

Foundation for History of Physiotherapy

Physiotherapy in perspective, 50 years past - present.

Dutch Heritage Physiotherapy, collection of curiosities in physiotherapy.



STICHTING GESCHIEDENIS FYSIOTHERAPIE
www.sgfnl.nl

Triptych Part 2

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Trilogy

- Part 1 collection of lung devices (PhysioPraxis June 2020).
- Part 2 collection of curiosities in physiotherapy (FysioPraxis Aug-Sept. 2020).
- Volume 3 collection of arsonvalization devices with experience story mrs. A de Groot (PhysioPraxis Oct. 2020).

Introduction In the second part of the triptych of the 'collection of devices of the History of Physiotherapy Foundation' we would like to show a number of special devices that are exhibited in the Trefpunt Medical History Netherlands (TMGN) in Urk.

With this part of the triptych we want you to enjoy and think about our

collection of "old" devices of which sometimes nobody knows which 'illnesses and defects' our forerunners in the field tried to cure with this.

The SGF has been receiving equipment from different directions (private individuals, institutes/institutions, colleges, etc.) for years, with our curators assessing whether the donation will be given a permanent place in the collection.



Photo 1. The chairman of the SGF, Dr. Anton de Wijer in conversation with Prof. dr. Dr. Mart van Lieburg, who is involved in setting up the collection of the SGF at Urk.



Photo 2. Collection of SGF devices on display during the Urkdag. Board member Rob Karstens explains.

FysioPraxis augustus/september 2020



photo3. Acquisition SGF, antique exercise device. On the right Henk Bijlsma and in the middle Aad Graafland busy unloading a donated device. It concerns an exercise device for extending and bending the knee from 1900 (M. Trennert, Braunschweig). Coll SGF.

COLLECTION Foundation for History of Physiotherapy (SGF)

Physical therapy

The field of physical therapy ie was practiced before it was included as a compulsory part of the curriculum of the physical therapist in the 1970s. Before this, the physical technique was often applied by doctors or by remedial gymnasts who applied it on prescription or under the supervision of a doctor referrer.² We still know enough about the operation and use of the more recent devices, from the last 50-60 years, and good descriptions can be found. With the "older" equipment in physiotherapeutics, we can no longer always find out exactly how they were used or for what purpose. We will discuss a few specimens of this older collection in physiotherapeutics.

Galvanization devices

Galvanization is already 200 years old and the term is derived from the Italian physician and physicist Luigi Galvani (1737-1789).^{2,3} Around 1900 people spoke of electrification devices (also called so until the 1970s).² The first devices only had a low-frequency application option, as shown in photo 4, a beautiful electrification device from around 1900 Later (after 1960) equipment with medium-frequency and high-frequency currents was also introduced.³ An apparatus widely used by the current generation of colleagues, trained after the late 1960s, was the 'universal electrification device the Elther'. See photo 5.



Photo 4. Low-frequency electrifier around 1900 (brand unknown).

A therapeutic effect was attributed to the direct current. Due to the physiological reactions in the body (including hyperemia due to the release of histamines), attempts were made to achieve tissue repair and/or pain relief or muscle actions. A medication can also be introduced (subcutaneously) by means of galvanisation.^{2,3} In that case we speak of electrophoresis/ iontophoresis. The most well-known form of this is the histamine



Photo 5. The universal electrification device Elther suitable for galvanization, interrupted current, diodynamic current also suitable for making IT curves.

iontophoresis, which we discussed earlier in Fysiopraxis (March 2020).⁴ Other equipment from the 'galvanization age' are the beautiful Pantostat and Overbeck's Rejunivator (photos 6-9). Here too, galvanization was used in various forms and beneficial successes were claimed to cure all kinds of ailments by restoring the 'imbalance in the body'.



Photo 6. The Pantostat was used by physicians in physical engineering for Galvanization, Electrolysis and Iontophoresis in the early 1900's

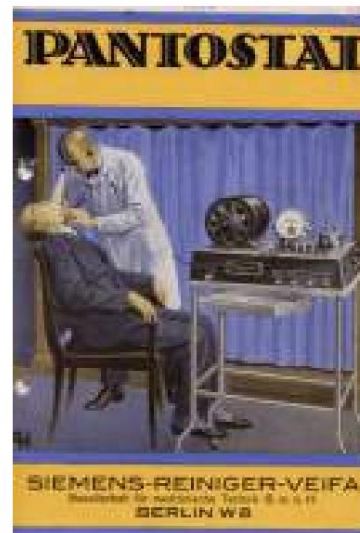


Photo 7. Advertising folder of the Pantostat in which many applications are promoted in the field of physical engineering.



Photo 8. Rejunivator, uitvinder Otto Overbeck 1860-1937. (SGF collar).



Foto 9. Rejunivator, Otto Overbeck (coll SGF). Documentation on this wonder device can be found in the book "A new electronic theory" by Otto Overbeck, 1925.

Induction devices

The French physician, Paul Marie Oudin, discovered the Oudin

oscillator or Oudin resonator in 1893.⁵

The Oudin coil generated high voltage in the form of high-frequency alternating current.⁵ Although in 2020 we will still come across

The induction method was widely used around 1900 and was used to build muscles

relax and relieve pain as far as possible in front of can be ascertained.⁵ See photo 10-13.

Here we have to guess about the working mechanism and experience stories, applications of this abroad in the most advanced form in hospitals (photo 13).



Photo 10. Du-Bois-Reymond induction coil (coll SGF)



Photo 11. Induction coil (Willats London).



Photo 12. Electromagnetic therapy used in 1900 (coll SGF).



Photo 13. Electromagnetic therapy used in 2020 for pain relief in Hungary (Budapest 2020 hospital coll.).

Arsonvalization devices

Arsonvalisation devices also belonged to the domain of physical therapy iez and were used around 1900 for all kinds of ailments. Later applications are also known (until the 1970s).

See photo 14 and 15. Especially the glasses that

colored visibly purple (due to ionization) did 'miracles' when held against the skin. In this context, the beautiful Arsonvalization devices must have impressed patients mainly because of the irritation of the skin and the beautiful lighting that occurred due to the ionization.



Photo 14. Arsonvalization device, brand name Corona. (SGF Collection). There are many of the devices on display under the collection.



Photo 15. Arsonvalization device (coll SGF).

Unfortunately, there are hardly any experts left who can explain the exact operation and use of this. It remains a 'medical miracle device'. Apparently the 'modern physiotherapist' was no longer waiting for miracles and this device disappeared in the museum of the SGF in Urk. In part three we will discuss this in more detail using one of an Experienced Expert (former patient) that we found and was willing to write down her experiences.

Interference Devices

A fine example of one of the first interference devices is the Nemectron. A colossal device that is more reminiscent of a control panel of the spaceship "Enterprise". See photo 16. Interference is still applied in the form of TENS (trans electric nerve stimulation) with a current modern compact version. See photo 17.



Photo 16. Nemectron, interference device according to Prof. Hans Nemeč, 1957.



Photo 17. Current interference device (TENS device)

Massage aids The SGF has a varied collection of massage appliances that were used at the end of the 19th and early 20th century. See photo 18-20. It was claimed that massage with a device would have a longer lasting effect. This claim of efficacy came from the

manufacturers themselves. It would be nice if it were all true. Research into effectiveness was not a practice in this industry at the time.

There are still massage devices on the market, although we almost only see them in use in wellness and spas.

Women using a Macaura device at home

Accompanying booklets for the Pulsocon included many images of the device being used. Macaura told his audience that it was worth remembering that cures 'by mechanical means' were 'more permanent than by any other known treatment'.



Photo 18 Advertising brochure from manufacturer (coll SGF).



Photo 19 Massage aids from 1890.
Links: Dr. Macauras Blood Circulator (Pulsocon).
Right: Dr. Johanson.



Photo 20 : Massage device the Maspo Super.

New additions to the collection. One of the most recent acquisitions of the SGF is a device donated by Mr. Hans Brinkel. See photo 21. He donated an arm to the SGF

training device from the year 1900. It is not known which brand it is. Upon closer examination, we noticed that we may have been dealing with an arm training device.



Photo 21. Arm training device from 1900 or not?

In discussing the book by the German surgeon and engineer Dr. H. Krukenberg (1863-1935), "Lehrbuch der mechanischen Heilmethoden", the surgeon Dr. SB Ranneft pointed out the existence of 'Krukenberg' devices at the end of 1896".6 We cannot figure out how they work, although we know that in the

Boerhaave Museum, a similar example exists: the Krukenberg pendulum and resistance device.7 See photo 22. It is most likely that this device was used to train the arm/shoulder and possibly dates from the period when 'medical mechano therapy' was in vogue.



Photo 22. Krukenberg device from the Boerhaave Museum. This device seems to match the latest addition to the SGF museum.



Photo 23. This shoulder and elbow training device, originally from the Hoogovens, comes from Heliomare (donated by Mr. K. Schumacher, manager Educational Advice and Labor Integration Heliomare).

International

We see a growing interest worldwide in sharing historical knowledge in the field of physiotherapy. This is how the SGF is informed

Photo 24. Remedial gymnastics in France in the year 1900.



by the International Physiotherapy History Association (IPHA) on historical knowledge in physiotherapy.⁸ See photo 24 from France that the IPHA shared on their website last April (along with many articles in France). See IPHA website: <http://history.physio/>

Below we see a working 'fitness center' with Zander equipment as they could still be found in the Netherlands around 1900. In July 2020 we will also have a report about the Zander Institutes in the Netherlands contribution written in FysioPraxis (July 2020).

Photo 25. Fully intact Mechanotherapy room with Zander devices in Brazil.



The special thing about this is that we The Netherlands no longer know anyone who is an expert with this Zander devices while abroad

another Zander Institute is fully operational.

For more information:

<https://www.youtube.com/watch?v=RQWrMtupNOU>

What can we learn from it?

This is just a small selection of the SGF's collection of devices. Many were in service in the early 1900s with very promising effects at the time. They acted in the spirit of that time with a great deal of experiential knowledge, then without tested evidence. A variety of conditions have been associated with an "imbalance" in the body (often found in recruitment brochures). For example, the purple light of the Rejuvenator will probably have helped many a "patient who was out of balance" and there will have been good experiences from patients. Even if it was a placebo effect.

In fact, we do not (yet) know very well why these devices suddenly disappeared in the Netherlands, in contrast to the disappearance of the Zander devices, for which Terlouw made an accurate analysis.⁹ Here too, when searching for information, we run into the fact that nothing was documented about the treatments (as with the hammer method of the remedial gymnast Dr. Johann Mezger).¹⁰ What were the experiences of the patient and of the therapist? What was the reason for the emergence and cause of the disappearance of certain treatment methods? These questions remain partly unanswered..... It is therefore often still a mystery whether all these devices have ended up in the museum rightly or wrongly.

We do know from the physio-technical devices that the doctors were the founders and that they are still used abroad. Other current forms also have an application closer to home. Pain relief or selective organ stimulation of the heart and

brain, but iontophoresis is also taking place more often. That raises questions! Over the past 50 years, have we crept too much into our 'own bubble', so that we no longer have an eye for what is happening by other care providers in the Netherlands and across the border? Perhaps there is a challenge for the SGF to strengthen international ties in the field of knowledge sharing in the field of historical physiotherapy? After all, many devices and treatment methods that were used and applied in the Netherlands came from abroad and we may be able to find out even more there how these devices were and are used and for what purpose.

Some historical reflection should once again be given a place in current education. Not those boring fact-oriented history lessons but a more philosophical and socially engaged approach to become competent in dealing with the heritage of physiotherapy especially to keep a healthy view and course towards the future. Stimulating curiosity and capable of clear analysis.

Only then will those "old" devices 'live' again and we can also learn from them what the sense and nonsense have been and not to repeat themselves.

Last but not least: Em. Prof. dr. dr.

Paul Helders said in a recent interview (SGF oral history 2019): "everything repeats itself in physiotherapy and those who do not know their history have to do everything over again".

Not a pretty prospect for a novice physiotherapist who starts his profession without any historical knowledge.

Wise advice not to fall into known pitfalls!

We would like to invite you to come and view the heritage and perhaps you can enrich us with stories/experiences associated with these devices.

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For information about the History of Physiotherapy Foundation, we refer you to the [website of the SGF](#).



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