

A contribution to the situation of a Swiss military-pharmacopoeia

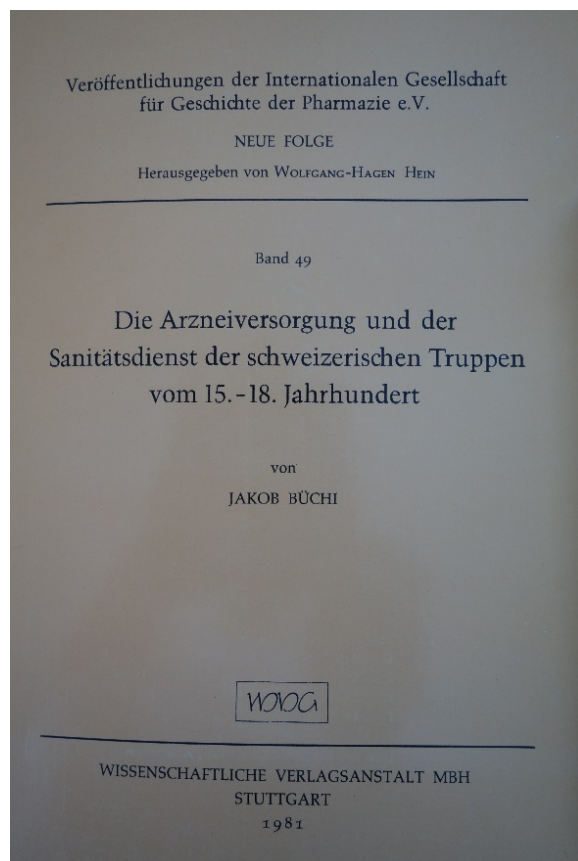
By Ursula Hirter-Trüb, Basel-Switzerland. October 2018

Understanding the Swiss union - “die Eidgenossenschaft”

After the death of Emperor Rudolf I of Habsburg¹(1291), the legend² says that in the same year on 1st August, three men representing their cantons³ swore an oath, uniting their small states (nucleus of the Old Swiss Confederacy: Uri, Schwyz, Unterwalden). These men represented a type of people, sturdy, healthy farmers working in their fields high up in the mountains. They defended their families, properties and autonomy with weapons and their life. 1386 they defeated the Habsburg, which meant freedom. These men had a good reputation and they often were engaged as mercenary soldiers for foreign rulers.

In the following centuries surrounding countries wanted to be part of the «Eidgenossenschaft/Federation»: Zurich, Bern, Luzern, Glarus, Zug, Freiburg, Solothurn, Basel, Schaffhausen, Appenzell joined up. By 1515 the federation was a loose union of 13 independant cantons. But by no means were these peaceful times.

Historic documents, still rare describe medicinal life in local or foreign battles and how the wounded were being looked after. In those days each soldier had to individually organise himself with cloth to bandage wounds. Injured comrades were then dragged along, till an end was found - dead or stumbling to a next village or town, civilians would then take care and treat the injured. The old Confederates regarded the care for their own wounded as a sacred duty.⁴ Expenses would be taken over by the involved towns or cantons. Field-shears are mentioned in the early 16th century, i.e. in the army of the state of Bern. In the 15th and 16th century no organised medical-system existed in the different troops, if field-surgeons or pharmacists were mentioned, they would be part of the military-corps.



¹ <https://www.geschichte-schweiz.ch/alte-eidgenossenschaft-1291.html> (9.9.2018):

² <https://en.wikipedia.org/wiki/Rütlichschwur> (9.9.2018): The following two sources nourish this legend. 1. The 16th century annalist Aegidius Tschudi fixed 8th November 1307 for the Rütlichschwur (the oath of the three men). 2. <https://www.geschichte-schweiz.ch/alte-eidgenossenschaft-1291.html> (9.9.2018): Late in den 18th century the so called “Bundesbrief of 1291” was found in the archive of the town of Schwyz. The purpose of the document being to preserve a minimal legal system and legal certainty in times of weak central power. In the outgoing 19th century these two topics were combined (the Rütlichschwur and the Bundesbrief) to fix the 1st August as Swiss Nationalday, 1291 being the founding of the “Eidgenossenschaft”.

³ Canton is the term for a Swiss state.

⁴ Büchi, Jakob (1981), p. 12.

The first mentioning of pharmaceutical presence

In a Bernese document of 1589, we find a field-pharmacist mentioned, but still only as a combatant soldier, but surely giving a helping hand, if needed for compounding medicines. From the middle of the 17th century on, pharmacists would partake eo ipso in military services. They would have had the same salary as a field-shear.

In those times we come across well described field-pharmacy-chests⁵, which had to be filled before entering battle. It was common, that raw material as well as galenicals had to be purchased in the town pharmacies, which themselves cashed the bill with the authorities. In the old Swiss confederacy-troops the doctors had to service these boxes themselves, had to organise whatever surgical and first-aid-equipment was needed. Tragically, enough recommendations of the authorities were spoken out, needing the doctors to be equipped well in advance. But they seldom achieved to be prepared for war and so most of them entered battle badly equipped.

Field-medication for the wounded and sick army-personnel of the 17th and 18th century, was nothing else than the usual medicine of those days.



A field-shear working in Bern, Fabricius Hildanus, published 1615 a book on field-medicine, describing a field-chest⁶. The chest contains 309 simplicia and composita and substantial material for surgery. The field-shear would compound some of the galenicals ad-hoc in the field, the chest had all necessary utensils (i.e. mortar, pistil) packed as well, again the raw-material for medicines coming from pharmacies.

Here some examples of medicines, which were available to treat the wounded in the field: Blood stilling: alum, bandages. Pain: Laudanum opiatum, earthworm oil. Wound fever: wound drinks (Wundtrank). Wounds: Ointments and plasters with quicksilver, wound sponge. Diarrhoea: Electuarium Diascordii fracastorii. Others: Theriak, Mithridat, Emplastrum de spermate ranarum⁷.

The beginning of a national Swiss army and its medical services

On the turn of the 19th century Napoleons' army also passes through Swiss territory. The French try to change the political system (1798-1803 Helvetic Republic) and the civilian life of the Swiss inhabitants, in some aspects they succeeded well, but the independence of the cantons could not be touched.

In 1817 the first Swiss federal military regulations were edited; in 1831 the new organisation of the medical-services introduced. A military-pharmacist was now in charge of the medical equipment, including the field-pharmacies. In 1842 the first service-regulation for army-pharmacists was introduced, where in detail his tasks were described. A point, which is

⁵ Hirter, Ursula (2015).

⁶ Büchi, Jakob (1981), p. 29.

⁷ Büchi, Jakob (1981), p. 44.

important to mention, is that the Swiss always had a relative small militia (Zivil-) not a standing army.

The creation of a federal constitution in 1848 and Pharmacopoeia Helvetica I in 1865

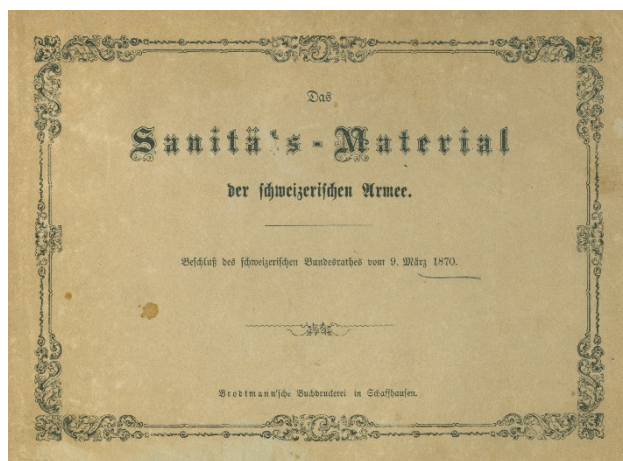
In 1848 the new federal constitution was called out, democracy was implemented. The now called “Confoederatio Helvetica” short CH or Switzerland, is at that time still a political system of individual and independent states. The idea of centralizing many topics nationally, for easier commerce (currency, weights, borders, taxes) and transportation (roads, railway) was an enormous project, which has brought a lot of wealth to the country.⁸

Before a nationwide Pharmacopoeia was edited, each canton decreed by law what-ever Pharmacopoeia or dispensary was reasonable for its purpose. Throughout Swiss pharmacy-history we find the use of all kinds of Pharmacopoeias, i.e. from London, Prussia, Baden, Augsburg, Brandenburg, France, USP.

In the same year, in October 1848 the Swiss Pharmacists Association⁹ was founded. The wish of a national pharmacopoeia being imminent, was fulfilled in 1867 when the Pharmacopoeia Helvetica (1) was legally introduced in 22 of 25 cantons.¹⁰

Medical-services, pharmacists and medicines

As we have seen the army normally purchased its equipment from pharmacies, which had to produce after the regulation and specification of its canton. The Swiss medical-services had no reason to concept an own pharmacopoeia. By 1865 the Confederation had its first Helvetic Pharmacopoeia, describing all medicines, which were also used in the army, once again no necessity to produce a military-pharmacopoeia.



In 1870 the Swiss Federal Council passed the law concerning the “Sanitäts-Material der Schweizerischen Armee”, a contemporary list, of what was needed in surgery, wound-healing, medication, transportation of the wounded and all material (beds, food, lampoil, ec.) to run a hospital. Raw material and Galenicals had by then to be of Pharmacopoea Helvetica I quality.

Materia medica militaris (M.M.)

The following next years saw different smaller battles and of course later on World War I. In 1911 the Swiss Federal Council appointed Julius Thomann (1872-1946)¹¹ as the first fully paid army-pharmacist. During 30 years Thomann reorganised the medical-service in point of view of introducing, producing, controlling and storing equipment and medicaments.

⁸ In 2000 eventually a national «Heilmittelgesetz» was implemented. But Switzerland still has 26 individual sanitary-Systems, for topics which are not cleared on a national basis.

⁹ Today in Switzerland the oldest still existing professional association

¹⁰ Furthermore IGGP-Pharmacopoeias Switzerland: <http://www.histpharm.org/ISHPWG%20Switzerland.pdf>

¹¹ Ledermann, François (1993), p. 331.

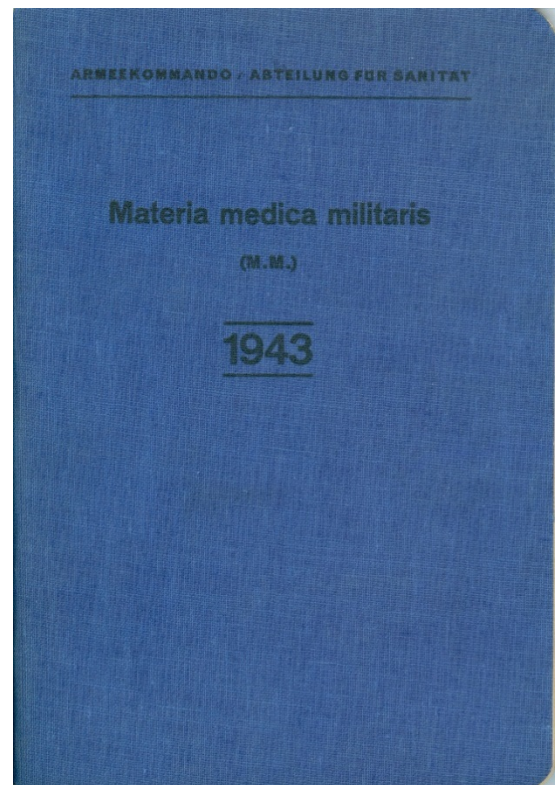
After World War I the pharmaceutical industry begins to be more present in production and sales of prepacked medicines. The amount of such medicines grew and grew, whilst ad-hoc compounding became less and less. The army-doctors, in civil life normal doctors, ordered when in army-services medicines, with which they normally worked and their effects were known to them. But in World War II, this was not possible anymore. Out of military and economic (shortages and expenses) reasons, the army-pharmacist Heinrich Spengler (1894-1966)¹² was forced to channel medicine use and prescriptions.

This mounted into a booklet of 126 pages, called **Materia medica militaris (M.M.)**¹³, which came into force on 15th march 1943. Only the listed medicines were now allowed to be prescribed and used.

The structure of the M.M. being as follows:

- General instructions and information in German, French and Italian
- Series medicaminum, a list of medicaments, indicating the page where to be found
- Formulary, with information to each medicine
- List of sera and vaccines
- Synonyma-list
- Index therapeuticus, a classification of medication-groups
- Therapy-indication of the most important intoxications

Galenicals were published without compounding instructions, the naming corresponded to the Pharmacopoea Helvetica V. In order to achieve equal good quality in compounding, the army-pharmacist published a small paper of eight pages¹⁴, with instructions to the most important and frequent prescribed medicaments. Because the medicines were not only used in military-service but also in civil life the M.M. was republished another two times in 1946 and 1956.



Summary

Being a small state of independent cantons, the Swiss army never thought it necessary to publish an own military-pharmacopoea. Standards were given either by legally implemented foreign pharmacopoeias or from 1867 on, by the Swiss "Pharmacopoea Helvetica". Only during World War II it became necessary to settle regulations due to shortages and enormous expenses, therefore the *Materia medica militaris (M.M.)* was put into force in May 1943.

Literature

¹² Ledermann, François (1993), p. 312.

¹³ Spengler, Heinrich (1943) in *Materia medica militaris (M.M.)*.

¹⁴ Spengler, Heinrich (1943) in „Vorschriften“.

ARMEEKOMMANDO/ABTEILUNG FÜR SANITÄT: *Materia medica militaris (M.M.)*, 1943.

BÜCHI, JAKOB: Die Arzneiversorgung und der Sanitätsdienst der schweizerischen Truppen vom 15.-18. Jahrhundert in Veröffentlichungen der Internationalen Gesellschaft für Geschichte der Pharmazie, Vol. 49, 1981.

HIRTER, URSULA: Die Feldapotheke der Schweizer Truppen von Napoleon bis zum zweiten Weltkrieg in Informationsschrift Koordinierter Sanitätsdienst (KSD), Vol. 2, p. 35ff, 2015.

LEDERMANN, FRANÇOIS: Schweizer Apotheker-Biographie, Verlag Schweizerische Gesellschaft für Geschichte der Pharmazie, Volume 12, 1993.

SCHWEIZER BUNDESRAT: Das Sanitäts-Material der Schweizerischen Armee, Brodmann Schaffhausen, 1870.

SPENGLER, HEINRICH: *Materia medica militaris (M.M.)*, Separat-Abdruck aus der „Schweizerischen Apotheker-Zeitung“, Vol. 18, Bern, 1943.

SPENGLER HEINRICH: Vorschriften für kriegswichtige Arzneimittel der Armee, Separat-Abdruck aus der „Schweizerischen Apotheker-Zeitung“ Vol. 11, Bern, 1943.

THOMANN JULIUS: Ausgewählte Kapitel der Militärpharmazie, Verlag Herbert Lang & Cie Bern, 1940.