

Section on Historical Pharmacy

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THE NAVAL APOTHECARY SINCE THE CIVIL WAR—SOME HISTORICAL DATA AND PERSONAL REMINISCENCES.

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There have been such changes in the rank, status and duties of the naval apothecary since the days following the Civil War and there are so few of us old apothecaries left whose experience goes back to the times of the "old Navy," that I gladly comply with the request of the secretary of this Section to present what data I can of historical value to the Association. History is made up of dates, but history is chiefly interesting not on account of these dates but because of what people did on those dates, so at the risk of making my contribution more personal and reminiscent than statistical I will try to tell what the naval apothecary was, what he had to do and how he lived in the past and what he now is and does. Conditions are so different now from what they were when I first entered the service that the only comparison I can think of is the comparison of the ships themselves on which the apothecary serves, the difference between the old ship rigged auxiliary wooden corvette on which the life was about as leisurely as was the speed of the vessel herself and the modern dreadnaught whose crew are but the attendants of guns and machinery and where everything is done on schedule time and by scientific methods. The romance, if there was any, seems to have gone with the masts and spars of the old ships, the present day battleship makes as regular a schedule between ports as does a passenger liner and it is simply a question of burning coal to get anywhere. We had to wait until wind and water served, counting months at sea as one of the things that had to be endured as part of the regular course of events.

The status of the naval apothecary in the early days was considerably different from that of today; then he was practically a civil employee, subject of course to naval discipline; now he is a member of a highly trained organized corps and an integral part of the personnel of the navy. Then the apothecary was appointed by the ship's medical officer for the "cruise" or such time as his services were needed; he was not required to enlist for any definite time and in fact often did not enlist at all but simply held his billet as ship's apothecary at the pleasure of the medical officer and captain of the vessel on which he served. He had no benefit from continuous service, was not eligible for retirement and there was no promotion for him; in fact his tenure of office depended entirely upon the time of commission of the vessel on which he served. The rank of the apothecary was then, as now, that of chief petty officer and he was allowed a ration and was paid \$60 a month. This was the apothecary afloat. On shore the condition was similar.

The apothecaries of navy yards and hospitals were really civil appointees, they were not required to wear uniforms and had the same status as other civil employees in regard to tenure of office and discipline. Their appointment was mostly by favor, that is when a vacancy occurred the medical officer of the navy yard or hospital selected some man known to him for the position and recommended his appointment, his recommendation usually being ratified by the authorities above. He had no status in a military sense, was not eligible for a pension except as having served during the Civil War and his appointment could be cancelled at any time. In fact he was carried on the payrolls as a civil employee and was considered as such in all respects. The only difference between the man ashore and the one afloat was that the former was treated as an enlisted man.

This was the condition when I entered the navy in 1890, with this difference, many apothecaries serving afloat were then taking advantage of the privilege of enlisting for regular service and thus being eligible for the benefits of continuous service and definite time of enlistment. The new entrant was compelled to enlist in the lowest rating of the "landsmen" branch, that of landsman, pay \$16 per month, depending upon the appointment of the medical officer of the ship to which he was assigned to secure the rating of apothecary, this appointment requiring only ratification of the commanding officer of the vessel and was only for the time the apothecary served on that ship. In 1893, I think, the Navy Department inaugurated a plan for providing for permanent service of petty officers, of which the apothecary was one, this consisting of a provisional warrant issued to men serving in the various ratings confirming them in their rate for one year, this warrant becoming permanent after one year's service in that rating on recommendation of the commanding officer. This was a great advance, for when the apothecary once obtained his warrant as a chief petty officer it was permanent during good behavior and on the expiration of his enlistment he was given an honorable discharge which entitled him to re-enlist as apothecary with increase of pay. Before this the man re-enlisting as apothecary had to enlist as originally, as a landsman, and take his chances of an early appointment to apothecary, sometimes having to remain on a receiving ship for months at the munificent pay of \$16 a month. The pay of apothecaries continued to be \$60 a month, with an added dollar per month for each re-enlistment. There was no promotion, the only fruit of long service being the reward of an assignment to a receiving ship, where one could go ashore nightly.

These rather indefinite conditions were all changed by the Hospital Corps bill of 1898 which for the first time established a definite organization for the Hospital Corps of the Navy and made it a part of the regular naval personnel. The rank of pharmacist, that of warrant officer, was created by this bill and all apothecaries were required to enlist, no matter where they served, and similar provision was made for the nurses, baymen as they were called in the olden days. This reform put the Hospital Corps on a practical basis and made the position of naval apothecary a definite one, with uniform requirements and status, and opened the door to promotion to officer's rank for the man enlisted in its ranks. Since then the organization of the Hospital Corps has been more and more perfected and its high standards of professional requirements and its definite promise of rewards for good conduct and work made it far more attractive to the young graduate in

pharmacy than did the uncertain conditions and future of years ago. The present pay of the hospital steward, the title now given to the naval apothecary, is \$70 a month, with an allowance for uniforms on original enlistment and the usual navy ration allowance of 30 cents a day. He enlists for four years, after passing a physical and professional examination, and receives a permanent appointment to the rating after one year's good service and may be assigned to duty either ashore or afloat. After eight or ten years' service he stands a good chance for appointment as pharmacist, ranking as a warrant officer and receiving pay amounting to \$1400 to \$2000 a year and an allowance for quarters when on shore duty. As pharmacist he is eligible to retirement after forty years' service, or at the age of sixty-two, on three-quarters of his pay and allowances for life. Hospital stewards are eligible for retirement on three-quarters pay, etc., after thirty years' service. Quite an improvement.

Conditions of life aboard ship have changed even more than conditions of rank and status. When I entered the navy in 1890 we were just beginning to build steel warships and had a few cruisers which we fondly christened the "New Navy." Except that the new ships were built of steel and the old ones of wood, there was little difference between them as regards equipment and conveniences. Both were fully rigged with masts and sails and the majority of the crews were still sailors, not gunners and mechanics, as are the men of the battleships of today; and living quarters, ways of living and things generally were pretty much the same. The sick bay, the space set aside for the sick, was still usually a space in the very bows of the ship separated from the crew's living quarters by a bulkhead and the dispensary where the apothecary did his work was merely a small cell-like space either alongside the sick bay or somewhere on the berth deck out of the way. There was no such thing as an operating room dreamed of in those days; when an operation *had* to be performed the long table in the sick bay was covered with a rubber sheet and the surgeon proceeded to do the best he could, the apothecary acting as assistant. When a man was too sick to work, his hammock was slung on hooks in the sick bay and he was nursed as best one could, fed with "grub" from his mess unless very sick, and then with food from the officers' mess and washed when required with a sponge and bucket of water. If the man had a broken leg the best we could do was to lay his hammock on deck with perhaps an extra mattress; later we had swinging canvas cots which were an improvement but a nuisance both to patient and caretakers. Toilet facilities were usually a covered bucket; ventilation, when there was any, came through a hatch opening to the deck above, unless we were in port and could open the port-holes, and light came from oil lanterns at night.

The dispensary, as I have mentioned, was a small place with a work counter on one side, above which were racks of bottles and in drawers below, space for keeping various articles of stock, and a locker with shelves on the other side. This locker usually had a folding seat or sometimes a permanent ledge about a foot wide, where patients might be seated for examination during the day and on which the apothecary made his bed as best he could at night. Some of the old ships actually had bunks for the apothecary, and I remember with what jealousy I saw the palatial couch of the Charleston and compared it with the two-foot plank that I had rigged up for my bed. The dispensary on the first vessel on which I served

was directly over the ship's boilers and when we were at sea under steam the dispensary became so hot that candles would melt and run together. Then I would take my hammock and mattress and sleep on deck in the coolest place I could find. Our supplies were very limited, mostly staple drugs and a few fluidextracts and tinctures. Pills when called for we made, capsules were a luxury only for the few, and "elegant" pharmaceuticals were unknown. In my first supplies I had fluidextracts made by Squibb as far back as 1870, but as they were never used, I have no idea of their efficiency at the age they then were. Everything was the simplest and crudest, the scales, for example, being the old style swinging balance on which it was impossible to weigh anything when the ship was at sea and rolling around. We got so skillful that we could guess weights within five or ten grains and let it go at that, of course being more careful with potent drugs, morphine, for instance, which I have known to be measured on the point of a knife blade in emergency. Yet we had few sick and most of them got well. The nursing of the sick was equally crude, the nurses, baymen as they were then called, were usually men who were assigned for that duty because they were worthless about decks and had about as much idea of sick nursing as they had of theology. My first two nurses were an ex-cavalry sergeant and a marine detailed for the duty as being too stupid for even a marine's duties, their sole ideas of nursing consisting of giving patients their medicine in liberal doses and taking their temperatures.

In those days water was the most envied possession on shipboard, all of our fresh water being carried in tanks replenished at intervals from the shore or when at sea from condensers, and I was an envied one because I could generally get an extra gallon or two of fresh water from the hold on plea of needing it for the sick. Now fresh water may not seem of much importance to the landsman, neither is it so precious aboard ship these days, but then fresh water was a luxury. Not only did we have to use salt water for washing clothes but for personal cleanliness as well, and salt water in the long run is not conducive to comfort. We used to wash carefully in a panful of water, saving this daily until we had a bucketful and then use that for the first washing of our clothes, after which salt water had to be used for the rinsing, as every man was his own laundry then. Similarly, in the dispensary my accommodations were a wash basin and pitcher and a bucket, and these had to be used for all purposes. Hot water was obtained painfully by means of a pan and an alcohol lamp. As with water so it was with everything, there was just so much of a thing and when that was used you had to do without. If our supply of one drug was exhausted we used the next best until we could get fresh supplies and the substitution that we had to do would shock an ethical pharmacist into his grave. Often have I made blue ointment and protoiodide of mercury from iodine and quicksilver.

Nowadays the sick bay of a battleship is like the ward of a modern hospital, comfortable cots, bath rooms, unlimited water, electric lights and unlimited fresh air from separate ventilators. In my time we had to use lard oil lamps and lanterns and often the air in the sick bay was so foul that aromatic oils had to be sprayed around to make it possible to stay there at all. The sick bay is heated in cold weather by steam, there are electric fans for hot weather and everything possible is done for the care and comfort of the sick, including prepared foods and special diets supplied direct from the ship's kitchen. The nurses, too, are

now trained men and are as competent and skillful as the nurses of any hospital ashore. In place of the old table and rubber sheet there is now a complete operating room, isolated from the sick bay, equipped with every modern appliance and in which it is possible to perform the most serious or the most delicate operations. The dispensary is equipped with modern conveniences, even a typewriter now being usual, and the medical supplies are not only liberal in quantity but contain such items as diphtheria and typhoid antitoxins and most of the tested and approved remedies of the modern materia medica. In brief the difference is just about the same as between the old days in the drug store when the apothecary made everything and now when everything is made for him.

The duties of the naval apothecary while still fundamentally the same, the preparation and dispensing of medicines and participation in drills, are now vastly increased over those of the old days. Not only has the advance in equipment and materials necessitated more duties, but the highly technical character of everything aboard a battleship has necessitated better training and knowledge of many more things than we old apothecaries were expected to know or do.

The old apothecary was expected to be a good apothecary, a fair penman and a man of good general intelligence, anything more than this was supplied at his own volition. He was expected to have general supervision of the nursing of the sick and was generally the surgeon's assistant during operations and attended to minor cases, applied dressing etc. In addition to all these duties the present day apothecary must have knowledge of modern hygiene and hospital practice, must be capable of performing chemical analyses, assisting in bacteriological examinations and must be thoroughly familiar with the various drills and practices incident to caring for the wounded in action made so vitally necessary by the conditions of modern warfare. Nowadays the battleship's equipment contains what is practically a complete chemical and bacteriological laboratory equipment and analyses are made in routine work of water, foods, supplies of all kinds and various materials in addition to the usual analyses of urine, faeces, etc. and bacteriological examinations are of frequent occurrence. My chief chemical work used to be testing the fresh water from the condensers to determine its potability, this depending upon whether it became turbid or not on addition of a solution of silver nitrate. There were occasional rough examinations of urine and once in a while a call for testing some article purchased ashore, and, I had almost forgotten it, so long ago has it been abandoned, a weekly testing of the air on the berth deck to determine the amount of carbon dioxide it contained. This was done by drawing air through lime water in a big bottle and then determining the amount of calcium hydroxide left, the method being capable of fairly accurate results but as usually done being more or less of a guess. Apparatus we had not except such as was used in dispensing and a few test tubes.

The present duties of the apothecary at shore stations and naval hospitals includes even more technical work than is required from him when aboard ship. In addition to having charge of the dispensary he has general supervision of the nurses and kitchens, acts as purveyor of stores, superintends the purchase of fresh meats, provisions, etc. and does the general bookkeeping of the station. He is often called on to make X-ray examinations, chemical analyses and assist in bacteriological work and at times to assist the surgeon as anaesthetist during

operations. There is now a training school for hospital stewards as well as for the nurses of the Hospital Corps, and every newly enlisted man is sent to this school as early as convenient for instruction, and is also assigned to a hospital for a time before being sent to sea. The requirements for appointment as hospital steward from civil life include a good general education as well as thorough acquaintance with the professional side, and graduation from a college of pharmacy is one of the essentials. Hospital stewards are also appointed from the ranks of the Hospital Corps, hospital apprentices these men are called, a hospital apprentice being eligible to promotion to hospital steward after two years' service in the various grades, provided that he can pass the rigid professional and general examination. This condition too is far different from olden times when favor and personal acquaintance counted far more than merit.

There is one chapter in the history of the Naval apothecary since the Civil War that cannot be passed by unnoted, that is the splendid showing the naval apothecaries made during the Spanish War in spite of being suddenly called upon to fill new and responsible positions and to perform unaccustomed duties. Of course most of us had at one time or another come in contact with conditions of actual warfare during cruises in the Far East and in Central American waters, but this duty was usually performed in company with a medical officer from the ship who would be in charge of the landing party. Personally I have had experience in several Central American revolutions and once helped establish a field hospital for the wounded in a battle fought near Bocas del Toro, Costa Rica, but I had only the responsibility for the equipment and minor operations whereas the apothecaries in many instances during the Spanish War were doctor, surgeon, apothecary and nurse all in one and had to meet emergencies unaided. At the beginning of the war there was such a shortage in the Medical Corps that it was necessary to put apothecaries on many of the smaller auxiliary vessels, tugs, colliers, etc., as medical officers, and the entire care and responsibility for the health and hygiene of the crew fell on the apothecary. Some of the men did remarkable work, such as reducing strangulated hernia, setting fractured limbs, and ligating severed blood vessels, and all but very few of them rose to the occasion and won high commendation for their diagnoses of disease and treatment of the sick and wounded under their care. Of course at times it was possible to call upon a regular medical officer when in company with larger vessels, but often for weeks the apothecary had no one to help him and had to depend upon his own skill and good judgment. The fine record made is all the more remarkable because of the fact that many of these apothecaries were green men, that is newly enlisted, and outside of their college education and drug store experience had had little training in caring for sick and wounded. The medical outfit they had was confined to the most essential drugs and surgical dressings, a book of instructions and such extra supplies as could be obtained from time to time.

Their service was all the more arduous and responsible too because of having to care for crews themselves chiefly recruits and because of the small size and character of most of the vessels and that they did so well is a splendid exhibition of the patriotism and devotion of the apothecaries who answered their country's call for service.

The life of the naval apothecary nowadays is far more comfortable and more

pleasant than in the olden days, there are few long sea trips and the vessels themselves are so well equipped in every way. Every battleship now has its cold storage rooms, and fresh meats and provisions are as common as they used to be scarce; ice is fairly plentiful and so is fresh water, trained cooks have supplanted the old "mess cook" and fresh bread is baked daily and the food supplied is better than at many boarding houses. Salt horse and hard tack are now largely curiosities and there is a howl from the crew if pie is not served them at least three times a week. In other personal comforts things have changed for the better; the ventilation is good and the sleeping quarters of the apothecary is equipped with a comfortable bunk, he has electric lights to read by and can take a shower bath whenever he wants to. Even in amusements times have changed. Our music, if we had any, was afforded by amateur talent on accordeon or banjo, but the apothecary today can listen to the latest ragtime, or play it himself, on a player piano while most of the ships have their own band. Each ship now carries an excellent library, newspapers and magazines are frequent and mails are frequent, something we oldtimers were deprived of. I could go on this way recalling contrasts and incidents for hours but I am afraid that I have already taken up too much time with reminiscences which however interesting to me may not be thought so by others, so will bring my "log" to a close. Just one more word—if the times have changed and methods with them, the naval apothecary has kept up with the Navy and the men of today are just as skilled and highly trained as those of any other branch of the service. The naval apothecary doesn't carry sails now either.

IMPORTANT DATES IN THE CHRONOLOGY OF PHARMACY.

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B. C. 3500. Is date of the oldest prescription, written on Egyptian stone, which is in the Metropolitan Museum of Art, N. Y.

B. C. 2000. Chinese knew Rhubarb, Aconite, Bark of Pomegranate, Ergot of Rye, Camphor, and Canella.

B. C. 2100. King Osimandias (Egypt) wrote above his library "The pharmacy of the soul," another rendering is "The office of remedies for diseases of the soul."

About this period pharmacy was separated from medicine in Egypt.

B. C. 1700 to 1400. There are three Egyptian papyrus, that are as much pharmacopoeias as medical treatises, one mentions fifty vegetable substances, another sixty, that were used medicinally, besides those from animals and minerals.

Ointments, clysters, and poultices are mentioned.

They appealed to the god who will "slay the slayer."

B. C. 1490 and 1000. The Bible mentions the art of the apothecary or perfumer. Moses probably had this from papyrus mentioned above, which he is supposed to have studied.

Apothecary and perfumer were one in Egypt.