

The Dactyle calculator, and its relations to Germany, California, England and Switzerland

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Octave Rochefort

He was the first agent for the American Blickensderfer typewriters in France, and renamed them “Dactyle”, as the writing was done with the fingers – derived from the Greek “daktylos” for “finger”. He retained this brand for the calculators that were delivered by the brothers Chateau from 1897 on. The first dealership in Paris was opened by Rochefort in the Boulevard Haussmann 46. It exists, according to advertising, from 1900 to 1911. In January 1912, the readers of the “Typewriter Topics” magazine could read that “The company with the Dactyle typewriters (Blickensderfer) booms in their new Paris location, Rue Lafayette 4.” This first indication helps to date the calculators, as both addresses appear on the brass shields on the machines. The cutoff is found around s/n 7400, on the cusp between 1911 and 1912. (Other sources for dating are patents, e.g. the clearing comb of 1908. Other improvements, like the carriage lock, were often installed later on older machines. What made sense at the time, can cause confusion today.)

American passenger lists show that Octave Rochefort travelled to the USA at least 3 times, in 1894, 1897 and 1904. The first two trips could have been linked to the Blickensderfer typewriters, whereas the last trip could have served to meet with Rodney Marchant, who at the time became the sole agent for Dactyle calculators in the USA. It is hard to imagine Rochefort as a man who was sitting behind his desk for years, leading his import-export company – he was an engineer. After he had initiated the sales of office machinery through advertising, public speeches and networking, he would have appointed a sales director.

Rochefort occupied himself with the technical details of the new radio revolution, and with automobiles. He is the holder of countless patents in France, and also some in Germany about radio (DRP 159.112). How long he has been the owner of the shop in the Rue Lafayette, we do not know. Years later, in 1922, the address was still mentioned on Dactyle machines, but the owner of the distribution firm was by then “Dejoux & Cie”.

Chateau

The name “Chateau” first surfaces on the calculators of serial number 5000 and up. No doubt exists that all Chateau/Dactyle machines come from the same factory in Foncine-le-Haut, but the distribution and sales apparently followed different paths for quite a while. Dactyle machines were sold together with other office machines, whereas the Chateau machines were delivered, possibly together with the clocks and measuring instruments (brand “Chateau Frères”), in the proprietary factory shop in Paris. Advertising was only ever done by Dactyle. Only when in 1929, hardly any calculators from Foncine could be sold anymore, an advertisement appeared under the name “Chateau”.

All 20 Calculator patents are under the name of “Chateau Frères et Cie” – see Table S11.

The factory

Foncine-le-Haut is located between Genf (CH) and Besançon (F), two old centers of clockmaking. From the 1860s on, clocks were built in the small town. The Chateau brothers obtained a patent in 1906 for an electric master clock, which synchronized all the slave clocks connected to it. The emphasis in manufacturing was on large clocks of all kinds (for towers, factories, train stations ...) The scheme of the factory below fits very well with the view of the factory on the preceding page. The facade is 60m long, and two passages lead to the courtyard. At “C”, a steam engine was installed around 1900. The building “F”, next to the riverbank, could have housed a foundry, as the old engraving shows a second chimney in that location.

Brunsviga

The close connection between Dactyle and Brunsviga machines is quite apparent, and has often been suspected in the literature. There is no hard evidence for it, but it pays off to judge a number of interesting facts. First, on the three oldest machines, N° 614 (engraving), N° 1103 and N° 2263, we find the abbreviation “Subt.” for subtraction, as on Brunsviga 2419 of 1899. The next known Dactyle machine shows the French “Sous.”. In any case this is the retouched engraving of N° 614 from 1905. If the parts for the first Dactyle machines would have been manufactured in France, the cover would have shown “Sous.” from the beginning. This is a strong indication of the origin of the parts being Germany, from 1897 to 1905. This observation complies with the fact that Brunsviga was not allowed to offer its products in France. The license with Odhner encompassed Germany, Belgium and Switzerland, and later also Austria and England. In France however, Odhner wished to sell his machine himself. Therefore he showed them at the world exhibition in Paris in 1900, advertised for them in bilingual (French-Russian) brochures, but the short crank, no provision for comma pointers, and the very long distribution chain would have oriented his customers rather towards Dactyle. And this machine consisted of German parts that were brought into Switzerland as “spare parts” and then from Genf over the border with France to Foncine-le-Haut. After assembly, the machines left the factory as French products and were delivered to the customers over Paris. The name of the Chateau brothers did not appear in this story for a long time, only in 1914 (see title image). Finally, we can cite Stephan Balthasar in an Austrian military magazine, who describes the Dactyle and Brunsviga as sister machines: “One of the newest developments in this area is a calculator named “Dactyle” in France and “Brunsviga” in Germany, ... which is the product of the brain of Odner (sic!) in Petersburg.”

The question remains whether Brunsviga was able to deliver additional parts for 200-300 machines per year. In her new research, Jasmin Ramm-Ernst reports that apart from the 500-600 calculators produced annually around 1900, the factory supplemented this production with sewing machines, cash registers and cast iron ovens, at least when sales were weak (see Ramm-Ernst, p.56). Regular sales of calculator parts would thus have been rather welcome. Dactyle machines received their own serial numbers in France.

Serial numbers and timeline

We have collected our data from around 100 photographs of machines and their serial numbers, patent applications and various clues in the literature, and have assembled a small list. This list shows serial numbers missing in the 3000-4000 region. We can explain this gap with the switch to the French production of parts in 1906, when Brunsviga could act in France under their own name, and thus stopped supplying parts. To “pimp” the image of the brand a little, the completely French-made Dactyle started with N° 5000.

Organizing their own parts manufacturing would not have been very hard for the factory in Foncine-le-Haut, as sufficient time and the necessary resources had been available – a foundry, suitable workshop machinery and trained personnel (according to a French source around 75 workers). Calculator production never took up much space in the next 23 years (between 200 and 500 machines p.a.) and is not remembered well – in Foncine-le-Haut, only the clock manufacturing operation receives attention today. Between 1932 and 1963, the factory building stood empty, afterwards they were used for furniture production for a number of years.

Wide array of machines = chaos for researchers

Already in 1907, Chateau obtained a patent for placing the warning bell behind the carriage. In a proper series production, this improvement would have been applied to all machines, but apparently at Chateau Frères for a long time, the customer was free to configure the machine he ordered himself. In machine N° 5759, the bell is behind the carriage, on the later N° 7360, it is at the side of the carriage again in the old way of Brunsviga. Another example is the clearing comb. Patented in 1908, and now can be seen on machine N° 5751 as well as on N° 1103, which was clearly so equipped afterwards.

These choices could also –and especially– be made for the carriage shifting device. An automatic carriage shift device was patented by Chateau Frères in 1922, with serial numbers around 11.000.

We also find this improvement on machine 7591. It is also conceivable that trade-ins were rebuilt in order to make resale easier.

These improvements were not innovations internationally – rather Dactyle/Chateau was always a bit behind the times. Another photo shows a Dactyle N° 10.791, which was probably new from the factory when Franz Trinks obtained it for the Brunsviga factory museum in 1922. The reason would have been the automatic clearing for the input register which was premiered in that same year. (lever at the top left). If circumstances of market and time would have lent themselves to it, Dactyle machines would have realized much larger sales. In 1905 still, as the dependence on Brunsviga came to an end, an input control register was developed and patented (FR360949), in 1914 there is a patent for a memory register (FR469303). Neither of these inventions apparently made it into production. Only the automatic clearing of the input was successfully implemented, but by then the German machines from Braunschweig, Leipzig and Berlin were flooding in. Also Facit from Sweden found a representative in Paris (see TT 1922). The sales figures for the Dactyle/Chateau machines in the mid 1920 can never have been good. The last known serial number is 13.402 (1929) – this means that in 7 years, the factory could only sell 2500 machines. In addition, apart from the many possible configurations (e.g. also machines with capacity 10 were sold) a new and rather fundamental new development was carried through: the complete miniaturization of the machine, similar to Brunsviga with the M series which had been introduced many years earlier. The comparison picture shows ... and 13.137. The latter machine has clearing cranks instead of the antiquated wingnuts. The end of production is however not the end of this article, as Dactyle machines temporarily were successful export articles.

The relations with Marchant/USA

San Francisco became the Californian trade capital, as the large railway companies had been established by 1900, and the Panama canal shortened the trip by sea to the East coast and Europe substantially, and made it much safer. The magazine "Typewriter Topics", which was read throughout the world at the time, allows us to follow the developments during these years both with articles and advertising. Brunsviga had until the 1920s only Reuters in Philadelphia as their distributor. Triumphator had only one export agent in London in 1906, and Odhner had tried to work together (probably unsuccessfully) with the New York distributor "The Spectator Company", which obviously was not present in California either. It is thus quite credible that Rodney H. Marchant of San Francisco and later Oakland, when looking back in a TT piece in 1916, told that before he became a manufacturer of calculators, he had sold various European calculators in the San Francisco region, the distributors of which were all located in the East of the USA. The name Dactyle remains unmentioned, although it is quite clear that he had to thank his growth to this brand – and his talent to properly market the French machine, and in time to copy it. At the census in 1900, the later manufacturer was still working in the coffee trade. In 1909, we find his name on the passenger manifest of the steamer Lusitania, which brought him back from Liverpool to New York. Had he been to Paris, to see Rochefort? During the next year's census in 1910, as a profession he gave "salesman for calculating machines". It is from this era that machine N° 7271 dates, which belongs to the French serial number range, and was sold approximately in 1911. It has a shield at the left with the text "R.H. Marchant, ... San Francisco/Cal. – Sole Agent U.S."

Interesting also is a short note in Typewriter Topics of March 1911. Shortly before that time, on Feb. 15th, president Taft had signed the agreement which granted San Francisco the world expo. Four years later, in 1915, the final completion of the Panama Canal would be celebrated. It was clear to all that the Californian metropolis would receive international acclaim. It was this kind of spark that the Marchant brothers had waited for – they collected 1 million dollars from 1200 shareholders, built a new factory, and in 1915, in time for the world exposition, and put themselves center stage with two innovations: an automatic tabulator for the carriage as well as the famous multiplying electric machine with an outboard motor (Pat. US 1.115.950 of Nov. 1914). TT wrote that a number of these machines were delivered to customers for trials. These test were apparently not very successful, as none of these machines has resurfaced today (picture e.g. in Martin, p. 263). In 1913, Rodney Hugh Marchant and his brother Alfred Harold started out as manufacturers. The factory building was long

and low, and rather foresightedly had a railway connection. From this point on, the Marchant brothers were able to manufacture complete American pinwheel machines according to the Dactyle model. From 1914/1915 on, the Marchant brothers gave these machines their own serial number range, probably starting from N°100. They were advertised as “proper American machines” and very quickly were sold in the thousands to the offices of businesses – what their countryman Frank Stephen Baldwin had been trying and failing to do for decades. Parallel to the machines with the new carriage tabulator, many machines were still built with the old Brunsviga style of carriage lock – see e.g. machine N°2096. In June 1916, TT wrote, Marchant could build 250 machines per month, or 3000 per year. It is clear that the new serial numbers increased quickly. Up to 1922, when the pinwheel system was abandoned in favour of the new geared sector of Carl Friden, 25.000 machines had been manufactured.

In their pride, the Marchant brothers, born in Mississippi to British parents by the name of “Merchant”, happily shifted back the birthday of the first Marchant machine to 1910, and spun a number of legends. Under no circumstances should the fact, that these machines were brought in from Dactyle, make its way to the literature.

As “Muldivo” in England

“The Blockade of Germany, or the Blockade of Europe, occurred from 1914 to 1919. It was a prolonged naval operation conducted by the Allied Powers during and after World War I in an effort to restrict the maritime supply of goods to the Central Powers, which included Germany, Austria-Hungary and Turkey”(from Wikipedia). These measures obviously targeted the well-established and important export of German calculators to London. To decrease the damage to the English economy, the French Dactyle pinwheel machine replaced the German ones (Triumphator, Brunsviga ...). Typewriter Topics published from 1916 on several large advertisements and an article about the Dactyle machines, renamed to Muldivo. There it was written about the distributor Longini, that he had sold the “Muldivo” for 18 years already from Brussels. It is a mature product, manufactured by a famous french clockmaking firm. The name “Dactyle” was consistently avoided. Known serial numbers for Muldivo machines are between 7600 (1911) and 9700 (1919). They belong to the French serial number range.

J. Goldschmidt

These machines should not remain unmentioned. It is quite certain that they are also products of the Chateau factory. Only very few have survived, from a very narrow serial number range. Very little is known about this retailer and manufacturer. Ernst Martin describes him as a salesman in Paris in 1906 for the very rare “Multaddiv” stepped drum machine. The address is identical to the one shown on the picture of the shield. In a different machine, this address is on the wooden board. According to our estimates, the Goldschmidt machines were sold around 1910.