

MARC: A French brand of pocket slide rules

Panagiotis Venetsianos

Introduction

The notion of *pocket* slide rule varies a lot according to the period of time taken into account. In 1827 for instance, the original Soho rule of 10 inches radius was described as being *a very convenient size for pocket*¹.

At nowadays standards though, pocket slide rules are those having a scale length of 125 mm (about 5 inch). They have been very popular in the second part of the twentieth century and all European major manufacturers had pocket versions of their 250 mm types.

One French manufacturer, however, never produced anything else than pocket slide rules having a scale length of 125 mm, he commercialized them under the brand «MARC» and made them almost exclusively of celluloid. Despite the success of the MARC pocket slide rules —especially as a business gift (they were not only small and thin² but also cheap)— there is little known about this brand. This article is an attempt to remedy that lack of information and to encourage other collectors to fill the gaps and share their documentation with us.

A.-A.-F. MARC

The MARC business was probably founded by Alphonse Adrien Fernand MARC around 1920. According to the *Journal Officiel de la République Française*, 10 juillet 1969 (www.lexeek.com), he was born in Argenteuil on 4 February 1886 and died in Reuil-Malmaison on 15 November 1959. It looks like he was a kind of reseller or manufacturer of general office supplies. It is not easy to determine whether he actually manufactured slide rules or whether he simply sold slide rules manufactured by others.

What is sure about A.-A.-F. MARC is that he applied for several patents, at least one of them, the French patent 528807, being about slide rules (see further).

Curiously, the same *Alphonse Adrien Fernand MARC*, deposited a new brand³ for *candies, pastries, chocolates, sugar, honey, jam, and perfumes* on the 27th of November 1933. It seems that A.-A.-F. MARC drastically re-oriented his activities after he sold his slide rule business to *Carbonnel et Legendre*.

Change of ownership

There is evidence that the company *Carbonnel et Legendre* was already involved in the manufacture of MARC slide rules in 1929 (advertisement in *La Science et la Vie* N°140).

At that time they were based rue Condorcet 12, not far from the address of Alphonse MARC who was, according to the 1921 patent, domiciled in the same street at number 35. This proximity probably explains their collaboration.

In 1931 though, it looks like Alphonse MARC backed completely away from the business he had started: on the 17th of July⁴ of that year, the official newspaper of judicial and legal announcements, *Archives Commerciales de la France*, announced that MARC, 237, avenue de Paris at Rueil, sold its *patents, customers list, equipment and tools* to the company *Carbonnel et Legendre*, the latter being domiciled 12, rue Condorcet.

There is as little known about the *Carbonnel et Legendre* company as there is about *MARC*. I have not been able to find much more than that they had transferred their headquarters from 12, rue Condorcet, to 24, rue de Dunkerque in 1936 and that they kept advertising⁵ MARC slide rules after they bought the business from A.-A.-F. MARC. They also applied for a patent in 1929 for «*Perfectionnements apportés aux règles à calcul*»⁶, which was granted in 1930 under the number N° 681188.

It is not known when the company stopped its business but the MARC brand was still alive in 1952.

MARC-Minerva

Some PVC slide rules are labelled MARC-Minerva. The French company *Trace Lettres Minerva* was specialised in templates and lettering guides. I have not been able to establish when the collaboration between MARC and Minerva started. The present chairman of the company, Alain Biscaras, estimates it had stopped in about the period 1960-1965. Anyway, by the time he joined Minerva, in 1967, the manufacture of slide rules under the brand MARC-Minerva had ceased, probably because Minerva had become by then the importer of the Aristo brand⁷.

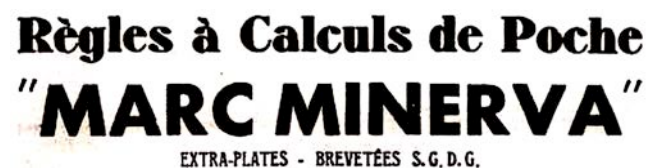


Figure 1. Picture from an Instructions Leaflet (courtesy Alain Biscaras)

The MARC patent N°528807

Perfectionnements apportés aux règles à calculs (improve-

ments brought to slide rules). Applied for on the 18th of December 1920, granted on the 25th of August 1921 and published on the 19th of November 1921. Applicant: *Alphonse-Adrien-Fernand MARC*, residing in France. Signed *A.-A.-F. MARC, rue Condorcet, 35. Paris.*

The overall impression that comes out on reading the 1921 patent of Alphonse MARC is that it is hard to believe a patent was granted at all with such general specifications. This might be due to the French *S.G.D.G.* patent system, which, until 1968, was granted without a depth examination and hence *without Government Guarantee*⁸.

Anyway, here are some of the highlights of the patent.

The introductory text starts by stating that the existing slide rules, because of their size and the way they are usually manufactured, can only be used at the office or at the workshop: *«indeed, it is impossible to carry around a device of such dimensions and the benefit of quick and secure calculations will be lost»*. There is though no indication of the length of the rule or of the thickness which will be used by MARC for its slide rules.

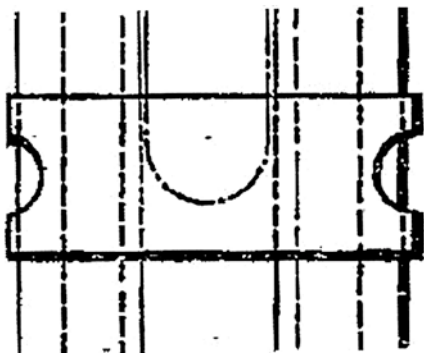


Figure 2. The Cursor

The cursor, made of a transparent material, runs in two grooves made on the stock and is provided with two notches to facilitate its use.

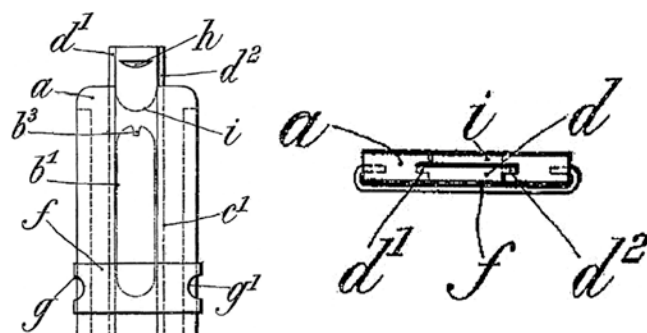


Figure 3. Details of the Cursor Patent

It resembles the cursor pictured in the advertisements shown in 1927 in the magazine *La Nature* (see below). If necessary the notches can be replaced by buttons or ribs.

Curiously, the patent does not foresee a spring to ease the movement of the cursor which had to fit snugly in the grooves. Later models had a spring, sometimes of the type described in the *Carbonnel et Legendre* patent N°681188 (see below). To avoid the loss of the cursor, *«which happens frequently»*, the grooves are obstructed by an *«appropriate mean»* at their ends.

The handling of the slide can be simplified by fitting it with notches, buttons or loops at both ends or by making it longer. Though this is not mentioned in the patent, the slide of the MARC rules was not reversible.



Figure 4. Non-reversible Slide

The bottom of the stock can be fitted with holes provided with bendable strips —termed *b³* in the illustration— preventing the slide of falling out of its groove.

The materials used for the manufacture of the slide rule are said to be preferably: celluloid, ebonite, rubber, horn, bone, ivory or ivoirine⁹, *«in short any material which can avoid the deterioration of the pockets or of the containing sheath»*. The instruments can of course also be made of wood, metal or any desired material. In practice however the large majority of the MARC slide rules were made of celluloid and a few later models were made of PVC.

Are also described a few means which can be used to attach the slide rule on a notebook, on a board or to a pocket.

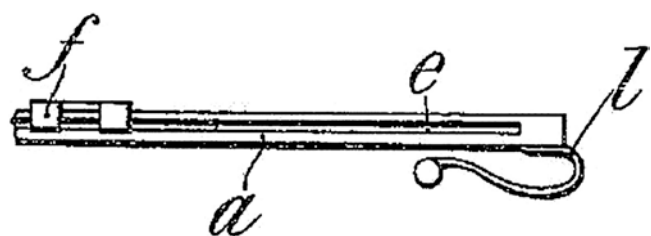


Figure 5. Clip to Attach the Slide Rule to a Pocket

The patent is signed *A.-A.-F. MARC, rue Condorcet, 35. Paris.*

Other patents by A.-A.-F. MARC

On the 20th of December 1927, Alphonse-Adrien-Fernand MARC was granted the French patent 635211 for an *Appareil for Sealing Envelopes (Appareil à cacheter les enveloppes)*.

This device must have had some success, as it was followed, in 1929, by the improving French patent 34773 and by foreign patents about the same object:

Apparatus for Gumming and Sealing Envelopes, GB patent 291359, September 1928.

Vorrichtung zum Anfeuchten mittels eines Wasserzerstäubers und zum Schließen von Briefumschlägen, German patent 492650, February 1930.

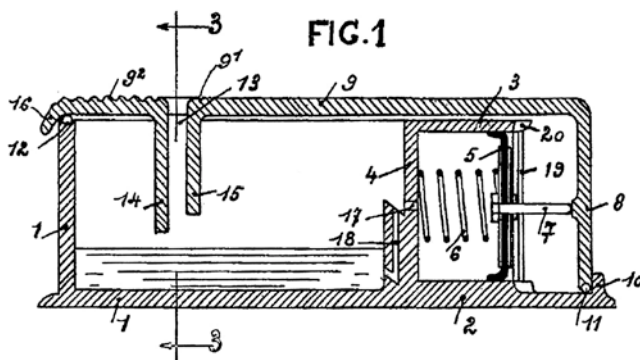


Figure 6. Picture from the patent 635211

One of the other patents of Alphonse-Adrien-Fernand MARC is about a *Compteur attache-rouleaux de monnaie à réglage universel*¹⁰. This French patent 1078622 was granted on the 12th of May 1930.

The Carbonnel et Legendre patent №681188

Improvements brought to slide rules. Applied for on the 2nd of September 1929, granted on the 28th of January 1930 and published on the 12th of May 1930. Applicant: Carbonnel et Legendre (Société à responsabilité limitée), residing in France (Seine). It is signed Carbonnel et Legendre, by proxy P. Degroote.

The claim «*improvements brought to slide rules*» concerns the addition of a special spring¹¹ to the cursor in order to keep it constantly parallel to the rule. This spring was «*preferably arranged in a supplementary groove of the back of the rule*».



Figure 7a.

Shape of the *Guignol* spring as illustrated in the patent

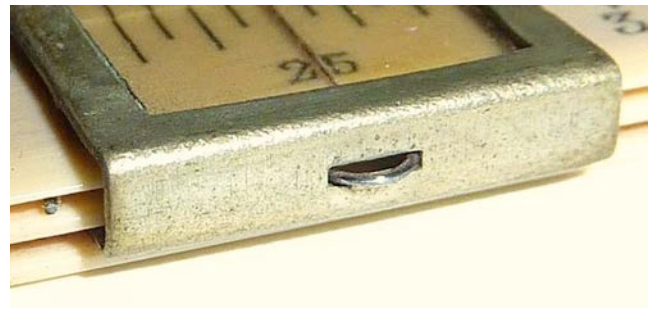


Figure 7b. Cursor with a *guignol* spring and the Double Groove

Addresses

Here follows a list of known addresses of Alphonse Adrien Fernand MARC and of Carbonnel et Legendre. Curiously enough, the early address *rue de Maubeuge* was used in the 1930 Unis-France directory and again in 1953, when A.-A.-F. MARC had apparently backed away from the slide rule business. Anyway, both streets in Paris, *Condorcet* and *Maubeuge*, are in close proximity to one another.

1920: Alphonse-Adrien-Fernand MARC, rue Condorcet, 35, Paris. Application date and address from the French patent 528807.

1927: Règles MARC, 41, rue de Maubeuge. Paris.

1928: Règles MARC, 41, rue de Maubeuge. Paris.

1928: Alphonse Adrien Fernand MARC, 237, Avenue de Paris, à Rueil (Seine-et-Oise), France. Application date and address from the GB patent 492650.

1929: Carbonnel & Legendre, 12, rue Condorcet, Paris (9^e). From an advertisement in *La Science et la Vie*.

1930: MARC, 41, rue de Maubeuge, Paris (9^e).

1931: MARC, 237, avenue de Paris. Rueil.

1933: Alphonse Adrien Fernand MARC, 237, Avenue Paul Doumer¹², Rueil.

1936: Carbonnel et Legendre, 24, rue de Dunkerque.

1939: Règles MARC, 24, rue de Dunkerque. Paris (10^e).

1953: Alphonse-Adrien-Fernand MARC, rue de Maubeuge, 41, Paris (IX^e). Application date and address from the French patent 1078622 (rolled coin counter).

1959: Marc (Alphonse Adrien Fernand Marc) deceased the 15th of November in Rueil-Malmaison at his domicile[1], avenue Napoléon Bonaparte 235 (that avenue is the continuation of the avenue Paul Doumer). See *Journal Officiel de la République Française*, 10 juillet 1969 (www.lexpeek.com)

Advertisements

The earlier advertisements for the MARC slide rules I was able to find date from 1927. They were published in the

magazine *La Nature* of May and June 1927, i.e. when the business was still in the hands of A.-A.-F. MARC. The address for the wholesale is 41, rue de Maubeuge, Paris. The retail sale is made by opticians, bookstores, stationery shops and stores of precision equipment. The price of what looks like a basic model is 30 francs. The rule bears the label Unis-France and the mention *B^{TÉ} S. G. D. G.*.

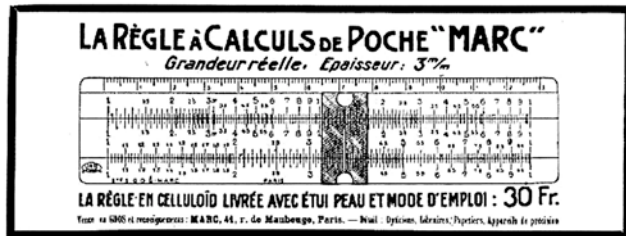


Figure 8. Advertisement from *La Nature*

In February 1929, the issue N° 140 of the magazine *La Science et la Vie* published an advertisement for the *Pocket Slide Rule MARC* in which the wholesaler and manufacturer was given as being *Carbonnel et Legendre*, domiciled 12, rue Condorcet, Paris.

The price for the Mannheim type was still 30 francs and the *full-size* illustration showed the Unis label on the front face. The thickness of the rule is said to be 3 mm (a little less than an eighth of an inch).

In 1939, an article in the magazine *L'illustration* says that «the MARC slide rules —whose pocket models, practical and precise are nowadays appreciated worldwide— have published a leaflet that you might want to read in order to be accurately informed». The address is *Règles MARC, 24, rue de Dunkerque, Paris (10e)*.

Méthode de vulgarisation

The MARC slide rules were usually accompanied by a single sheet of instructions but a 132-page¹³ instruction book, written by P. Morellon and published by «*Les Règles à Calcul MARC*», was completely dedicated to the MARC models. The book is quite lengthy called «*Pour calculer facilement avec rapidité et précision. Méthode de vulgarisation simple et détaillée pour l'emploi des Règles à calculs Scolaire, Mannheim, Beghin, Sinus et Tangente, Électricien, Rietz*». All pages bear the shorter title *La Règle à Calcul «MARC»*. It is unfortunately not dated but according to the data given by the *Dictionnaire Critique des Arts Numériques*¹⁴ it was published in 1942. However, the Erwin Tomash Library gives a publication date of 1950, this may have been the second edition¹⁵ as many leaflets coming with the slide rules make mention of a «*Méthode Nouvelle de vulgarisation etc.*».

Range of models

There are six models known to have been in existence. They



Figure 9. Advertisement from *La Science et la Vie*, 1929 (www.technologymuseum.eu/phpwebgallery/picture.)

were not numbered in Morellon's book but they usually were on the rules and in the leaflets that came with them.

N° 1. Scolaire.

The scales¹⁶ are the classic A|B and C|D. The slide has no scales at the back.

N° 2. Mannheim.

Same as the N° 1 but with a bevelled edge bearing a centimetre scale.

N°3. Beghin.

The scales are CF|DF and C|D on the front face. There is also a bevelled edge with a centimetre scale. The CF|DF scales are folded at square root of 10.

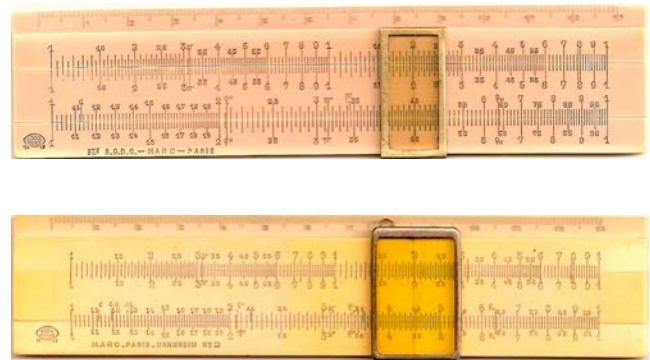


Figure 10. Two types of N°2 Mannheim

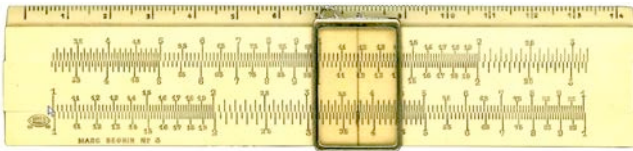


Figure 11. The N°3_Beghin
Picture: courtesy Otto van Poelje

N°4. Sinus et tangente.

Also called *full Mannheim*¹⁷, this model had the S, L and T scales at the back of the slide.

N° 5. Électricien.

This model has, on the front face, a KW scale which is displaced by 736 to convert from horsepower to kilowatt, and vice versa. The bottom of the stock bears DYN and MOT scales for solving dynamo or motor efficiency problems. There are no S, L and T scales at the back of the slide.



Figure 12. N°5 Électricien

N° 6 and N° 6A Rietz.

The front face bears the classic Rietz scales: K, A|B, CI, C|D and L. The bevelled edge has a centimetre scale. The back of the slide bears the S, ST, and T scales.



Figure 13. The N° 6 Rietz

Note that some models, in the addition of the centimetre scale on the front face, had an inch scale at the back of the rule.

Besides, all the rules had gauge marks but some models had more specialized ones: for instance the electro model had marks to calculate the weight of conductors made of copper, steel, or aluminium (respectively labelled CU, A and AL).

Material

Most of the MARC side rules were made of celluloid but much later models, marked MARC Minerva, were made of PVC-like material.

Dimensions

Except for a very early model (marked B^{TÉ} S.G.D.G. — MARC — PARIS) which has a total length of about 141 mm,

all the rest of my collection of MARC slide rules (a total of 18) has a length varying from 147 mm to 150 mm. The width varies from 32.4 mm to 33 mm. The thickness varies from 2.7 mm to 3.1 mm except for two PVC models which have a thickness of 3.4 and 3.8 mm.

UNIS-FRANCE

The majority of MARC slide rules are marked UNIS-FRANCE, the label authenticating the French origin of a product. The earlier evidence I have found of a MARC slide rule with the Unis label dates from 1927. The 1920 directory of Unis-France does not show MARC as being a member, so he must have joined the Union somewhere between 1920 and 1927.

The logo is accompanied with two numbers: the number 19 on the left side identifies the trade syndicate of which the MARC company was a member and the second number 19, on the right side, identifies the MARC company itself¹⁸. This 19 19 marking is often mistaken on the internet as the manufacturing date, but it is not the case.

Curiously, the 1930 directory only lists *MARC (F), 41, rue de Maubeuge, Paris (9^e)* under the category *Apparatus for sealing envelopes*, no mention is made of slide rules. This might mean that the slide rules were only a side business for MARC.

Markings

Very early MARC celluloid rules are pictured without UNIS logo. After around 1925 the UNIS logo was added and the model type was scribed longitudinally on the stock¹⁹ (the very early ones bore, additionally to the UNIS logo, the mention *Breveté S.G.D.G.*).

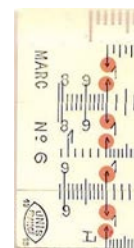
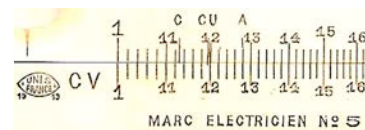


Figure 14. The UNIS France Logo

Later celluloid rules, though, had the UNIS logo and the model type scribed perpendicularly on the left part of the stock and on the slide. Besides, the left and right indexes were complemented with V marks (some right way out and others reversed).

One of the two PVC rules in my collection has the scribing perpendicular but the V marks are no longer used. Both of these rules lack the UNIS logo.

Cooperation with other brands

The manufacturer of MARC slide rules has probably also produced for other brands, with or without the mention MARC; he may have even licensed his models to other manufacturers.

Berville

Some slide rules bear the *Unis* logo and are marked *Berville_Paris*. Berville is not the place where they were manufactured but the name of a French maker of instruments, based rue de la Chaussée d'Antin, in Paris. P. Berville is better known for his Camera Lucida.



Figure 15. The UNIS Logo on the Berville Slide Rule
Picture: courtesy Otto van Poelje

These slide rules are identical to the MARC ones and were probably manufactured by MARC for Berville which acted as a reseller.

There are also Tavernier-Gravet rules known to have been marked Berville (http://www.digitalmuseum.no/things/regnestav/NF/NF.2005-1724?query=tavernier&search_context=1&count=1&pos=0).

Dietzgen

The Dietzgen Mannheim 1765F is, with no doubts, a MARC slide rule which is said to be *especially adapted for carrying in the pocket; it is both compact in size and light in weight.*

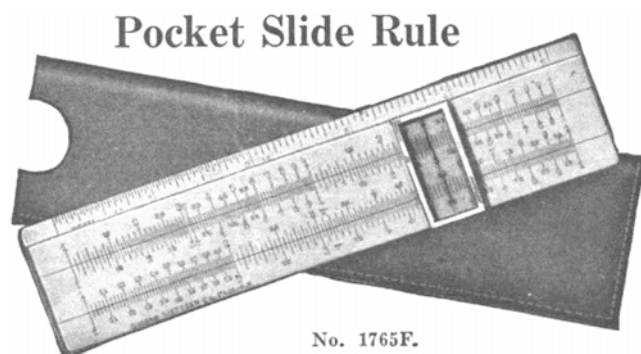


Figure 16. 1925 advertisement for the 1765F

Guedon²⁰ - Camden, New Jersey.

The celluloid rule pictured in Figure 17 is from my own collection, it is clearly marked *Made in France*, has a typical MARC cursor and is about as thin as the MARC models but it lacks the beveled edge. Besides the slides of my MARC labeled rules do not fit in the groove. It might have been

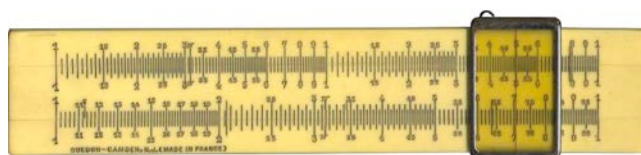


Figure 17. The Guedon Slide Rule

made by the same manufacturer as the MARC rules but, if so, not to the same specifications.

Other Guedon rules, though, are clearly MARC models, the close up below shows it is patented S.G.D.G. under a MARC license.

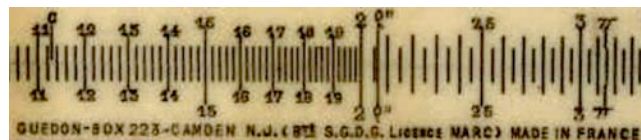


Figure 18. A Guedon Showing the MARC License

Acknowledgements

<http://cnum.cnam.fr/>
<http://gallica.bnf.fr/>
<http://worldwide.espacenet.com/>
<http://books.google.be/bkshp?hl=en&tab=wp>
<http://www.linguee.com/>
http://en.wikipedia.org/wiki/Main_Page
 Alain Biscaras.

My thanks to Otto van Poelje, who visited for me the International Institute of Social History, in Amsterdam, and provided me with extracts from the Unis-France directories dated 1920 and 1930.

Notes

1. John Farey. A treatise on the steam engine, historical, practical, and descriptive. Printed for Longman, Rees, Orme, Brown, and Green. London. 1827.
2. The overall length was 140 or 150 mm and the thickness 3 mm (about 1/8 of an inch).
3. Un Souffle d'Or. Advertised in *Revue de la chocolaterie*, 1934.
4. The same announcement was also published in the 7th August issue.
5. The ads showed sometimes, side by side, slide rules and other office supplies like sealing devices. See <http://sliderulemuseum.com>.
6. *Improvements brought to slide rules.*
7. Personal communication, March 2012.
8. *Sans Garantie Du Gouvernement*, hence SGDG.
9. Ivoirine is ivory reconstituted with ivory powder and resin.
10. A kind of rolled coin counter with *universal setting*.
11. Called *ressort guignol* in the patent.

12. According to the Rueil municipality, the Avenue de Paris was renamed Avenue Paul Doumer in 1932, (see http://www.mairie-rueilmalmaison.fr/pdfs/rueil_infos/ri249.pdf).
13. Of which 86 pages were devoted to the instructions itself and the rest to an aide-mémoire.
14. <http://diccan.com/>
15. My copies of the book are labeled *Nouvelle Edition*.
16. I use the nowadays symbols for naming the scales but they were not labeled that way on the MARC rules.
17. Mannheim complète.
18. See my article about UNIS-FRANCE to be published in the next *Journal of the Oughtred Society*.
19. My guess is as from 1925 up to after WWII.
20. I have found two Guedon companies in Camden, one was called *Guedon Scientific Co* and the other *Guedon Co*. The latter was active in signs and advertising displays; perhaps this rule was made for one of these two companies.

Separated by a Common Language

Colin Barnes

The question has been raised as to why the newsletter of the UK Slide Rule circle is called “Skid Stick”, the more usual term for the slide rule being “slip stick” on both sides of the Atlantic. “Skid stick” was used locally where I was working and is not in common usage. Someone noted that “Skid Stick” sounded like a tyre¹ company, but, being an awkward old cove², I kept the name if only to be different. Another word for the slide rule in common use was “guessing stick” but this term tended to be used in a derogatory sense by the uninitiated.

This discussion led to the comparison between words used in the US and the UK. Now, I claim to be bi-lingual, being able to speak both versions. I lived for many years in the British Virgin Islands, a stone’s throw away from the US Virgin Islands, and US English was the lingua franca. As I recall, many of the variants involved technical terms such as “truck” for “lorry”, “trunk” for “boot”, “hood” for “bonnet”, and of course “gas” for “petrol”. The names of tools, too, had their differences: in England we use the word “spanner” whereas in the US a spanner is a wrench and perversely a pipe wrench in England is commonly called a “Stilson” in the US. “Stilson”, I believe, is a US trade name that is now appearing as a generic term in England.

Being in an area of the world used to US English but dealing largely with British people and companies, one had to watch one’s language. Some words have totally different meanings. For example “pants” and “trousers”; also the word “fanny” refers to a totally different part of the female

anatomy in England! I had to meet a young lady in Puerto Rico from England, stay overnight, and escort her on the Virgin Islands. I gave her a short lesson on the new language and warned her not to request being “knocked up” when being called the following morning. She promptly forgot and that evening in a loud voice said that “I had “knocked her up” at seven o’clock”.

Of course, we also differ in our pronunciation of words. Probably the most common, the words “clerk” and “Derby”, which in British English are pronounced “clark” and “Darby”. *Vive la différence!* Then there is spelling; a scan through the PC spellchecker provides many examples. I do not believe that one can be too pedantic on this subject. English has been around for so many years that variations are bound to occur especially when one realises that words were often spelt



phonetically.

On this point, how did Oughtred pronounce his name? There are many possibilities. However, the only clue we have comes from some variant spellings, as used by semi-literate clerks, such as “Owtred” or “Outred”.

Notes

- 1 “Tyre” is, of course, British English for the American “tire.”
- 2 “Cove” is British English for “man” or “fellow.”