace in London. It was visited by a quarter of the British population, and it affected manufacturing, consumerism, class politics, and much more for decades afterwards. Charlotte Bronte paints a picture of what it was like to visit:

"It seems as if only magic could have gathered this mass of wealth from all the ends of the earth – as if none but supernatural hands could have arranged it this, with such a blaze and contrast of colours and marvellous power of effect."

Thomas and Warren had a central role to play, helped in by a couple of key links. The first was Owen Jones, who designed so many De La Rue playing cards, and was commissioned to ornament the interior of Crystal Palace. The second was Warren's scientific circle, including the Royal Society. Prince Albert was key to the scale and publicity of the event, and many other members were involved. The de la Rues joined many organising committees and were invited to be jurors for the event.

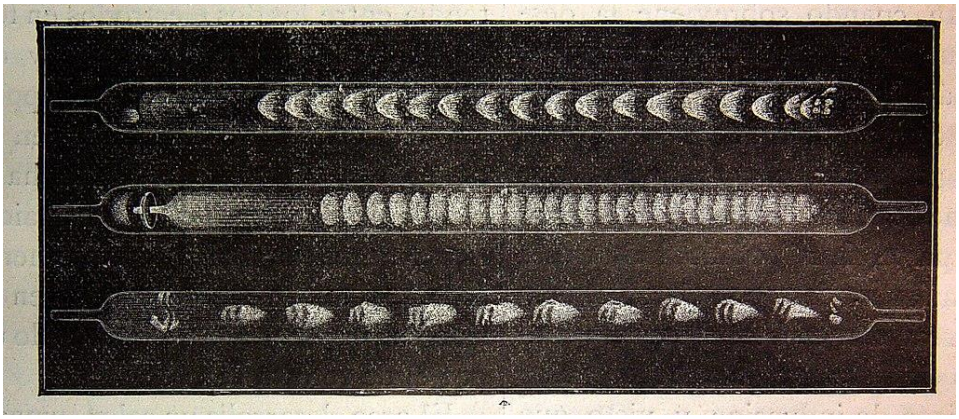
They also had a stand, on which they showcased 289 items! All 289 were listed in the official catalogue; an achievement as they were the only stand to be allowed to list all their items. Their stationery was so popular that the jurors expressed regrets that, because Thomas himself was a juror, they could not award him the Council Medal, "both as an inventor of acknowledged distinction, and for having exhibited a great number of specimens of general stationery and playing cards."

288 items aside, the one which really drew the attention of the public was the Envelope-Folding Machine! It "attracted the public in such crowds that many were disappointed in their endeavours to see it!"

This machine was an excellent invention and business move at the time. In 1840 Rowland Hill had invented the Penny Post, which meant that for the first time, an ordinary person could send a letter at a reasonable price. This lead to an enormous increase in sending letters. Warren worked with

Edwin Hill, brother of Roland, to invent the machine. It could fold 2,700 envelopes in an hour, operated only by a 'boy' and a 'maid' - the same as could previously be folded in a day!

Celestial Photography



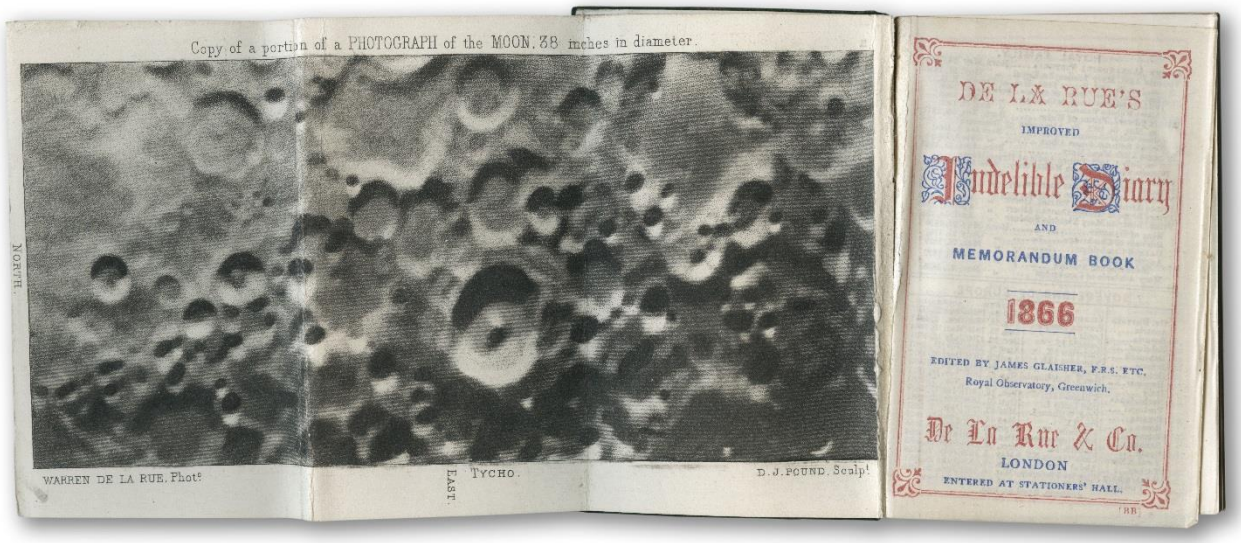
After the Great Exhibition, Warren's scientific and business life continued to intertwine. He led the company to new heights, and his scientific interests also turned to the skies. In 1851 Warren visited James Nasmyth, who was working on pigment with Thomas. Warren was fascinated by Nasmyth's specula (mirrors) and commissioned one, for a special new telescope. He later acknowledged this debt, writing to Nasmyth: "No one has so great a claim on the fruit of my labours; for you inoculated me with the love of star-gazing".

Astronomy, and in particular celestial photography became Warren's life's work. He set up a personal observatory with his new telescope, and joined the Royal Astronomical Society. From 1852 he contributed vivid drawings of the planets to their *Monthly Notices.* In this case, business helped the science as it provided him with means to make prints, and key skills, as expressed to the famous astronomer Herschel:

"I always etch the outline of the planet and all its details myself on the steel plate, as I do not find any of the engravers sufficiently skilful or rather I ought to say careful to undertake it".

In 1852 Warren pioneered use of the new wet collodion process for celestial photography. This involved coating and developing the plate within 15 minutes. It was a cumbersome method, but it yielded more detail than its predecessor, daguerreotype. He was later to take this method to Spain in order to photograph the eclipse, where he was the first person to prove that it was the sun behind the moon.

His astronomical life was even included in some De La Rue products. The 'Indelible Diaries' featured Warren's photographs, and astronomical information edited by his professional friends. Scientific journals commented on their utility and beauty: "all these are more beautiful examples of the printer's art than those produced in past years".



Eventually, when his eyesight started fading, Warren donated his telescope and astronomical paraphernalia to Oxford University, an important donation for founding their observatory, which later earned him a DCL (an honorary Doctorate of Civil Law). Upon his death, obituaries classed him among the greats of the age.

> *"In the Councils of our great Societies he was a man invaluable for his intelligence, for his persevering energy, for his promptness of resource, and for a generosity, princely, but discriminating".*

His scientific achievements notwithstanding, Warren de la Rue was instrumental in steering De La Rue into a new age. Next time we will finally see some of the changes in the business, including the beginning of De La Rue as a security printer, with the advent of our first stamp!

Words and Pictures (some of the primary sources and images you might like)

For some fun images of planets and telescopes and of Warren - http://www.sciencephoto.com/search?subtype=keywords&searchstring=warren+de+la+rue&media_type=images&license=all&channel=all&Search.x=0&Search.y=0

Obituaries for Warren from scientific publications can be found here and here and here

For an interactive look at Crystal Palace which shows the location of the De La Rue stand, see this site http://www.clikmedia.ca/CM/CM_FR/swf/MMW/03.SC.RM.18.swf

This article from the Postal Museum showcases our envelopes and exhibits https://www.postalmuseum.org/blog/crystal-palace/#

Warren's election to the Royal Society certificate can be viewed on the Royal Society Collections site: https://collections.royalsociety.org/DServe.exe?dsqIni=Dserve.ini&dsqApp=Archive&dsqCmd=ImageView.tcl&dsqDb=Catalog&dsqImage=EC_1850_10.jpg

De La Rue Crater https://en.wikipedia.org/wiki/De_La_Rue_(crater)