

# UNIS - FRANCE: A Collective Trade Mark, Not a Manufacturer!

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## Introduction

“UNIS-FRANCE” is sometimes mistaken for a French manufacturer because these two words — usually enclosed in an oval shape — often are found on many French made products of the past century. We will see, though, that this mark is neither a manufacturer nor a French *quality* label. This mark is a *collective trade mark*, which was meant to guarantee the French origin of miscellaneous products, from dolls to punched card machines, handcuffs, slide rules, and even Addiators.<sup>1</sup>

## The Context

Ancient pottery bore factory marks indicating their origin, but it “was only in the 19th century that people began to think of marks. ...as a type of property”.<sup>2</sup> This soon induced, in the fast-industrializing world, the establishment of specific laws on trade marks, which, in turn, allowed taking action in courts if needed.

At the end of the 19<sup>th</sup> century and in the early 20<sup>th</sup> century, local regulations were voted and international treaties were concluded to fight counterfeit products as well as products bearing false indications of origin. (Is there nothing new under the sun?). A conference, held in Madrid in 1891, resulted in an agreement known as the “Madrid Agreement for the Repression of False or Deceptive Indications on Goods”.<sup>3</sup> This agreement, initially adopted by only eight countries (France, Brazil, Spain, Great Britain, Guatemala, Portugal, Switzerland, and Tunisia) was especially favourably received by French wine producers; who were pleased that “it would not be possible anymore to put the words Bordeaux or Bourgogne on a wine produced in California”.<sup>4</sup>

This, together with other, further agreements, though a step in the right direction, proved insufficient to stop counterfeiting the country of origin of goods. (I guess this is still not completely solved today).

In 1911, the Washington Conference authorized associations, and individuals, to register a mark guaranteeing the origin of a product, even if such associations or individuals did not possess an industrial or commercial establishment. This compelled the signing countries to enact specific laws to comply with the new regulation. Germany had already enacted a law protecting collective marks as early as 13 March 1913. In France, by contrast, a draft law presented in 1916 and revised in 1924 was still being discussed in 1934.

## What Is a Collective Trade Mark?

According to the French journal *La Propriété Industrielle*, in 1917:

A collective trade mark is either a sign guaranteeing the quality of a product or

a sign guaranteeing the origin of a product. It is applied for by an association — that is to say a legal entity such as a private company or a public authority — in order to be used, not by the association as such in the industry or trade it is entitled to exploit, but by the members of the company or the inhabitants of the countries administered by the public authority. The collective trade mark, in the contrary to a plain trade mark, does not create a personal right between the products on which it is applied and the collective group that has applied for it.<sup>5</sup>

## Veiled Protectionism?

In 1917, a journalist of the magazine *Fédération Horlogère Suisse*<sup>6</sup>, analysing a French article that was praising the UNIS-FRANCE mark, wrote:

This is a demonstration of protectionism such as many occur since the beginning of the war and which will have no reason to exist after the resumption of international trade. The mark in question is, in fact, intended to stand in the way, after the war, of all the products of foreign manufacture, therefore also those from neutral countries.

In 1919, a certain Ernest Merton Best was of a different opinion:

Efforts are being made these days by manufacturers of various countries to arrange for a national trade-mark. France is the first country where such a mark has been created and adopted by a large number of French manufacturers. Its aim in creating a 'Trade-Mark of Origin' designed to authenticate French Products has only put in practice the ideas of righteousness, justice and fair play that must preside over all international intercourse.<sup>7</sup>

The first aim of the new regulations tending to make mandatory mention of the origin of goods was not, as one might think, veiled protectionism. As put by a French foreign trade counsellor in 1913:

One can resolutely be and remain in favour of the most liberal views concerning customs regulations and, in spite of it, or even because of it, be in favour of the most strict measures concerning, I wouldn't say the mandatory mention of the origin on all the goods, but the mandatory mention of the origin every time a foreign

product, by its apparent look, can be mistaken as one of national manufacture.<sup>8</sup>

In other words, customs protectionism should not be confused with protection of the indication of the origin.

One has to agree that such a matter could not be totally free of any nationalistic feelings. In France, we can see evidence of this in the fact that, until the outbreak of the First World War in 1914, examples of forgeries given by the economic world did mention all kind of countries, for instance Norway, Spain, and even France (for forged Malaga and Madera wines). Some countries though were treated friendlier than others:

France would gladly trade more with the Belgians, the Swiss, the American Nations, whereas 'Anglomania' was often only a somehow gaudy veneer of the Entente Cordiale.<sup>9</sup>

### A Specific Case: Germany

As stated in 1914 by Lucien Coquet, the German traders had gained Germany a very bad reputation by "rising counterfeiting and fraud to the height of an institution".<sup>10</sup>

The German industry, which had existed only for about 40 years, could not have achieved as much without imitating the processes used by the neighbouring nations, but from imitation to counterfeiting there is only a small step. Lucien Coquet admitted that, due to the abrupt expansion of its industrial development, Germany was forced in the beginning to copy anything made by others, but he noted also that Germany realised that continuing copying would ruin the market for a successful industry. Coquet stated that the Germans were no longer simply copying and using another one's inventions, they had reached a stage where they were themselves inventing new products (for instance, *aspirin*). Lucien Coquet praised in the same article the strict German legislation on forged goods and was very critical about the French one.

During and after the First World War, the friendly tone had changed and Germany became the favoured target of the French attacks. The same Lucien Coquet wrote in February, 1917: "The Germans, as you know, did business in peacetime the same way as they are making war nowadays, probably in an orderly way, but without any scruples".

As a proof, he cites some decisions made in 1914 during a meeting of German merchants and manufacturers:

The German houses established in foreign countries should employ, at least in the early stages, exclusively native people and replace them by Germans only as they progress in the conquest of the corresponding markets. All German trading houses must create, from now onward, special offices to be able to affix on their goods trade marks from the neutral countries.<sup>11</sup>

Coquet ended by saying that:

In their desire and need to sell us their merchandise, the Germans will not hesitate to dispatch their products to America and send them back to France but sealed with false American certificates of origin.

### The *Made in...* Syndrome

In the beginning of the German industrialisation, wages in Germany were very low compared to those in England. Thus, German products, though of a lesser quality than the English ones but of lower cost, were able to penetrate the English market. German companies often used *English sounding* marks and used English importers instead of selling directly from Germany.

The British trade industry soon demanded legislation making mandatory the mention of the country of origin on foreign products that could be confused with British ones. This was achieved quite late, in 1887, with the *Merchandise Marks Act*:

goods having applied to them British trade marks, or marks which purport to be British trade marks, can only be imported when the goods bear, in addition to the mark, a definite indication as to the country in which they were made.

Unfortunately for the British trade, German manufacturing had already gotten better, and this legislation produced the opposite effect. The new English rules turned out to be a tremendous boost for the German goods, and this even prompted German manufacturers to label all their exported products—also those not intended for the British market—with the "Made in Germany" seal.

In the beginning of the 20<sup>th</sup> century, the French people involved with the creation of a means to differentiate truly French products from forged ones were aware of the failure of the British "Made in..." legislation and were afraid of making the same mistake. One can see the rigour of the famous "Made in Germany" label origin. The strictness of the English law has turned out to be a gigantic advertisement for the German products, and this curious coincidence prompted the lawmakers to be cautious and mistrusting of the legislative measures they were voting on, unable as they were to predict all the consequences of the laws that might ruin what the laws were supposed to protect.<sup>9</sup>

### Campaign for a French Collective Trade Mark

Already by 1913, there were people in France propagating the establishment of a French collective trade mark, but the real start point looks to have been a conference held by a certain Raynald Legouëz on the 26<sup>th</sup> of June 1915. The latter, tired of waiting for a French law transposing the Washington agreements, began a true promotion campaign for the creation of a French collective trade mark meant "to defend and assert French products abroad". His attacks were especially directed against

the Germans who, according to him, “had become masters in the art of telling lies, imitating and counterfeiting and were flooding the world and the French market with their goods under French and French looking marks”.<sup>12</sup> He advocated strongly for a mark authenticating the origin of French products instead of imposing an origin label for foreign products (the “Made in Germany” syndrome was still not forgotten):

Imposing a label of origin to foreign products would mean repeating the deceiving experience of our English friends and allies.

A few days after his conference, a study committee was created with representatives of the National Office of Industrial Property, of the hardware trade, of the footwear trade, of the electric industry, of the paper industry, and of the textile industry.

### The First Collective Trade Mark



**FIGURE 1. The First Collective Trade Mark from Ireland**

The first collective trade mark was not registered in France, contrary to what Ernest Merton Best wrote in 1919, but in Ireland on the 8<sup>th</sup> of December 1906, by the *Irish Industrial Development Association* in Cork.<sup>13</sup>

The mark, meant to differentiate “what is Irish from what is spurious,” bore the Gaelic words *Déanta i nÉirinn* (made in Ireland) in a circular border, surrounded by “a second circular Celtic design believed to be taken from the Book of Kells”.<sup>14</sup> By 1920 there were over 700 licensed users.

### Birth of the Union Nationale Inter-Syndicale

The Inter-Syndical National Union of Collective Trade-Marks (Union Nationale Inter-Syndicale des marques collectives<sup>15</sup>) was eventually founded on 9 December 1915, under the patronage of the Chamber of Commerce of Paris. The aim of UNIS was to investigate the possibility of creating a mark protecting French products. The Board was mostly composed of members having a position within the Chamber of Commerce. The chairman was Raynald Legouéz.

The Union was allowed to use premises in a building owned by the Chamber of Commerce, 8 place de la Bourse, Paris. The Chamber seems to have been the main provider of funds, at least in the beginning, a subsidy of 10,000 francs was voted in June 1916 to cover the heavy costs due to advertisement and the filing of the mark abroad.

### The Statutes

The Board of UNIS was in charge of:

- propaganda;
- studies;
- advertising;
- filing of the mark UNIS-FRANCE abroad<sup>16</sup>;
- possible litigations;
- funds management;
- correct use of the mark by its adherents;
- etc.

The first issues tackled by the Board were:

- regulations for using the mark UNIS-FRANCE;
- filing of the mark in France and abroad;
- steps to be taken in order to bring the law on the collective marks to a successful conclusion.

A higher Council composed of members of each affiliated syndicate was in charge for the General assembly.

Each trade syndicate member of the Union:

- laid down the conditions for using the mark within its own trade;
- granted or refused to its members the right to use the UNIS-FRANCE mark;
- undertook the monitoring and an effective and continuous control of the use of the mark by its affiliates;
- was in charge of studying its own needs and had to report the results and the proposed solutions to the Union.

### UNIS-FRANCE

The choice of a distinctive label for the Union was carefully discussed, even before the Union was incorporated. The label could not be composed of the sole word “France”, “as many foreign legislations would not accept country names, flags, or even the Gallic cockerel as a mark”. After several unsuccessful trials, the Committee adopted the name *UNIS*, a plain word, easy to remember, conveying appropriately the wishes of the promoters. The new mark was composed by the first letters of *Union Nationale Inter-Syndicale* complemented with the word *France*, the latter as a guarantee for the origin and not as a trade mark. In the beginning of the Union, the words “UNIS-FRANCE” appeared inside a circle, but eventually the Committee decided that the words also could be framed in other ways, according to the nature of the products.



**FIGURE 2. Picture from the UNIS-FRANCE 1930 Directory**

### Use of the UNIS-FRANCE Words

The UNIS-FRANCE mark was forbidden to be used for products known to be of a poor quality.

The UNIS-FRANCE words were allowed usage in three ways:

- 1) Included within the trade mark of the manufacturer, the solution adopted, for instance, by the *Société Française de matériel agricole & industriel*<sup>17</sup>, a manufacturer of agricultural machines.



FIGURE 3. First Example of Use

- 2) Combined with the trade mark of the manufacturer, the solution adopted, for instance, by *SL (Société des Lunetiers)*, a manufacturer of compasses and other mathematical instruments.



FIGURE 4. Second Example of Use

- 3) Stand alone, without any mention of the manufacturer's name, but with the compulsory identification numbers.<sup>18</sup>

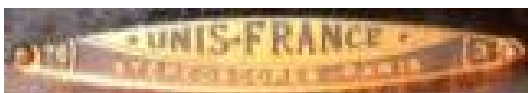


FIGURE 5. Third Example of Use

### Identification Numbers

A numbering system<sup>19</sup> was set up to identify the users:

The Inter-Syndical Trade-Mark can be associated either with an association trade-mark, or with the private trade-mark of the name of its user. A number on the left, that of the syndicate, always compulsory, and a number on the right, that of the user, which is only to be necessarily added when the trade-mark is not accompanied by either the name or the private trade-mark of the latter, make it always possible for the board of the syndicate and that of the U.N.I.S. to exercise their control. A special combination enables the conventional use of a particular number, which is only known by the "U.N.I.S." for its control.<sup>20</sup>

The MARC slide rules<sup>21</sup>, for instance, bore the number 19 on the left and an identical number 19 on the right. The first number 19 being that of the trade syndicate of which the MARC company was a member and the second number 19 being that of the MARC company itself.<sup>22</sup>

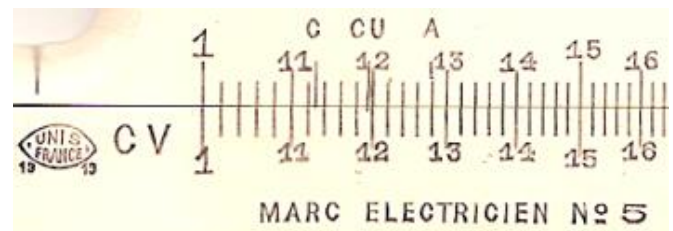


FIGURE 6. An Example of the Numbering System

In exchange for a small additional contribution to the annual fee, every user was allowed to apply for more than one personal identification number.<sup>23</sup>

### Requirements for Members

By mandate, the affiliated syndicates had to adopt internal regulations complying with the regulations of the Union. The manufacturers had to be French<sup>24</sup> and manufacture French products in France, either in their own factories or elsewhere in France under their responsibility.

For a company to have been set up under the French law or to have its head offices in France was not sufficient. The nationality of the Board members and of the managers, as well as that of the main capital holders, was to be checked: in 1918 for instance, a company whose management board and assets were Belgian was refused the right to use the UNIS-FRANCE mark. If the manufacturers were not French by birth<sup>25</sup>, they were only allowed to use the mark if they had been naturalized for at least 15 years. The inquiries made by the syndicates bore "specially on the nationality of the directors of the companies' boards, that of their managers and of the biggest shareholders".<sup>25</sup>

Even the workers had preferably to be French, a condition difficult to comply with. For this reason each syndicate had to determine the quota of foreign workers allowed in their specific trade.



However, a product containing foreign parts that could not be found in France in the same quality, or at the same fair price, would not be denied the right to use the mark<sup>26</sup>.

In 1916, the fee for the syndicates was 100 francs the first year and 50 francs the following years. The fee for the users was set at 24 francs per year.

In 1926, the fee for the syndicates was still 100 francs the first year and 50 francs the following years but the users had to pay 50 francs, of which 10 francs remained for the syndicate.

### An Apparent Fast Success

In June of 1916, only six months after the formation of UNIS, more than seventy trade associations had joined the Union. In August of 1916, a delegation was received by the President of the French Republic, Raymond Poincaré. The delegation explained to him that the aim of the UNIS-FRANCE mark was to authenticate true French Products and that a large number of trade associations had already joined the Union. An object bearing the UNIS-FRANCE mark was gifted to the French President who

congratulated the members of the delegation for the success of their efforts and insisted on the need for the French industry and the French trade to unite and to act vigorously in order to defend and spread out the French products, in France as well as abroad.<sup>27</sup>

The table hereafter gives an overview of the number of adherent syndicates (various sources):

December 1915.....	42
October 1916.. .....	Almost 80
July-August 1917.....	About 100
1919. ....	100
1920. ....	Over 100 <sup>28</sup>
1922.....	96
1928.....	Over 125
1934.....	About 100

In 1934, after almost twenty years of existence of UNIS-FRANCE, an article<sup>29</sup> stated that the mark had been granted to about 3,000 French industrialists and registered in 50 foreign countries, *including Great Britain*.

### How Really Widespread Was UNIS-FRANCE?

The relatively high number of syndicates adhering to the Union does not mean that the use of the label UNIS-FRANCE was widespread. Though some big names of the French economic world used the logo during some years (for instance Thomson or Bull), the logo was more commonly used by small manufacturers. An examination of advertisements in newspapers and specialized magazines after the First World War does not show a prevalence of the UNIS mark. Rather, the contrary is the case.

There may be many reasons for this:

First, compliance with the requirements was not easy. Required were French nationality of the owners, French origin of the assets and even, if possible, French origin of the raw materials.

Second, there was a risk for big manufacturers to see their brands associated with another label. In 1919, the French Bulletin of the Society for comparative legislation reported:

UNIS-FRANCE would be seen by many as a true trade mark<sup>30</sup> and not as a mark authenticating the origin; small-scale industrialists and small traders who do not have a famous brand would benefit from the UNIS mark – and from the advertising made by the Intersyndical Union – by the very fact that this mark will be seen as true trade mark. Instead of being a mark of origin it will purely and simply be a brand grouping together, in the contrary to what was intended, products of lesser quality.

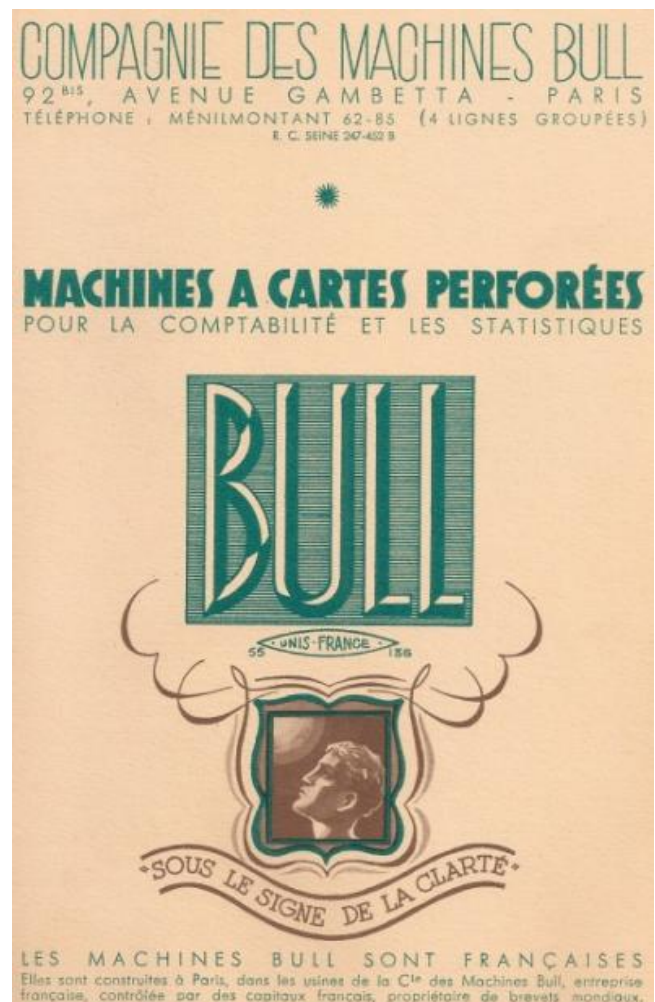


FIGURE 7. Picture from a Catalogue of the "Compagnie des machines Bull"

## Propaganda

Propaganda was a responsibility of the board of the Union, and apparently the board took this task to heart. Hereafter are a few examples.

In June 1917, an exhibition showing the efforts made by the French industry during the war was held in the premises of the *Society for Encouragement of the National Industry*.<sup>31</sup> The Union had a separate exhibition room showing all the objects bearing the UNIS mark. One could find jumbled together: jewellery, leather goods, ceramic insulators, cans, chairs, stereoscopes, electrical devices and light-bulbs, smoker's supplies, buttons, mirrors, chains, pencils, rubber erasers, ink, compass sets, fountain pens, coloured pencils, made-up goods and lingerie, shoes, shoe-repair articles, shoe lasts, combs and celluloid objects, grain separators and kneading machines, toys, dolls, lead soldiers, etc.



FIGURE 8. Picture from "Bulletin de la Société d'Encouragement, Paris, 1917"

The aim was to spread awareness of the efforts made by the Union and to encourage the public to preferably buy, at equal quality, the products bearing the mark UNIS-FRANCE:

The more demanding the public will be, the more industrialists will join the ranks of the Intersyndical National Union and the better our industry will be defended.<sup>32</sup>

In 1919, the Bulletin of the Society for comparative legislation reported that a poster was displayed "on all the walls in Paris" praising the mark UNIS-FRANCE and endeavouring to promote the idea that the mark was, at the same time, a guarantee of French manufacture, a guarantee of the French nationality of the manufacturer, and even, to a certain extent, a guarantee of quality because a control was exercised by the syndicate.

In 1921, the Union published agendas and calendars.

In 1925, the higher committee of UNIS-FRANCE promoted the mark in theatres, in cinemas, and on the radio. Advertising boards for retailers were also available (see Figure 9).

In 1932, the Union sold postal stamps bearing the UNIS-FRANCE mark (the Trade Union of Fabrics Manufacturers advised against the use of those stamps "because of their too high price").

In 1927, the Union ran a poster contest carrying prizes ranging from 300 to 5,000 francs.

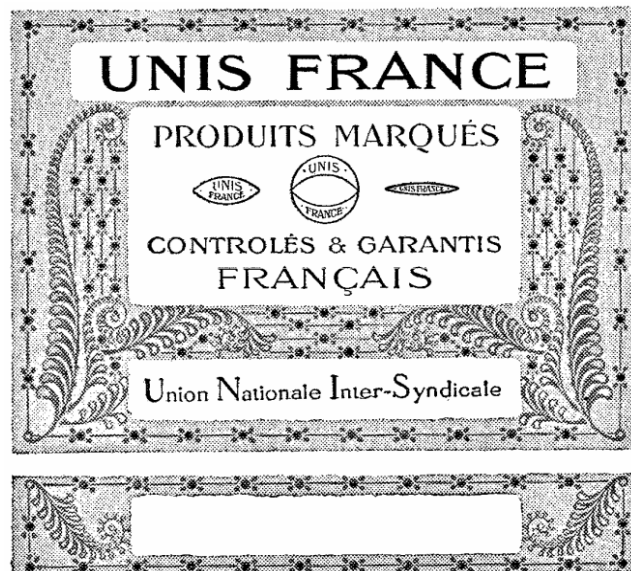


FIGURE 9. Advertising Board for Retailers

The Anti-Counterfeiting Mark... Counterfeited

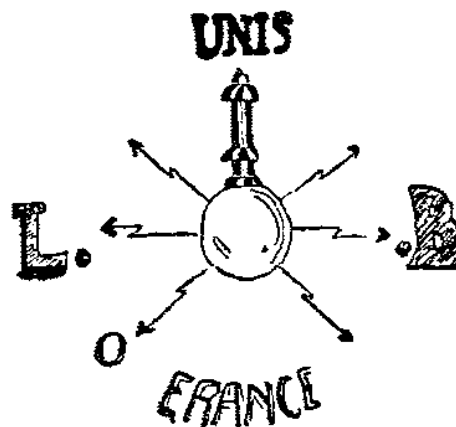


FIGURE 10. A Counterfeit Mark

The apparent success of the UNIS-FRANCE mark did not go unnoticed, and, as often the case, success attracted counterfeiters. In 1925, an application for the trade mark *UNIS-ERANCE* was published in the *Boletín Oficial de Madrid*. One does not need to be a genius to find out which French mark had inspired the Spanish applicant (a trader or a manufacturer of broadcasting and telephone devices). The Union, obviously, raised an objection.

### Known Addresses

1915 until at least 1925: 4 (sometimes 8), place de la Bourse, Paris.

1928 until at least 1933: 25 (sometimes 23), rue Notre-Dame-des-Victoires, Paris<sup>33</sup> (address of the management).

1934: 92, rue de Courcelles, Paris 8

### Congresses

The Union has held at least two congresses, the first one in 1922 and the second one in 1927. There may have been more, but I have not been able to find any evidence of this.

### Members

The Union published regularly member directories (*Annuaire*s). There is evidence of the publication of such directories for the years 1920 (the first one), 1921, 1924, 1925, 1926, 1928, 1930, 1931, 1932, 1933, and 1934.

As an example of members advertising with the label UNIS-FRANCE, we can cite following companies:

- 1919 Vimont et Linzeler (underwear).
- 1920 until 1921: Thomson Houston.
- 1922 until 1930: Arras (miner's lamps).
- 1922 until 1924: Leflaive (mechanical engineering).
- 1923 Bardon: (electrical equipment).
- 1923 Explosifs Minelite (explosives).
- 1923 until 1925: La Métallurgie Électrique (equipments for the industry).
- 1923 until 1937: La Soudure Autogène Française (autogenous welding).
- 1923 until 1935: Société Alsacienne de Constructions Mécaniques.
- 1923 to 1924: Touilleux Fils (shoestrings).
- 1924 until 1925: Birum (vacuum cleaners).
- 1924 Herrman Auclair (fire extinguishers).
- 1924 Mazda (electrical lamps).
- 1924 until 1931: Ragonot Era (electric motors).
- 1926 until 1937: Sautter-Harlé (electrical equipments).
- 1926 until 1927: Worthington (pumps and compressors).
- 1927 until 1928: Ducellier (electrical equipments).
- 1928 Babcock et Wilcox (industrial boilers).
- 1928 until 1931: Quiri (refrigeration equipment).
- 1932 Grosjean (leather).
- 1933 until 1934: Corector (office supplies).
- 1935 Dulox (paints).
- 1935 until 1936: Le Carboram Fa (tungsten carbide).
- 1935 until 1936: Usines de la Seigneurerie (paints).

### What Happened to UNIS-FRANCE?

Though not easy to gather together, there is enough information about the birth of UNIS-FRANCE available on the Internet. What is not easy to find is what happened to this Union and to its collective trade mark.

Information appears to run dry since the mid 1930's. Anyway, the Union was still active in 1934 and in 1935. An article in *l'Informateur Photographique* of July 1934, states that the Union had sent a letter informing of their projects of reorganization, without saying, though, what these projects involved. The same article informed readers that the Government was intending to reserve the orders of public administrations to French companies and that the Union had started a study to delimit the nature of what was integrally French, against the future regulation.

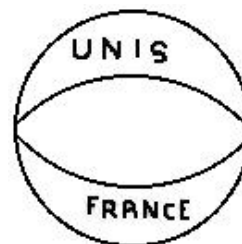
Did the Union survive the Second World War? Seeing the anti-German feelings and literature of the Union, the Union probably did not. During the months of December of the years 1932 until 1935, advertisements in the newspaper *Le Matin* invited the French to buy French-made toys bearing the logo UNIS-FRANCE. Though numbers until 1944 of *Le Matin* are available online, there were no advertisements found after 1935.

Post-war illustrations of MARC slide rules still show the UNIS mark, but this does not prove the Union was still active. It may be that this brand of slide rules was so strongly associated with UNIS that MARC kept the label despite all of the inactivity.

Anyway, a search on the French Institute of Industrial Property<sup>34</sup> curiously shows that the UNIS FRANCE brand is still valid for three depositors, shown in Figures 11, 12, and 13.

**UNIS FRANCE**

**FIGURE 11. DENTORIA, with a Logo Showing Only the Words UNIS FRANCE**



**FIGURE 12. Michel ROUILLER, with a Logo Looking Like One of Those Defined at the Beginning of the Union**



**FIGURE 13. BEUGNOT ENTREPRISE, also with a Logo Looking Like One of Those Defined by the Union, but with the Letters HB inside the Circle**

## The Driving Force Behind UNIS-FRANCE

The driving force behind UNIS-FRANCE seems to have been Raynald Legouëz. Born the 26<sup>th</sup> of September 1857, in Bezons, France, this Polytechnique graduate and electrical engineer was a founding member of the Union and a fervent promoter of the collective trade mark. He had a quite active career marked by many activities from which there is evidence of the following:

- 1898 civil engineer at the *Ponts et Chaussées*, loaned to the Sewerage Service of Paris.
- 1915 correspondent of the Société d'Encouragement pour l'Industrie Nationale; chairman of UNIS-FRANCE.
- 1915 vice chairman of the Chamber of Commerce of Paris.
- 1916 chief engineer at the Ponts et Chaussées<sup>35</sup> administration; member of the Chamber of Commerce of Paris.
- 1919 member of the Society for comparative legislation.
- 1920 until 1927: chairman of the Technical Union of the Electrical Syndicates.
- 1920 until 1943: member of the Conseil d'escompte de la Banque de France.
- 1924 vice chairman of the Chamber of Commerce of Paris.

- 1926 chairman of the Syndicate of Manufacturers of Electrical Devices.
- 1944 honorary chairman of the magazine *Revue générale de l'Électricité*; board director of the Forges et Ateliers de Constructions électriques de Jeumont.

Raynald Louis Henri Legouëz died in Paris on the 29<sup>th</sup> of February 1944; he was over 86 years old.

## 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](http://en.wikipedia.org/wiki/Main_Page)

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. My thanks also to the JOS editing staff, who *revised* some of my English sentences. This article was intended to be published together with the article on "MARC" in JOS Vol 22:2, Fall 2013; however, this was not possible because of conflicting article schedules.

## Notes

1. Yes, Addiators, but only after all the rights for France of this originally German brand were sold to a French manufacturer in about 1922.
2. <http://www.ipo.gov.uk/types/tm/t-about/t-whatist/t-history.htm>
3. Still a legal instrument at present time.
4. <http://appellation.maisons-champagne.com/index.php?page=19>
5. *La Propriété Industrielle* N°6. June, 1917.
6. Swiss Watchmaking Federation.
7. Business equipment topics: Volume 41.
8. Conference held by Lucien Coquet, the 5th of February 1913, in the *Société d'Économie Politique*, Paris.
9. *L'Information Photographique. Douzième année.* 1913. The *Entente Cordiale* was a series of agreements signed on 8 April 1904 between the United Kingdom and the French Republic (source: Wikipedia).
10. Lucien Coquet: *Répression de la Concurrence déloyale et de l'Escroquerie en Allemagne* in *La Revue Judiciaire*, Paris, 25 April 1914.
11. The meeting, under the presidency of the chairman of the Board of the Hamburg Exchange, was attended by members of the Ministries of Trade, of Industry, of Finance and of Foreign Affairs.
12. *Les Marques syndicales destinées à authentifier (sic) les produits de fabrication française.* Conference held in Paris on the 26<sup>th</sup> of June 1915.
13. This was advertised in the N°12 issue of *La Propriété Industrielle*, a Swiss periodical, on the 31 December 1906.
14. *Déanta i nÉirinn*: the Belleek Third Period Mark, by Trevor Roycroft and Chris Marvell in Newsletter, NR 31/3, October 2010 of the UK Belleek Collector's Collectors' Group.
15. Later spelled *Union Nationale intersyndicale des marques collectives*
16. According to the 1930 UNIS directory, the mark had been filed by then in 49 countries.
17. [www.ferguson-en-perigord.com/pages/tracteurs/sfv/htm/sfv](http://www.ferguson-en-perigord.com/pages/tracteurs/sfv/htm/sfv).
18. [www.collection-appareils.fr/phpBB3/viewtopic.php?f=7&t=2762](http://www.collection-appareils.fr/phpBB3/viewtopic.php?f=7&t=2762).
19. This numbering system would allow the Union to take action against a manufacturer if, for instance, the quality of a product was found questionable by a consumer.
20. Business equipment topics: Volume 41, 1919. Ernest Merton Best.
21. To my knowledge, MARC is the only slide rule manufacturer bearing the UNIS-FRANCE label. Though the instrument maker H. Morin was also member of the Union, I have never seen a Morin slide rule bearing the logo. See also the article about the Marc slide rules in the *Journal of the Oughtred Society*, 22:1.
22. This 19 19 combination is often mistaken as the date of manufacture by e-bay sellers.



23. *Bulletin de la Société d'Encouragement pour l'Industrie Nationale*. Paris. 1916.
24. There were some exceptions, for instance for industrialists from the Alsace and Lorraine Regions.
25. There were special regulations for manufacturers from the Alsace and Lorraine and for “allied countries” having showed their dedication to France (Source: *Annuaire UNIS 1920*).
26. *Annuaire UNIS 1920*.
27. *Messages, discours, allocutions, lettres et télégrammes de M. Raymond Poincaré*. Bloud & Gay. Paris. 1919.
28. And “very soon two thousand users” according to the 1920 directory.
29. *La Propriété Industrielle*. N°11. 1934.
30. Which is the case for many nowadays collectors!
31. *Société d'encouragement pour l'industrie nationale*.
32. *Bulletin de la Société d'Encouragement*. Paris, 1917.
33. Head office of Afnor, the French standardization association, of which Reynald Legouéz was the first chairman.
34. <http://bases-marques.inpi.fr>
35. Bridges and roads administration.

## ***The B-47 and B-52 Bombers and the Slide Rule<sup>1</sup>***

*William K. Robinson*

My talk begins in July 1946, sixty-six years and seven months ago. That was the time of the B-47 and B-52 jet bombers and the slide rule. My talk covers the changes in our work that occurred in three and one-half years; from the summer of 1946 to the end of 1949.

My home was in beautiful Seattle. I was very fortunate when looking for a job that summer. Boeing hired me to work in their “Vibration and Flutter Unit”. I was lucky because this was a small Unit, with only eight people. Two of them had PhD’s in Mathematics and Physics. My beginning job title was “Vibration and Flutter Computer”. And compute I did!

Now, airplanes are designed and tested to avoid flutter. In the air there is a great deal of vibration that occurs throughout the entire structure. Vibration instability can occur due to aerodynamic and structural forces. Predicting when an airplane will respond to flutter conditions is a very complex process. The prediction involves mathematics at a very high level and there are many variables in the matrices and equations. The calculations are repetitive with numerous iterations to perform to reach a solution. In 1946 a solution may have taken weeks or months to complete by hand. Figure 1 shows the Flutter Equation of Motion. Notice that four of the terms in the equation are matrices. These matrices are fairly sizable and multiple iterations of the solution steps are required to obtain a result. Figure 2 shows the solution steps as a Flow Diagram - to solve the Flutter Equations of Motion. This gives an idea of the complexity of the problem.

This was a wonderful job to get as I had only finished my freshman year at the University of Washington. I had started on the G.I. bill in the fall of 1945 after discharge from the Army Air Corps. I had become proficient in using the slide rule in high school, the Air Corps, and the University. This was probably why I got the job. My slide rule was a K&E 4083-3 Log Log Duplex Vector, purchased in January 1944. I had moved upward from my first, a 50-cent wooden slide rule purchased at Kress’s Five & Dime in 1937.

All the engineers at Boeing (a few hundred were on our floor) had slide rules. The slide rules would be on the engineer’s desks or drafting tables and were used often. Ninety-nine percent or more were various K&E models. Due to distances and the War, to see any slide rules from Europe or Asia were very rare. Post, Dietzgen, and Pickett & Eckel were barely in the market in 1946. So, K&E ruled at that time.

However, I should mention that the slide rule was not all we used. We had other resources to work with. These were in the books we all had at our desks: log tables (when more accuracy was needed than the slide rule gave); and numerous other math tables; graphs of functions; and nomograms. Where possible all answers from these other sources were checked afterward using the slide rule. The slide rule was our primary tool and used often!

For the next four years until I graduated I worked full time in the summers and school breaks and part time during school time. The high level of mathematics we used in my Unit caused me to switch my major at the University from Engineering to Applied Math.

We were working on a most fascinating project. This was to calculate the solutions to the flutter modes of the B-47, the first swept back wing bomber (see Figure 3). All of the pictures of airplanes, except for Figure 6, are those on the grounds of the Pima Air and Space Museum. I had seen my first jet fighter only a few months before, and now we were working on a jet bomber. The B-47 represented a milestone in aviation history and a revolution in aircraft design. Today, in 2013, every large swept wing jet in the World is a descendant of the B-47 bomber. In April 1946, just three months before I was hired, Boeing had received a contract to build two prototypes of the B-47. Because of the swept back wings, we had to confront new problems of sub, trans, and supersonic configurations. No one had ever done this work before on this type of aircraft. This was original pioneering work, and new mathematics to solve the problems were being developed by my Unit as we went along.