JOHN HARVEY KELLOGG (1852-1943)

SCRAPBOOKS BOUND

HYGENIST ABROAD, 1912 (?)

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J. H. KELLOGG, M. D.

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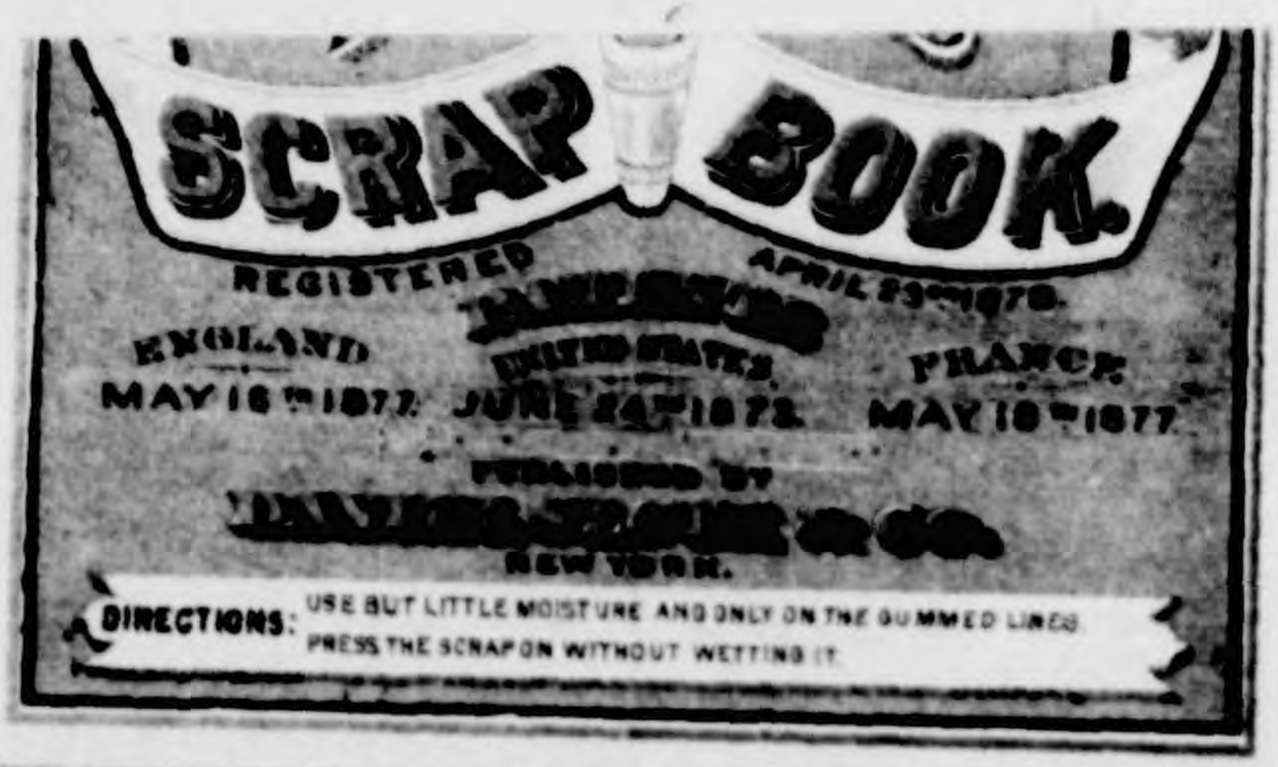


CROSSING THE OCEAN.

HAVING been granted leave of absence for a few weeks by the indulgent Board of Directors in charge of the Sanitarium, an institution which has for a number of years occupied our almost undivided attention, we gladly embraced the opportunity to make a long-contemplated visit to Europe. Our object is not only to recuperate our physical and mental powers, which have been somewhat overtaxed, but also to gain valuable information by the aid of which to enlarge the usefulness of the institution for whose upbuilding we have been earnestly laboring during the years we have been connected with it. We felt great reluctance to leave our many friends at the Sanitarium, especially the several scores of invalids in whose cases we have taken a deep interest on account of the gravity of their maladies, and the special effort required to secure to them the long-sought boon of health. Urged by numerous friends, prompted by a sense of duty to ourself and others, and encouraged by numerous favoring circumstances, we however decided to tear away from the many agreeable and endearing associations which have made our duties in connection with the Sanitarium pleasant, and our busy life a happy one, though these duties have often been most arduous, and have taxed our powers of endurance to the utmost. If we had ever been tempted to believe that real friends were few and genuine friendship rare, we certainly should have been undeceived at the hour when we said "Farewell" to our one hundred co-workers at the Sanitarium, and our much more numerous family of patients. The hearty handshakes and earnest wishes for a safe return, with now and then a tearful eye, assured us that, whether deserving or not, we held a larger place in the hearts of our friends and patients than we should have dared allow ourself to believe.

Leaving home on the evening of Feb. 11, accompanied by Mrs. and Miss K., we reached New York after a somewhat tedious journey, due to the fact that our train was so far behindhand as to miss connections all the way; but we were in ample time for our steamer, which, on account of a late arrival, did not sail until two days after the appointed time.

Having got fairly away from our work, we realized more fully than we could before, the fact that the time had come when we needed a respite from work and care. Though admonished of this fact by numerous friends, we had scarcely allowed ourself to give credence to such a notion, and hence were not really prepared for the sensation of utter good-for-nothingness which completely overwhelmed us when we felt that we had nothing to do but rest and recuperate. It was fortunate indeed that we had a day or two to spare in New York, or we should hardly have had ambition to drag ourself on board the steamer. On the day appointed for sailing, however, and an hour or two before the time announced, we were safely settled on board, in the most comfortable quarters our good ship afforded, which had been kindly reserved for us by the managers of the Monarch Steam-Ship Line, with whom we had arranged for passage before leaving home. The hour for sailing arrived, and our ship was still held fast to the wharf by the immense ropes which kept her in position while loading her cargo. Upon making inquiry as to the cause of delay, we found that although the cabin and steerage passengers—the latter comprising twenty-five Russian Jews, exiles returning to their native land—were all safely settled on board, a large number of other passengers were yet to be received; and on looking over the other side of the vessel, we found that a huge cattle boat had come alongside, and was transferring its cargo of several hundred cattle and sheep to our vessel from a door in its side opening from the lower deck. After waiting patiently for several hours, the last horned passenger was safely lodged on board, with the exception of one refractory creature that leaped overboard, determined not to leave his native land. Attempts were made to capture the fugitive by a lasso, but without success, and as we steamed away, it was still to be seen paddling about among the cakes of ice in the harbor. We learned afterward that it was helped out by some stevedores who were watching it from the wharf; but we had little interest in the rescue, as we had quite as soon it should die by the hand of nature as by the butcher's knife in the *abattoir*.

Sailing out a few miles, we found ourselves too late for the tide, and so were obliged to cast anchor but a short distance from Staten Island, near one of the government forts by which the entrance to the metropolis is guarded. We retired early to bed, and enjoyed a good night's sleep. On awakening the next morning, we found that the incoming tide having secured the necessary depth of water to carry our large vessel over the "bars," we had been several hours under way, and were rapidly making out to sea, the land being even then quite invisible on account of a dense fog which had settled down upon us.

At breakfast we found that our little party comprised more than a fourth of the entire number of cabin passengers; so we had plenty of room, and a good prospect of not suffering for lack of sufficient attention from the kind stewardess and gentlemanly waiters and porters. Finding ourselves fairly out at sea, the gloomy prospect of seasickness, the great bane of ocean travel, began to rise in our imagination, especially when we gathered from some of the officers that the last voyage had been an exceedingly stormy one, and that all of the passengers were seasick most of the way. We do not rec-

ommend people to anticipate trouble of this sort, as such a condition of the mind is sure to produce the corresponding physical condition in the body; but we had for several weeks before leaving home suffered so much from vertigo, the result of excessive nervous taxation, that we felt morally certain that we should not escape being obliged to do homage to old Neptune; for if we were already almost seasick on shore, why should we not be quite so when at sea? So we felt that we might as well "prepare for the worst," although we did, to the best of our ability, endeavor to "hope for the best." Fortunately, the first few days were unusually pleasant. It seemed that the storm which had been raging for two or three weeks continuously, had just spent itself, and tired old Ocean was quietly resting preparatory to a new exhibition of his fury. After a few days, however, when about in mid-ocean, we had one or two days of stormy weather, not sufficiently rough to involve any danger, but quite sufficient to give us a clear conception of what the angry waters are capable of doing when Neptune's ire happens to be aroused to a high pitch. So long as we were able to keep on deck, we experienced no symptoms of seasickness, although our good ship rolled and tumbled among the waves so violently as to make it necessary to cling firmly to some stationary object to prevent being dashed overboard when on deck. The waves finally rose so high that the highest of them dashed over the upper deck, making it impossible to remain there even though fairly well protected by a water-proof suit, with which we had taken the precaution to provide ourself. After being submerged a few times, we reluctantly yielded to the force of circumstances, and joined our seasick companions below. We found most of the passengers were in their berths, and the remainder were lying about, each with a cuspidor conveniently near, which was frequently called into requisition.

Scarcely had we entered the stagnant, odoriferous atmosphere below, when the conviction forced itself upon us that our time had come, and for two or three hours we resigned ourselves to that utter wretchedness which can be appreciated by no one who has never "enjoyed" the experience of seasickness. We say "enjoyed," because our kind stewardess constantly assured us that "it would do us a world of good," and that by relieving our stomachs of the bile which had undoubtedly accumulated there, we would realize such wonderful advantages, health-wise, as would make us anxious to undergo the same experience again as a therapeutic measure. We were reminded of the story of the colored gentleman, who, on going to sleep with his feet too near the fire-place, awakened to find that he had seriously burned one of his great toes. When offered sympathy by one of his friends, he assured him that he was not in need of it, as he always enjoyed an accident of that kind, because he felt so much better when he got well. We can readily imagine that the enforced abstinence and thorough evacuation of the digestive canal occasioned by a vigorous attack of seasickness, may be of service to persons whose dietetic habits have been such that a house-cleaning process of this character, with rest for the tired organs, is required; but it was difficult for us to understand how persons whose dietetic habits have been scrupulously frugal and abstemious for years, could derive any advantage from such a stirring-up.

We were of course glad to improve the opportunity for practical study of the causes and cure of this troublesome malady, and we were not long in arriving at the conclusion that in our own case, at least, the horrible nausea which settled down upon us like a nightmare immediately upon leaving the upper deck, was fairly attributable to nothing else than the foul air of the cabins. When the weather was fair, so that the port-holes and gangways could be freely opened, this was less observable; but as soon as the dashing of the waves over the ship necessitated the closure of the usual avenues for the entrance of fresh air, the intensity of the odor increased to such a degree that it became absolutely intolerable. We could not induce our kind stewardess to indorse this view, however, although she admitted that persons suffering with seasickness were always at once made comfortable when they could be upon the deck. She constantly assured us that the "ship odor" was extremely tonic in its properties, and that "we would find it very strengthenin' when we became accustomed to it." We assured her that although it was quite apparent that the odor was "strong" enough, we did not care to have any of that kind of strength imparted to us. Fortunately for us, at least, all of the other passengers of the ship left the Ladies' Cabin unoccupied, and we were allowed to take full possession for a day or two, until the worst of the storm was past; and as it was located on deck, on the protected side, we were able to get an abundance of fresh air, although it brought with it an abundance of cold, and this was not antagonized by a sufficient amount of caloric, the steam being scrupulously hoarded for the benefit of the huge engines which were driving us on our way. We felt certain at the time that had we been confined below, we could not have survived the ordeal, not of the storm, but of the stench.

There is certainly a great chance for improvement in the ventilation of ocean steamers. One very singular fact we observed; namely, that while the necessity for securing a supply of fresh air to human beings on board the ship is very little recognized, the necessity for an abundant supply of air to the furnaces is not only recognized, but satisfied by the provision of immense ventilating shafts in adequate numbers to secure to the furnace and the firemen a plentiful supply of fresh air. Even the quarters in

which the cattle and sheep were kept, were supplied with means to secure ample ventilation; but we were unable to discover anything of this sort in the cabins. We do not wish it to be supposed that the good Grecian Monarch, on which we crossed the ocean, is worse in this respect than other vessels. It is a new vessel, and undoubtedly comprises in its numerous arrangements for the convenience of passengers the best appliances for obtaining fresh air which are in use by ship-builders. From the examinations which we have made of various steamships, we believe the fault to be a general one; and while it would, perhaps, be too much to say that foul air is the sole cause of seasickness, we believe it to be the chief cause in the great majority of cases, and have not the slightest doubt that the introduction of proper arrangements for supplying an abundance of fresh air to passengers during stormy weather would do more than any other one thing to abolish the greatest inconvenience of ocean travel.

With the exception of the two or three days of stormy weather to which we have referred, the weather during the whole voyage was remarkably pleasant. Several of the ship officers assured us that a summer voyage is seldom as agreeable in all respects as was this one in the month of February. The gentle southern breeze kept the atmosphere so moderate that passengers could be on deck every day without discomfort. Not a single day passed without bringing into view several ships or ocean steamers. One day about noon, quite unexpectedly, a huge whale made his appearance a short distance from the ship. Although traveling in a direction opposite that of the ship's course, its spoutings were visible for some time Frequently schools of porpoises were encountered, and afforded much amusement to the passengers by their strange antics as they gambled in and out of the water, sometimes turning almost complete somersets in the air, and playfully leaping over one another several feet above the water.

On the evening of the thirteenth day, the light from the first light-house on the English coast was discovered, and a few hours later we were sailing up the English Channel toward our destination, the metropolis of the world. The next morning a Trinity House pilot came on board, and by twelve o'clock our good ship cast anchor in the Thames opposite Gravesend. After three or four hours vexatious delay, the custom-house officers came on board to inspect our baggage. The inspection consisted chiefly in asking us if our trunks contained "any cigars, tobacco, or whisky, or reprints of English books," to all of which questions we were able to give an honest negative, although the officer felt inclined to confiscate a copy of an American magazine, which is published simultaneously in New York and London. The inspection being completed, a wharf-boat carried us to the shore; and an hour later we found ourselves safely and comfortably settled, to our great satisfaction, at an excellent hotel in Charing Cross, the very center of the great city. We remained here, however, but a day or two, until we could find apartments in a more salubrious and quiet portion of the city, which we were very fortunate in securing exactly to our liking, in a portion of London known as South Kensington, which is world famous for its immense parks, scarcely surpassed anywhere for natural or artificial beauty. Having made such arrangements with our landlady as enabled us to secure the hygienic dietary to which we had so long been accustomed, we found ourselves feeling perfectly at home at once, and prepared to appreciate the comfort of dwelling upon land once more.

Next month we will endeavor to tell our readers something about London from a hygienic point of view.

HYGIENE IN LONDON.

One cannot long remain in London without becoming acquainted with the fact that very great attention is given to public hygiene, or sanitation. Probably no other country in the world has so excellent a code of sanitary laws, and so effective machinery for securing their enforcement, as England. The almost universal cleanliness of the streets of London is certainly remarkable With such an immense amount of traffic as is carried on through its rather narrow streets, making them alive with horses, mules, and donkeys, it would be anticipated that by night the thoroughfares would be anything but clean, no matter how perfect may have been the cleansing of the night preceding. Most of the filth disappears from the streets as rapidly as it is deposited, through the agency of small boys, who, with scoop and brush, dodge furtively about among the passing vehicles, half of the time apparently under the wheels of the carts or the heels of the horses, so that there is little accumulation of filth. This, we believe, is a custom peculiar to London, although several other cities which we have visited, for example, Paris and Rome, sweep the streets during the day.

We shall find many other things to commend, as well as some to condemn, in a cursory review of matters of interest in London from a hygienist's point of view.

One of the first things of a disagreeable nature which forces itself upon the hygienic traveler, is the difficulty of obtaining such food as he desires. Indeed, within twenty-four hours after getting on board the steamer at New York, he makes the discovery that respecting diet he must either submit as gracefully as possible to an order of things to which he is quite unaccustomed, or contrive some stratagem by which to escape from that which is seemingly inevitable, since the ocean steamers follow the English customs in dietary and table service Not being prepared to make a graceful surrender of dietetic habits based upon principle, and faithfully followed for

years, we set our wits at work to discover some means of escaping from our unpleasant dilemma. Seeing no other resource, we decided for once to waive our opposition to the feeing system, and to hold a private conference with the chief cook, whose good offices were readily secured by the tender of a few shillings, so that we were liberally supplied during the entire voyage with oatmeal porridge, rice, milk, and such vegetables as the ship's store afforded, and thus were delivered from the necessity of depending upon such unwholesome viands as Irish stew, boiled ham, pickled tripe, kidney soup, and plum-pudding. We felt a real sympathy for our fellow-passengers, as we saw them preparing the way for a tempest within at the slightest suggestion of a tempest without, by swallowing the indigestible compounds spread before them; but the commiserating and sometimes contemptuous glances which our frugal fare elicited, gave us reason to doubt whether our sympathy was appreciated, even when we beheld for the first time, with mingled feelings of pity and horror, the consumption by our unhygienic fellow-passengers of a plum-pudding which a moment before had been enveloped in a blue flame from the ignition of a quantity of alcohol which had been poured upon it.

We were able to get along better at the hotels, after arriving in London, as at most of them, as well as in all continental European cities, meals can be obtained *a la carte*. The cooking at first-class hotels in England is excellent, not the least of the good qualities to be mentioned being the sparing use of salt. Grains, according to our observation, are usually cooked without salt, and vegetables are salted very slightly,—a quality which we were prepared to appreciate at its full value after having been compelled, while on shipboard, to swallow more salt than we had eaten before in several years together.

The American finds in England many dishes to which he is quite a stranger, most of them with French names, indicating their origin; for fashions in cookery as well as in dress emanate from Paris; and many of the most common American dishes are equally strange to English palates. We were forcibly impressed with the latter fact by an episode which afforded us not a little amusement. We one day ordered baked beans for dinner; and we were prepared to enjoy with a relish the nutrient *legume* which has contributed so largely to the fame of Boston, when the waiter-girl made her appearance with a covered dish containing the coveted esculent. Imagine our surprise, when, upon removing the cover, we beheld our beans roasted to a nice brown, each as hard as a bullet, having been placed in the oven raw, and heated like raw coffee-berries preparatory to grinding.

ve then understood the puzzled expression of our honest waiter, who was evidently at a loss to understand our mode of eating bean bullets.

The English proclivity for flesh-eating is clearly indicated by the hotel bills of fare. Animal food of almost every description, cooked in every conceivable style, makes up the greater portion of the list; while the few vegetable dishes are quite inconspicuous, and are served in a very simple manner. Meat seems to be the chief food of the wealthier classes, although the markets afford an excellent variety of wholesome, nutritious, and palatable vegetable foods, many of which are not seen in America, or at any rate are not in common use. Among these are sea-kale, and two very different varieties of artichoke, one being an edible root, the other a curious sort of fruit.

Good apples are almost unobtainable. We purchased a few at fourpence a pound (eight cents in American currency), which at home would be counted hardly fit for making cider, and would by most farmers be left to rot upon the ground or fed to the hogs. Indeed, we have not seen a single good apple since leaving America, with the exception of the few we brought with us.

A commendable feature of English dietetics is the very extensive use of graham and whole-wheat bread, which is undoubtedly in a great measure the result of the persistent efforts of the vegetarians and of the Food Reform Society. The bread is of good quality, also, which cannot always be said of American bread, a fact probably attributable to the want in America of that close official supervision of food supplies which has long been customary in England. By a careful system of inspection, adulteration has come to be comparatively rare in that country. Occasional instances are brought to light; but the knowledge on the part of those engaged in this nefarious business that any purchaser may obtain from the public analyst an analysis of suspected articles without expense to himself, has a powerful restraining influence upon this class of criminals, who in America, for the want of an equally efficient provision for the protection of the public health, carry on their nefarious business in an open manner and on the most gigantic scale.

The greatest danger to health in London through food supplies is in the use of diseased meat. Many thousands of pounds are annually condemned in the markets, and yet it can hardly be supposed that more than a small proportion is detected.

The rapid advance made in temperance work in England during recent years, is a source of great satisfaction, not only to reformers in England, but to those in America as well. Never have we attended such enthusiastic temperance meetings as in London; and never have we seen elsewhere so general and deep an interest in the scientific branches of the question. This fact is undoubtedly due to the personal influence of such men as Drs. Richardson, Norman Kerr, Edmunds, and other medical men whom we might mention. The experiments of Dr. Richardson, establishing upon a scientific basis the opposition of the temperance people to alcoholic drinks, are known to temperance workers in all lands. Dr. Norman Kerr has established most important statistical facts which show the actual fatality arising from the use of alcohol to be an enormous total annually. Dr. Edmunds, in spite of many obstacles and in the face of much opposition, possibly hampered somewhat by personal prejudices, has succeeded in demonstrating to the world the important fact that a hospital can be conducted as successfully and in every way as satisfactorily, without the use of alcohol as with it, and that, too, when many of the patients have, previous to admittance, been habitual users of alcoholic beverages in one form or another.

There appears to be a much more general interest in sanitary matters in England than in America. The common people seem to know more of the possible dangers from such things as sewer-gas, drains, cesspools, etc., than in America. We observed that advertisements of premises for sale or rent usually contained a statement of the sanitary condition. We think it but fair to attribute this unusual intelligence on a subject usually left to sanitary experts and boards of health, in considerable part at least, to the persevering and ably-conducted efforts of the Ladies' Sanitary Association, the secretary of which, Miss Rose Adams, we had the pleasure of meeting. For more than twenty years this society has been at work through tracts, lectures, and in almost every way imaginable, enlightening the people on all subjects relating to domestic sanitation. The good they have accomplished is incalculable, and their influence will be felt more and more.

We were surprised to find nearly all the hospitals and public buildings which we visited defective in the important particular of efficient ventilation. The hospital for consumptives at Brompton, and the Houses of Parliament, are the only exceptions we can make. Of these, the latter structure only, better known in England as the Palace of Westminster, is ventilated in a really scientific manner. This building is, in our opinion, as nearly perfect in respect to its air-supply as a structure of its size, situated in a large city, can be. The fresh air is admitted through the floor, which is composed of perforated iron, having previously acquired the proper temperature by passing over steam pipes in the basement. Before passing to the heating-pipes, the air is filtered through cloth screens to remove dust and other suspended matters, and in cold weather receives an extra supply of moisture, just as it passes over the heating surfaces, by means of long evaporating troughs. In this manner the air is cooled by passing over ice, the circulation being maintained by means of immense air-pumps.

The foul air from this mammoth building, some rooms of which are often densely packed, is removed by means of immense ventilating shafts, at the ends of the long building, one in each of the two towers. In each shaft an open fire is kept constantly burning, securing a very strong and continuous upward cur-

rent at all seasons of the year. The ducts communicating with the ventilating shafts are connected with the base of the rooms ventilated, thus securing the prompt removal of the most impure air, and a complete change of the air.

It occurred to us while looking over this admirably ventilated building that it would be a capital thing for the architects of some of our public buildings at home to make a visit to Westminster to study ventilation for a week or two before again undertaking the responsible task of regulating the air-supply of five hundred or a thousand persons in a State prison, a reformatory, or an insane asylum.

We have stated that most of the hospitals were poorly ventilated. We do not mean to say that we found the air foul in all of them, although it was decidedly tainted in several which we visited frequently, but the system of ventilation was such that in severe cold weather, when the doors and windows must be closed tightly, the air would necessarily become very impure.

A general air of neatness was universally present in the London hospitals. The nurses, with their plain, neat dresses and white caps, appeared to be very intelligent, and no friends to dirt. We must remark, however, that we saw some very dirty patients, several of whom had been in the hospital over two months, and could not have had a bath during that time, and perhaps not for a generation before Bathing is much practiced among the upper classes in England, and also among the middle classes, many being accustomed to take a cold sponge-bath every day immediately upon rising; but the lower classes are by no means on so intimate terms with the bath In this respect London is probably no worse than other cities, and the city authorities have done their duty in providing excellent public baths, where a warm bath can be obtained at any season for twopence. We were not a little surprised to find the bath so little used in the hospitals, and trust that some prominent medical gentleman connected with some one of the great hospitals will erelong make the discovery that water is a sovereign remedy for many maladies, if well applied externally and internally.

One would naturally expect to find a very high death-rate in a city like London, with its more than 4,000,000 inhabitants, in some places huddled together like sheep; with the atmosphere densely charged with the smoke of a million chimneys, the noxious vapors from ten thousand manufactories, the poison-laden breath of a nation of human beings and half a million animals, and an almost perpetual fog; with a climate so cold and damp that one may say with perfect truth that he is never warm in England, but although nearly double that of a healthy country town, the death-rate is not nearly so high as that of many smaller cities Even some of our American cities, half a hundred of which would be required to make a city equal in size to London, are unable to present so favorable a mortuary report. This is a problem which we have not yet fully solved. Perhaps we may give a little credit to the insurance companies, which are particularly numerous, offering insurance for both man and beast, and even for some inanimate objects, as plate glass. Business men are very sagacious in discovering ways and means for advancing their interests, and have learned that one of the best means of increasing their dividends in the life-insurance business is to encourage the education of the people respecting the care of their health. We believe some of our American societies are making efforts in the same direction.

The superior robustness of English ladies has long been a subject of remark, and from our observation we think that American ladies may well envy their cousins across the water. The excessive consumption of animal food, the unfavorable climate, and the unhealthful frequency of meals,—the majority among the upper classes eating four meals a day, and many five,—especially the late suppers, would certainly soon suffice to destroy the digestion and quite undermine the nervous system of an American woman of average good health; but an English lady at forty or fifty looks as fresh, and when not excessively stout, seems to be as active, as an American woman at twenty or twenty-five. Women in England do not seem to grow old so fast as in America. An American maiden of sixteen looks as old as an English lady of twenty or twenty-two. We know of nothing to which to attribute the superiority of English ladies in point of health, unless it be their devotion to the morning bath, and the universal habit of out-of-door exercise. We believe the daily cold bath is habitually employed by a great majority of English ladies of the middle classes. Every house contains a bath-room, with tub and water-supply convenient for use. Most English ladies, except among the poorer classes, are habitual walkers, and good walkers, too The English woman does not boast of so *petit* a foot as her American rival, but as a pedestrian she demonstrates the utility of a large, well-developed foot and strong limbs The numerous parks in London afford ample opportunity for walking and horseback-riding This latter is a very common mode of recreation with ladies able to afford the luxury, and on pleasant afternoons the spacious parks and favorite streets are crowded with ladies and children. Tricycling is also coming to be quite a common means of exercise for ladies, and we think it much more healthful, and decidedly less dangerous, than horseback-riding

The English people take many more holidays than Americans. Besides their Christmas and New Year holidays, they have at Easter a holiday of five days in which business is almost totally suspended, a large proportion of the shops being closed from the Thursday preceding Good Friday until the Wednesday following. Several "bank holidays" and fête days are scattered through the year, besides the annual boat race between the Oxford and Cambridge crews, which is frequently witnessed by half a million people, most of whom have to travel from five to ten miles to reach

the points on the Thames which the competitors pass. Another English peculiarity we should mention. Living-rooms are kept at a much lower temperature than in America. Open grates are the most common means of heating; and as they seem to be constructed with reference to the consumption of the greatest possible amount of fuel with the utilization of the least amount of heat, at least ninety-nine per cent of the caloric goes up the chimney, making it almost an impossibility to well warm an outside room in cold weather. We believe the average temperature of living-rooms in England to be less than sixty degrees. In the hospitals, the regulation temperature is 60° Fah.; but we often found it several degrees lower, never higher. We walked about the wards shivering with an overcoat on; but the nurses and patients seemed to be perfectly comfortable. We are inclined to think that this custom has much to do with enabling the English people to endure their damp, chilly, changeable climate, and perhaps by encouraging the surface circulation, accounts for their rosy complexions.

The London fire did a good thing for the metropolis as a disinfectant, putting an end to a terrible epidemic which had raged for years previously. From what we observed, we believe a moral disinfectant of equal efficiency is as greatly needed at the present time. In some portions of the city vice stalks abroad in most hideous forms. Mr. Comstock would find here a rich field for operations in suppressing obscene literature, and would have no trouble in discovering plenty of culprits; for the principal streets are thronged with young men who offer for sale the most filthy and debasing pictures and literature imaginable. There is a law against the traffic, but it is carried on constantly before the eyes of the police without their interference. Probably there are few cities in the world in which licentiousness is so common as in London. No city has so vast an army of wretched women devoted to infamy; and the consequences are to be seen upon the streets at every turn, in the human forms rendered hideous by disease, the faces exhibiting a mind sunken to the depths of depravity. The scores of hospitals are overflowing with the victims of vice, dragging out an existence the most wretched possible,—a living death,—to whom the grave would be a most welcome relief if it were but oblivion; although the most graphic pictures of future retribution drawn by Jonathan Edwards could scarcely suggest an augmentation of misery.

We find in our note-book many other items of interest of which we would like to write, but we have already presumed upon the patience of our readers, and must bid them good-by for another month, when we shall take a look at Paris through our hygienic eyeglasses.

A HYGIENIST ABROAD.

OUR stay in Paris was rather limited, but our time was all profitably employed. Here we found the only Turkish bath in France, established about seven years ago, and very prosperous. It was evidently modeled after the Hamman of London, and bears the same name. We also found here the most expert masseur we have ever met, and are under obligations to him for the special pains he took both at the bath and at our hotel in exhibiting to us every detail of the French and English methods of massage. The hospitals we found interesting, though dirty. The Charité hospital is provided with a complete bath department, including Turkish and Russian baths, which we have not found in connection with any other hospital, although a building for the purpose was being constructed at the famous Salpétrière, one of the largest hospitals in the world, accommodating several thousand patients and attendants.

At the Charité hospital we saw in operation the baby incubator invented by M. Tarnier, and made almost exactly like a chicken-hatching machine. The inventor declares that by the aid of his apparatus he is able to make babies of six months rival those of three years in size and strength. Of three hundred babies put through a six months' course, all were able to walk within a week after leaving it, though most of them were but little more than six months old. It is said to be almost indispensable for rearing very feeble infants. The nurses are very enthusiastic in its praise, perhaps partly because babies in the hatching apparatus are very easily cared for, sleeping constantly, except while being fed. The heat of the apparatus is regulated by a current of hot water. The apparatus is destined to become very popular in France, where mothers are notoriously averse to the trouble of caring for their little ones, and for years have engaged in the infamous practice of "farming" them out. They can now avoid all inconvenience by putting the little ones into the glass box of the incubator, and engaging some one to administer food at proper intervals. The children will also enjoy the advantage of escaping most of the diseases incident to early childhood, and will undoubtedly be better brought up by the "artificial mother" than by the real one. We have not fully decided whether an incubator may be profitably introduced at the Sanitarium or not; but if we thought a six months' course in the apparatus would remedy the defects acquired in babyhood by bad nursing, we should bring back several sets of the apparatus, with a certainty of finding plenty of use for them.

We were much interested in investigating the effects of the treatment of disease by means of oxygen, or superoxygenated air, as we have for a long time had under consideration the advisability of introducing the remedy among the other numerous appliances already in use at the Sanitarium. We have waited only to become thoroughly convinced of its utility. The remedy is employed very largely in Paris at several establishments, where it is exclusively relied upon as a means of cure; and our investigation led us to believe that while it is by no means a panacea, it is of very great value in the treatment of certain ailments, particularly anæmia, nervous debility, many cases of dyspepsia, inactivity of the liver and other excretory organs, and last, but by no means least, pulmonary diseases, especially asthma and incipient consumption. We shall construct apparatus for its use after the most approved forms, as soon as possible after we return.

We have always felt it to be a duty which every physician owes to his patients, to employ no remedy capable of doing harm, until its utility has been thoroughly demonstrated, and its mode of application clearly defined. Human life is too valuable to be wasted in experiments. France is pre-eminently a country of experimentation. All sorts of projects, to an American brain in the highest degree absurd and chimerical, are constantly being set on foot by impulsive, quick-witted Frenchmen, who now and then, out of seeming impossibilities, by good fortune more than by profound research, develop really useful and valuable results; and we Americans are very ready to make use of them, although our French brethren are decidedly averse to the adoption of anything American, or, indeed, of any other foreign origin. The average Frenchman cannot conceive of the possibility of the discovery of anything valuable being made

☞ We edit this number of GOOD HEALTH from Vienna, the capital of Austria, and the great medical center of the world. Here are found some of the greatest of living surgeons and physicians, among others the eminent Prof. Bilroth, who has several times successfully performed the seemingly impossible feat of removing malignant and other morbid growths from the stomach. Thus a way of escape has been provided for sufferers from that hitherto most hopeless of human maladies, cancer of the stomach.

Prof. Politzer, the famous aurist, is also a member of the faculty in this famous university, and we find him one of the most admirable of teachers. Profs. Jaeger and Stellwag, the eminent eye specialists, are also here, as well as many other brilliant lights in the medical world too numerous to mention. One of the unique and admirable features of this institution, at least for students, is the plan pursued of not only showing the student how to perform operations and administer treatment to patients, but making him perform operations and administer treatment himself, so that he cannot avoid becoming familiar with practical details so essential to success. We find much of interest here, and are hard at work in the hospitals in various special departments from ten to twelve hours daily. The opportunities are so marvelous that we hope to derive many advantages from our stay here, although it must necessarily be much briefer than we could wish.

☞ Through the kindness of our friend Dr. Pietre-Santé, of Paris, we had the pleasure of attending the annual meeting of the Societe D'Hygiene of France, of which the Doctor was the founder and is the secretary and most active member. Several hundred members were present at the annual banquet, many of whom we had the pleasure of meeting personally through the courtesy of Dr. Pietre-Santé, and the venerable Dr. Boggs, an English physician for many years a surgeon in the East Indian army, now a resident of Paris. With the exception of the wine, which is universally used in France, we should not think it necessary to criticise the material elements of the banquet; but we were gratified to note that our wine glass was not the only one that remained empty. At least one member, the presiding officer, and a member of the French Senate, also abstained, quite to our surprise, as we expected to be an isolated example of total abstinence in the large assembly. The toasts were numerous, and were all loudly applauded. We also have to thank Dr. Pietre-Santé for the honor of being made an honorary member of the Society.

The organ of the Society, the *Journal of Hygiene*, has for several years been one of our valued exchanges, and we shall in future take a still greater interest in its perusal.

outside of France. And so we sought in vain for some of the new and valuable remedies introduced in America within the last ten years, although we did find any quantity of the different brands of American "bitters" and other patent nostrums. The Frenchman is quite an enigma to us. He seems to delight in doing what other people either do not care to do, or are not sufficiently venturesome to undertake. The reckless daring of the first Napoleon was undoubtedly one of the elements of his success, as it awed and astonished his foes into inactivity, while he was preparing the way for certain victory.

In matters of diet the Frenchman is unique, at least among civilized nations. He is proverbially the king of cooks. Give him a bit of charcoal for a fire, a bone, and a handful of vegetables, and he will make you every imaginable variety of soup. If beef bones are scarce, a horse or mule bone will do just as well. One day while riding along the street in Paris, we noticed a horse's head fastened over a doorway, through which we could see what seemed to be an ordinary meat shop. We ordered our cabman to stop, and with our courier stepped inside. On inquiry, we found that this shop dealt entirely in horse flesh, which was exhibited in all varieties. Huge quarters of mule were suspended from the ceiling, and various chunks of flesh which were arranged about on counters were labeled "*mulet premier classe*" (first-class mule), "*âne premier classe*" (first-class donkey), etc. Here was a horse's heart, there a portion of mule tripe, a nice donkey steak, mule tallow, and sausage which was undoubtedly on intimate terms with all varieties of the horse family, and possibly with some smaller animals as well, as the French sausage-maker has long enjoyed the reputation of being able to make most toothsome sausages from defunct dogs, cats, and even rats, and sundry other small animals whose utility has heretofore been considered questionable. We ventured to inquire after the previous health of the creatures whose nicely dressed carcasses looked quite as inviting as though they had been the choicest of beef; but soon found we were treading upon forbidden ground. The shopkeeper never inquired as to their previous history, and had other business unless we wished to purchase. Here was a tenderloin steak which we would find very excellent eating. We allowed him to cut us off a piece, settled our bill, and carried home our steak, not to eat, however, but to preserve in alcohol as a memento of our visit. Unfortunately, a catastrophe to one of our valises just as we were leaving the city, demolished the bottle containing the precious morsel, and left us nothing more tangible than the memory of our visit to the horse-meat market, which, however, will remain fresh for many a day.

An hour or two after our visit to the market, we witnessed the death of a cab horse, which broke its neck in turning a somersault just as we were passing it in the street. The poor beast was undoubtedly the next day honored with a place in some butcher's shop along with other unfortunate equines that had died prematurely, or had outlived their usefulness as beasts of labor.

Leaving Paris, we had a very pleasant trip through France and Switzerland, including a ride on Lake Geneva nearly its whole length, which afforded most charming and romantic views nearly the whole route. On one side were to be seen fertile hillsides covered with vineyards just putting on their green dress, with flourishing little villages nestling at their feet along the shore; while on the other side a rocky wall, sometimes hundreds of feet in height, marked the border of the lake and presented tier above tier of cliffs and bluffs, which, receding in the distance, towered higher and still higher, until lost amid the snow-clad peaks of the world-famous Alps. We were interested in noticing the habits of the Swiss peasants as we passed along. They were just beginning in good earnest their agricultural operations for the season, and a very busy scene the country presented. Every foot of tillable soil is cultivated in this rocky country, and the whole country population, men, women, and children, are farmers. The men plow, the women and children sow, and all carry burdens in huge baskets strapped to their backs, or mammoth bundles on their heads. All the animals work as well, including goats and cows. And these people looked wonderfully healthy, happy, and innocent. Their laborious life leaves them no time and no disposition for mischief. Their life is the most simple imaginable, and they seem to be the most contented and happy people in the world.

Before leaving Switzerland, we provided ourselves with a loaf of "swartz brod," the well-known black bread of Germany, thinking we should be unable to obtain "bran bread" in Italy. We made one or two attacks upon our black loaf, and succeeded, by dint of much labor, in detaching a few crumbs; but the greater portion still remains intact, and will most likely accompany us to America. In its present state it ought to outlast an Egyptian mummy. In Italy, as in Switzerland and France, the whole population work, except among the wealthy class, which is not at all numerous. Burdens are almost altogether carried on the head, and on the backs of donkeys. It is not at all uncommon to see a woman with a bundle upon her head quite as large as herself, and so heavy as to require two persons to lift it into place. And the poor donkeys are often so heavily laden with heaps of vegetables, that as they move along, they appear at first sight to be animated cabbage heaps rolling off to market on their own responsibility. The patient brutes are most unmercifully overworked, and cruelly treated.

The Italian plow consists of a long pole, to the end of which is attached a very rude sort of an iron instrument which makes a shallow furrow in the soil.

To this is usually attached a cow, or sometimes two cows, or a cow and an ox. In the vicinity of the large cities, many carts are seen drawn by the most incongruous combinations of animals. Here are a few of the most common combinations: a horse and a donkey; a horse or a donkey and an ox; a donkey and a cow; a cow with a horse on one side and a donkey on the other; a donkey and a man, both in harness, and tugging away at the same load. Once we saw three women in harness, hauling a huge cart, the owner of which walked leisurely along behind, now and then putting out his hand to steady the load as it rattled over the rough road. Even this combination was surpassed in Vienna, where we saw, the other day, a woman and a dog harnessed together and hauling a heavily loaded cart. Huge dogs are used here as are donkeys in Italy. Hundreds of them may be seen daily upon the streets, hauling seemingly impossible loads.

But to return to Italy. It is certainly a most wonderful country. It is a land full of ruins of former greatness. The Campagna, extending from Rome to Naples, is strewn with the ruins of tombs, temples, and once gorgeous palaces. Rome itself is built upon the ruins of palaces and pagan temples. Its hundreds of churches are built of the very stones, and ornamented with the costly marbles and bronze, which once decorated the temples of Jupiter, and Mercury, and Venus, and those of the hundreds of other pagan deities which were once worshiped in ancient Rome, and confronted each other in the Pantheon.

That the ancient Romans were a cleanly people is evidenced by the great number of baths with which the city was provided. The immense baths of Caracalla, for example, cover several acres, and furnished accommodations for sixteen thousand bathers. Dressing-rooms, reading-rooms, porticoes, and every possible luxury, were added to the necessary apartments for vapor, hot-air, and various kinds of water baths, including immense basins for swimming and other aquatic sports. No modern structure can begin to rival these ancient baths in completeness or magnificence. Some of them were several stories in height, with both private and public compartments, the latter being free to every Roman citizen, whether patrician or plebian. The baths of Diocletian, though less perfectly preserved than those of Caracalla, were twice as large, accommodating more than thirty thousand bathers. The beautiful mosaic floors, and the rich frescoes of the walls and ceilings, are in some places sufficiently well preserved to afford a faint idea of their former magnificence and grandeur. We took great interest in studying the plan of these famous baths, and found the study profitable, though it was a little humiliating to learn that our modern arrangements are in many ways so much inferior to those of a nation which flourished two thousand years ago. At Pompeii we found a bath in a state of almost perfect preservation, only a portion of the roof having been destroyed, so that the whole plan could be studied with ease and accuracy. To our surprise, we found in the Rome of to-day not a single Roman bath in operation, and we did not learn that the city contains any public baths of any sort, although the poorer classes are evidently in great need of sanitary institutions of this sort.

We found the hospitals of Rome very interesting on account of the rigidly scientific manner in which patients are classified. Each hospital has its particular class of maladies, so that the old adage, "Birds of a feather flock together," seems to be literally fulfilled. One of the hospitals we visited was the oldest in Europe; yet it embodied one feature which might well be imitated in our modern hospitals. The courteous Italian physician who showed us through called our attention to the great height of the vaulted ceilings, which were not less than thirty or forty feet from the floor, and remarked that our forefathers appreciated better than we the value of fresh and pure air as a remedial agent. Somewhat to our surprise we found in these Italian hospitals some of the most recent and valuable of American methods in efficient use, and found that they were understood and appreciated much better than in either England or France.

At the hospital for skin diseases, we witnessed a spectacle which will never be forgotten for its oddity. In a room devoted to the special purpose for which it was used, were seated twenty or thirty boys, upon two rows of seats extending along two sides of the room, the back row being raised about eighteen inches higher than the one before it. The boys were equally divided between the two rows, and each boy in the upper row held between his knees the head of the boy before him in the lower row. These boys were all suffering with a malady known as *tinea capitis*, a disease of the scalp which requires the extraction of every hair in the affected portion, not only once, but many times; and these boys were performing for each other the necessary duty of extracting the hairs, one at a time, with a pair of pincers. The degree of expertness which these little fellows had acquired was quite marvelous. We have never seen their dexterity equaled except by that caricature of humanity, the monkey, when searching the furry heads of its young for predatory parasites.

One of the striking features of the hospitals of Rome is the requirement that all patients who are able shall labor a portion of each day. At one hospital we saw men patients engaged in repairing shoes, bottoming chairs, mending tin pans and other articles, besides cleaning floors and doing other necessary work about the premises. A woman was using an American knitting machine with as much expertness as we have ever seen one operated in America.

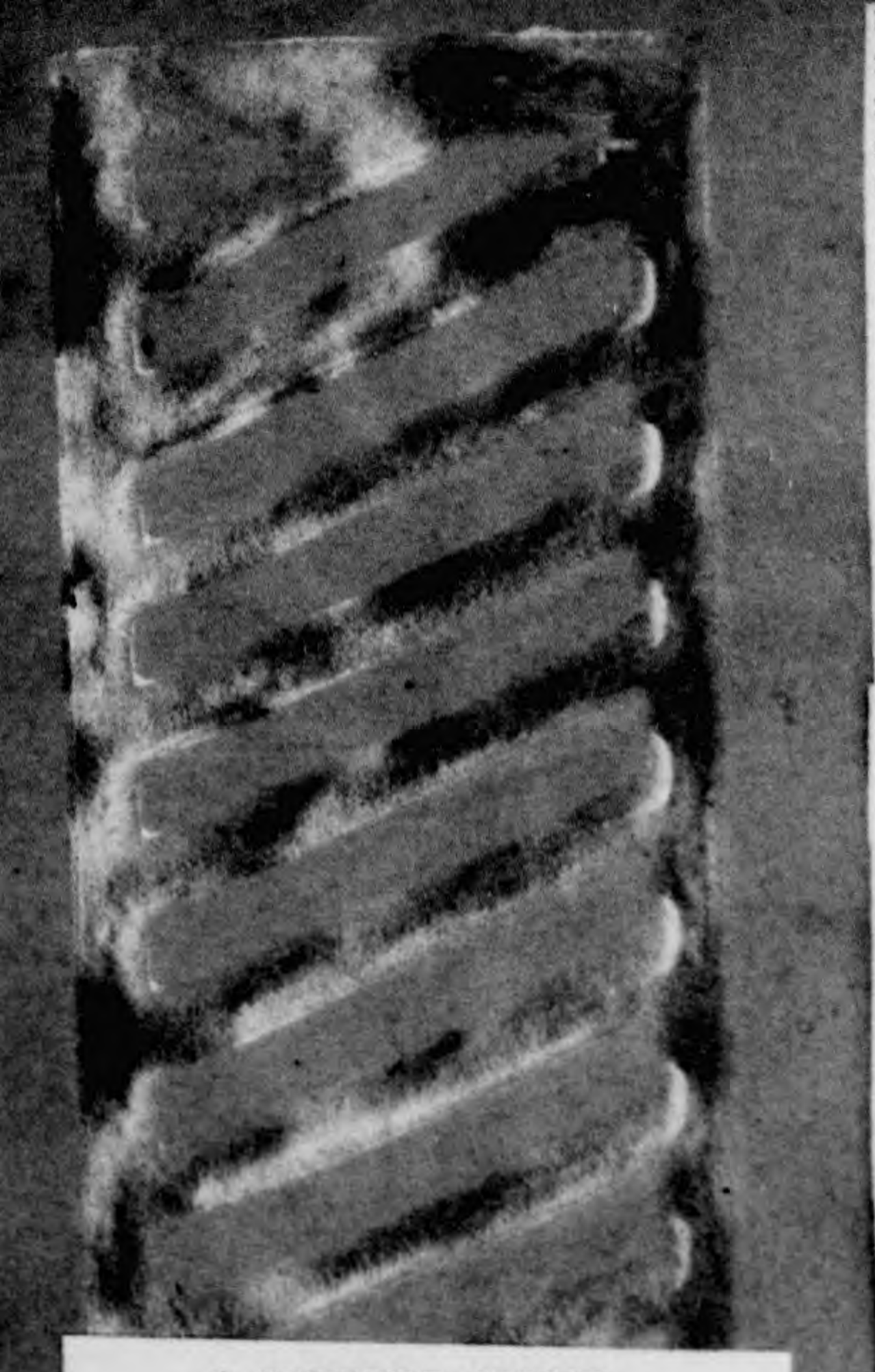
But we have already extended this article far beyond the limits which we had fixed for it, and must hasten

to give a brief sketch of some of the interesting objects about Naples. You have all heard of the famous grotto into which a man may walk erect, while a dog by his side is quickly rendered insensible by the carbonic acid gas and other poisonous gases which, being heavier than the air, creep along the floor of the cave. The grotto extends downward and into the side of a mountain near Naples, perhaps no one knows how far, as it can be explored but a few feet from the entrance. We went in until our torch was extinguished, and we were completely submerged in the gaseous poison, when we were glad to hasten out to avoid the fate of the poor dog that lay struggling upon the ground in insensibility. The poor brute recovered in a few minutes, however, and wagged his tail as happily as though he had just received a fresh bone, and raised not the slightest objection when the man in charge of the cave led him into the noxious vapors for another exhibition of their poisonous properties. From these cruel experiments, the cave has acquired the name of *Grotto del Cane*, or grotto of the dog. We were curious to know the effect of the frequent inhalation of the gas by the poor dog, and were informed that the unfortunate animals seldom survive the treatment more than six months.

Near by is another grotto, or rather chambers excavated in the soft rock, in which similar vapors collect, and which are visited by persons suffering with rheumatism, and known as the *Stufe di San Germano*. The vapors are so hot that profuse perspiration is induced in a few moments, and they thus form a sort of natural Turkish bath. A few miles farther, just beyond Pozzuoli, the ancient port upon the bay of Naples where St. Paul landed on his journey to Rome, and then known as Puteoli, is found another curious cave in the side of the mountain. The passage is very long and narrow, and at its inner terminus is a spring of boiling water. Two little boys in waiting for the opportunity, quickly stripped to the waist, and with torches in their hands and an egg in a basin, ran rapidly into the dark passage. Curiosity led us to follow suite. The heat was almost insupportable; but we thought we should be able to endure as much as the small boys, and so ran on through the winding, narrow passage, which seemed constantly to descend, until on turning an abrupt corner we discovered the little fellows holding the egg in the boiling water of the spring, with the perspiration streaming down their bodies as though they were in the hot room of a Turkish bath. We were glad to hasten out, and escaped into the fresh air with a better appreciation of the value of oxygen than we ever had before. We found our egg was as well cooked as though it had been the same length of time in boiling water; but our guide swallowed it before we had a chance to taste it.

This boiling spring is said to have been visited by the ancient Romans for the relief of rheumatism. All of these curious places are in the immediate vicinity of Solfatara, an old volcano now nearly extinct, although its old crater is larger than that of Vesuvius, and it still sends forth a great volume of sulphurous smoke and noxious gases. Several years ago, a medical correspondent of ours who then resided at Naples, suggested that this would be one of the best places in the world for the establishment of a Sanitarium. The climate is most delightful. There is no frost in winter, and no oppressive heat in summer. Every variety of fruit grown on the face of the earth is found here, from apples and pears to figs, pomegranates, and the Japanese nespola; and all manner of fresh vegetables all the year round, with a volcano to supply hot water and steam free of cost and in unlimited quantity. Possibly the uncertainty of mundane things in the neighborhood where Herculaneum and Pompeii were buried some centuries ago, and the not unusual experience of having to jump up in the night and run into the street to avoid being buried under a falling chimney disturbed by a gentle reminder of more vigorous shakings-up in by-gone days,—possibly these and similar little episodes might serve to discourage foreign patronage to some degree; and the native population have free access to any number of natural Turkish baths and thermal springs. So we think perhaps it will hardly be advisable to undertake such an enterprise in Italy just yet.

But how this article has expanded as we have rambled on in our journeyings! We were going to ask you to ascend Vesuvius with us, but you must be quite too much fatigued for such an expedition, and so we shall have to defer the trip until another day. We have yet to visit Graefenberg, the home of Priessnitz, the pioneer water-cure doctor, Carlsbad, Baden Baden, and other famous places, including Stockholm, Sweden, the head-quarters of the Swedish-movement cure, in all of which places we hope to gather valuable and practical ideas which we may utilize in helping invalids to health.



A HYGIENIST ABROAD.

IN ITALY.

We believe we left our readers in Italy, with a promise to invite them to ascend Vesuvius with us, and we now fulfill our promise. We must take an early start, as we have planned to see Pompeii and Herculaneum on the road, and we have a very large day's work before us.

Our guide and carriage, having been engaged the night before, are on hand in good season; and taking an early breakfast of hot milk, graham bread, and oranges, we are off in good time. Our road leads us the whole length of the city of Naples, and thence along the shore of the beautiful Gulf of Naples, through a number of little villages, to the objects of our journey. As we pass along the busy thoroughfare, we meet long trains of peasants coming in with their loads of vegetables,—some carrying the products in huge baskets upon their backs, others driving before them great heaps of lettuce, radishes, greens, and other early vegetables, beneath which one is barely able to discover a pair of long ears in front and a tufted tail behind, indicating that underneath the mountain of green stuff a patient little donkey is trudging along with his ponderous load. Here comes a sturdy peasant woman, with a great pile of onions upon her head, strong enough to bring tears to the eyes of a sphynx. A little farther on, we meet a goat-herder, with his two dozen goats, which he brings into the city every morning, and drives around from house to house, supplying his customers with fresh, warm goat's milk, which they feel confident is not adulterated, since with their own eyes they see it brought fresh from the fountain. But we must not be too sure about the adulteration. A careful investigation may perhaps reveal the fact that our Italian milkman is quite a Yankee in the way of inventing means for adulteration without detection. Perhaps he never made wooden nutmegs, but he has constructed a little rubber pouch to be carried under his arm beneath his coat, and supplied with a long tube passing down his sleeve to the palm of his hand, by means of which he can water the milk at pleasure, without fear of detection, unless he makes too great a dilution, and even then it would be easy to explain that the goats had been unusually thirsty.

Ah, here is a macaroni factory! We have never been quite able to believe that yarn told by the Autocrat of the Breakfast Table, to the effect that macaroni and vermicelli are produced by the bread-tree, the former consisting of the larger stems, and the latter of the small twigs; nor that incredible assertion of his that the government of the macaroni-producing country requires that the tubes be each provided with a piston, for the purpose of dislodging from the interior various small insects which take up their habitation there, although we have no difficulty in believing that the insect inhabitants are something more than a myth. However, here we have an opportunity to solve the mystery of macaroni, and we must improve it.

We understand that the manufacturers keep their process something of a secret; but fortunately for us, in this one case at least, the morning is so sultry that the workmen are obliged to have the front doors open for ventilation, and so we can take a sly peep inside, and observe what we can. The first thing we notice is a couple of boys hopping up and down on a spring-pole. They seem to be having a jolly time, and we wonder that their overseer should allow them to spend their time in such a frivolous manner. On expressing as much to our guide, he explains to us that the spring-pole is a kneading apparatus, and points out the fact that near its stationary end is a large roll of dough, which is being squeezed and kneaded in the most thorough manner while the boys are having a jolly time at the other end, the dough having first been made by mixing with boiling water. After it has been sufficiently kneaded in this curious manner, it is placed in another machine over at the right, through which it is forced, coming out in the shape of cylindrical tubes about two feet in length, which are hung over poles and carried away to dry. Every vacant space in the large factory is filled with these poles of freshly-made macaroni, and for several rods in front of the building, one-third of the street is occupied in the same manner. The street is a very dirty one, and hundreds of vehicles of every description are passing, so that the air is constantly filled with dust; and the macaroni is very well adapted to catch and hold this flying dirt of miscellaneous character. Perhaps this is what gives to it its usual gray

mountain a lady who had fainted at sight of the cra-

color. Be this as it may, the manufacturer has no particular concern about it, as any addition of this sort will only add weight to his product. Our guide assures us that this particular firm is famous for its fine quality of macaroni. For ourselves, our relish for this particular variety of food was never very strong, and a more intimate acquaintance with it has not increased our love for what a friend of ours denominates "boiled pipe-stems."

But we must hasten on our journey, or night will overtake us before we get down from the mountain Here is an interesting sight, however, and we must pause a moment. We are just passing a large tannery, and twenty or thirty workmen, most of whom seem to be boys of fifteen or sixteen years of age, are taking their breakfast. It is the custom here to begin work about six o'clock in the morning, and take breakfast between eight and nine. What do you think they are eating! "Beef-steak," says an English friend, who imagines that no one can work without meat, pork, and potatoes. An American backwoodsman argues that nothing "sticks by the rib" like fat pork. "Bread and butter and black coffee," says a friend who has heard that that is the breakfast dietary in most European countries. You are all mistaken. Our tanner boys are making a breakfast of boiled chestnuts. They are gathered around an old woman who keeps a chestnut stand at the street corner, and has a large iron pot boiling over a cheerful fire, from which she ladles upon little tin plates a small quantity of chestnuts for each, which disappear into hungry mouths as rapidly as they can be conveyed there, by fingers not over-scrupulously clean. This is the way these workmen take their breakfast every day; and when night comes, and their day's work is ended, they regale themselves with a generous dish of boiled macaroni, seasoned with tomatoes. These men labor incessantly many hours a day, and yet many of them do not taste meat half a dozen times a year, except now and then a little fish.

But while we have been telling you all this, our driver has been hurrying on his horses through one village after another, and now we have reached a large stone building, which our guide informs us is an entrance to Herculaneum. We purchase tickets and a special guide-book, and, accompanied by a government guide, who supplies us each with a torch, descend several flights of stairs, until we reach the level of the long-buried city. Here are streets, temples, private houses, squares, and fountains, all showing traces of former opulence; while here and there are to be seen traces of the magnificence of rich ornamentation, although all works of art of any value were removed to the museums of Naples and Rome as soon as discovered by the excavators. Most notable of all is a great theater, in which may be seen the seats for the audience and place for the musicians, private boxes for the royal patrons, dressing-rooms for the

mountain, and the twilight had deepened to evening,

actors, with the accompaniments of a modern place of the same sort. The whole was buried in lava, which had become hard as the firmest rock, and the excavations have been made with the greatest difficulty. But a small part of the ancient city has been exhumed, as it extends under the most populous portion of the adjacent city, and the work could not be carried on without undermining thousands of costly edifices, and thus destroying a vast amount of property.

We have neither space nor time to describe the relics of this wonderful old city, and so will ascend to her sister in calamity, Pompeii. One hour's drive brings us to the place where tickets are purchased, and we mount a long staircase, instead of descending, as in case of the Herculaneum, and soon find ourselves among the entombed streets and ruined palaces of a city which was for ages so completely buried in ashes from the crater of Vesuvius that its very site was forgotten. Here are the veritable old pavements over which the chariots used to roll, two thousand years ago, made of broad slabs of lava, exactly like those composing the famous Appian way, over which Paul traveled when he journeyed from Puteoli, now Pozzuoli, to Rome.

One curious feature which quickly strikes the visitor, is the street-crossings, which seem to have been arranged more for the convenience of foot-travelers than for that of vehicles, every crossing being provided with large broad stepping-stones, placed about eighteen inches apart, so that a person can easily step across from one side of the street to the opposite one without soiling his feet by the mud or dampness of the streets. These crossings are so numerous that it seems difficult to reconcile their existence with the use of vehicles in Rome, unless it be true, as has been conjectured, that the carriages used in ancient Pompeii were drawn by slaves instead of horses. But we must not attempt to describe in detail the many interesting features of this wonderful city. A mere mention of one or two other points must suffice for the present.

Near the central part of the town, we find a large public bath in a state of perfect preservation, nothing but a portion of the roof being destroyed. Here are rooms for Russian or steam baths, hot-air or Turkish baths, swimming baths, and full baths, either hot or cold, with leaden pipes to convey the hot and cold water from one room to another, furnished with taps exactly like those of modern construction; flues for conveying hot air through double floors with an air-space between, and double walls made to economize heat; and furnaces constructed in a scientific manner. Here are many ingenious devices, which antedate our modern inventions in the same line by a couple of thousand years, and let down our conceit about modern sanitary improvements a great many degrees. Here are dressing-rooms, also reading-rooms, and rooms for conversation—in fact, no mod-

bound for the Queen of the Adriatic. Just before sunset we reached Florence, where a stop of a half-hour gave us time to drive hastily through some of

brings into the city every morning, and drives around from house to house, supplying his customers wi

ern establishment with which we are acquainted is more complete in its appointments than this long-buried bath of ancient Pompeii.

A short distance beyond, we find a bake-shop, not different in any essential particular from the modern brick oven used by small bakers. Loaves of bread found here, and preserved in the museum of Naples, are of exactly the same shape as those to be found on the counters of Italian bakers at the present day.

As we wend our way slowly among these marvelous relics, we are constantly surprised at the familiar look of things so very old. Here is a street of shops. The first store was occupied by an oil-merchant. The huge jugs in which he kept his different grades of oil still remain in the very spot where he left them when he hastily gathered up a few valuables, and fled from that terrible rain of mud and cinders and ashes, which buried his home, with that of thousands of others, eighteen centuries ago. The next shop is a tailor's store, and near by is a shop which, we learn from the inscription on the door-post, was that of an apothecary. Here is a ruined tower, from the top of which we can take a survey of this twice entombed city, or of that small portion which has already been excavated. From our elevated point of view, we can see public squares, the remains of stately columns, gorgeous temples, ruins of grand palaces, and thousands of roofless houses once occupied by the wealthy, and, there is every reason to believe, desperately wicked, citizens of the Pompeii of the past. The impressions made by such a picture sink into one's mind so deeply as to last a lifetime. Strange pictures rise before one's eyes; solemn reflections crowd the mind. The moment is one never to be forgotten. But we must not attempt to describe our feelings here; one must see Pompeii to appreciate it.

Let us hurry down, and take our lunch while our donkeys are being made ready, and prepare for the great event of the day, the ascent of Vesuvius.

As we are hurrying on, our guides stop us one moment to watch the workmen who are making new excavations. How carefully they take out each shovelful of earth, and, spreading it over the ground, inspect each little module with the greatest care. They are disentombing a private dwelling, from which they removed one or two charred corpses a few days ago. How carefully they are propping up that tottering partition wall, so as to preserve everything in its original form as nearly as possible.

Our tramp of several hours among the ruins has given us a good appetite; and we eat with a relish our lunch of nice graham bread, which we brought from the hotel, and a few nespoli, a luscious Japanese fruit which has within a few years been introduced into Italy, and has proved a valuable addition to the fruit productions of the country, as it ripens in April, long before any other fruit is mature. We have eaten our dinner, and are getting somewhat impatient at the long delay of our guide, whom we suspect is having an extra bottle of wine in the back room, when a loud bray at the door announces that our donkeys are ready. Our guide quickly makes his appearance, and, mounting our long-eared musicians, we form in single file and start for the foot of the mountain, which is three or four miles distant. We are obliged to take another guide with us, as the guides to Vesuvius are appointed by the government, it being necessary that a man should be especially trained for the purpose, on account of the constantly changing site of the crater, and the lava pouring out from the mountain-side. As Mrs. K. was not much accustomed to riding, we also took an extra boy to aid in the management of her donkey. Armed with a stout, short stick, our donkey-driver seized the creature by the tail, after the usual fashion, and, trotting along behind him, belabored the poor creature's calloused flanks from time to time in a way which seemed to us cruel, but which, nevertheless, appeared not in the least to disturb the absurdly grave expression which these animals always carry upon their faces. Our ponies and donkeys seemed to be possessed of the general slow-going disposition which seems to pervade the whole south of Italy, and it was only by much belaboring, and the guide's constant cries of Eeh! eeh! that we were occasionally able to induce them to a greater speed than a slow walk.

After pursuing the traveled road for a short distance, we turned off into a narrow path which led by the mountain-side through the most luxuriant vineyards we ever beheld. Although in other parts of Italy the vines were only just budding, here we found them in full leaf, and the laborers—men, women, and children—busily employed in digging about the roots, supplying them with fertilizing material, and digging trenches about each individual vine, destined to be filled with water three times every week during the dry season. After a two hours' ride, we found ourselves filing through the last vineyard, having reached the highest point upon the mountain-side where vegetation could be maintained. Beyond, there was only a waste of lava, which had been thrown out in successive eruptions of the crater smoking two thousand feet above us. From this point on, the ascent was exceedingly difficult and arduous, and we respected our four-footed friends for the good sense they had shown in preserving their strength for the last of the journey. A narrow path winds about among sharp crags and rough, jutting points, the lava having remained just as it cooled when turned out hundreds of years ago. When about one hundred feet from the top, the ascent became too difficult to be made otherwise than on foot; so leaving our donkeys in charge of a man stationed at this point for the purpose, we began the most difficult part of our journey.

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NAPLES TO VIENNA.

TAKING a sleeping-car at nine o'clock in the evening, we soon said good-bye to Naples, with its beautiful bay, its wonderful ruins, its gorgeous sunsets, its smoking volcano, its macaroni, and its chin-rapping beggars. Mr. Licausi, a young dentist whose pleasant acquaintance we were so fortunate as to form, came down to the depot to see us off, and provided us with a liberal supply of the most delicious oranges to be found in the world, coming fresh by every boat from the neighboring island of Sicily. As soon as we had time to look around us, we found ourselves in possession of a nice light sleeping apartment, wholly devoted to our exclusive use, furnished with luxuriantly cushioned couches on either side, and supplied with every modern convenience to be desired. Three days of mountain climbing, tramping among old ruins, and hunting for adventures among the country peasants, had entitled us to a good night's rest, notwithstanding the rattle and jostle of the light Italian cars, and we woke at six o'clock the next morning to find ourselves in Rome *en route* for Venice. We had two hours to wait for the northern train, which gave us time to get our breakfast and call at the bank for letters. We improved a little spare time also to step out from our hotel, with a bottle carefully concealed in our side-pocket, in quest of a sample of goat's milk. We soon found the corner where we had previously observed that a goat-herder was in the habit of stopping each morning with his flock of goats to supply his customers in the neighborhood, and had the satisfaction of seeing our bottle filled with the foaming lacteal fluid. We had imagined that we should find goat's milk possessed of a strong and unpleasant flavor, and were agreeably surprised to find it quite as sweet and palatable as the best cow's milk we ever tasted, though not quite so rich, but according to the testimony of those familiar with its use, much easier of digestion by weak stomachs.

At ten o'clock we were again on board the cars, bound for the Queen of the Adriatic. Just before sunset we reached Florence, where a stop of a half-hour gave us time to drive hastily through some of

ern establishment with which we are acquainted is more complete in its appointments than this long-buried bath of ancient Pompeii.

A short distance beyond, we find a bake-shop, not different in any essential particular from the modern brick oven used by small bakers. Loaves of bread found here, and preserved in the museum of Naples, are of exactly the same shape as those to be found on the counters of Italian bakers at the present day.

As we wend our way slowly among these marvelous relics, we are constantly surprised at the familiar look of things so very old. Here is a street of shops. The first store was occupied by an oil-merchant. The huge jugs in which he kept his different grades of oil still remain in the very spot where he left them when he hastily gathered up a few valuables, and fled from that terrible rain of mud and cinders and ashes, which buried his home, with that of thousands of others, eighteen centuries ago. The next shop is a tailor's store, and near by is a shop which, we learn from the inscription on the door-post, was that of an apothecary. Here is a ruined tower, from the top of which we can take a survey of this twice entombed city, or of that small portion which has already been excavated. From our elevated point of view, we can see public squares, the remains of stately columns, gorgeous temples, ruins of grand palaces, and thousands of roofless houses once occupied by the wealthy, and, there is every reason to believe, desperately wicked, citizens of the Pompeii of the past. The impressions made by such a picture sink into one's mind so deeply as to last a lifetime. Strange pictures rise before one's eyes; solemn reflections crowd the mind. The moment is one never to be forgotten. But we must not attempt to describe our feelings here; one must see Pompeii to appreciate it.

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the principal thoroughfares, catch a glimpse of the home of Michael Angelo, and gaze for a moment upon the beautiful bronze door which that famous artist rather irreverently pronounced "fit to be the gate of Paradise." When it came time to return to the depot, we found to our discomfiture that our Italian cabman was unable to comprehend a word of either French, German, or English, and when ordered, in either one or all three of the languages mentioned, to drive to the depot with dispatch, dashed off furiously in the opposite direction. By much vociferation of the one or two Italian words we had mastered, and violent gesticulation, we succeeded, however, in getting to the train just in time to leap aboard. Our sleeping car left us at Rome, and we were obliged to pass the night after the usual uncomfortable fashion —curled up on the seat, underneath a blanket, with a valise for a pillow. The next morning just at daybreak we peeped out of our window, and, to our surprise, saw water stretching out before us as far as the eye could reach. The track seemed to be running out to the very water's edge. Stepping over to the other side of the train, we found to our amazement that the view was identical on either side. Thinking that we might not be quite awake, and were looking out the same side as before, we oscillated back and forth, making observations from either side and from the middle of the car, until we became convinced that our train was running straight into the sea, the intent of which was to us an inscrutable mystery; for it seemed inevitable that we should shortly be plunged headlong into its dark floods.

We wondered at the cool apathy of our fellow-passengers under such alarming circumstances, and meditated the feasibility of numerous methods of escape,—such as dropping off the hind end of the train, sailing away on a valise, etc., but finally concluded to meet our fate with composure equal to any of our fellow-passengers. Just as we were becoming resigned to the evil catastrophe which appeared to await us, we began to discover in the distance the outlines of an island, with here and there a tall spire barely visible in the dim light of early dawn; and ten minutes later we found ourselves again on terra firma. We had found a new continent away out in the sea, apart from all the rest of the world—not exactly

a continent either, more properly an archipelago, as we soon discovered. While entirely surrounded by water, the land was divided into innumerable islands, all connected by bridges spanning the numerous canals which meandered among them like the cattle-paths of a western forest, without the slightest hint of regularity. The conductor turned us out of our section of the coach, and bundled out our baggage after us. As we stepped out of the station door to look for a cab, we found ourselves again at the water's edge and a long row of gondolas before us evidently saying, "This is Venice, and we are the cabs here;" so stepping aboard and seating ourselves in the covered coupé in the center, our gondoliers quickly paddled us to a hotel, where we snatched a few hours' sleep, and then, with a guide and a gondola, started out to see the town. The transition from a jarring, rattling, jostling, noisy railway coach to a graceful, silently moving gondola is most delicious. Nowhere else can one find such boatmen as in Venice. They stand with their faces to the prow of the boat, and dip their oars out and in the water so deftly that scarce a ripple is stirred; planting their oars deep, they incline their bodies forward with a quick jerk, then back to position again. This motion is repeated about thirty times a minute, and propels the boat at about the same speed that a good horse would trot, as nearly as we could estimate, though we did not have an opportunity to make a comparison, since there is not a single horse in Venice. The marvelous skill with which these boatmen turn the sharpest corners and shoot through narrow arches, is almost incredible. The ancient looking houses of the city all front upon the canals, rising up perpendicularly out of the water, as though they had been half buried by a sudden flood which never subsided. A flight of steps from the front door leads down to the water's edge, and a gondola may usually be seen near at hand, with a sleepy looking boatman drowsing in the sun. Often we saw little children four or five years of age playing upon the stone steps, within a foot of the dark blue waters, which led us to ask the guide if people were not frequently drowned in Venice, to which he gave a negative answer, assuring us that "in Venice everybody can swim," which painfully reminded us of our own lack of that convenient accomplishment, our case being that of the boy whose mother was unwilling he should venture into the water until he learned to swim. We have read elaborate treatises on the subject, and received a world of excellent advice from experienced swimmers, and believe we know pretty well how the thing is done; and yet we doubt whether our modesty would allow us to attempt an exhibition of the art in mid-ocean, at least unless we had a few experienced seamen close at hand to prompt us in case the excitement of the moment should lead us to omit any of the proper evolutions.

We should advise any one who expects to stay long in Venice to learn to swim before going there, as it would be the easiest thing imaginable for one, in a moment of abstraction, to start out for a moonlight stroll, and, while admiring the transcendent brilliancy of the Queen of Night in a clear Italian sky, walk down the front doorsteps into an involuntary sea-bath, where, like the tippling fisherman, he would go down, down to feed the fish, without a hope of rescue unless there happen to be some little Venetian boy prattling on the banks, who could plunge in after him and tow him to the shore.

Well, here we are, gliding along the Grand Canal of Venice, with the gondoliers darting recklessly in every direction, but never colliding and never bespattering the occupants. Here is the Rialto, the great bridge of Venice, ever so many hundred years old, with its two grand arches and its double row of shops on either side. We land close to it on one side to cross over and take a walk through the market-place, leaving orders for our boatman to join us at another point. And such a market-place you will see nowhere but in Venice. Fish, fish, fish, everywhere! Here and there are a few vegetables, rather dear in price and not extra fine in quality, evidently not esteemed so highly here as elsewhere, as fish is the staple diet of Venice. It is natural that it should be so, since fish are almost the only crop raised by the Venetian farmer, whose broad pasture lands and meadows are all buried in the sea. The fish-market of Venice is the best place in the world to study piscatology. We cannot begin to name the variety of fish, with scales and without scales, bi-valves and uni-valves, and curious masses of jelly without any valves at all. Strangest of all is the black cuttle fish, with its ink-fountain by means of which it "throws dust" in the eyes of its enemies. The gift of a few coppers persuaded a Venetian to squeeze one of these devilish looking creatures with his thumb and fingers, when it immediately vomited out its internal skeleton, and we beheld the oddly shaped cuttle bone which we have so often seen stuck between the wires of canary bird cages.

But we have only a few hours for Venice, and must hurry on. Here is St. Mark's church, whose rich gilt ornamentation glitters in the sunlight, and whose antique structure half persuades one that the legend which claims for it the honor of being the burial place of the veritable St. Mark, may possibly be true. Close by is the bell-tower, surmounted by a huge bell, on each side of which stands a mammoth bronze figure. The hand of the clock points just at twelve, so we shall see it strike. Now the bronze man on the right is raising his right arm, in which he holds a great sledge-hammer. Down it goes with a tremendous thump, and the great bell jingles as though a giant had struck it. The bronze man on the other side seems to be a shadow of the other, and repeats the operation in order to make the shadow true to life. So they go on, each striking alternately until twelve

double strokes have been produced, then each becomes as immovably passive as before.

Just at the right of St. Marks' is the famous Doge's palace, in which, however, there has been no Doge for scores of years. It is now used as a picture gallery, containing numerous works by the most eminent masters, the most remarkable of which is the painting of Paradise by Tintoretto, the largest oil painting in the world. Here are also the dungeons in which the prisoners of state were confined, dark, damp, and dismal enough, but rather disappointing after all, as they are not half so miserable as the word-painters have made them out to be.

Lastly, we note the Bridge of Sighs, which a famous Italian traveler has denominated "that pathetic swindle of Venice," which it certainly is, for we were not able to discover a single sigh in its composition. Neither was one, in passing over it, disposed to sigh more than in many other situations. It looks exactly like a hundred other little bridges in Venice—neither better nor worse—and there is no special reason why one should sigh because it happens to be the particular bridge over which the cut-throats, ruffians, brigands, and miscellaneous villains of a century or two back, used to walk on their way to execution.

We ask our guide what next there is to be seen. He scratches his head, and says, "Well, there are the public gardens;" but we cannot be induced to believe that a public garden in Venice, where land is so scarce that some of the streets are hardly wide enough for two persons to pass without jostling each other, can amount to much compared with the magnificent garden of the Tuilleries of Paris, or the spacious parks of London, so we conclude to return to our hotel, stopping on the way to visit the Government school of lace-makers, and the manufactory of the famous Venetian glass. We get back just in time to escape a vigorous rain-storm, which pours down water as plentifully as if it were as badly needed in Venice as in the heart of the Sahara, and brings on the night so early that by nine o'clock when we start for the depot to resume our journey, the watery streets are, to use an Americanism, as dark as a pocket. Snugly packed away in the coupé of our gondola, we do not mind the rain, though the darkness is somewhat oppressive, as the electric light is as yet somewhat of a novelty in Venice, at least on board gondolas. We are afraid our boatmen will lose the way in the darkness so that we shall miss the train, but, almost before we are aware of it, they are dropping the oars, having brought us to our landing-place, and, after paying our fare,—not forgetting the "*pour boire*" for the boatmen and a few coppers for the man who holds our gondola with a boat-hook,—we step on land again. The "*pour boire*," we should explain, is a sum which the traveler is expected to pay, in addition to the regular fare, for the purpose of supplying the guide or gondolier with wine or beer to drink. In other words, it is "drink money." We took pains, however, to explain that we did not believe in drinking either wine or beer, and would not buy either one for anybody, and that our "*pour boire*" was for bread instead of wine.

Snugly packed in a compartment by ourselves, we were soon flying over the rails again toward our destination, Vienna. Passing another miserable night, cramped on a short seat, and shaken out of every inclination to slumber by the jostling train, we arrived the next morning at Trieste, one of the most important ports of the Adriatic; and, after traveling another day through the most delightful variety of mountain scenery, including the beautiful Semmering Alp region, we arrived about ten o'clock P. M. at Vienna. We found an omnibus from the Hotel Metropole at the depot, and after securing our baggage, rolled away over the rattling pavement to the hotel some three or four miles distant,—all of the railroads entering Vienna terminating at the outskirts of the city.

The next morning the first sight that met our eyes as we looked out from our window was the "Beautiful Blue Danube," flowing majestically along to mingle its blue waters with the briny waves of the Baltic. Wait a moment. Did we say *blue* Danube? Certainly, the "Blue Danube" must be blue. We look again, and then again, to assure ourselves that this is really another poetical fiction, for certain it is that the "Beautiful Blue Danube" is the muddiest stream we ever set eyes upon. Indeed, one finds it hard to believe that it is even water. It seemed to be nothing but yellow looking mud, and an old resident assured us that this has been the complexion of the river during the memory of the oldest inhabitant. Alas, the romance is all gone! The Danube after such a cruel disappointment is no more to us than the Kalamazoo or any other little river whose waters are not extraordinary for their purity.

The first day in Vienna was spent in hunting for a guide and getting settled. We succeeded after several miles of tramping through the rain and mud, in finding suitable furnished apartments near the great hospital of Vienna, the central object of interest to us. Receiving an invitation from Prof. Hebra, to whom we had a letter of introduction, to attend his lecture on Diseases of the Skin at two o'clock P. M., we made a beginning of our medical work in Vienna, about which, together with the many things of interest which we saw and learned in this great city, we will tell you next month.

Tea versus Whisky.—A newspaper correspondent is responsible for the statement that Sir Garnet Wolseley, commander of the British army, is a teetotaler, and has substituted cold tea for whisky in the British army. If true, this is certainly a commendable improvement. One more substitution, that of cold water for cold tea, would effect the change necessary for a thorough-going temperance reformation.

A HYGIENIST ABROAD.

A MONTH IN VIENNA.

BEFORE our first week in Vienna had expired, we were daily going through the following program:—

At 7:30 A. M., special instruction at the Polyclinic, in diseases of the throat and larynx, with an hour's practice in treating patients afterward; at 9 A. M., clinic on diseases of the skin; at 10 A. M., surgical clinic by the eminent Prof. Bilroth, who astonished the world a few years ago by removing a cancer from a man's stomach (The patient died, but that was to be expected. The operation was quite a success, and has since been performed upon several patients, who are yet living, and enjoying excellent health); at 11 A. M., the study of tubercular vascilli under Prof. Stricker; at 12 M., instruction and exercises in the treatment of the ear, under Prof. Politzer; at 1 P. M., special surgical work with Dr. Wölfler, First Assistant to Dr. Bilroth; and at 3 P. M., work in the microscopical laboratory of Prof. Kolisko; at 5 P. M., a private study, with the assistant professor of Pathology, of the result of all the post-mortem examinations made in the hospitals during the day; at 6 P. M., study and practice in diseases of the eye, with the assistant of Prof. Arldt, the oldest specialist in diseases of the eye in Vienna; between 7 and 8 we snatch a breath of fresh air and a few mouthfuls of food; at 8 P. M. exercises at our own apartments in removing foreign bodies from the larynx, stroking the vocal cords, performing sham operations on the interior of the larynx, exploring the throat, ears, and nasal cavity with various instruments,—all of which operations were performed on a professional dummy in the person of an old lady who obtained her living by allowing herself to be maltreated in this manner.

To relieve our reader's mind from any misapprehension, we ought to state just here that the old lady assured us many times that none of our operations gave her any pain. The kind-hearted creature generously volunteered to allow us to wash out her stomach, or explore it with an electric light. She was certainly the most convenient manikin we have ever met anywhere, as she had by long practice acquired such unusual delicacy of touch in the internal structures, as to be able to correct us instantly, in her pleasant German tongue, whenever we failed to direct the probe to the point designed.

When through with our old lady, we had letters and notes for articles to write which occupied our time till midnight, unless we had a visit from a good friend we were so fortunate as to find, who frequently came to aid us in gathering together the fragments of the German which we had learned years ago at school, and which at first seemed of little more use to us than Greek, but afterward astonished us by the rapidity with which it freshened up under the influence of a German sky, German diet, and nothing but German, German, German, from morning till night.

Then we went to bed, and quickly dropped off to sleep, notwithstanding the hard mattress underneath, and a huge, obnoxious feather-bed above. The execrable feather-beds, for blankets, are universal in Germany; so it was no use to do otherwise than smother our compunctions, and endeavor to make the best of it. We usually succeeded in getting to sleep with the mountain of feathers towering high above the bed-posts over us; but we inevitably awakened during the course of the night to find that, during our unconsciousness, we had rebelled, and kicked the monstrous bag upon the floor. We could not conceive of a more uncomfortable covering during sleep. It is impossible to make one of these great round sacks cover the whole person at the same time. A foot or a knee, an elbow or a shoulder, is certain to be protruding somewhere, and not without considerable risk of being frost-bitten on a cold winter night; for the great earthern thing used for a stove, which stands up in a corner, and looks like a cup-board, or a secretary, or a money safe, or a huge picture-frame with a pedestal, or almost anything you are pleased to call it but a warming apparatus, is an exceedingly poor substitute for one of our American heaters. We should not like to be dependent upon one of these slow-going stoves on a January night, with the thermometer a few degrees below zero, if the fire should happen to go out; for the chances are ten to one that we should freeze solid, even if we succeeded in kindling the fire, before ever the clumsy piece of

Everybody seemed to be hard at work, except the German students, who appeared to take things more leisurely. Perhaps it is true in Vienna, as in other parts of the world, that "a prophet is not without honor but in his own country and among his own kin;" or perhaps the phlegmatic temperament of our German friend disposes him to devote more time to play and less to work than his American professional brother.

Here we are just opposite the doorway leading to Prof. Bilroth's operating amphitheater. It is just his hour, and perhaps you will be interested to drop in with us. A patient is on the table all ready. One of the half dozen attendants is administering the chloroform, and a noble-looking old gentleman, with a kindly face and a magnificent physique, is explaining the nature of the case, and of the operation which he has to perform. The poor patient is suffering with that most terrible of human maladies, cancer, and the part affected is the larynx, or that portion of the upper air passage which contains the vocal cords. The disease has extended to such a degree that the passage is nearly closed, and breathing next to impossible. "Well," you would say, "what does the professor propose to do for such a case? Should he not administer the chloroform a little more freely than usual, and let the poor fellow die easily!" By no means. The motto of the physicians of Vienna is, "While there is life, there is hope;" and if that hope consists in a surgical operation, the operation shall be done, even if the chance for life is but one in ten thousand, and so the eminent professor proposes to remove this poor man's larynx, which you see he has already nearly accomplished, and shortly you will see him slip in place a silver tube, through which the man may breathe freely. In the course of a few weeks, the wound will be healed, leaving a permanent opening, and then, by further exercise of ingenuity, he will furnish the voiceless patient with an artificial larynx, containing a number of vocal cords, by means of which he can speak, though in a monotone, of course, as artificial cords are capable of making but one tone. But this tone can be modified by the tongue, lips, palate, and other accessory organs of speech, into any variety of sounds which can be uttered in that tone. If he gets tired of one tone, he can have two or three sets of vocal cords, which he can introduce at will, and so modulate his voice from a deep base tone to a shrill falsetto.

We must not pause so long in a single apartment, or we shall never get through this great establishment.

As we step out into the court again, and walk along, we pass the unpretending doorways over which are inscribed the world-famous names of Stellwag, Arldt, Jaeger, Hebra, Kaposi, and others. The last name, by the way, has a little romance about it. The professor, now the leading authority on skin diseases since the death of the elder Hebra, was formerly known to the professional world as Cohn. Suddenly Cohn disappeared from view. No one knew what had become of him. There was no account of his death, and none of his having fled to foreign parts. He had simply dropped out of knowledge in some incomprehensible way.

The secret was this: the eminent specialist of skin diseases wished to marry a daughter of his venerable teacher, Hebra, but the latter objected on account of his Jewish name, and so one night, when Cohn retired to rest, he dropped off with his old garments his old name, and awoke the next morning, Kaposi.

Here we are at the entrance of the Pathological Institute. Underneath is a long room, in which are arranged in coffins the bodies of patients who have died in the hospital, whose friends claim the privilege of burying them. We may look in through the open door, by going down a flight of stairs to the left, and, as we do so, we see the man in charge of this department carefully sorting out labels, on which are written the names of the deceased, their ages, and other particulars, and tacking them onto the coffins. How he ever prevents their getting mixed up and transposed is a mystery not easily solved, and we would not wish to vouch that such an accident does not happen now and then. A hearse is just coming in to take away one of the three coffins ready for burial, and we will run up stairs and take a moment's peep into Prof. Stricker's famous laboratory.

In this little work-shop have been made some of the most important of modern discoveries in relation to the structure of the human body. Here is our table, and with the apparatus scattered over it we will make a careful study of the so-called tubercle bacilus discovered by Prof. Koch of Berlin, and believed by him to be the cause of consumption. Prof. Stricker believes Koch to be in error in his views on this point, and so we are studying his side of the question, hoping by comparing the arguments of both to be able to arrive at the real truth.

The other morning we had the pleasure of meeting in this interesting place, our friend, Prof. Heitzman, of New York, one of the most noted microscopists in America, who has come here to work up a special subject with Prof. Stricker, during his summer vacation.

Some of you will perhaps be interested to know that the Medical Department of the University of Vienna, one of the leading medical institutions in the world, has a Professor of Hydropathy, or water-cure. Dr. Winternitz occupies this chair, and has a cold-water clinic three or four times a week, at the Polyclinic, a few rods from the great hospital. We called in there the other day to see him, and found him prescribing wet bandages for the abdomen, cold com-

presses for the throat, chest-wrappers for the lungs, foot-baths for the head, cool shower-baths for a general tonic, plain diet, and other sensible things which are not wholly unfamiliar to us. He received us very politely, and took us down stairs to the basement, where he had everything fitted up for the demonstration of his sovereign remedy. Sitz-baths, full-baths, foot-baths, shower-baths, douches, sprays, packs, etc., were all in vigorous operation. The room was rather cold, not over 55°, and the water still cooler, so that a number of patients groaned and squirmed and shivered when the great streams of water came pouring down upon them; but they were quickly rubbed and spatted till a fine reaction occurred, and the Doctor assured us that the results were excellent, although, to us, the dose seemed rather severe.

The Professor invited us to visit his institution ten or twelve miles out of Vienna, which we accordingly did the next day, driving out over the beautiful hard road in a light, covered carriage, as the sky threatened a storm. We found Kaltbad a charming little place up on the mountain side, supplied with water by a gushing spring, clear and cold, hundreds of feet higher up. The Doctor owns the whole village, it being almost entirely occupied by the patients of the establishment, who number, during the summer months, somewhere from three to five hundred. Water and a carefully-regulated diet, are almost the sole means relied upon in the treatment of patients, although the Doctor uses a very little medicine now and then, in special cases. The appliances in use seemed to us rather crude, compared with those we have been accustomed to employ in the Sanitarium, but they were certainly superior to those of any other establishment we have seen abroad, if we except the splendid institutions at Baden Baden. The courteous assistant physician showed us all about, and explained very fully the workings of the institution. He proposed to give us a little lunch, "schwartz-brod und saur milch" (black bread and sour milk), the staple articles of diet in the establishment; but we suddenly recollected that our time was too limited to allow us to prolong our stay. Sour milk and black bread are the leading articles of diet among the poor, though perhaps we should add *beer*, which is certainly used much more freely than water in Germany. We have many times seen German laborers making an entire meal of black bread and sour milk, with beer. We have frequently seen women laborers making a meal of black bread and water, though we do not recollect having seen, in Germany, a single man, among the laboring class, eating his dinner without the beer. American ladies would certainly be amazed to see the German women at work along with their husbands upon the street, hauling stones, digging ditches, making pavements, collecting garbage, building public buildings,—in fact, in every place where one sees men, women are also to be seen. The principal difference in their employment seemed to be that the women did the hardest kinds of work, and did the most of it, and did their work without smoking pipes, and without drinking much beer, which could not be said of the men.

Here is a great brick building going up. The brick and mortar are all carried by women, upon their heads. Young women of eighteen or twenty, and old women whose locks are white,—or would be if they were thoroughly washed,—are trudging along together with great piles of mortar upon their heads, every one as straight as a straight-edge, with strong arms, ruddy cheeks, and bright eyes, the very picture of robustness and health,—no high-heeled shoes on their feet, but good substantial boots, and no long skirts dangling about their ankles. Their dresses clear the ground by at least ten inches. A well-informed gentleman assured us that these women are considered more valuable, as common laborers, than men. Being more industrious, they accomplish considerable more work in a day than the average man, and hence employers are willing to give them equal pay. We cannot say that we believe the kind of employment described is in any way advantageous to the women of Germany, as the women of that class were usually coarser looking than the men were; but they work well, and there may be some apology for their employment in the fact that a large share of the able-bodied men are in the army. We were informed that the standing-army of Austria has twelve hundred thousand men; while eight hundred thousand more soldiers are held in reserve. One thing we observed in the laboring women, which we consider noteworthy: when we met them upon Sunday holidays, we found them still retaining the same good sense in dress that they observed on week days. They still wore boots, but not so coarse and heavy as those worn when they were laboring, and their skirts still lacked eight or ten inches of reaching the ground. One of these women would probably feel as ill at ease in a pair of French boots, as a man would feel in a trailing dress, or a monkey entangled in the same ridiculous trapping.

But it is time to leave Vienna, as we have many other places to visit, and so we will not stop at present to tell you of the curious one-sided wagons, and the big and little carts drawn by huge dogs, sometimes harnessed alone, and sometimes making a team with a man or a woman, a boy or a girl for a partner; or of the absurd way in which everybody works on Sunday, and wears a sanctimonious face on a holiday; or of the spacious avenues, with their triple driveways and double rows of trees; or of the parks, and gardens, and palaces, and many other wonderful sights which ought to be seen to be appreciated.

Next month, if you are not tired of following us in our journeyings, we will take you on a little excursion among the Alps.

A HYGIENIST ABROAD.

AMONG THE ALPS.

EARLY one lovely morning in June, a party of five, of which the writer was one, swallowing a hearty breakfast,—which was a very unhygienic thing to do, but excusable on the present occasion, as a moment's delay would occasion the loss of the train,—with a few bundles, and two or three carpet-bags, set out for a week's trip among the Alps, taking for our starting-point a city on the borders of the Black Forest, at a point where, in a half hour's drive, one can travel in Switzerland, Germany, and France. A short ride through the beautiful valleys of the Jura Mountains brought us to the city of Berne, famous for its bears; and a few hours later we were able to spend some time at Fribourg, a place renowned for its suspension bridges and its great organ, which is considered one of the finest in Europe. By evening we had reached Lake Geneva and Lausanne, and changing cars we returned along the border of the lake some distance by another road, passing numerous Swiss villages, nestled down by the lake-side, at the foot of the mountain range, whose sides were covered almost to the top with terraces heavily festooned with vines, and among other places of interest, the romantic old Castle of Chillon, which stands partly in the lake and partly on the shore. Its grim walls and tall tower look as solid as when the pile was erected, some centuries ago. The record omits to tell how many princely prisoners have pined away in its dismal dungeons. About ten o'clock, our train left us at the little village of Saint Maurice. Two hours were consumed in getting located for the night; and making arrangements for an early morning excursion.

Promptly at four o'clock, we were up and following our guide up the mountain side to a curious cavern in the rock, which bears the romantic title of "Fairy Grotto." We found the "fairy" who attends the grotto sound asleep, and it required fifteen minutes of vigorous ringing of his bell, and rapping upon his door, to wake him up. Finally a half-dressed man with a frowzy head, projected himself through the door, provided us with torches, and led the way into the cave. In, in we went, turning sharp corners, dodging jutting crags, going through many genuflections and twistings until we reached a beautiful cascade at the end, springing over a shelf of rock thirty or forty feet above us, and pouring down into a black abyss, which may be bottomless for all we could discover. The guide pointed out to us one lone little stalactite, the pride of the grotto. Chilly and damp, we were glad to hasten out of the cold atmosphere into the early morning air, though the latter in that elevated region is by no means comfortable. We felt, on the whole, rather disappointed. Perhaps our disappointment would have been less if we had never seen the famous Mammoth Cave of Kentucky, with its huge yawning chasms, its mammoth labyrinth of galleries, and its wealth of stalactites and stalagmites.

We forgot to mention that, climbing the zigzag path up the mountain side to the mouth of the grotto, we met a lad coming down from the mountain pastures, high up above, with a large tin can filled with Alpine milk. We persuaded him to set down his can, and pour us out half a pint, to enable us to test the quality of the world-renowned product of Alpine bovines, which we found neither better nor worse than many less pretentious specimens of lacteal fluid tasted in humble farmers' kitchens at home. As we came out of the cave, we saw a number of peasants carrying down the steep mountain path, upon their backs bundles of produce, which they undoubtedly expected to exchange for household necessaries. Beyond the little valley, snow-covered mountains rose thousands of feet. Lying a little lower were numerous mountain pastures, covered with sweetly scented grass, after which the goats and nimble cattle of the mountains tirelessly climb from morning till night. A little farther down the valley is shown the spot where the Theban legion was massacred by a cruel Roman emperor, because they refused to engage in the work of exterminating their Christian brethren in Germany.

Thoroughly fatigued with our morning tramp, and ravenously hungry, we reached the little tumbled-down pile of rough stones called a *hotel* where we had spent the night, just in time to eat our breakfast, which we found ready, before train-time.

Then, catching our valises, we hurried down through the one street of the town, bordered on either side with dilapidated stone buildings,—certainly much older than the oldest inhabitant,—and reached the train just in time to purchase our tickets. In half an hour, the train stopped, and we were put off at Vernayez. We expected to find a village, but instead, as soon as our train went off, we found ourselves at a solitary little building used as a station house. We peered around for some time before we discovered, rising from among the tall weeds that covered the little plain on that side of the Rhone, one or two buildings, the larger of which we took to be a hotel, and accordingly directed our course toward it, after having first found a man with a two-wheeled cart to aid with our baggage. At the hotel, we found an old man who smoked a pipe and talked French; and a young man who spoke English tolerably well, but disgraced the language by telling us all sorts of impossible yarns respecting the excursion which we proposed to make. We learned, however, that we should need two guides, three horses, and a two-wheeled carriage; and leaving orders for the necessary arrangements to be effected, we made a short excursion to the romantic Gorge de Trient, the entrance to which was but a few paces distant.

The entrance to the Gorge is a mammoth vertical crack in the face of a perpendicular cliff, which borders the southern side of the narrow valley of the Rhone. Down through this narrow crevice rushes the wildest torrent our eyes ever rested upon. A large stream, formed by the confluence of thousands of little rivulets coursing down the mountain side for miles back in the rocky range, foaming and rushing and dashing along through the wildest scenery in all Switzerland, for fifteen miles, just before it leaps into the Rhone, is compressed between these two perpendicular cliffs, which sometimes approach each other so closely that one can easily reach from one side to the other. In this rocky vise, the water is churned into a milk-white foam, which is shot spitefully along by the overwhelming pressure behind, as though it were shot out of the mouth of a huge cannon. Just above this rushing torrent, clinging to the side of the granite cliff, is suspended from iron rods driven into the rock, a narrow pathway; along this our guide led us through the most romantic, nerve-racking scenery we ever beheld. As we looked down into the whirling, dashing, leaping, sparkling foam below, the disposition to spring over the frail railing which alone separated us from instant destruction, was almost irresistible. But our guides are waiting, and we must hasten out of this wild place, which impresses one as though it might have furnished an appropriate entrance to the "Inferno" of Dante. As we anticipated, we find our guides ready, with their three ponies and a curious little two-wheeled cart which looks like one of the awkward dog-carts for hauling coal one sees going about the streets of our large American cities, only on a smaller scale, and furnished with heavy springs beneath its rude, square box, which is just large enough to hold two persons with a bundle or two of baggage behind. As we expected, we find one or two extra guides endeavoring to press themselves into service, but we resolutely order them away, assist two of our ladies into the gig, the other upon a pony, and then mount ourself upon one of the two remaining horses, whose countenance seems to express a kind-hearted disposition. Alas, how often are we beguiled by a deceptive face! sometimes in our opinion of horses as well as of men. Little did we suspect what may have been true at that very moment that our benevolent, noble-looking equine was meditating the most monstrous mischief in his heart. All being in readiness, we at last started out for a day's ride over the wildest mountain region in the world.

After traveling along a level road a short distance, our course suddenly turned toward the perpendicular mountain side, down which we had previously noticed a little rivulet dashing itself in pieces in beautiful cascades rising one above another as far as the eye could reach, and hidden now and then by a thick growth of evergreens, and here and there crossed by a log, laid across from jutting rocks, by which perilous means adventuresome mountain climbers might seek the ever-changing views of the lovely valley beneath. Toward this very perpendicular ravine, our head guide leads us. What can he mean? Perhaps he is only taking us here to show us the fantastic manner in which the restless water displays itself, as it leaps down from rock to rock, and finally runs away in sparkling foam. But here we are, driving right into the thicket of evergreens, and climbing a narrow path so steep and smooth as to scarcely offer a foothold, even for a foot-climber; but we somehow scrambled up, when our road turns to the right, and here we find ourselves actually riding over one of those very logs which we had previously seen from the valley below; but we discover that two or three more logs are laid along beside it, with a little earth on top, so that we have a passable bridge after all. Almost as soon as we get across, we turn nearly square around, and travel back again across another bridge, the road being higher up. Occasionally the path leads off a little farther along the mountain side, but quickly returns to the cascade again, and the light log bridge. So we go zigzagging up the mountain, now and then stopping to rest, and looking down to count the bridges and the turnings of the road just beneath our feet, and then casting our eyes out over the lovely Rhone valley, greatly lengthening as we make the ascent, with its

winding river and fertile fields on either side, all walled in by crags and grim precipices. We at last reached the top of the bluff, having crossed twenty-five bridges, and turned more than twice as many square corners. As we looked about us we found ourselves upon a mountain top, and yet saw rising higher and higher in the faint distance, peak after peak, snow-capped and barren; while our road lay along the side of a deep gorge, leading us constantly higher and higher, passing every now and then little Swiss villages, clinging to the mountain side, in seemingly impossible places, up among the stunted pines, where scarce a blade of grass could grow, and subsistence seemed impossible. Every now and then we met or passed a peasant with the inevitable huge bundle strapped upon his back, or balanced upon his head, going somewhere.

We have not time to dwell on the never-ceasing variety of scenery constantly opening before us. Deep gorges, glittering cascades, dancing down over the rocks, and glimmering in the sunlight like streams of silver, huge bluffs, yawning chasms, cloud-mantled peaks, and roaring torrents seemed to be huddled into this little corner of the world without the slightest regard to the artistic value of such materials, or the great demand for them elsewhere. Now our road was zigzaging over a mountain top, now zigzaging down into a valley; now crossing a frail bridge over a yawning chasm, and now winding along the edge of a frightful precipice. Our guides seemed to have scarcely the remotest idea of looking after our safety, and kept our hearts jumping to our mouths, by leading the carriage-wheel within five or six inches of the edge of the precipice, which presents a perpendicular wall for nearly three thousand feet to the bottom of the gorge, when there was room enough and to spare on the safe side of the track. When we were crossing one of the most perilous passes which we encountered, the horse which the writer rode, and which he had selected, as he before intimated, on account of his honest countenance, found it impossible to longer act the part of a hypocrite, threw off his mask, and deliberately attempted to pitch him headlong over the brink. He reared, plunged, sidled, started quick, stopped short, and performed every other malicious antic by which his murderous scheme could be accomplished, and all without the slightest provocation unless it was because we had condescended to pat his villainous neck, and pull a few handfuls of sweet grass for his special delectation but a few moments before. Fortunately, we were able to keep our seat until, by administering a liberal dose of corporal punishment by the aid of a stout Alpine stock which we carried in our hand, the savage brute was diverted from his infamous intent. When the little adventure was over, and we had leisure to glance down the abyss where we might have been tumbled headlong, we confess our nerves were a little unsteady.

Two o'clock found us at a little hotel, or way-side inn, near the bottom of the mountain gorge, on the direct route to Chamouni, a little village lying close to the foot of the world-famous Mt. Blanc. So while the horses and guides were getting their dinner, we also ordered a meal prepared for our party of five; and, after an hour's impatient waiting, the lady in charge produced for us a very comfortable meal, only the bread was a little too sour to be palatable, and the milk had a flavor of something foreign to it, and the soup was not so strongly seasoned with nutriment but that it was easy to discover that the water was brackish, and the eggs were a trifle stale; but these were all mere trifles, which an Alpine traveler would never think of mentioning as obstacles to the enjoyment of a hearty meal, after a long ride over the rough mountain passes of that elevated region.

Soon after our refreshment, we were in readiness to pursue our journey; and as the road from this point to Chamouni is comparatively easy, we made rapid progress. In the course of an hour, we had passed the summit of the ridge which marked the beginning of the gorge through which we had been traveling, and saw stretching down before us another gorge, leading into the valley of Chamouni. Here we could see how these mountain rivers have their beginning,—in little rippling rills flowing out from beneath huge snow-banks lying on the highest peaks, and converging toward a common center, until a larger stream is formed, which swells rapidly in dimensions as it descends, until in a few miles it becomes a rushing torrent, tearing away huge rocks from their places, and gradually cutting its bed deeper and deeper into the hardest rock.

Another hour's easy riding brought us to the little village D'Argentière, lying at the foot of a glacier of the same name. Here our guides insisted that it would be wise to stop for the night, and make thence an early morning excursion to the Mer de Glace, the ascent to which is from a point about two miles further on. While we were discussing the matter, however, two friendly English guests of the one hotel of the place improved the opportunity to inform us that the whole establishment was afloat, having been thoroughly deluged by a storm the day before, driving all of the guests of the place into one or two large rooms for shelter. Several circumstances made us suspicious that our guides had some selfish motives in wishing us to stop in this dismal, tumbled-down place, and so we insisted in driving on to Chamouni, taking a large carriage, however, for the balance of the way, in which our whole party were able to ride with comfort. We reached our destination in time to catch one glimpse of the snow-covered peak of Mt. Blanc, towering high up above the

clouds, which soon closed up the one little space of blue, shutting out forever from our view the stately pinnacle which annually looks down upon ten thousand reverent visitors.

LEAVING a commission with the waiter to wake us at four o'clock, so as to enable us to make an early morning excursion to the Mer de Glace and other places of interest, we retired to rest, and slept so soundly that we seemed to have just fallen asleep when the obnoxious waiter was thundering at our door, announcing that we had already overslept our time. A warm breakfast was ready for us, which we ate with a relish while our guides were preparing for the start, and by five o'clock we were again on the road. An hour's driving brought us to a point where the ascent of the mountain could be most easily and quickly made, from which one may look out upon the *Sea of Ice*, and view it in all its splendor. Two hours' hard climbing brought us to the summit of the peak called the Chapeau; and spread out before us was the great river of ice, flowing down the deep mountain gorge so slowly that its motion is imperceptible to the eye, and yet with such resistless power that it grinds the hardest rock to atoms beneath its crushing weight, and carries before it every presenting obstacle. The deep blue of its precipices seem almost like a reflection of the sky. Deep seams penetrate far into the interior, and here and there, through some mysterious agency, huge caverns are formed, the entire depth of which the eye does not fathom. From its foot flows a great torrent of muddy water, formed from the melting of the lower portion of the glacier, as it descends to the warm valley. A little higher up, reached by a long, rude path, winding around a cliff, is the dangerous pass known as the Mauvais Pas, which a portion of our party visited. After resting a few minutes, we hastily retreated down the mountain, taking a shorter path, so as to join our carriage at a point a mile or so in advance, where we had left it. As we hurry along, the startled goats, who are nibbling the straggling blades of grass peeping out here and there from among rocks and snowbanks up the side of the mountain, spring nimbly across our path, and scamper up the mountain side, leaping from rock to rock with perfect ease, along the edge of precipices where the slightest slip would be destruction. Sometimes little kids, less timid than their mothers, would come close to us, begging for a biscuit.

After an hour's run down slippery rocks and winding paths, we reached the place where we had left our horses the day before. As we were to return by a route which might be traveled by a larger carriage, we made arrangements to pursue our journey in a more comfortable manner than that in which we had begun our first day's traveling, and accordingly started on, leaving one of our guides to follow with the small carriage, and bring our baggage and the extra horses. Dinner-time found us at the same place where we had dined the day before, with precisely the same bill of fare. Our guides tarried long over their lunch and bottles of wine; but we at last succeeded in getting off again, but at so late an hour that we felt grave fears that we should be too late for the train, with which we wished to continue our journey. The guide, however, assured us that we had ample time, and so jogged leisurely along. Our road this time led over the Tête Noire, one of the most celebrated mountains in this region, by a route so steep that our poor horses were tasked to the utmost to draw even the carriage, leaving our party to climb up on foot as best they might,—a bargain which was not mentioned when we made arrangements for a carriage. However, we arrived safely at the top at last, and then our guides insisted that we must stop again to feed the horses, although they had spent two hours in eating, only an hour and a half before. We strongly suspected that they were longing for another bottle of wine, and hence protested against further delay, but with little avail, until we made a few positive assertions to the effect that if we were not in Martigny in time to take the seven o'clock evening train, we should deduct a liberal proportion of the price agreed upon for our conveyance, as the time was stipulated in the bargain. This had the effect to liven up matters very considerably, and we were soon flying down the mountain at a speed almost frightful. Suddenly we saw our driver making great exertions to stop his horses, in which he finally succeeded, though with considerable difficulty, when we learned that our carriage brake had given out, and would no longer hold back; and, as it was a single carriage, with an extra horse hitched along-side, the whole task of holding back the heavy carriage, with its load of six persons and a large lot of luggage, fell upon one horse, and depended entirely upon two frail straps. This situation was anything but pleasant, as the road was, in many places, exceedingly precipitous for long stretches, without curve or break. It seemed that the poor horse who was doing all the work had given out, so we were obliged to wait as patiently as possible, though every moment the time for our train was drawing nearer, until the rear guide came up with his extra horses. A change of horses was quickly made, and also a change of drivers, and again we started down the steep mountain road at as reckless a speed as ever.

Notwithstanding our fear of being late at the station, and no inconsiderable uneasiness concerning the condition of our carriage, we could not avoid noticing the charming scenery which now and then appeared through the thick trees which bordered the road. As we wound around the mountain side, the valley of the Rhone again came into view, with its level meadows on either side, stretching on and on as far as the eye could reach, or until a turn in the river hid them from view. Every few minutes, as we were rushing along, we passed little Swiss villages, stuck up among the rocks in every conceivable

way, which afforded many most grotesque and long-to-be-remembered sights. The quaint little children, gathered in knots, looked at us with open mouths and wide-stretched eyes, as we dashed along. The older people dropped their work, and stood gazing after us until we were out of sight. Even the goats and the cows and the mules stopped their various employments to ascertain the meaning of such an extraordinary disturbance. Probably they were no more astonished at us than we were at them, especially at the way they lived, huddled together,—men, women, children, goats, cattle, horses, chickens, pigs,—all in the same house, or at any rate under the same roof, and with a door connecting the kitchen and the stable, so that practically there was but one suite of apartments for the whole community, the humbler members of which evidently felt as much at home in one apartment as in the other. Each house had two front doors, one opening into the stable, and the other into the family sitting-room; and it was not surprising to sometimes see the brute members of the family walk out of the stable door, and stroll in at the other. As a matter of course, the front door presented a very picturesque, but, to say the least, not a very sanitary condition. No graveled walks, no flower beds, no green turf, but here and there little heaps of such material as is usually found most abundant in barn-yards, and not infrequently a huge heap of the same material exactly in front of the principal entrance of the dwelling. Here are two milk-maids filling their bright tin pails, who quickly seize the horned members of the family by the caudle extremities to prevent their scampering off with fright, as we rattle by. One milk-maid, in a quaint Swiss costume, has dropped her pail, and is swinging her arms and shouting at the top of her voice something which we do not quite understand. But now we see: here is a girl clinging to a buxom calf which she has barely succeeded in getting out of the road before our carriage comes rattling over the spot where the creature stood. The girl seems satisfied with her success, and the calf kicks up its heels at us in spiteful resentment for having been disturbed in his twilight meditations.

All this time we are dashing along at an increasing speed; and now we are on level ground, with the station just in sight. Two minutes more and we shall be there; but it is already one minute past the time for the train to start. Has it gone? We cannot tell, but we dash up, leap out, and find that it still stands upon the track, having been delayed by a train from the opposite direction, which it meets at this point, and which just at this moment comes rushing in; so we dash across the track and tumble on board just as the wheels begin to move. Five seconds more and we should have been too late. Our guide stands looking after the train a little disappointed, however. He has had his full pay, but we did not give him anything *pour boir*. Well, we are bound for the Baths of Leuk, where we expect to take a community bath to-morrow, about which we will tell you some other time.

A HYGIENIST ABROAD.

THE LAND OF THE MIDNIGHT SUN.

SOMETIME we shall try to tell our readers about Baden-Baden, the most famous bathing place in Europe, with its beautiful Trinkhalle, its magnificent Conversation-Haus, its grand Friedrichsbad, its hot springs, its "whey cure," its lovely promenades, charming avenues, enticing rambles, romantic old castles, beautiful scenery,—all set down in the midst of the great Black Forest, the scene of so many stories of thrilling adventure. We should like to tell you, too, of a somewhat sensational carriage-ride we took at night through this same Black Forest. But we must leave these topics for some future time, and take a little run up into Sweden, while waiting for the sailing of the great steamer which is to take us back to our native land. Leaving the balance of our party in Cologne to await our return, we took the cars at eleven P. M. Stockholm, by way of Hamburg. Morning found us in the great shipping port of Germany, and changing cars, we were soon on our way through Schleswig-Holstein. Reaching Kiel before noon, we went on board a small steamer, and after riding six or seven hours across an arm of the Black Sea, threading our way among charming islands, considerably sheltered from the sea, but not sufficiently to prevent our little ship from shifting in a side-wise fashion, producing an epidemic of sea-sickness among the passengers, we were glad to disembark at Korsor. Taking the train again, we reached Copenhagen shortly before midnight, where we found, to our chagrin, that we must wait twelve hours before taking the steamer again, to cross the Great Belt to Malmo.

We improved the time in running about the city, observing its customs, its busy market, its little fleets of fish-boats coming in with their morning "catch," its gaily-dressed flower girls, and its numerous shipping, which seemed to be scattered all over the town. Here is a long row of ships in the very center of the city. How they ever got here is a mystery. At any rate, there seems to be no place for them to get out, for there are stationary bridges on either side of them, coming close to the water. We were much puzzled for some time, but finally discovered that they were simply market-boats which never stir from their moorings from one end of the year to the other. There is a plank walk reaching from each to the shore, and people are going to and fro, purchasing fish, vegetables, and various other commodities, which they carry home on huge trays upon their heads.

Our guide wishes to show us something on the other side of the river, so we must cross a neighboring bridge. Just as the horses' feet are touching the first planks, the bridge suddenly begins to move upward. The driver stops his horses, and in less time than it takes to tell it, the bridge has split in two in the middle, and each half is standing up endwise on its respective shore. A little tug comes puffing along the river with a huge ship behind it, so we must either wait until the performance is over

ing comfortable. After riding for several hours, our road led us through a rolling country not very different from what we were accustomed to see in our Middle Western States, but the houses and the people and everything except the natural landscape, was so different as to afford constant material for interesting observations. Every now and then we passed a quaint old grist-mill, its mill-stones not turned either by water or by steam, but by wind-power, the tall building in which the grinding is carried on being surmounted by four great arms, each furnished with a sail, which, when driven by the wind, drive the machinery at a rapid rate. The mills in Sweden are nearly all constructed in this way.

By and by we grew weary with sight-seeing, and wondered why the sun did not set. It seemed as though it never would go down. We kept looking at our watch, which said eight o'clock, half past eight o'clock, and yet the King of Day was still above the horizon, shining as bright as ever. Just before nine o'clock, however, he reluctantly hid his face behind a hill, and twilight began, but not such twilight as we were accustomed to see in America, which lasts but a few moments, and ends in darkness.

In vain we watched for night to appear. At half past eleven o'clock we could read the finest print with ease. We watched until after midnight for the darkness, but becoming discouraged, as the sky was still as bright as ever, we laid down to rest. At two o'clock the bright daylight woke us up, and at 2.45 the sun shone out again above the hills. We had had the longest day and shortest night we had ever experienced; and began to appreciate the fact that we were in the land of the midnight sun, for, as many of you know, the sun does not set at all on the longest days of summer, in the extreme north of Sweden.

About eight o'clock in the morning we reached Stockholm, and soon found ourself at the Hotel Grand. After relieving ourself of the dust which had accumulated during our long journey, and getting breakfast, we started out in quest of the chief object of our visit, the Swedish Movement establishment, the most famous institution of Stockholm in the medical line. By the aid of a guide, we were soon on the right track, and by ten o'clock had found the proprietor of the largest mechanical movement establishment in the world. Dr. Zander is the inventor of a large number of ingenious machines for the purpose of administering both active and passive movements, which we took pleasure in examining, and seeing in use, and trying ourself. Through Dr. Zander, we were introduced to the central institution for the administration of manual movements, which is under the control of the Swedish Government.

A school for the instruction of persons in the administration of manual movements is held here during the winter, a course of two years being required for graduation. The school had closed just two weeks before we arrived, so we did not see the students, but we found that the President, Dr. Hartelius, was then stopping at Ramlösa, a watering-place on the sea shore, in the south of Sweden. We found, by consulting a map, that we might easily include this famous summer resort in our return journey, by going by a somewhat different route from that by which we came, and, as we were especially desirous of meeting the celebrated professor of Swedish Movements, for the purpose of increasing our knowledge of this improved method of treatment, we spent but a few days in Stockholm, improving to the best advantage, however, our short time, and acquiring as much information as possible respecting the manners and customs of the people, their habits of life etc., all of which, we have not space to speak of here, but shall tell our readers something in the future.

One of the features of Stockholm is its numerous bathing-houses, some of which are among the most extensive in the world. Each bath establishment has six complete bathing apartments,—first, second, and third class bath-rooms for men, and the same for women. A gentleman who acted as guide for us showed us through one of the largest bathing establishments, many parts of which we found interesting. One, particularly, was exceedingly novel and surprising—not to say shocking to our American ideas of propriety. As we entered the door of the bath apartment, a pleasant-faced old lady, in the dress of a bath-woman, met us with a smile, and kindly introduced us to the various departments. At first we supposed that she was stationed at the door simply to take the tickets, but we soon discovered our mistake when she led us directly into a large Russian bath, where half a dozen men were lying on shelves, arranged against the wall, while an ancient dame was administering a cold shower-bath to a fat old man, with mutton-chop whiskers, who stood in the corner, shivering under the cold torrent poured upon him. At this moment the fact dawned upon us that in Sweden the bath-men are all *women*, usually nice, quiet old ladies, with grey hair and spectacles. The most common form of bath is the warm tub bath, or full bath, in which the bather receives a thorough shampooing. Then the old lady gives him a shower bath, rubs him down, drys him with a sheet, and packs him away in blankets to get warm. We received an invitation to enjoy the luxury of a Swedish bath, but politely declined. From the excellent opportunity we had of witnessing the administration of the Swedish bath, however, we acquired a very high opinion of the skill of Swedish bath attendants. In the administration of massage, we have seldom seen so excellent proficiency and thorough attention to the com-

greatly indebted to the kind-hearted ... for the great pains he took to give us a thorough knowledge of the special methods which he employs in these cases.

way, which afforded many most grotesque and long-to-be-remembered sights. The quaint little children, gathered in knots, looked at us with open mouths and wide-stretched eyes, as we dashed along. The older people dropped their work, and stood gazing after us until we were out of si and the cows and the mules employments to ascertain the extraordinary disturbance. Pr more astonished at us than we cially at the way they lived, hud women, children, goats, catth pigs,—all in the same house, the same roof, and with a d kitchen and the stable, so that but one suite of apartments fo nity, the humbler members of w much at home in one apartm Each house had two front door the stable, and the other into room; and it was not surprising brute members of the family w door, and stroll in at the oth course, the front door presente but, to say the least, not a ver No graveled walks, no flower bed here and there little heaps of usually found most abundant in infrequently a huge heap of the actly in front of the principal ent ing. Here are two milk-maids tin pails, who quickly seize the the family by the caudle extremit scampering off with fright, as w milk-maid, in a quaint Swiss cos her pail, and is swinging her arm the top of her voice something quite understand. But now we clinging to a buxom calf whi succeeded in getting out of the re riage comes rattling over the spot stood. The girl seems satisfied and the calf kicks up its heels resentment for having been distur meditations.

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A HYGIENIST ABROAD.

THE LAND OF THE MIDNIGHT SUN.

fort and convenience of the persons under their charge was simply perfect.

We could learn no reason for the employment of women exclusively in this capacity, but were informed that it had been the custom from time immemorial, though we believe it is not practiced in any country except Sweden. Perhaps it may be considered as a sort of compensation for the male bathmen employed in the female department of some of the bath institutions we visited in Germany.

Swedish bread is a curiosity. You do not see the huge, round loaves so common in America, nor long, slender sticks, with which the visitor in Paris and Vienna soon becomes familiar. The common bread of the country is made in loaves—or rather plates or discs—not more than a quarter of an inch thick and eight or ten inches in diameter. A large round hole, a little more than an inch in diameter, penetrates each disc a little one side of the center, by means of which a lot of them may be strung together on a string, and suspended from the ceiling, in which condition they are kept indefinitely. The common bread is made of rye meal with perhaps a little wheat meal added, together with a considerable quantity of caraway or anise seed. One of these flat cakes is sold for twelve *ore*, which is equivalent to between three and four cents, American money. A somewhat finer quality of bread, made in still thinner cakes with a large proportion of wheat flour, sells at fourteen *ore* per cake, while a wafer loaf of graham bread is sold at sixteen *ore*. The bread is fermented and rather slightly baked, and is so hard that considerable exercise is required in eating it. From the amount of rough usage safely encountered by the few loaves which we brought away with us as curiosities, we should judge that one of them might be used some time in a game of quoits, without suffering any material damage. We managed to make one meal of this curious bread, by supplementing it with a bottle of milk, but should not like to be obliged to depend upon it as a staple article of diet for subsistence. Besides being dry, hard, and tough, it is almost tasteless, or would be but for the great quantity of flavoring seed it contains, which, however, rendered it none the more agreeable to our palate.

Soothed to Death.—A Brooklyn mother gave her infant a teaspoonful of soothing syrup, and in the morning found it dead, though it was not seriously ill; and yet the advertisers continue to extol the virtues of this mischievous nostrum as a perfectly harmless remedy. Every mother ought to know that it is a compound of opium and other narcotics, and that of all drugs, opium is one of the most dangerous to infants.

ERRORS ABOUT SALT.

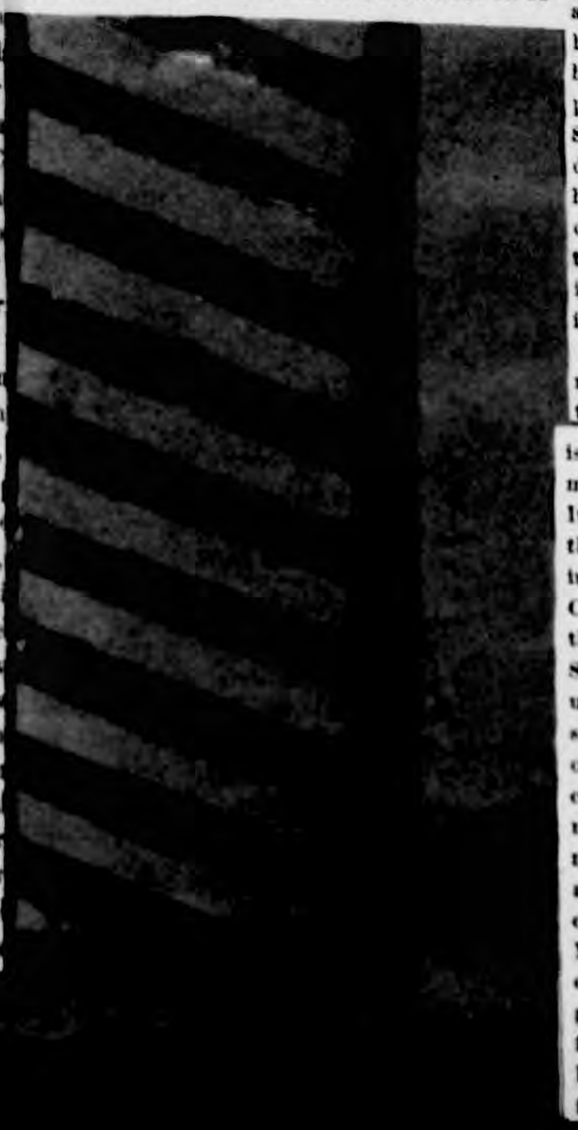
A CORRESPONDENT sends us the followin extract relating to the use of salt as a article of food, desiring our opinion co cerning the same:—

"Among the follies of the day, some i discreet persons are objecting to the u of salt, and propose to do without Nothing could be more absurd. Comm salt is the most widely-distributed su stance in the body; it exists in every flu and in every solid; and not only is it ever where present, but in almost every part constitutes the largest portion of the a when any tissue is burned. In particul it is a constant constituent of the blo and it maintains in it a proportion that almost wholly independent of the qu tity that is consumed with the food. T blood will take up so much and no m however much we may take with our fo and, on the other hand, if none be giv the blood parts with its natural quan slowly and unwillingly. Under ordin circumstances a healthy man loses d about twelve grains by one channel or other, and if he is to maintain his he that quantity must be introduced. C mon salt is of immense importance in processes ministering to the nutritio the body; for not only is it the chief in the gastric juice, and essential for formation of bile, and may hence be sonably regarded as of high value in gestion, but it is an important agen promoting the processes of diffusion, therefore of absorption. Direct ex ment has shown that it promotes th composition of albumen in the body, ing, probably, by increasing the act of the transmission of fluids from ce cell. Nothing can demonstrate its v better than the fact that if albumen w out salt is introduced into the intestin an animal, no portion of it is abso while it all quickly disappears if sa added. If any further evidence we quired, it would be found in the pow instinct which impels animals to o salt. Buffaloes will travel for mil

and the bridge has finished its antics, or drive to another bridge not far distant. Our driver adopts the latter plan, when, just as we reach this bridge, its middle begins to rise, and the same performance begins. We conclude to visit some other part of the city, and abandon the idea of crossing by one of these strange, tilting bridges.

Copenhagen is one of the most beautiful cities we have ever visited. It has none of the dilapidated appearance almost universally found in Central and Southern Europe. There is an air of thrift apparent everywhere, even in the hospitals, which are as neat and tidy as any we have ever seen. We found the surgeon in charge very courteous, and ready to give us all desired information respecting methods of treatment employed, etc. Among other things which interested us was a case of typhoid fever, which was being treated by means of a cold bath, in which the patient was placed for five minutes every two hours. We observed that little if any medicine was used in such cases, and that the bath was almost the sole reliance, together, of course, with good nursing.

At twelve o'clock we took the steamer again, and in two hours landed at Malmo, from which, at five o'clock, we took the cars again for Stockholm. A small fee to the guard secured for us a compartment all to ourself; so we made calculations on be-



LEAVING Stockholm at seven P. M., we reached Ramlösa at eleven o'clock the next forenoon. Here we saw Prof. Hartelius, and were delighted to discover that he spoke German well, and a little English, so that between the two, we were able to get along admirably. We found the Professor a very young looking gentleman of sixty-five,—that is, young looking for his age, and he assured us that he was as vigorous and hearty as at any period of his life. He works hard every day, administering movements with his own hands from early morning till late at night, being thronged with patients, who follow him to the sea-side, and flock thither from various parts of Sweden, Denmark, and Germany. He informed us that he also occasionally had patients from England and America. We were most affably received, and the Professor at once undertook to exhibit to us the Swedish Movement Cure in its various phases, illustrating its proper application by patients, and giving us every facility to become familiar with the results of his experiments of nearly half a century, with this particular mode of treatment.

We remained with him at his charming resting-place a sufficient length of time to acquire the information desired, which, thanks to the Professor's readiness to assist us, we were able to accomplish in a shorter time than we expected, as he devoted many hours to our special instruction, which he should have spent in rest and recreation from his arduous professional labors. In Sweden, the Professor of Swedish Movements does not simply prescribe and direct the treatment, but administers it with his own hands, and hence goes through an immense amount of hard work. However, to our surprise, Prof. Hartelius seemed as lively after spending a whole day in arduous work as when he appeared in the morning before breakfast to receive his earliest patients.

We were surprised to discover, through our experience with Dr. Hartelius, how little is known of this excellent mode of treatment in America. There is very much which passes with us as Swedish Movements, which is very different from the real thing. It is probably largely on this account that with us the system has never acquired so great celebrity as in Sweden, where it is as popular as the Cold Water Cure is in Germany. Great numbers of persons in the larger cities of Sweden are as dependent upon Swedish Movements for a comfortable existence as upon their daily food. These persons are usually sufferers from organic disease of the heart, asthma, or some serious nervous affection of an organic character, such as *locomotor ataxia*, which the movements always relieve in the most remarkable manner, even though, like other remedies, they cannot accomplish a cure. In the treatment of lateral spinal curvature, no method can accomplish what Swedish Movements can, when skillfully applied. In these cases, the nicest precision is required, and we feel greatly indebted to the kind-hearted old Professor for the great pains he took to give us a thorough knowledge of the special methods which he employs in these cases.

pushing along the river with a huge ship behind it, so we must either wait until the performance is over

We were also very glad of an opportunity to acquire knowledge of a method of treatment quite new to us, known as Nerve Impression, which, though not in the highest degree agreeable, is found of immense value in the special cases to which it is adapted.

We found at Ramlösa a Cold Water Cure under the direction of Prof. Bienz, who occupies the chair of Pathology in the University of Upsala, one of the great educational institutions of Sweden. We found Prof. Bienz a very affable gentleman, thoroughly scientific, and well versed in the literature of England, America, and Germany, as well as that of his own country. Although able to read English readily, he was unable to converse, in consequence of not being familiar with the pronunciation; but by using our limited stock of German to the best advantage, we enjoyed a very pleasant conversation with him. In looking through the treatment rooms, we observed a chronic rheumatic taking a pack. The patient lay on a small couch, enveloped in many heavy blankets, with a broad strap outside of them, by means of which he was secured to the bed, making escape impossible until his term of imprisonment had expired. We expressed some doubt whether free-born Americans would endure this mode of administering treatment.

After accomplishing our mission in Sweden, we took a steamer at Helsingborg, by which we crossed an arm of the sea, and then continued along the shore to Copenhagen, where we spent the night. Taking the cars the next morning, in twenty-four hours we found ourselves in Cologne.

We formed a much more favorable opinion of the Swedish people from our brief acquaintance with them in their own country than we had previously held, our former impressions having been derived chiefly from occasional glimpses of emigrant parties *en route* to some destination in the far West. We found them cleanly, intelligent, thrifty, good-looking, and generous. At the railway station, where we improved the opportunity of a little longer stop than usual to replenish our water-bottle, we were unable to prevail upon a kindly dame who washed and refilled our bottle, to take even the smallest remuneration, which, we are obliged to say, was the first time we experienced the sensation of having a tender of money refused during all our journey on the continent of Europe. In England, if you inquire upon the street for the location of a place you are looking for, your informer will probably tell you it is "Just around the corner," and, touching his hat, make some such remark as "Ard times, sir," "Drink yer elth, sir!" or something similar, which, interpreted in plain English, means, "A shilling or a sixpence, if you please." The porter who takes your baggage at a hotel expects a fee for it, and another when he carries it out again, at your departure. If you expect to get a respectable dinner at a hotel table, the waiter must be fed beforehand. In France and Italy, it is really affecting to see the tender manner in which all the porters and waiters press close together around you to bid you farewell, and wish you a pleasant journey. But should you so grossly misinterpret the object of this remarkable manifestation as to suppose it to spring from a real interest in your welfare, and attempt to take your leave without depositing in the hands of each a shilling, you will at once discover that their tender regard is closely centered on your pocket, and means *cash*.

On reaching Cologne, we found letters and telegrams indicating the necessity of our immediate return home, and hastily arranging our numerous parcels of baggage, we were off for London by the first train *via* Calais and Dover, as we wished to make the Channel passage as short as possible.

A HYGIENIST ABROAD.

COMING HOME.

EIGHTEEN hours from Cologne brought us back to London; and we were happy indeed to find ourselves safe at the great Charing Cross Hotel, with our thirty bundles of luggage, containing medical and surgical instruments and apparatus, traveling conveniences, and mementoes gathered in the various continental countries visited.

One who has never traveled in Europe among the little countries of which at least half a dozen would be required to equal in area one of our larger states, can have no conception of the annoyance to which travelers are subjected in having all their luggage overhauled two or three times a day, at the custom-houses on the frontiers of these petty sovereignties. Just as you are getting settled down to sleep at night, the car-door is jerked open, and a porter shakes you up, and indicates to you that every scrap of baggage must be hauled out, and carried into the station to be inspected. So you tumble out with your valises, bags, and bundles, and, with the aid of a couple of porters, get into the station, and arrange all in a nice row upon a form, behind which stand a half dozen men in blue coats with great brass buttons, indicating their official position. If you are an experienced traveler, you deposit an extra fee in the hands of one of the porters, in addition to the usual amount expected for assisting with your luggage; and if you watch him carefully, you will notice that he winks at the officer who undertakes to go through your luggage; and in that case you have only to open one or two valises, and close them again, scramble back into the cars, along with a crowd of sleepy, growling passengers, some of whom are pretty certain to get into your apartment, and spoil your calculations for a comfortable night, unless you are able to get there first with your baggage, and fee the guard to lock you in. If you have not learned the magic influence of an extra franc or two used in the manner suggested, you will probably have to submit to the overhauling of every single package, though it may touch your heart in its tenderest spot to see some of your frail works of art tossed about as though they were worthless stones, and to find at the completion of the operation your snugly packed bundles left in a sadly demoralized condition for you to scrape to-

Monday evening we started for Liverpool, which place was reached at midnight. The greater portion of the last day before sailing was spent in repacking baggage. We found time, however, to run out to Manchester, the head-quarters of the Vegetarian Society, where we found our good friend, Mr. R. Bailey Walker, the energetic secretary of this Society, at his office in the beautiful building of the Young Men's Christian Association. After an hour or two very pleasantly spent with Mr. Walker and several other vegetarian friends to whom he introduced us, we reluctantly said "Good-bye," and hastened back to Liverpool.

The next morning we were pleased to meet our friend G. R. Drew, of California, who is stationed here as ship missionary by the English Mission, which is under the charge of Elder J. N. Loughborough, and has its present head-quarters at Southampton, England.

Nine o'clock found us safely on board the steam tender of the City of Rome, and at half past one we were landed safely on board the largest steamship afloat; in fact, the largest in existence, with the exception of the Great Eastern, which is now lying idle in the docks. Perhaps our readers would be interested to know something more about this magnificent passenger steamer. The vessel was constructed for the Inman Line, who were disappointed in it, however, as the speed was not quite so great as desired. The vessel accordingly changed hands, being secured by the Anchor Line, who, after thoroughly refitting her machinery, adding four boilers, and putting in larger engines, have succeeded in producing the finest steamer which ever crossed the ocean. The one trip which the vessel had made since the refitting, showed her capacity for speed to be equal to, if not greater than, that of the famous Alaska, although unfavorable weather had prevented her making as good time as the latter boat has made under the most favorable circumstances. Her owners are confident, however, that on a fair trial she will prove superior to the Alaska in speed, as she undoubtedly is in every other particular. The following is a brief description of the boat, as given us by the chief engineer, who had the kindness to personally accompany us through the regions below, where the ponderous machinery was throbbing, explaining to us the use of each part, and the nature of the improvements which have been made :—

The length of the vessel is six hundred feet; breadth fifty-two feet and three inches; height from the bottom of the hold to the top of the pilot-house, fifty-eight feet; capacity, eight thousand and four hundred tons, equivalent to that of eight hundred and thirty freight cars. The vessel is fitted to carry five hundred saloon passengers and two thousand steerage passengers. The saloons, cabins, and state-rooms are furnished and decorated in the most luxuriant style, and all the appointments are equal to those of the best hotels. This magnificent floating palace is propelled at the rate of twenty miles an hour by a ponderous engine of twelve thousand horse power, the motive power of which is furnished by twelve mammoth boilers, in which the steam is generated by sixty-three furnaces. The engines are the largest carried by any vessel, and among the largest in the world. Three great pistons are driven by three high-pressure and three low-pressure cylinders, the first forty-six inches in diameter, and the second eighty-six inches, the length of stroke being six feet, and sixty revolutions being made per minute. The diameter of each of the immense crank-shafts is twenty-five inches, each weighing twenty-one and one-half tons. The propeller is made of steel, being twelve feet in diameter, and has a pitch of thirty-two feet and three inches, by which is meant that deducting a loss of from four to thirteen and one-half per cent for resistance, each revolution of the propeller moves the ship forward thirty-two feet and three inches. The actual difference made by each revolution is about thirty feet under ordinary circumstances. As the propeller revolves sixty times a minute, or once a second, the reader will at once realize something of the immensity of the power which is able to project through the water such a mass as this great vessel at the rate of thirty feet a second.

The immense engines and mammoth boilers and furnaces occupy a great portion of the hold of the vessel, requiring for their management one hundred and thirty men, including engineers, firemen, coal-heavers, machinists, and electricians, the latter having in charge the four electrical engines by which the ship is lighted. Two hundred and eighty tons of coal are daily consumed in the production of steam, nearly three thousand tons of coal being taken on board at Liverpool, and two-thirds that quantity in addition before leaving New York. The steam is conveyed to the engines by a pipe thirty-three inches in diameter, through which it travels at the rate of six thousand feet per second.

The size and weight of the vessel are so great that it moves through the waves with great steadiness even during hard storms, so that when smaller steam-ships are tossing and rolling, and being constantly submerged by the dashing waves, this great steam-ship moves along as steadily as though the sea were calm, apparently considering anything but a violent hurricane as quite beneath her notice. Another feature of this vessel which renders it superior to any other with which we are acquainted, is the great attention given to proper ventilation of all parts of the ship, by means of short ducts communicating with the huge ventilators by which the furnaces are supplied with air. An excellent draft is created through the state-rooms at all times, thus making it a matter of small consequence whether the port-holes are open or closed, although the great steadiness of the ship renders the closure of the ports rarely necessary. The absence of ship smells is another feature decidedly noticeable, which may be fairly attributable to the great attention to cleanliness in every department.

Thus pleasantly situated, we start out on our re-

all somewhat disappointed, however, when we found

We were also very glad of an opportunity to acquire knowledge of a method of treatment quite new to us, known as Ner[illegible] not in the highest deg[illegible] mense value in the [illegible] adapted.

We found at Ramlös the direction of Prof. I[illegible] of Pathology in the Un[illegible] great educational instit[illegible] Prof. Bienz a very affab[illegible] entific, and well versed [illegible] America, and Germany [illegible] country. Although abl[illegible] was unable to converse, [illegible] familiar with the pron[illegible] limited stock of Germa[illegible] enjoyed a very pleasant [illegible] looking through the tr[illegible] a chronic rheumatic tak[illegible] on a small couch, envel[illegible] ets, with a broad strap [illegible] which he was secured t[illegible]

possible until his term o[illegible] We expressed some doul[illegible] icans would endure this r[illegible] ment.

After accomplishing [illegible] took a steamer at Helsin[illegible] an arm of the sea, and [illegible] shore to Copenhagen, w[illegible] Taking the cars the nex[illegible] hours we found ourselves [illegible]

We formed a much mo[illegible] Swedish people from our [illegible] them in their own countr[illegible] held, our former impre[illegible] rived chiefly from occasio[illegible] parties *en route* to some de[illegible] We found them cleanly, inte[illegible] ing, and generous. At the [illegible] improved the opportunity o[illegible] usual to replenish our wat[illegible] to prevail upon a kindly d[illegible] filled our bottle, to take ev[illegible] ation, which, we are oblig[illegible] time we experienced the s[illegible] der of money refused durin[illegible] continent of Europe. In [illegible] upon the street for the loc[illegible] looking for, your informer [illegible] it is "Just around the [illegible] his hat, make some such [illegible] sir," "Drink yer elth, sir!" [illegible] which, interpreted in plain E[illegible] ing or a sixpence, if you ple[illegible] takes your baggage at a [illegible] it, and another when he c[illegible] your departure. If you exp[illegible] dinner at a hotel table, th[illegible]

beforehand. In France and Italy, it is really a[illegible] sence, and which we wish to finish before reaching home, so that we may be able to devote our time entirely to the numerous patients whom we expect to find waiting for us at the Sanitarium. Most of the passengers occupy their time reading, promenading upon the deck, and playing shuffle-board and other ship games. We have among our fellow-passengers a great variety of American and English types, from the venerable clergyman down to the New York rowdy, among the gentlemen; and from a gray-haired matron of fifty or sixty summers and winters—whose kindly face is beaming with philanthropy and good-will for all mankind, who has a husband in business in London, a son an officer in the army, and other sons and daughters at the family homestead in a Western State—down to a fast, flippant, fashionably-dressed, would-be-fascinating grass-widow, who struts about in the most absurdly stilted of French boots, with her pug nose lifted high in the air, and chattering like a magpie whenever she can find a male auditor.

The two nationalities, English and American, seem to be about equally represented among the male passengers. The discovery of this fact led to the proposal that on the anniversary of our national independence, which happened to occur during the voyage, the struggle between the two nationalities should be re-enacted in the form of a "tug of war," in which the combatants are arranged along a long rope which is divided into two equal parts, by a red ribbon tied around the middle, thus separating the contesting parties. On one side were a dozen Americans, and on the other side an equal number of Englishmen. At a given signal, each party pull with all their might, the "tug of war" continuing until one party succumbs, and is hauled away in triumph by the victors. Three several trials were made, in each of which the Americans were successful, which was quite in harmony with the spirit of the day, and the Englishmen accepted their defeat with the same good grace shown by Mr. John Bull a century ago.

On the morning of the fifth day, we passed a fleet of fishing smacks anchored on the great bank of Newfoundland. The waves were rolling high, and the little vessels were tossing about like nutshells, making a great contrast to our steady-going vessel.

The sixth day out from Queenstown a pilot-boat was sighted, at first a mere speck, a long dis[illegible] tance off. The pilots had evidently discovered o[illegible] steamer by its long stream of black smoke some tim[illegible] before, and by the aid of the stiff breeze were bea[illegible] ing down upon us. In less than half an hour th[illegible] little yacht was crossing our course just in front o[illegible] the ship's bow, when she quickly sent out a skiff wi[illegible] a pilot on board, and at the same moment a rope la[illegible] der was dropped over the steamer's side, while h[illegible] motion was slowed, and five minutes later the pil[illegible] stepped beside the captain on the pilot-deck. T[illegible] Americans were of course anxious for news fro[illegible] shore, and eagerly snatched the copies of the N[illegible] York papers which were brought on board. We w[illegible]

of a pleasant voyage with every anticipation of a pleasant passage. We left Liverpool at 3:30 P. M., Wednesday, June 27, and the next forenoon reached Queenstown, where the mails from London, with a few additional passengers, were received on board, the latter swelling the number of passengers to one hundred and ten saloon, and six hundred steerage. A little repairing in the engine department made a slight delay necessary, the final start being made at four P. M. Our expectations of comfort were fully realized. Although quite a severe storm was encountered when two or three days out, we knew nothing of the sea-sickness with which we suffered so intensely on the voyage from New York to London.

The fourth day out found us at night in the center of the iceberg region, with a dense fog settled down upon us. As we sat in our state-room at midnight, writing, now and then looking out into the dense darkness, watching the gleaming phosphorescent lights dancing in the thick foam at the vessel's side, and listening to the hoarse voice of the powerful fog-horn, our sensations were too strange for description. The slow throb of the ship's great iron heart, and the double watch which we had observed placed in the fore-part of the ship at night-fall, told us as plainly as words might have done, that our situation was not free from danger; and the next day, when the fog lifted, and a huge iceberg made its appearance a short distance from our course, it became clearly evident that the extra precautions taken were by no means unnecessary. Last year, as some of you may remember, our good ship had the misfortune to collide with one of these icy islands, doing serious damage to her bow. This time we were fortunate in keeping out of their way, although so thick was the fog for some hours during the night that a collision would have been unavoidable had an iceberg been lying directly in the line of our course.

The days on shipboard are all very much alike. At seven o'clock the rising bell is rung. At eight o'clock the gong announces that breakfast is ready; but as breakfast may be obtained till ten o'clock, we usually took our morning meal at nine. At half past twelve a gong again sounds for lunch. At five o'clock dinner is announced, when we take our second meal; then at nine or ten o'clock the majority of our unhygienic fellow-passengers take their supper, after the English fashion; but we prefer to go to rest with a clear conscience, at least so far as our stomach is concerned. The meals are served on board the City of Rome in excellent style, a good variety of food being served, a sufficient portion of which is plainly cooked to enable us to make out a good meal without doing violence to our dietetic principles. Every variety of fruit obtainable is furnished in abundance, including oranges, lemons, peaches, apricots, grapes, strawberries, and tomatoes, as well as various kinds of canned fruits.

We find our time fully occupied in completing writing which we have had in hand during our ab-

gether in the two or three minutes left before the train starts, and tumble on board in miscellaneous confusion. Under the circumstances, if your patience is not as badly demoralized as your baggage, you must be either a good Christian or an experienced vegetarian. After safely passing through all of these afflictions with a score and a half of bundles, we felt, upon reaching London, that the hardest part of our journey was accomplished, although we had yet to travel nearly four thousand miles before reaching our journey's end.

Having still a few days to spare before the time appointed for our steamer to sail, we took the opportunity to revisit some of the medical institutions in which we had spent the greater portion of our time during our month's stay in London. We also spent considerable time in the selection of the most improved forms of surgical appliances, such as we had not already purchased in Vienna and elsewhere.

The last day of our stay in London, we spent a few hours very pleasantly and profitably with Dr. J. Mortimer Granville, who did us the favor to show us the various methods of applying his ingenious apparatus for nerve percussion and vibration, with which he has been accomplishing such remarkable feats during the last two or three years, in the cure of various obstinate nervous diseases. We met in his office a young American lady who had been sent from the United States to receive this treatment, after having been treated for a painful spinal disease for six years by many of the best American physicians, without obtaining any relief. Although she had been under treatment but two weeks, she was already nearly well, and in a week or two more would be discharged cured. Understanding that we intended to make a thorough trial of the method, Dr. Granville kindly devoted nearly half a day to making us familiar with all the details of the method, and the results of his experience in its use, especially those obtained since the publication of his papers on the subject, which we had examined with great interest. We were fortunate in being able to obtain from Messrs. Weiss & Co., instrument-makers, a very fine apparatus which they had just completed, and which, they informed us, would be the second one brought to America, where this method of treatment is as yet quite unknown.

all somewhat disappointed, however, when we found upon looking at the date of the supposed fresh dailies that our news was two weeks old, from which it appeared that our little pilot-boat had been cruising around about six hundred miles from land, for a fortnight before our departure from Liverpool.

On the evening of the same day, we were passing through numerous schools of flying fish, which, we were assured by the sailors, sometimes make such long flights above the waves that they not infrequently find themselves stranded on board passing vessels.

To-day, the seventh, is a perfect day on the ocean. The mist has cleared away, and the sun's rays come down so fiercely that the passengers, to escape the heat, gather in little knots under the shade of the life-boats, which are arranged along the upper deck on either side. The blue expanse above is broken only by a few scattered cirrus clouds, which here and there weave themselves into the most weird and fantastic of cloud imagery; and the blue waste beneath is only broken by the white caps of the waves, which glisten in the sunlight like little snow-banks scattered over the surface of the ocean plain. Away off on the horizon can be seen here and there a ship, with sails all spread, looking in the gray distance as we imagine the poet saw that phantom ship which bore its luckless passengers across the river Styx.

The long distance has dwindled down to the last one hundred miles, and our jolly old captain assures us that just as the sun is setting in the west, we shall glide over the bar into New York harbor. Then, if we find the health officers and custom-house officials in an accommodating mood, we shall perhaps get through with our inspection, and be safe on land by midnight.

We forgot to report that we saw a whale this morning. The huge fellow, when first discovered, was almost along-side. He seemed to be embarrassed in the presence of strangers, and started off to the south, spouting the sea-water high in the air, and rolling his huge body among the waves as though annoyed at having been disturbed while taking his late morning nap.

Our good captain was disappointed in his calculations; when fifteen miles from shore, we ran into a fog-bank so dense that it became necessary to cast anchor for the night, and it was not until noon of the eighth day from Queenstown that our good steamer reached her dock on the New York shore, at North River. After several weary hours spent in getting our numerous packages through the custom-house, we sought a hotel, and after resting a few hours, boarded the car for home, where we arrived July 8, with an addition of fifteen pounds, and we hope with a considerably larger amount to our stock of useful information, having been absent from home exactly five months, lacking three days. We were happy to meet many of our friends and co-workers

from the Sanitarium at the station on our arrival; and on finding ourself quietly seated in our pleasant little office near the Sanitarium main building, we felt deeply grateful that a kind Providence had brought us safely home through many unseen dangers, and in the consciousness of increased physical strength with which to engage with renewed energy and enthusiasm in our work for suffering humanity.

A HYGIENIST ABROAD.

A VISIT TO THE BATHS OF LEUK.

NESTLED down among the Gemmi peaks at the head of the valley of the Dala, is a quaint little village, known as Leukerbad, or Loëche-les-Bains, according as you are talking with a German or a Frenchman. A large number of the towns and cities near the border-line between the German and the French speaking nations, are blessed with double names, the significance of which is the same, although the spelling and pronunciation are very different.

Leukerbad (we use the German name, as it is the shortest and most euphonius) is to be reached only by diligence or carriage, the nearest railway station being at Susten, in the valley of the Rhone, distant about five hours' ride. The road from Susten to Leukerbad leads through some of the most interesting scenery in the Alps. It follows the wild gorge of the Dala, which it crosses on the route, over a wonderful stone bridge four hundred and twenty feet above the water. The road is one of the best in Europe, cut out of the solid rock, and made as smooth as a marble pavement. Occasionally, for long distances, it runs close to the edge of some frightful precipice, which grows more appalling as we ascend, and brings to mind all the tales ever heard of the terrible accidents that sometimes happen on these mountain roads through the carelessness of drivers or the viciousness of horses. In some of these places, a low wall of cut stone affords a partial protection; but in many places, this is absent, and yet our driver seemed to take delight in seeing how near to the edge he could keep the carriage without going over the brink.

We took an early morning start from Susten by private carriage, so as to be able to get back in time to catch the afternoon train for Lausanne, where we wished to spend the night in the excellent hotel, *Beau Rivage*. From the windows of this hotel, one may overlook nearly the whole of the beautiful Lake Geneva, and catch distant views between the moving clouds of the snow-capped Alpine peaks. A half hour's ride up the steep mountain, through thrifty vineyards clinging to the rocky wall, which stretched down to the edge of the beautiful Rhone, and far up among the shifting snowbanks of cloud, which now and then lifted long enough to enable us to catch glimpses of the glittering mantle of snow which perpetually clothes the nakedness of the time-worn and storm-battered peaks,—brought us to the curious little town of Leuk. Perched up here on the mountain side, this little hamlet of old brown hou[illegible] minded one of a group of birds' nests, clin[illegible] some old moss-grown wall. The few inhabit[illegible] whose thrifty habits had already brought them ou[illegible] of their dingy homes on various domestic errands, looked as ancient and old-fashioned as the ruined towers, dilapidated inn, and antiquated dwellings. We have in our mind's eye a picture of this secluded little village which will remain vivid for many years. We can almost see again the milk-maids with their rustic and healthful garb and unaffected manners, coming out with their pails in the fresh morning air, which they hardly needed to deepen the roses on cheeks blooming with the exuberant health which is so seldom seen except in those who are reared in Nature's own lap, at a safe distance from the deteriorating and demoralizing influences of civilization.

But we must not become too enthusiastic about the healthfulness of these Alpine wilds; for there is an old man tottering along by the roadside, with a huge goitre pendant at his neck, a sight not uncommon in many localities among the Alps, especially in villages situated in deep valleys, or gorges, or on the shaded side of mountains, places to which the sun has little access.

But we must hasten on our journey. Leaving Leuk, the road constantly ascends, until from the summit of the pass, the eye commands one of the finest views in all Europe. Several thousand feet below runs the classic Rhone, its green, fertile banks spread out into a narrow valley, which can be traced from our dizzy hight, winding between its perpendicular mountain walls for thirty or forty miles. All along the silver line which represents the Rhone, are little villages, each of which has a history running back so far into the misty past that in most instances any inquiry concerning the founder or first inhabitan[illegible] can be answered only by the most vague conjectu[illegible] Old Sol is just beginning to show himself abov[illegible] low peaks in the east, and his slanting beams light up the lovely landscape stretched out before us with such a striking effect as to make us long for some art to catch the wonderful picture and immortalize it.

Reluctantly we turn away from the fascinating scene, and hasten on our journey along the winding mountain road. Having left our hotel before breakfast time, we had made provision for taking breakfast on the road. We only lack a bottle of water to dilute our can of condensed Swiss milk, which, with a loaf of good Graham bread and a few boiled eggs, will constitute our meal. Nature seems to have anticipated our wants, for here is a cold crystal spring gushing out of the rocks just by the road-side. The keen, fresh morning air gives us as good a relish for our simple fare as could be excited by the most luxurious spread.

After pursuing our way along the summit of the range for an hour or two, the road begins to descend, and we shortly find ourselves riding along the edge of a deep gorge, at the bottom of which, some thousands of feet below, runs the romantic little

torrent known as the Dala. Every turn in the winding mountain road brings into view new and striking pictures, each of which out-vies its predecessors in its fascinating grandeur; but our sinewy Swiss horses dash along so rapidly that one view follows another in as quick succession as the scenes in a rapidly changing panorama.

Just after making a sudden turn about a projecting rock, the driver brings his horses to a halt, and points to some object of interest on the opposite side of the deep valley. Bringing into requisition an excellent field glass, we discover the object to be a series of ladders, one above another, clinging to the bare face of a rocky wall some thousands of feet high. On inquiry, we learn that this is the famous ladder path which in winter constitutes the only means of communicating with the outside world for the inhabitants of the little village of Albinen, situated at the very top of the rocky hight, but hidden from view by its frowning crest.

A few minutes' farther whirling down the steep Alpine road brought into full view the curious old hamlet at the head of the valley of the Dala, famous for its hot springs and its unique bathing customs, unlike those of any other bathing place in Europe, known as the Baths of Leuk, which we will describe at length in the next number.

THE HYGIENIST ABROAD.

The Baths of Leuk.

At the head of the narrow valley of the Dala, a tributary of the Rhone, nearly surrounded and sometimes overhung by the steep walls of the Gemmi, rising perpendicularly a hight of more than 2,000 feet, lies a curious nest of odd brown houses, known as *Leukerbad*. Nestled down here amid some of the grandest scenery of all Europe, at an altitude of 4,600 feet above the sea, close by the lofty Torrenthom, whose snowy peak rises more than 5,000 feet higher still, this ancient little hamlet, with its roaring torrent, its green meadows,—a sort of oasis in a desert of bare rocks and snow-clad peaks,—and most of all its renowned springs and curious baths, has for two centuries or more attracted annually thousands of visitors during the few weeks of its short summer.

Out of the mountain-side gush innumerable springs of every possible flavor, most of them icy cold, but a few with a temperature of 117° to 124° Fahrenheit. The hot springs number about twenty, but only three or four are used for bathing purposes. There are several bath-houses, all of which are built after the same plan. On one side of a long hall, perhaps thirty feet wide and nearly as high, is arranged a series of little dressing-rooms, each provided with a stool on which to sit while dressing and undressing and a peg on which to hang clothing, but without other furniture. On the other side of the wall is a promenade eight or ten feet in width. The intervening space is a large tank, not unlike a fish pond in a fish-breeding establishment. The tank extends the whole length of the room, and occupies about two-thirds of its width. It is divided into several departments by partitions, on the top of which is a narrow walk constituting a bridge, by which the bathers may cross from the dressing-rooms to the promenade on the opposite side. From each dressing-room a pair of stairs leads down into the tank.

At five o'clock in the morning the bathers descend into the steaming vats,—a mixed multitude of all ages, sizes, sexes, and nationalities, clad alike in loose woolen gowns. They remain in the water from five o'clock to ten in the forenoon, and from two to five in the afternoon, making eight hours per day for the full regimen. Breakfast is taken in the bath, on little floating tables, which the bathers push around before them, and on which they also play cards, write letters home to their friends, and drink beer and coffee at their leisure. The odd appearance of half a hundred human heads floating about upon the steaming pool, some chatting, laughing, making grimaces, and others looking stolid as statues, patiently enduring the tedious hours of waiting for the magic influence of the all-healing waters to charm away their dire disorders, can be better imagined than described.

Water is especially recommended for skin disorders. It is chiefly applied externally, although dyspeptics are expected to take copious quantities of hot water direct from the springs, one of which, the St. Lawrence, the largest of all, is located in the very center of the town, and provided with facilities for drinking. The water in the soaking vats is said to be changed once a day, but whether or not the tanks are ever cleansed or disinfected is a question upon which we could obtain no authentic information. Our observation would incline us to the belief that sanitary measures are not very much thought of in these regions.

From three to six weeks is the time usually considered necessary to effect a cure of ordinary cases, though on what principle a cure is effected we were unable to learn, unless, as a visitor to the baths suggested, it might be that explained by an Irish bathman in a Hydropathic establishment. "You see, sir," said he, "that the shock of water unites with the electricity of the system, and explodes the disease." As the visitor referred to remarked, the shock of one's feelings of decency and cleanliness at these baths ought to be sufficient to explode any disease in Europe. If there is truth in the theory held by some of the old-fashioned doctors of by-gone days, that one disease sometimes neutralizes another, it might be conceived that the apparent good effects of these baths result rather from the miscellaneous mingling of maladies than from any peculiar potency of the water.

When we entered the bathing apartments, one tank had just been emptied of its occupants, had been macerating since early morning, and had just gone out for their noon-day rest. As we peered into the clouds of odorous vapor, arising from

the huge steaming vat, our imagination easily pictured ghostly shapes of exorcised diseased demons of every description, misshapen, distorted, pain-racked, rheumatic phantoms, mingled with the lank, sallow, woe-begone imps of chronic dyspepsia, the ruddy-nosed, rosicund, wine-bloated ghost of gout, and the scaly, fidgety, ever-scratching ghost of some loathsome skin disease.

We arranged for a bath in a tank containing water fresh from the spring, yet, as we entered to try the novel experience of a bath in this modern Bethesda, our uncomfortable imagination made us experience strange crawling, tingling, and rather curious sensations, as though we were being attacked by all the belied, diseased entities which the waters were supposed to have extracted during the eight or ten generations since the baths have been in operation. We soon succeeded, however, in quieting our morbid sensibilities, and really had a very enjoyable bath, occupying a part of the hour we spent in the bath in writing a letter home on one of the little wooden tables, several of which floated about in each tank, for the accommodation of the bathers.

After the bath, we had a shampoo *à la Leuk*, a style of shampooing different from anything else we encountered in any of the bathing establishments of Europe. We were taken from the large bathing room to a room in the upper story, the temperature of which would be barely comfortable with the clothing on, and for one clad only in a wet sheet it was decidedly uncomfortable. After being deprived of even the small comfort of our dripping covering, we were made to take hold of an iron bar, supported about four feet from the floor, and instructed to brace ourselves firmly and hang on tight, the necessity of which we very soon discovered as a large stream of water spurted upon us from the rear, and struck us with such force between the shoulders that we should have been thrown to the floor without the aid of our support. Our attendant directed the stream by means of a nozzle which he held in one hand, and at the same time, with the other hand, vigorously rubbed and kneaded the muscles in such a manner as to prevent the severe shock which we expected to experience from the contact with the cold water. Instead of being thoroughly chilled, as we expected, we found ourselves, at the conclusion of the bath, in a warm glow, and feeling quite renovated from the effects of a week's riding and climbing among the steep Alpine peaks.

After doing up the day's soaking, the bathers stroll about the various pleasant mountain paths in the vicinity of the village. One of the most romantic and interesting leads off to the south down the Dala. For about a mile the path lies through a lovely mountain meadow. Innumerable springs are found bursting out from the ground by the road-side, and running across or under the pathway, and gurgling down the hill-side to join the gushing Dala, which here finds its source. Mountain flowers of every description grow in abundance among the scattered rocks, which from time to time have fallen down from the precipitous mountain-sides. Another half mile through a natural growth of evergreens completely overshadowing the pathway, brought us to a place known as the *Ladders*, of which we caught a glimpse from the other side of the valley, as we were approaching *Leukerbad*. At this point the rocky wall is nearly two thousand feet in hight, and slightly overhangs the valley below. On the top of the cliff is located a little village known as *Albinen*, the only direct communication to which is by a series of ladders set up against the rocky wall, and fastened in a most astonishingly careless manner.

Accompanied by a young friend who had joined our party for a trip through the Alps, we undertook the ascent of this unique pathway, first divesting ourselves of all superfluous clothing and encumbrances. The first two ladders brought us to a little cave, excavated in the face of the rocky wall, to furnish travelers over this novel road a place of retreat from the winter storms. Another ladder brought us to a landing-place which consisted of the tap-root of a stunted tree. The upper end of the ladder rested upon this, with a foot or two of rock surface, where rested the foot of the ladder next in the series. Ascending this ladder for a short distance, we found two or three rounds broken, but managed to clamber to the top, where we found the ladder fastened to the wall by a green withe nearly worn in two. As we clambered on, we found one or two ladders so old and rotten as to be barely able to sustain the weight of the body, and some were supported only on one side, and threatened constantly to turn out of their places, and precipitate one into the abyss a thousand feet below. All of the ladders were shockingly insecure, and very different from what one would expect to find in such a perilous position.

Half way to the top our curiosity was entirely satisfied, and when we turned to descend, for a moment we grew dizzy and slightly faint, as we gazed down into the rocky bottom, hundreds of feet below, and imagined our ladder slipping away from its frail hold upon the bare granite wall, and plunging down upon the rocks below. Turning our eyes steadily upward, we clambered down, and drew a long sigh of relief when at last we reached the foot of the last ladder, well satisfied with our experience in ladder climbing, and concluded that we were better at home or elsewhere than in the lonely village just beneath the rocky cliffs at the top.

This ladder road is in winter the only means of communication between *Albinen* and the outer world; and at all times it is the only means of reaching *Albinen* from *Leukerbad* except by a very long and circuitous road down the valley and up a rugged mountain path; and, notwithstanding its perils, in summer-time it is in constant use by the natives of *Albinen*, who carry on their backs their milk, butter, cheese, and garden produce down the ladders, bringing back from *Leukerbad* the merchandise for which it is exchanged.

The bathing season of *Leukerbad* is only for a few weeks during the middle of the summer. During the rest of the year the hotels are shut, and the few inhabitants hiberinate in their little brown houses, almost entirely secluded from the rest of the world.

WATER IN VENICE.

THE "Queen of the Adriatic" abounds in water; boats take the place of wagons and carts, and the graceful gondola, with its deft and merry oarsman, replaces the broughams, hansoms, and carriages of every description which abound in other cities. Not a horse is to be seen in all Venice. The main street of the city is a grand canal; and the side streets, lanes, and alleys are contributary ditches. But all the water possesses the bitter, saline taste of the sea. All the water used for drinking and cooking purposes is brought in boats from the main land, a long distance. In every large open space where there is sufficient room, cisterns have been made by the city authorities, to which the people resort at certain hours of the day. We spent a half-hour in watching the throng of sturdy women coming for water, each with a pair of copper buckets suspended from a wooden yoke placed upon the shoulders. Children also came with their little pails, and all waited patiently for the great bronze man on the top of the clock tower near St. Mark's to strike the hour of three, when all were at liberty to help themselves for an hour.

A traveler on the streets who wishes a drink must purchase it as he would a glass of milk or lemonade in other cities. He does not need to look far for an opportunity, as men with little wooden stands holding a pitcher and glasses may be found at almost every corner in the principal streets. If you wish to drink, the vender pours out a glass, and sprinkles into the water a few drops from a bottle containing a solution of anise-seed oil, or some mild acid, which may be vinegar. The price per glass is five centimes, or one cent.

SCENES IN ITALY.

ITALY is a country so full of interest to a foreigner that it furnishes an inexhaustible amount of reminiscences to one who has traveled through it. As our visit was made chiefly in search of matters of interest pertaining to our profession, we had not much time to devote to miscellaneous sight-seeing, and hence shall not attempt to draw in detail a picture of Italian life, which, indeed, would be a useless task as the work has been so frequently and so well accomplished by numerous writers who have traveled through this sunny land. We will notice, however, a few pictures which impressed us particularly by their novelty, without attempting to follow any regular method in so doing.

On first entering Italy, one is struck with the construction and infinite variety of the vehicles. In a large city like Naples, for instance, one may see every imaginable form of two-wheeled and four-wheeled vehicles, drawn by every variety of domestic animals—excepting fowls and cats—harnessed in every absurd and fantastic manner allowed by the law of permutations and combinations. Here comes a little two-wheeled cart, rattling over the pavement, drawn by a donkey whose ears are almost as long as his body, and driven by a bare-headed washer-woman, who sits in front of a great heap of washed linen which she is carrying back to her customers. Down the street comes thundering the country stage-coach, drawn by three stout horses, which are kept on a good round trot by the driver's long whip. Something more than a score of people are snugly packed away in the inside, or perched upon perilous seats on the top, or clinging to a sort of plank behind as the ponderous coach rocks to and fro, and sometimes even suspended in a sort of net from the hind axle-tree, smeared in dirt from head to foot, and half choked with dust. Just round the corner comes a great wagon with a long tongue. On one side is hitched a single mule, which is almost jerked off his feet every time the wheels strike a stone, or fly out of the rut. The first time we saw one of these one-sided establishments, we supposed that the poor animal had been deprived of his mate by some accident and was obliged to pull the whole load home alone; but we soon discovered that nearly all the one-horse vehicles were constructed on this plan, only cabs or elegant carriages intended for one horse being made with thills, after the American fashion.

If we look out on the harbor, we see the same variety in the shipping; but most numerous of all are the little sail-boats, furnished with their huge, awkward, square sails, exactly like those in use two or three thousand years ago.

We are just at the door of the Cathedral. Let u run in a moment, and see the chapel of St. Januarius said to contain the sacred blood of the saint, which by some sort of jugglery, is made to undergo a miraculous liquefaction three times a year. It is also claimed that the distant rocks, where the saint was slain, become red at the same moment the liquefaction occurs. Italy abounds in pretended miracles of a similar sort, most of which are so patently absurd as to excite the most profound disgust in a person whose education has been such as to enable him to view them with eyes unbiased by prejudice.

The place to see churches and miracles, however, is at Rome, where every sacred edifice is duly provided with some popular humbug, by which the gullible people's pockets may be emptied. For example: the church of the Ara Coeli in Rome contains a little wooden doll called the Babino, which represents the infant Saviour, and is supposed to possess miraculous powers, being carried about the city to the bed-sides of sick persons, to whom it is presented with tedious incantations, the result of which, in every case, is that the patient either gets well or dies sometime. If he dies, it is because he di i not make

a full confession of his sins. If he recovers, the wooden doll has wrought a miracle. Of course, the maintenance of such a marvelous doll must be very expensive, so a large sum must be charged for its valuable services.

Another Roman church contains an altar on which is inscribed the name of every celebrity who frees his soul from purgatory at it. Over the door of a church we frequently passed, was a Latin inscription to the effect that perpetual indulgences were daily granted within. We were surprised not to see throngs of people crowding in through the open door, since our observation assured us that there were plenty of people in Rome standing in great need of indulgence. In some places among old ruins, crosses are placed, bearing inscriptions promising indulgences for a certain number of days to whoever kisses the cross, the length of time varying with the supposed sanctity of the particular cross, one cross being efficacious fc. a hundred days, another for two hundred, etc.

A church in another quarter of the city shows the identical chains by which Peter and Paul were confined in the Mamartine prison, which, by the way, was also exhibited as the place where Paul and Peter were confined previous to their execution, although positive evidence is yet wanting that Peter ever visited the "holy city." In the dungeon where it is claimed Peter was confined eighteen hundred years ago, is shown a hole in the rocky floor in which water may be seen rising within a foot of the surface, this is claimed to be a miraculous spring produced by the apostle for the purpose of obtaining water to baptize one of the early Christians. The miracle-mongers have evidently forgotten that the apostle baptized only by immersion since the little fountain is barely large enough to provide for the modern substitute for baptism—sprinkling.

There is an old church near the outer border of the city, called St. Stefano Rotondo, whose walls are covered with fresco paintings, representing the tortures and martyrdoms of the early Christians. The scenes depicted could scarcely be equaled by the most horrid night-mare, and must make a vivid impression upon the pilgrims who come to view the sacred relics.

Beneath the church of St. Paoli is the entrance of a vast range of subterranean chambers, which are said to communicate with the Colliseum. There are two series of these vaults, one above the other, according to church tradition. The lower series was formerly occupied by wild animals destined to participate in the games in the amphitheater; while in the upper series were confined the persecuted Christians, whose days and nights in darkness were rendered doubly hideous by the savage howlings of the hungry beasts beneath their feet, which they knew were soon to feast upon their bodies.

We shall not attempt to show you through St. Peter's, that grandest of all church edifices in the world, six hundred feet in breadth, and over four hundred and fifty feet in hight; but you must peep in through the great door-way long enough to take a glimpse of the great bronze statue of St. Peter, made from a heathen idol. The great toe of his right foot has been nearly worn away by the lips of pilgrims in depositing their devout kisses, an act of humility by which they doubtless hope to atone for some misdeed. As we looked about, and saw the scores of people on bended knees before the pictures and images of various saints, our first thought was, "Surely, here is sincere, though strangely benighted, devotion;" and we felt almost guilty for having in sport followed the example of our good Catholic predecessors, in depositing a kiss upon St. Peter's toe, first taking care, however, to make a stealthy application of our pocket-handkerchief. But a little more extensive observation led us to a different conclusion respecting the devoutness of a large portion of the worshipers. For example: a few feet before us we saw, leaning in front of a magnificent picture of the Virgin Mary, a man repeating his prayers in a half audible whisper, and at the same time looking curiously around at the passers-by, as though the act in which he was engaged was of little more consequence than the revolving of the water-wheel, by means of which the Hindoo devotee turns off his written prayers by proxy. The professional beggar pauses in the midst of his prayers to St. Michael, and holds out his hand for alms, offering to say a prayer for you for a few coppers. A gentleman asserts that he once saw a man pause in the midst of his prayer to administer a caning to his dog, which had become involved in a quarrel with another canine, and then immediately resume his devotions, while the sacred walls were echoing the howlings of the irreverent brute. Another visitor declares that a woman, who was earnestly engaged in her devotions, arose from her knees as he passed her, and presented him her card, announcing her profession as a music teacher.

But let us take one glimpse at the holy stair-case, and then we are done with churches. Here we are at the entrance, and we find a dozen or more persons are making the ascent. The most devout ones say a prayer on each step of the long stair-case. Others hurry along as though it were a matter of very little consequence, only so they get to the top wholly on their hands and knees. Gray-haired old men, and women long past the middle of life, young men, young women, little boys, little girls,—all climbing in the same ridiculous fashion, but not so deeply absorbed in their devotions but that the most of them, especially the women, feel sensitive about being looked at, and keep peeping over their shoulders to see that their dress and inferior extremities are properly disposed. Here is a worldly-looking man who is actually perpetrating a fraud. He has brought his umbrella along on purpose to pull himself up by, which is evident from the fact that there never was a brighter day in sunny Italy than this one.

But here comes a woman, with a little girl, who seems to hesitate about starting in while we are gazing, and so we will content ourselves with what we have seen, and leave the reader to find out for himself, if he can, whether this is the veritable, identi-

cal stair on which our Saviour trod when he descended from the judgment hall of Pilate. We had not humility enough to climb the stair-way in the proper fashion, and so we did not see the wonderful relics exhibited behind an iron railing at the top.

A HYGIENIST ABROAD.

SOME of you may have heard of the Ghetto. If any have ever visited it, you certainly recollect it most distinctly as the dirtiest place you ever beheld or smelled, unless, perhaps, we should except an Alpine Swiss cottage, where cows, goats, chickens, pigs, and human beings all live under the same roof. The Ghetto is that part of Rome inhabited by the Jews, formerly known as the "Jews' Quarter." It is close by the old theater of Marcus Aurelius, and is densely peopled with the most degraded representations of the Jewish race we have ever met. The filth of the narrow alleys, denominated *streets*, is beyond description. The filthy gutters are lined with half-naked children,—some of whom are nine-tenths naked, or more,—who wallow in the mud, and indescribable nastiness which flows in streams from the swarming tenements on either side. The front rooms of the lower stories of all the houses, are occupied as shops, where are found dry goods, notions, and second-hand clothing, which seems to be the trade specialties of the Jew, the world over. Into this filthy little corner are crowded all the disciples of Judaism who inhabit the holy city. Until recently, it was surrounded by a wall, the gates being locked daily at eight P. M. But the odor is becoming terrific. High above all the lesser smells of decaying vegetables, moldy walls, filthy pens, obscure gutters, and the great unwashed multitude, towers a stupendous and overpowering odor of garlic. How we long for a patent charcoal respirator to disinfect the pestilential air! How we marvel that, in this famous city of the gods, fastidious Hygeia has not long ago sent her serpent down among these shameless transgressors, to either annihilate them, or coerce them into a better observance of her laws!

One can hardly believe that, in a civilized country, the customs and ways of doing things could differ so widely as do those in Italy from what we are familiar with in America. For instance, here is a flour store. A boy turns a crank attached to a big wheel, which, being visible through the open door, attracts our attention, and we venture in. We find that the flour is only ground, and not bolted at the mill; and this little dark-eyed boy is the motive power of a bolting machine. The entire flour is brought to the store, and by means of a bolting apparatus similar to that used in other countries, but on a very small scale, is separated into first, second, and third grades of flour and bran. The first grade of finest and whitest flour makes bread for the rich; the second grade makes a somewhat coarser and darker bread, and is also used for macaroni; the third grade,—really the best of all,—makes bread and macaroni for the poor, who consequently are better fed than the rich. The bread made from this flour is rather darker than our Graham bread, being more nearly the color of rye bread, and, when well made, is palatable and wholesome. With corn bread, it constitutes the chief food of the poor in large cities. In the country, beans and other vegetables are the chief diet, with very rarely a taste of meat. In the north of Italy, the chief food is bread made from chestnut flour, a sample of which we were fortunate in obtaining through our friend, Prof. Biglia, and have brought home, together with other specialties from the various countries which we visited.

Another curious custom is the very common one of carrying on all kinds of household preparations out of doors. How odd it would seem to an American woman to see half a score of her Italian sisters standing up to their knees in a lake or river, industriously scrubbing their linen on the smooth face of a huge stone. Just across from our hotel in Naples, we may see a woman cooking the family dinner over a small charcoal stove, placed just in front of her door, upon the side-walk. She has no hesitation in letting people see the family bill of fare, for all the poor in Naples eat the same thing for dinner,—bread and macaroni soup,—provided they are fortunate enough to be able to obtain the macaroni to accompany the bread. One day, when we were riding about in quest of sights, we passed through a street where nearly everybody had their work out of doors. A laundress was doing up her linen on the front door-step; a seamstress had her sewing-machine exactly in the middle of the walk; a shoemaker had turned his whole shop out of doors into the street; and half a dozen cobblers were pegging away as industriously as their American brethren of the same craft.

One evening we made an excursion down into the poorest quarter of the city. We could not see that it looked much different from the rest, however, as Naples certainly contains more poverty to the square rod than any other city we ever saw or heard of. But perhaps in the "poor quarter," the poverty is a trifle more impoverished and more numerous than elsewhere. Here the lazzaroni of Italy appear in all their glory, which consists chiefly in dirt, disease and deformity, vice and vagrancy, rags and rascality. Never were we surrounded by such a set of ruffianly rag-muffins as gathered round our carriage when we came to a halt in the very heart of the most poverty-stricken portion of the poorest city in Christendom. Our cab had stopped just before the stand of a macaroni vender, who carried on his business at the edge of the side-walk, supplying his customers from a big pot, which he kept boiling by a little charcoal furnace. Thinking it would be the wisest policy to secure the good graces of our villainous looking spectators, we, through our guide, instructed the macaroni man to supply the crowd with boiled "pipe stems" at our expense. The thing was understood at once, and the mob made a rush for the macaroni vender which threatened to annihilate him. The poor fellow managed to keep his feet, however, and ladled out dish after dish of the limber food, which was no sooner dished up than devoured by the hungry fellows, who fought and scrambled for the steam-

"GOING SOUTH."

BY MRS. E. E. KELLOGG.

FROM MICHIGAN TO FLORIDA.

SNOW, deep snow covered all the landscape as we steamed away over the grand old Michigan Central R. R., *en route* for the "sunny south." The lakes and streams were locked in fetters of ice, and the little villages and towns along the way seemed almost asleep beneath the thick mantle of snow in which Old Winter had enwrapped them. We left Chicago by the evening train, and found ourselves the next morning in the southern most part of Illinois, at the city of Cairo, where the Ohio pours its waters into the turbid Mississippi. A steamboat transfer bore our train across the beautiful Ohio, and we rushed on across the western portions of Kentucky and Tennessee and through Central Mississippi, for the most part a populous and pleasing country, dotted here and there with small villages of the most primitive looking habitations, each with its great Dutch chimney upon one side, and occasionally a more flourishing city. In ratio with our progress southward, winter appeared to have loosed his icy hold of Nature; and when, on the second morning, we looked from our car window as we neared the city of New Orleans, we could almost fancy that we had spent the winter months in a sort of Rip Van Winkle sleep, and awakened to joyous spring-time, with verdant fields and woodlands, singing birds, and April showers.

At New Orleans we made the first stop on our journey. The Crescent city, the capital and chief city of the State of Louisiana, and the greatest cotton mart in all the world, dates its first settlement back to 1718. Its history records two great and memorable events: the last battle of the war with Great Britain, Jan. 8, 1815, when Gen. Andrew Jackson, with but a small force of valiant men, behind a hastily built breastwork of cotton-bales, fought and repulsed an army of twelve thousand British soldiers with a loss of but seven Americans; and the capture of the city by Admiral Farragut during the war of the Rebellion. Our first visit was to Jackson Square, a pretty little park, adorned with beautiful trees, shrubbery, and flowers, in the center of which is Mill's admirable equestrian statue of the city's hero, Gen. Jackson.

On the opposite side of the street stands the St. Louis Cathedral, the oldest and most famous church edifice in New Orleans. Its lofty ceiling is adorned with paintings by Canora and Rossi, among which we noted a copy of Raphael's "Transfiguration of Christ." Our next visit was to the Levee, a vast embankment of earth, fourteen feet high and fifteen wide, constructed for a considerable distance along the river. A forest of masts lines its wharves. Hundreds and even thousands of vessels from all parts of the world lie at anchor here, and the scene of bustle and activity where a throng of busy men are lading them with cotton from the huge mountains of bales that lie upon the Levee, is without parallel on this continent.

A drive through some of the principal streets, which are broad, many of them beautiful boulevards shaded by double rows of trees; a visit to the U. S. Branch Mint, which is located here; a glimpse of the Custom House, which, with the exception of the Capitol at Washington, is the largest building in the United States; and a moment at the far-famed French Market, one of the most picturesque sights [illegible] we wended our way toward the [illegible] of [illegible] to different race, the influence of race appears to be the same occupation belonging to the criminals, but heavier. In men of population. Lunatics are about as short as the criminals, but heavier. In men of two inches shorter than the average of the

In most instances they are ornamented at the narrow end with a marble slab appropriately inscribed

The Exposition buildings, which number fifteen in all, are pleasantly located in the city park, a fine tract of land with miniature lakes and groves of live oak, four miles distant from the city. The buildings are magnificent structures, and the exposition, which originated in a design to celebrate the centennial of the first shipment of cotton from this country, has expanded into an exhibition of the resources and natural products of the whole world, of all that this age of rapid progress has wrought that is wonderful in engineering, mechanics, manufacture, science, art, and education.

In the large Main building are exhibits from every quarter of the globe. India, with corals and other tropical products; Palestine, with attar of roses and trinkets of olive wood and mother-of-pearl; Italy, with beautiful Roman mosaics, wonderful specimens of Venetian glass, lava jewelry and cameo shells that savor of Vesuvius and the blue Mediterranean; Bohemia, with exhibits of lovely tinted glass-ware; Mexico, with Aztec relics, mineral products, and specimens of manufactured goods; all nations with specimens of foods, articles of dress, and household utensils,—all these constitute a grand school of anthropology in which the habits and customs of nations can bestudied with unequaled facility.

In the Chinese section one may see in effigy the mandarin in his regalia, a bride in wedding garments, a priest in robes, a widow in full mourning, children at play, the silk weaver at his loom, and some representative of almost every phase of social and industrial life common among the native Celestials.

In the Horticultural hall, besides rare trees, curious plants, shrubbery, and flowers from all sections of the earth, there were on exhibition at the time of our visit some twenty-five hundred plates of luscious fruits, some of them peculiar as to variety, others wonderful in size. Apples and pears from England, Russia, France, and Mexico, as well as from the various States of this country; grapes, oranges, bananas, pomegranates, figs, persimmons, and other fruits from the various localities in which they are grown. Some of the more tropical fruits, as cocoanuts and pine-apples, are here growing and ripening upon the trees.

In the immense Government building, the various States and Territories have placed their exhibits, each seeming to have striven to outvie all the others in making its own display of the products of soil, mines, and manufactures the most unique and complete. Minnesota has brought hither not her own beautiful "Laughing waters," but a miniature cascade that falls with measured cadence over a pleasing imitation of the rocks and ledges of the genuine Minnehaha. An Indian canoe, fashioned from the stalks of wheat and other grains, hangs near, which we could fancy was designed to symbolize both the past, when the red man's bark alone floated upon the waters of her beautiful lakes and rivers, and the present, when the shores of these same lakes and streams are golden with the settler's waving grain. Indian wigwams, with dusky savages in effigy, and a log hut close by bring to the imagination vivid pictures of frontier life and perils.

Nebraska, under the inscription, "Corn is King," presents a fine profile portrait of a monarch made from white, red, and yellow corn; while close by, surmounting a high pedestal, is the statue of a king made from sheaves of golden grain

Dakota symbolizes the enterprize and progress of her people by many unique designs, among which we noted two complete and model railway trains constructed entirely of the straw and heads of grain. Towers and pagodas built of spool cotton, and calico pavilions are among the many fanciful ways in which some of the New England states represent their special industries. An interesting feature of the United States exhibits is the relics of the Greely Relief Expedition. The costumes worn by the explorers, their sleeping bags, specimens of their daily rations, their comfortless tents, their sledges, and various other articles of use, all combine to form a vivid picture of the hardships and perils of Lieut. Greely and his brave comrades.

The gallery of the building is devoted to the display of woman's work and the educational exhibits. Prominent among the latter class is an exhibition of the methods of the industrial school system of France, model school-houses, improved styles of school furniture, and almost every phase of progress in educational facilities is here shown and contrasted with those of earlier times. Here, too, is Chautauqua, the people's university, with a miniature "Hall in the Grove." In another portion of the gallery, ornamented with the motto, "Africa shall stretch forth her hands," is a very meritorious exhibition of specimens of the colored race. Prominent among the educational displays is that of Michigan, which presents among other exhibits large photographs of her leading educational institutions, a prominent place among which the commissioners have given to a photograph of the Sanitarium at Battle Creek, which is looked upon as a grand educational institution, as well as a hospital for the sick.

Farther on we find the display of woman's work, to which each State has contributed until the list of things useful and ornamental made by women is nearly infinite. Beautiful paintings, exquisite embroidery, rugs, laces, decorated china and brass, crocheted pictures, zephyr sculpture, shells, moss, and hair arranged in almost every conceivable form, and even a bouquet made from the trimmings of finger nails, are simply a beginning of the list of curious things. Among the more useful articles we noted an electric clock, and a new building material invented by a woman.

Prominent among the attractions of the Woman's Booth is the beautiful pavilion of the National W. C. T. U., with its comfortable seats and inviting fountain, where the weary and thirsty may find rest and a drink of pure water, the only place upon the grounds, we were told, where nature's beverage is obtainable, though beer gardens and ale stands are plentiful enough. [Since the above was written, the managers have insisted upon the removal of the fountain, and will not allow the ladies of the W. C. T. U. to supply water to visitors, even at their own expense, as the privilege of furnishing drinks has been sold for a liberal sum to beer and whisky venders, who are now in full possession, and virtually prohibit the use of any drink upon the grounds except such as they delight to dispense.]

The sides of the pavilion are ornamented with shields and banners emblematic of the work and purposes of this largest organization of American women; the shields representing the various State Unions which compose the one grand whole, the banners symbolizing the work accomplished and designed to be accomplished through the numerous departments of the National Union. All are unique in design, as well as meritorious works of art. The Department of Hygiene is represented by a beautiful banner of satin, on the lower portion of which is painted in oils a lovely

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"GOING SOUTH."

BY MRS. E. E. KELLOGG.

andscape, through which flows a stream of water, rippling into silvery cascades as it wanders on, emblematic of *pure air and water*. A modern villa at one side represents a *healthy home*, while *exercise* and *healthful clothing* are symbolized by a daintily dressed maiden, who, with hat in hand, has been gathering flowers in the field. Stalks of golden grains, vegetables, and lovely fruits form a group near the top, emblematic of *wholesome food*.

Mexico, our sister Republic, has erected, for her exhibits, a beautiful iron building, so scientifically constructed that it can be taken down in sections when the exposition is closed, and removed to the Mexican capital, where that Republic intends to hold a similar exposition next year. It is octagonal in shape, and the most ornamental building upon the grounds.

It would be impossible in this short sketch to even mention the many interesting and wonderful things to be seen in this vast collection of the useful, beautiful, and curious in art, science, life, and nature; and with but this hasty glimpse of the great World's Fair, and a hope that all our readers may be permitted to go and view it for themselves, we must hasten on toward the land of flowers, the Italy of America.

Our route lay along the Gulf coast, through a lowland region, much of it wooded with lofty pine trees, and dotted here and there with the forlornest of huts, negro cabins, and the homes of the poor white settlers, with an occasional small town or village. Pensacola we passed before daylight, so that we failed to see the beauties of the city sometimes styled the Naples of America. Midway between Pensacola and Tallahassee we stopped at Lake de Funiak, the assembly grounds of the Southern Chautauqua. The lake, which is just one mile in circumference, is a beautiful sheet of water, and very nearly a perfect circle in form. A large Tabernacle, one hundred feet square, built with an iron roof, furnishes seating capacity for the thousands who throng there for entertainment and profit, during the Assemblies to be held each year during February and March; while comfortable cottages and elegant hotels supply accommodations for those who come to live and enjoy the delights and comforts of a summer in mid-winter, together with mental and moral improvement.

The grounds, when laid out in the parks and drives contemplated, will be most beautiful, and with an entertaining program, such as has been arranged for the present session, together with such facilities for instruction as are presented in the schools of cookery, music, art, kindergarten, agricultural congress, and ministers' retreat, the "winter assembly in the land of summer" will prove quite as attractive as the great original Chautauqua.

A few hours' farther ride through Southern Georgia and Northern Florida, almost wholly devoid of interest save the crossing of the beautiful Swanee River, famed for its memories of the "Old Folks at Home," and we reach Jacksonville, the largest city of Florida, and the present terminus of our journey.

"A TROUBLER IN ISRAEL."

BY ELEANOR KIRK.

CONTINUED.

THE Westbrook mince-pies could always be relied upon. They were sure to be sweetened and spiced properly; and whether the brandy which was copiously added to the mixture when ready for the oven, kept it from killing the whole family, must be left to those who know more about the subject. At Thanksgiving time, great stone jars were filled with minced-meat, and stowed away in the cellar for use when wanted. It was not an unusual occurrence for Mr. Westbrook to eat half a good-sized pie before retiring; and when at dinner time, dessert was brought on, the Westbrook baby was allowed to have so many "tastes" that could the aggregate have been measured it would have been found to be no inconsiderable quantity. Just so with other indigestible compounds, such as lobster, chicken salads, etc., etc. The consequence was numerous colics and fevers, all of which were most mysterious to the parents.

Mr. Westbrook was subject to occasional glimpses of light in regard to the management of this little one; but he had no conception that the bits which found their way to her mouth could help to produce such serious results.

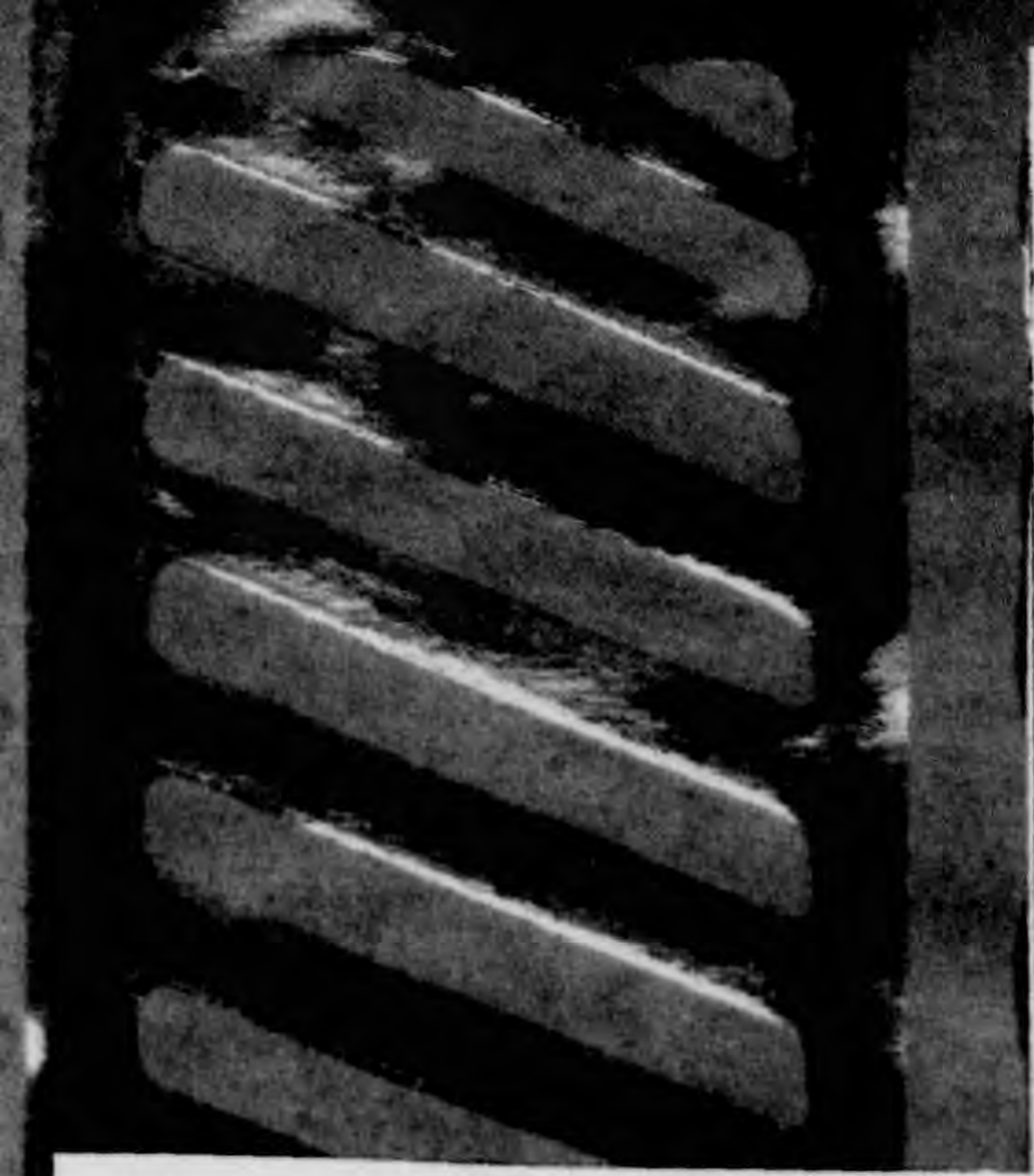
The mother's remedies at such times were tincture of rhubarb and castor oil, in generous allopathic doses. The nurse held the child's feet on these occasions, Bridget her arms, and Mrs. Westbrook the poor little nose. It was sometimes hours after these brutal performances before the sufferer could be brought to terms. She would scream, kick, and sob till her strength was entirely exhausted. This was most shocking to the mother's moral sense.

She had no doubt that her first-born was utterly depraved and unregenerate; and so after the child had acquired enough language to say "I will" and "I wont," which were about the first words that left her baby lips, Mrs. Westbrook inaugurated the switch *regime*, and this was on as broad and generous a basis as the drug treatment. The child's will must be broken at once, and so the instrument of torture was hung in a conspicuous place on the wall, and at the slightest hint of rebellion it was immediately appealed to.

Think of the deplorable ignorance that would make it possible to thrash a baby for a rasped nerve condition, brought about by an overloaded stomach, entirely the fault of cruel and chronically improper management.

One day, when an unusually violent demonstration had turned the house topsy-turvy for an hour or two, the odious Mrs. Miller happened to call. She was a narrow-minded, ill-dressed, close-fisted, and most eccentric person in Mrs. Westbrook's estimation; but just at this particular juncture anybody would have been welcome who spoke the English language, and had an available pair of hands. Miss Nellie had grown black in the face with shrieking and struggling, and at last had been seized with singular muscular twitchings and an ominous rolling of the eyes, which succeeded in seriously alarming her mother. Bridget stood one side, the nurse the other, while a bottle of castor oil and a spoon reposed on a chair close by. The combined strength of these three women had not availed to force the spoon between the child's teeth.

The visitor took in the situation at a glance, and hastily divesting herself of her hat and shawl,



WINTER RAMBLES IN THE LAND OF SUMMER.

BY MRS. E. E. KELLOGG.

A Day at St. Augustine.

We left Jacksonville early one bright morning in January, for a day at St. Augustine, the "Newport" of Florida. Our route, for the most part, lay through the woodland portion of the country, with openings here and there through which we could catch glimpses of the winding St. Johns, and the thriving little villages along its shores. At Tekoi a transfer steamer took us across the beautiful river, which at this point is quite as broad as a lake, and a few moments more found us at the city of our destination.

Fifty-five years before the landing of the Pilgrims at Plymouth Rock, a band of Spanish soldiers, under the leadership of Pedro Menendez de Aviles, landed on the Atlantic coast of Florida, planted the banner of King Philip II., of Spain, and founded the city of St. Augustine. The record of the city is an eventful one; and, like much of the world's history, is written in letters of blood and fire. Scarce six months had rolled over the settlement, ere the hands of the inhabitants were stained with one of the most terrible tragedies history has ever recorded. Hundreds of starving Huguenots, whose vessel the cruel sea had wrecked on their shores, were butchered in cold blood, with their hands pinioned behind them, while pleading for mercy, simply because they were Lutherans. The settlers thought they did God service in thus ridding the world of the enemies of their Catholic faith; and so doubtless did Dominie de Gourgues, a Huguenot commander, who two years later avenged the deed by a similar attack upon the Spaniards. Seven years after, England being at war with Spain, Queen Elizabeth's admiral, Sir Francis Drake, bombarded St. Augustine, plundering and burning the larger portion of the city.

Several times since, it has been visited by the vicissitudes of war, but has withstood them all, and is to-day a quaint, beautiful city, possessing a curious aspect and flavor of antiquity, totally unlike anything else in the United States. It is, as Mrs. Harriet B. Stowe aptly says, "as if some little, old, dead-and-alive Spanish town, with its fort and gateway and Moorish bell towers, had broken loose, floated over here, and got stranded on a sandbank." Here you see the shovel-hats and black gowns of priests; the convent, with gliding figures of nuns; and in the narrow, crooked streets meet dark-browed people with great Spanish eyes and coal-black hair. The older streets are romantic and curious, being very narrow, sometimes not more than seven feet wide, and in the old Spanish times were floored with concrete, or coquina stone. No vehicles were ever permitted to travel over them, and they were kept so cleanly swept that the Spanish belles of old St. Augustine might traverse them with no fear of soiling their dainty satin slippers.

The prevailing style of architecture is old and quaint, many of the houses being built with overhanging balconies from the second story, which frequently almost touch each other across the narrow way, and from which the neighboring dames could enjoy a quiet gossip while attending to their household affairs. Do not, however, think that St. Augustine is wholly built in the Spanish style; there are hundreds of modern residences and beautiful villas, looking out from luxuriant masses of moss-covered and rare tropical trees and shrubs. Here are oranges, lemons, figs, and bananas, with roses, honeysuckles, and manrundias, climbing and blossoming in such profusion that to one coming, as we had, from the icy rigor of a Northern State, it almost seemed as if St. Augustine might be the garden spot of America. A further acquaintance with Florida has taught us to be less partial as to locality. Here we had our first glimpse, outside of a greenhouse, of the date palm, as odd a specimen of a tree as one can well imagine. From the top of a tall trunk, which appears built up of great scales, amid which vines and ferns climb and root themselves, falls a feathery arch of green leaves, sometimes thirty feet or more in length, and crowning the trunk in the center of the green mass are numerous drooping clusters of yellow blossoms or scarlet fruit.

Fort Marion, the oldest fortification in the United States, and which protects the ocean front of the

city, claimed the first attention of our party. On our way thither we passed the ancient city gateway, two square and imposing pillars with Moorish tops, near the ruins of a wall supposed to have once extended around the city.

Old Fort Marion is one of the most picturesque structures in America. It is built of coquina, a conglomerate of fine shells and sand, quarried in the vicinity. Its construction required more than one hundred years, and was only completed in 1756, as is shown by an inscription which, with the Spanish coat-of-arms, is handsomely carved in the stone over the gateway. In form, the structure is a trapezium, inclosing within walls twenty-one feet high and twelve in thickness, an area of about sixty yards square. It is surrounded by a moat, and is considered a fine specimen of military architecture. Its formidable bastions, whose guns command the whole harbor, its imposing sentry towers, its massive arched entrance, its staunch battlements, and moss-grown walls, certainly indicate that it might have been, as it was said to be while in the possession of the British, "the prettiest fort in all the King's dominion."

Within the fort, we were shown an old Romish chapel, with an altar, and niches for holy-water vessels, the Judgment hall, where court martial was held, and several dungeons, vaults, and dark passages, sufficiently gloomy and mysterious in aspect to bring us to ready credence of the stories told of victims of inquisitorial cruelty who suffered here, and of human skeletons found in cages, and underground passages connecting the fort with a neighboring convent.

Doubtless, much is held by tradition which is not authentic; yet enough is true to make the place strangely attractive and interesting. Here "Wild Cat," the distinguished Seminole chieftain, and several other noted Indian warriors, were for a long time confined.

The site of St. Augustine is a low, sandy peninsula, the ocean front being protected for nearly a mile below Fort Marion, by a sea wall ten feet above low-water mark; the top of this wall, capped with granite, is three feet in width, and forms a fine promenade.

We were much interested in the *Plaza de la Constitucion*, an acre of ground in the central portion of the city, ornamented with shrubs, trees, and fountains, in the center of which stands an old monument, twenty feet in height, erected in 1812 in commemoration of the "Spanish Liberal Constitution," and is the only one of the kind now standing.

Opposite this monument stands one erected in 1880 by the Ladies' Memorial Society, in memory of the soldiers of St. Augustine who fell in the war of the Rebellion. Near by is the old slave market, an odd looking structure—a platform covered with a roof supported by square pillars, and surmounted by a cupola in which hung the bell that rung out the clarion notes to announce the sad fact when human beings were to be bought and sold like cattle.

Fronting on the Plaza is the Spanish Cathedral, a very ancient edifice, with its quaint Moorish belfry, the four bells of which, each hung within a separate niche, with the clock below, form a complete cross. Its interior is without especial interest, save an old painting of the first mass in St. Augustine held at the landing of Menendez; and a curious lamp of solid silver, in which the sacred flame has been kept burning, almost without intermission, for nearly one hundred years.

We had not time in our short stay to visit the many places and objects of interest with which this historic city abounds,—the old Spanish graveyard with its antique tombs, the convents, the Governor's Palace, the island with its famous beach, or the rose-tree with a trunk the size of a man's arm, on which it is said a thousand roses have blossomed in one season; but we drove past the U. S. Barracks, and stopped a moment at the military burying-ground, where under three pyramids are interred the remains of Major Dade and his one hundred and seven comrades, who were massacred by the Indians while on their way from Fort Brooke, Tampa, to reinforce General Clinch at Withlacoochee River, during the Seminole war.

GLIMPSES OF FLORIDA.

BY MRS. E. E. KELLOGG.

FROM THE ATLANTIC TO THE GULF.

JACKSONVILLE is the commercial metropolis and largest city of Florida, and was named for that hero so well beloved in the South, Gen. Andrew Jackson. We could not learn that it was particularly noted, save as a winter resort for tourists and invalids; but it appeared a handsome and prosperous city, with remarkably broad streets, most of them shaded by long rows of mammoth live-oak, whose spreading branches nearly met overhead, forming an arcade of leafy green. There are many fine residences, most of them surrounded by attractive grounds filled with tropical shrubs and flowers, among which are the homes of Judge Thomas Settle, the original of Judge Denton in "The Fool's Errand," and Gen. Spinner, inscriber of the famous greenback autograph. The beautiful St. John's River, on the shore of which the city is located, and which it overlooks for many miles, forms one of its most attractive features. We sat at our hotel window, and gazed upon its placid waters, in which the blue of the sky was reflected, and watched the far off shores, purple in their hazy distance, and the white sails of the fishing boats gleaming in the sunshine, until the picture grew enchanting; and one day we took passage upon a St. John's steamer for a grand tour up the river. For the first hundred miles the stream is a series of connected lakes, varying from one to six miles in width, with flat shores, green with forests of live-oak, cypress, and willow, and frequently dotted with little villages of well-built, bright looking homes, surrounded by thrifty groves of orange trees bending beneath a burden of golden fruit.

The first point of interest to us was Mandarin, a cosy little village of neat houses with orange groves and gardens, and the winter home of Mrs. Harriet Beecher Stowe. A colored deck hand proudly pointed out to us the residence of the author of "Uncle T bin," which can be plainly seen from the d we shall ever carry in our memory a pie e pretty little Gothic cottage with its broad nestling among a wealth of green foliage it on that January morning.

Just river from Mandarin lies the little village Park with its wide streets, numerous pr ges, and broad river avenue lined with t agnificent live-oak trees, in one of which rustic summer house reached by easy stairs. Hanging in the greatest profu the spreading branches of the oaks were of Spanish moss, looking in the distance ense cobwebs flaunting in the breeze. s of other small towns, among which are Green Cove Springs, and Palatka, each with ecial attraction,—sulphur springs or

famous orange groves,—kept us on the lookout for points of interest at every landing. A few miles farther on, the river widens into Lake George, one of the most beautiful inland lakes of America, twelve miles in width and eighteen miles in length. Its surface is dotted with a score of lovely islands, and its waters teem with numberless varieties of fish. Beyond Lake George, the character of the river changes; its channel becomes narrower, its waters darker, while vegetation along its shores assumes a more tropical appearance. The St. John's is a most unique river. Unlike most other rivers of America, in its course it flows due north, and it is not grandeur one finds upon its banks; there are no cliffs, no storm-battered rocks and trees, but a wealth of exquisite foliage and flowers, wild and untouched in their native beauty.

Here one sees the palmetto tree in all its stages, from its earlier growth, when it appears like a fountain of immense, green, fan-shaped leaves falling from a low, scaly trunk, often so full of clambering vines and flowers as to look like a flowery pillar, to the mature tree that stands a tall, smooth, branchless trunk with its fan-leaf canopy sixty or seventy feet in the air. The palmetto builds itself up in ring after ring of leaves, which decay and drop away with age, leaving their stems like scales upon the tree; these finally fall and leave the trunk smooth and bare, with only its crown of green at the top.

The shores on either side of the stream are lined with a dense growth of live-oak, willow, and cypress trees with their feathery foliage and peculiar trunks, smooth and white as ivory, with an enlargement at the base, giving them, as some one has said, the appearance of "champagne bottles set in the current to cool." Long, swaying festoons of gray moss hang from the branches of the trees, and mingle with the green of the foliage and the bright, scarlet blossoms of the air-plants that cling to the sides of the sturdy trees.

As we progress up the river, the channel of the stream grows narrower, sometimes so narrow that the boat seems almost to touch the over-hanging branches of the trees on both shores as we glide past them, and so remarkably crooked and winding that at every turn we are kept wondering where it will be possible to find a chance for farther passage, since we appear to be entirely surrounded by the shores; but just as we feel sure we have reached the end, a sharp turn of the boat opens to view a few leagues more of the beautiful river, and we glide on through a succession of turnings and windings which constantly present us with a varying panorama of enchanting scenes. The glimpses of the shore, covered with a dense jungle of bushes and moss-robed trees, over which gigantic vines run riot, are most pleasing; and the bright red berries of the mistletoe, the wild flowers on the banks, and the gay plumage of the birds, add many charms to the ever-changing picture. Occasionally our steamer startled up an alligator basking in the sun, and once a few frightened deer went leaping through the thicket at our approach. Now and then the woods break away for a little space, and one sees the thrifty orange orchards and small cottages of the new settlers.

Night overtook us before we reached the end of our journey, and we sat on the deck and watched the beautiful sunset, and the waters in the track of the boat glimmering like ripples of pearl in the deepening twilight, until the mellow brightness of the electric lights from the boat transformed the tall, pillar-like trunks of the palmettos with their crown of waving fans, and the thickets of moss-hung, vine-covered trees, into a scene most wonderfully weird and beautiful. The day's journey had been one of ever-varying interest; but the evening's ride was the most dream-like, enchanting one conceivable, and it was almost with regret that we saw our boat steam out into broad Lake Monroe, and in a few moments more found ourselves at the wharf of Sanford, where we were to remain over night.

Early the next morning we were on board a train of the South Florida Railroad, flying on through a monotonously level country, dotted with numberless little lakes, a few of which were remarkable for their beauty, the scenery only varied by the thrifty little villages which are springing up so rapidly in this southern portion of the State. Here the changes from our Northern ways of living began to be most apparent. The two-wheeled vehicle filled with store supplies, and drawn by a single beast, astride whose back sat the driver, and the canvas-covered ox-cart in which a whole household with all its belongings might dwell, soon ceased to be a strange sight to us; and before we reached the terminus of our journey we had quite gotten used to seeing the characteristic Southern house, one or one and a half stories high, with its broad verandas, its wide hall extending through the entire building, and the shed at the rear whose one chimney or stovepipe reaching up through the roof furnished the only convenience for a fire within the dwelling, with the whole structure set up from the ground on a row of short piles. At first we imagined we had come to a country where sanitary principles were so widely practiced that cellars had been purposely abolished as unhealthful; but, judging from the lack of regard paid to hygienic laws in other particulars, we were afterward forced to the conclusion that no such actuating principle could account for this excellent feature of a Southern house, but that more probably necessity, in a land where all the stone is sand, had obliged the residents to forego the convenience of the underground store-room which so often proves an enemy to health in Northern homes. The dreary aspect of the negro hovels, with their one room, whose only chance for sunlight is the square apertures in the side, sheltered from rain and wind by solid shutters of wood through which when closed no ray of light can enter, was sometimes offset by the thrifty gardens of strawberries, and pine-apples, and banana plants with their broad green leaves which a recent writer has most aptly likened to "immense, green quill pens," that grew along the way. As we journeyed along, we more and more lost sight of that freshness that the green grass gives to our Northern landscape, but we were hardly prepared for the abundance of white sand which spread itself with such dreary untidiness everywhere before our vision as we stepped from the train at Tampa, where we were to spend the remainder of the winter months. We soon learned, however, that in Florida one must accept certain deficiencies for an equivalent of certain other excellencies, and that if one wants to live in an orange orchard, he must give up wanting to walk upon velvety lawns and green grass.

DOWN THE GULF.

BY MRS. E. E. KELLOGG.

FROM TAMPA TO KEY WEST.

THAT Tampa, situated on a bay of the same name, is a "place in Florida," is familiar to all the students of geography throughout the country; but the inhabitants of the little town had, for a long period, so quietly pursued the even tenor of their way that little else was known of it until the South Florida railroad recently put it in more direct communication with the outside world, and gave it an impetus to progress. Historically, Tampa is associated with the Spanish conquests of the sixteenth century, being one of the four places of Florida selected by those commissioned to secure some portion of this then new world, as possessing conditions worthy of annexation to the Spanish Crown. At the present time, it is a rapidly growing town of

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Early the next morning we were on board a train of the South Florida Railroad, flying on through a monotonously level country, dotted with numberless little lakes, a few of which were remarkable for their beauty, the scenery only varied by the thrifty little villages which are springing up so rapidly in this southern portion of the State. Here the changes from our Northern ways of living began to be most apparent. The two-wheeled vehicle filled with store supplies, and drawn by a single beast, astride whose back sat the driver, and the canvas-covered ox-cart in which a whole household with all its belongings might dwell, soon ceased to be a strange sight to us; and before we reached the terminus of our journey we had quite gotten used to seeing the characteristic Southern house, one or one and a half stories high, with its broad verandas, its wide hall extending through the entire building, and the shed at the rear whose one chimney or stovepipe reaching up through the roof furnished the only convenience for a fire within the dwelling, with the whole structure set up from the ground on a row of short piles. At first we imagined we had come to a country where sanitary principles were so widely practiced that cellars had been purposely abolished as unhealthful; but, judging from the lack of regard paid to hygienic laws in other particulars, we were afterward forced to the conclusion that no such actuating principle could account for this excellent feature of a Southern house, but that more probably necessity, in a land where all the stone is sand, had obliged the residents to forego the convenience of the underground store-room which so often proves an enemy to health in Northern homes. The dreary aspect of the negro hovels, with their one room, whose only chance for sunlight is the square apertures in the side, sheltered from rain and wind by solid shutters of wood through which when closed no ray of light can enter, was sometimes offset by the thrifty gardens of strawberries, and pine-apples, and ba[illegible] with their broad green leaves which [illegible] to "immense [illegible] the inhabitants of the [illegible] riod, so quietly pursued the even tenor of their way that little else was known of it until the South Florida railroad recently put it in more direct communication with the outside world, and gave it an impetus to progress. Historically, Tampa is associated with the Spanish conquests of the sixteenth century, being one of the four places of Florida selected by those commissioned to secure some portion of this then new world, as possessing conditions worthy of annexation to the Spanish Crown. At the present time, it is a rapidly growing town of [illegible] inhabitants, with [illegible]

Physical Development.

THERE are also abundant statistics, says Dr. Dodd in an extract from a treatise on Food and Physical Development, and some of them from excellent authorities, showing that among the savage tribes there exist the most startling contrasts in respect to longevity, beauty of form and strength of muscle. And the travelers who have made note of these facts, and who in all probability cared nothing whatever for dietetic rules or theories, tell us that the nearest and most hideous forms of human life (as the Calmucks) were found among those people who subsist almost exclusively upon animal food, and this often of a very low order. On the other hand those races that are celebrated for the beauty of form and complexion (as the Circassians), are an agricultural people drawing their subsistence chiefly from the soil.

But leaving the Europeans and Asiatics [illegible] to work out their own destinies, continues the writer, may we not venture to inquire whether certain physiological defects so prevalent among our own people, defects so pronounced as already to be considered national, may not in some degree be traceable to their dietetic habits? Is there not some error, which if corrected, would lead to more beneficial results? There must be a reason why sound teeth are the exception; why natural dentine gives place to porcelain; why the teeth that remain are ill-shapen, loose in their sockets and covered with scurvy. There must be a reason why heads are bald so early; why heavy tresses of beautiful hair, even on youthful brows, are so rare; why the few, thin straggling locks that remain are harsh and faded and the scalp covered with a scurvy dandruff. There must be a reason why firmly knit muscles, giving to the human figure a beauty and lovelinesses of form almost divine, have left in their stead, loose, flabby tissues, with very little muscular fiber in them. There must be a reason why the rose tints fade so early from the cheeks of the young; why healthful boys and girls are converted into little, spindling, wizen-faced creatures, looking more like old men and women of diminutive stature, than like thriving, growing children. There must be a reason why even in infancy the spine so often refuses to hold the body erect, and disease and deformity ensue. There is a reason and it is our duty to find it.

If the food we eat does not contain the elements out of which dentine is made, how can we expect to have good teeth? If it is defective in nutritive quality, having a lack of those materials which make fibrin, by what process can we hope to clothe the bones with muscles? If it has a meager supply of the "salts" which enter into the formation of the bones, why should not the little children (and those of larger stature) be limp and rickety? If the nutritive substances that are found in the hair are wanting, is it not reasonable that the middle-aged and even our young people should have bald heads? If our babies do not supply the elements which go to make up our bodies, and therefore to form the blood corpuscles out of which the various tissues are made, then indeed we must be content to have faded cheeks, flabby muscles, sunken eyes, weak backs, toothless gums and bare scalps. Nor is it at all strange that what we have left is little more than a "bundle of nerves," since we have lavishly parted with all besides.

We deserve our fate if we do not mend our ways.

[illegible] sen, mental and moral, tend to strengthen our hold upon life, and all the voices to [illegible] mean it.—*Youth's Companion.*

atoned for by the wealth of tropical fruits and flowers, which grow here in great abundance; among the former may be mentioned oranges, grape fruits, shaddocks, wild, sour, and sweet lemons, limes, citrons, guavas, bananas, Japanese plums, and pineapples.

The one attraction in point of beauty is the grounds of old Fort Brooke, occupying a peninsula reaching out into the harbor. The barracks, hospital, and other quaint old buildings are considerably dilapidated; but the gigantic live oaks, with which the grounds are densely wooded, are so heavily hung with draperies of the grey, Spanish moss, that a walk beneath their spreading branches is most strangely wierd and suggestive of fairy grottoes hung with waving stalactites.

From old Fort Brooke the view across the bright waters of the bay, with the white sails of the pleasure yachts and fishing boats, dancing in and out amid the green islets that dot its surface, is most charming. Its proximity to the Gulf waters is one of the greatest charms of life in Tampa; the sea breeze tempers the otherwise sultry air, and the numerous steamers that regularly ply between this and other Gulf ports, afford excellent facilities for pleasant excursions.

We took delightful trips during our winter sojourn, to some of the island beaches and points along the coast; and late one afternoon in April we started on a longer voyage down the Gulf; a sail of one night and a day, the monotony of the voyage varied only by the changes of wind and weather and the opportunity we had at one time of watching an immense shoal of porpoises sporting along side our vessel, brought us to Key West. Next to Jacksonville, Key West is the largest city of Florida. The island at the southern extremity of the peninsular State, upon which the city is located, is nearly seven miles in length, but less than two in width. It is of coral formation, and has but a shallow soil. There are no springs, and few wells, and the people are dependent upon cisterns for their water supply. The government has a large apparatus for distilling sea water in case of water famine, which sometimes occurs. The market price of water is one cent a gallon.

Although Key West is one of the enterprising cities of Uncle Sam's dominion, the aspect of its buildings, its vegetation, and its people is quite suggestive of a foreign clime. The one thing that appeared quite too natural was the ever present cigar or cigarette, at one end of which some unwise specimen of humanity kept puffing continuously. Seldom have we seen a sadder exhibition of the excessive use of tobacco than here. Men of all ages, little boys scarcely out of their pinafores, and not a few women and girls, appear upon the streets, at the shop doors, or sit upon their own piazzas, burning incense to the god, Tobacco.

Perhaps it is hardly to be wondered at, since one of the principal industries of the place is the manufacture of cigars, upwards of thirty million being produced here annually.

At Key West we saw for the first time the cocoanut palm growing in the open air. It has been said that nature seldom produces a tree so variously useful to man as this. Where it is grown abundantly, its leaves are employed for thatching, its fibres for manufacturing many articles, while its ashes produce potash in abundance. The fruit is eaten raw, and in many ways prepared for food; it also yields an oil which forms an important article of commerce. The milk of the fruit is a cooling beverage, and the woody shell of the nut answers very well for a cup to drink it from. The saccharine juice of the tree also affords an excellent drink; and from the fresh young stems is prepared a farinaceous substance similar to sago. The cocoanut palm possesses so many useful properties that a Polynesian proverb says, "The man who plants a cocoanut, plants meat and drink, health and home, vessels and clothing, for himself and his children after him."

The cocoanut palm is quite as ornamental as useful; it has a tall, smooth trunk, branching out from the top of which is a tuft of long fringed leaves, looking like immense green feathers, several feet long, from among which droops a cluster or two of cocoanuts. The cocoanut as found in commerce is the nut divested of its outer sheath, and is much smaller in size than when seen upon the tree. Picked fresh from the tree, the cocoanut consists first, of a green outer covering; next, of a fibrous coat, which if mature, is hairy-like in appearance; and then, of the woody shell, inside of which is the meat and milk. For household purposes, the nuts are gathered while yet green, and before the inner shell has become solidified; the flesh is then soft like custard, and can easily be eaten with a teaspoon, while a large quantity of delicious, transparent fluid is obtainable from each nut. We drank of the crystal cocoanut water, and ate of the meat in its various stages of growth. Desirous of obtaining a cluster of the nuts to take home with us, we visited a grove on the outskirts of the town, and gained permission to pick one. An active little negro lad promised to secure the cluster for us. Attaching one end of a long rope to his body, he agilely ascended the tree, and after drawing the rope over a large leaf branch for support, tied it around the branch selected, which he then severed from the tree with a sharp knife, while another lad, who held the other end of the rope, gently lowered to the ground the cluster of ten cocoanuts, weighing nearly five pounds apiece.

A large variety of tropical fruits grow upon the island, many of which were new and curious to us. We were also greatly interested in visiting a garden where a banyan, the sacred tree of the Hindoos, seemed to thrive as well as if upon its native Indian soil. We counted thirty large trunks that had formed from the long aerial roots, or stems sent down by the branches, and a number of smaller shoots that will in time reach the soil and take root. The tree already covers a large area, and appears much like a grove of young trees all connected overhead by a net-work of leaves and branchlets.

There are several buildings of interest in the town, including the Fort, Custom House, and Barracks, but they had fewer attractions for us than did the natural curiosities to be found in the vegetation of the island and in the waters of the surrounding Gulf; indeed, the water held for us a charm above almost all else, and we spent several hours of our short stay sailing around near the shores in a small yacht, fishing up sponges, corals, and sea ferns with the aid of a water telescope (a glass set in the bottom of a bucket, which, held on the surface of the water, enables one to see the bottom forty feet or more below the surface), and a long, slender pole fitted at one end with a double hook. We also caught sea urchins, hermit crabs, fishes, and specimens of the beautiful Medusæ. Seen upon the bosom of the water, the curious Medusæ look like floating mushrooms, some as colorless as crystal, and others striped with blue or violet; upon a nearer view, their delicate, jelly-like structures appear perfect marvels of wonder and beauty. They move about in companies, and by a series of contractions and dilatations of their bodies, make long voyages upon the water. One can scarcely conceive of a more lovely, fragile, flower-like specimen of animal life than these jelly fishes, or "living soap bubbles," as they have been aptly termed.

DAYS IN THE TROPICS.

BY MRS. E. E. KELLOGG.

GLIMPSES OF HAVANA.

WE went on board the steamer just as the last rays of the setting sun were gleaming over the bright waters of the Gulf, and gilding the spires and towers of the quaint and picturesque city of Key West. Owing to delays necessitated in obtaining proper passports for the passengers, the vessel did not leave her moorings for some time afterward, and in the interim we had an excellent opportunity to watch the interesting phenomenon of phosphorescence caused by myriads of luminous little animals that swarm in the warm waters of the Gulf. The naturalist of the party procured a pail and a row-boat, and by dint of much perseverance, succeeded in capturing one of these curious little creatures. In appearance it was eel-like, about the size of a knitting-needle, from one and a half to two inches in length, and every few seconds emitted a beautiful pale-greenish light, far more brilliant than that of the common lightning-bug. As the twilight deepened, the twinkling of the stars above and the bright scintillations of the millions of these little phosphorescent creatures in the water beneath us, presented a most magnificent spectacle.

We spent the night crossing the Strait, and early the next morning found ourselves in sight of the "Queen of the Antilles," and ere long we were approaching the harbor of Havana, the largest city and chief commercial metropolis of the West Indies. The entrance to this harbor is a channel half a mile or more in length, and so narrow that only a single vessel can pass at a time. The whole length of the narrow passage is guarded by immense fortifications. On either side, like two massive gate posts to the channel, stand the strong tower of the *Punta* and the famous *Morro Castle*, bristling with guns and formidable artillery. From the entrance of the port the aspect of the city with its fine edifices, its broad arcades and pretty parks, its diverse structures of all sizes and styles of architecture, painted in the most fantastic colors, its numerous spires mingled with the towering palms, and back of all the evergreen hills, is one of the most gay and picturesque imaginable. To us as we saw it that April morning in the mellow light of the tropical sunshine, it appeared like a veritable city of "crazy patchwork," wherein each building formed a "piece" joined to some other piece by arabesques of flowers and foliage, which toned down the harsher outlines, and served to make it one harmonious whole. As our vessel sailed into the harbor, we were met by a flotilla of curious little row-boats, over the stern of each of which was stretched a semi-circular canvas covering, giving it an appearance similar to the top of a western "emigrant wagon;" while from the front of the little craft arose a flagstaff, upon which fluttered the national ensign of Cuba. These little boats were for the transfer of passengers from the ship to the landing, and as soon as the government officials, who boarded the ship upon its arrival in the harbor, had completed their examination, we were quickly ensconced beneath the canvas awning of one of them, and rode to the *marchina*, or custom house, as comfortably as though the mercury was not away up in the nineties, and the heat of the tropical sun beating fiercely down upon everything unprotected from its heat.

The arrival of a Spanish vessel just previous to our own, had crowded the custom house with baggage for inspection, so that we were obliged to wait for our turn; but meanwhile we found it interesting to watch the courteous officers in the performance of their duties, and the jargon of Spanish chattering around us was quite as amusing as it was unintelligible.

Having finally secured the requisite chalk mark upon our baggage, we proceeded to our hotel, catching glimpses on the way of the curious and interesting city. In the older portion of Havana, within what was the original city walls, the streets are extremely narrow, so narrow, indeed, that it is quite customary to see an awning stretched over the entire way, and though generally well paved, are ill-provided with side-walks, a narrow ledge on each side, barely wide enough for one person, being the only provision for pedestrians. Outside the old wall the thoroughfares are broad and ample, and fringed on either side with rows of graceful palms.

The prevailing style of architecture is the same as that of Southern Spain. The houses are constructed with very substantial walls, about twenty inches thick, and are painted in bright, showy colors, sky blue, light green, pink, and yellow predominating; they are either one story and covered with a pointed tile roof, or two stories, built around an open *patio*, or court, with a flat roof surrounded by a substantial railing, and sometimes surmounted by a *mirador*, or look-out. Each room opens upon a covered veranda surrounding the open court, which is usually adorned in a most tasteful manner with parterre of flowers and shrubs and a fountain in the center. The doors are usually double and very ponderous; the windows, which are merely apertures in the walls, without sash or glass, are strongly latticed on the outside with iron bars, while solid wooden shutters inside, protect from heat and dust. These shutters are kept tightly closed during the day, giving to the houses more of the aspect of a prison than of a dwelling. Few of the inhabitants venture out during the day, save on business; but when the sun is set, and the cool breezes from the Gulf have modified the atmosphere, then all is changed; the streets, parks, and dwellings are brilliantly lighted; shutters are thrown open, and there is music and revelry within; while outside a gaily dressed throng are chatting and promenading, or driving in their elegant equipages about the city and its environs.

In the hotels and dwellings of the wealthier class, the floors and stairs are of marble, the ceilings finished with massive beams of some dark wood highly polished, the decorations and furniture tasteful, and seemed to us quite home-like, save that in their arrangement about the room the chairs (the majority of them are rocking-chairs of assorted sizes) were placed in rows one behind another, like seats in an audience room.

Havana possesses many beautiful boulevards, squares, and parks filled with magnificent tropical trees, luxuriant flowers, elegant fountains, columns, and statues, some of them ranking among the finest specimens of art in America.

DAYS IN THE TROPICS.

BY MRS. E. E. KELLOGG.

A DAY IN HAVANA.

OUR first visit in the city of Havana was to the market, an immense structure surrounded by a broad arcade, where was exhibited for sale almost every conceivable commodity that can be raised or manufactured, from toilet articles and jumping jacks to live goats and an endless profusion of household wares. Upon one side, donkeys, laden with h[illegible] aniers of [illegible] beneath [illegible] hil[illegible] nd and [illegible] of al- [illegible] ing in [illegible] dy a little [illegible] a ripe

dral, which contains the tomb of Christopher Columbus.

The discoverer of America, or as he is styled by the Spaniards, *The Great Admiral*, died in Spain in the year 1506. In the succeeding three hundred years, his remains were transported from Valladolid to Seville, afterwards to the city of Santa Domingo, and at last after this long period of wandering from place to place, were brought to Havana, where with imposing and pompous ceremonies they were finally immured behind a marble slab in the walls of her great Cathedral. A fine bust of Columbus in relief adorns the slab covering the depository, underneath which is the following inscription in Spanish :—

OH, REMAINS AND IMAGE OF THE

GREAT COLUMBUS,

A THOUSAND YEARS ENDURE PRESERVED IN

THIS URN,

And in the Remembrance of our Nation.

The Cathedral itself, though massive and old, is not particularly interesting either for its architecture or interior embellishments, of which it has but few.

The heat, which in the middle of the day is quite oppressive, drove us back to our hotel till evening; but as our windows looked out upon one of the principal thoroughfares, we found much to interest us in watching the ever-varying panorama of life and activity going on around us. Hundreds of Chinese coolies, in their native dress, were to be seen carrying baskets of produce and burdens of all sorts suspended from a yoke placed upon their shoulders. These poor sons of China came to Havana, agreeing to work eight years in payment for their passage money, at the end of which time they were, of course, in debt for board and clothing, the liquidation of which requires another eight years' servitude. Thus they were virtually slaves. We understand that the cooley trade is now suspended, by order of the government. We judge that they have retained their native customs in all their manners of living, dressing, and eating, as several times during our stay, we chanced to see them at their meals as dexterously whisking their food into their mouths with chopsticks as though at home in their own Celestial Empire.

Donkeys, bearing upon their backs whole coopsful of live chickens, marching gravely along toward the market; two-wheeled Victorias, with postilions in bright colored uniform sitting astride the horse, rumbling along over the pavements; street-cars almost invariably drawn by three horses; negro women, puffing cigars, and cooking their dinners over a bonfire in the yard or on the street corner, added to the strangeness of the scene. Occasionally we would see a milk-vender driving his cows, with their muzzled calves, from house to house, and, stopping before the front door, milk the required amount, after the usual custom in Cuba. One would imagine this method of milk-selling must do away with all proneness to adulteration, but we have been informed that milk-men, even here, find some way to trick their customers out of the genuine article, either by carrying sponges filled with water in their sleeves, from which that liquid trickles down their arms into the lacteal fluid, or by wearing about their bodies a supply of tubing filled with water, which they press out while milking, by the movement of their arms in much the same manner as the Scotchman plays upon his bagpipe.

As the atmosphere cooled toward evening, we drove out to the Botanical Garden, a magnificent collection of tropical vegetation, where majestic palm-trees, lifting high toward the heavens their clusters of rich, rustling verdure, and a countless variety of other tropical trees, shrubs, and flowers, interspersed with miniature water-falls, statuary, and grottoes, made the place a "thing of beauty and a joy forever." Attached to this garden were the magnificent grounds and summer residence of the Captain-General.

DAYS IN THE TROPICS.

BY MRS. E. E. KELLOGG.

A VISIT TO A SUGAR PLANTATION.

CANE growing and sugar manufacturing are among the chief industries of the Island of Cuba; and as there are no sugar plantations near Havana, we arranged to spend one day farther inland, at Mariano, visiting an *ingenio*, as a sugar plantation is termed. The day for our excursion, like all the days we spent on the island, was beautifully bright and fair; soft, fleecy clouds floated over a serene sky, and the face of nature everywhere presented the appearance of a perpetual summer time.

Our way to the railway station led us through a business portion of the city hitherto unvisited, with streets so narrow as to seem more like spaces between the houses than public thoroughfares, and with awnings stretched across the top from house to house, giving to them the semblance of long, narrow tents, under the grateful shade of which we rode in perfect comfort, though outside the shelter, the heat was like that of a midday in August.

Every shop, even the most humble, has its title, some pretty, fanciful name, that of a flower, a gem, a star, or some alluring quality, but nowhere does the name of the proprietor appear. Immerging from the narrow, covered streets we passed beyond the confines of the older city out upon the *Paseo de Tacon*, a broad boulevard with two carriage drives and two foot paths, with double rows of trees between. Beautiful villas with parks and gardens, embellished with statuary and fountains, and filled with rare trees and shrubs, line the avenue its whole length of nearly three miles, and make it one of rare beauty, unsurpassed, it is said, in any other city on this side of the Atlantic.

About one mile out upon the avenue, we reach the railway station, and have just time to get on board the outgoing train. The cars are all after the American model for narrow guage tracks, and graded into three classes, first, second, and third, though what is termed first class is much plainer in appearance than the common passenger coach upon our Northern railways. No brakeman with sonorous voice announces the approaching station, but the one official, or guard, who examines the tickets, turns a mechanical device (somewhat similar to an adjustable calender) in either corner of the car, and displays in large letters of black on white the name of the "*proxima estacion*," or next station at which the train will stop.

Our only fellow passengers were two dark-browed swarthy-looking men and one lady, all native Cubans we judged, though from their dress we could not tell, as there are no costumes worn by the Cubans, no Spanish hats and cloaks, knee breeches and waistcoats, such as are deemed so picturesque in other Spanish countries. Ladies wear no hats, simply a scarf of lace thrown over the head, while the opposite sex go to the other extreme, and wear heavy wool hats in the hot sun. One peculiarity we observed in their jewelry. The teeth which their near friends or deceased relatives have had extracted, are mounted in gold and worn with as much pride as the rarest of gems.

Our route to Mariano lay over a gently undulating country with here and there a picturesque little village of high one-story houses with tiled roofs and long, barred, open windows, surrounded by yards of grass and trees, among which are almost always to be found the characteristic palms, mango, cocoa, and banana trees. Thickets of shrubs and wild flowers of varied forms and richest hues abound. Occasionally a tall tree with immense trunk and wide-spreading branches stands alone, like some majestic monarch, keeping guard over broad acres of verdant fields, and which as our guide tells us is a *ceiba*, the largest tree upon the island.

At Mariano the railway terminates, and we take a cab for the *ingenio*, which is yet some little distance into the country. On our way we pass the town residence of the owner of the estate, a large and most elegant mansion, approached by broad avenues, and surrounded by spacious grounds beautifully laid out, and adorned with fountains, shrubs, and flowers.

In the distance are to be seen acres upon acres of the sugar-cane, looking like fields of overgrown broom-corn, and soon we come upon a group of white, one-story buildings, and a mill with one high furnace chimney. This is the sugar plantation. Our arrival was during the midday rest hour, and we had an excellent opportunity to become acquainted with the mechanism employed in the sugar-making process, before the afternoon labor began. Promptly at one o'clock the engine is started, the machinery set in motion, and active operations begin.

The process by which the cane juice is converted into sugar can be easily described, but it would be extremely difficult to picture the scene of labor and activity which characterizes a Cuban *ingenio* during the hight of the sugar-making season. The cane is cut fresh as needed, by companies of negro men and women working together, who move about the field like reapers, in even lines and at stated distances. They use for this purpose a *machete* or long sword-like knife, with two blows of which they slash off all the leaves, and with a third sever the stalk near the ground. Another company of men and women, with large two-wheeled carts to each of which are attached two yoke of oxen, pass over the field to gather up the long bare stalks of cane, and carry them to the mill. The oxen are worked after the Spanish fashion; the yoke, instead of being hung about the neck, is strapped upon the head close to the horns, and the animals are guided by ropes attached to a ring put through the nostrils, thus necessitating a driver for each pair of oxen. Over five hundred head of oxen and hundreds of negroes were employed in cutting and drawing the cane from the field. To view the vast sea of waving cane, the hundreds of busy reapers, the active operation of gathering and loading the stalks, and the long procession of huge, loaded carts, each with its four oxen and two drivers (which were quite as frequently women as men) winding slowly along toward the mill, was the most fascinating and picturesque scene imaginable.

At the mill the cane is thrown from each cart into large piles near a platform, from which it is carefully and evenly placed by hand in a long trough with a bottom made of slats. This trough, which is moved by the action of an endless chain, pours the cane thus spread upon it slowly and evenly between two heavy horizontal, cylindrical rollers. These crush out every drop of the juice, which falls into a receiver beneath; while the crushed stalks pass into another trough, and are carried along by it and gathered into baskets by the negroes, who carry it out and spread it upon fields, where it is carefully watched and turned till thoroughly dried, and is then gathered and used to feed the fires. This crushed cane, or *bagazo*, as it is called, serves a most important purpose in the sugar-making system, since as wood is very scarce it is the main dependence for fuel.

The manufactory which we visited was supplied with the most approved machinery. Instead of the open vats in which the cane juice was formerly boiled, large cylinders were employed in which the juice is pumped from the tanks, into which it flows from the crushing cylinders. In these it is evaporated at a low temperature by the aid of vacuum pumps, which exhaust the air, and cause the liquid to boil at a temperature much lower than boiling heat. From this it is pumped into other cylinders in which it is further condensed for a time, carefully skimmed, and finally transferred to a rapidly revolving "centrifugal" machine, by which the molasses or uncrystallized portion is separated from the crystallized sugar.

The scene on a sugar plantation is emphatically a busy one. Everybody is employed, even the children, who feed the standing oxen with green stalks and blades of cane as they wait for the carts to be unladed. And as the cane only ripens once a year, and remains in suitable condition for use but a few months, it is necessary that the furnace fires burn night and day, and the work go on without cessation to the end of the sugar-making season.

We carried back with us to Havana, by the afternoon train, many specimens of the sugar in cane and crystals, and a picture—which can never be effaced from memory—of the busy scene of industry on a Cuban *ingenio*.

The Catacombs of Rome.

You are taken down a long passage till you find yourself at the entrance of a gallery forty feet under the ground, and with lighted torches you walk through miles and miles of the dead, who, as they have been lying here fifteen hundred years, may be said to be very dead.

There is a series of subterranean corridors, a labyrinth which to traverse is only safe by those who know its intricate turnings and twistings.

The receptacles for the dead who lie in these subterranean cemeteries are niches in the walls of the passages, though occasionally when the deceased was of more than usual consequence, or one whom his friends considered more than common, he was embalmed and laid out in a sarcophagus all by himself. Inasmuch as his name is quite as much forgotten as those of lower degree, he is now no better off than the indistinguishable mass who repose higgledy-piggledy all together. After two thousand years it makes precious little difference where one is bur ed. It's all the same after a certain time has elapsed. It begins by strewing flowers on tombs, till the wife marries again or the children have spent the money the old gentleman painfully accumulated, then the dead are forgotten and its dust and ashes merely. One might as well have his dust and ashes mixed with the dust and ashes of a thousand others, as to have it separate in a sarcophagus, provided everybody has forgotten who is in the sarcophagus. And even if the name be remembered it doesn't make much difference to the deceased. Either in Heaven or the other place, what happens to his poor remains on earth, above or below, makes no difference to him.

The catacombs were originally Pagan burying places, but afterwards the Christians took possession of them. The inscriptions on some of the tombs are Pagan but those of a later date are covered with the emblems of the new faith.

A tour through the catacombs is all very well if you could only go by yourself. A dozen miles, more or less, of corpses underground isn't a very cheerful thing to explore, and so, were you alone, you would merely look into the first passage, take a short excursion into the second, and diverge into some one of the chapels, and then get out into the fresh air where there is something besides death. But unfortunately you are always in a party, and some one in that party, always an old lady with spectacles, will insist upon making the tour of the entire business. After you have seen a half mile of mortality you have seen it all, for the next half mile is an actual repitition of the first, but she wants to see every inch of it, and as the guide is paid for it all he cannot refuse to conduct us, and as once in you cannot get out without the guide's assistance, you are booked for the entire trip. And so you go on wandering among passages filled with the remains of the dead and as full of ghostly suggestions as an egg is of meat. The old lady stops and makes enquiries as to every individual niche she comes to, thinking she is possessing herself with information, every other member of the party wishing heartily that by some process she could be lost and the rest of us permitted to get out into the open air.

And when we emerge she immediately asks the guide if there are not more catacombs near by!

There are sixty of these catacombs in and about Rome, but they are all alike. It was an expensive way of interment to dig these frightful passages out of the solid rock, but it pleased the people of the day, and it's none of our business. The most of the graves are pictorially ornamented, and very bad pictures they are. However, one large class of visitors go into raptures over them, and they doubtless serve some purpose.—*D. R. Locke, in Toledo Blade.*

NOTES OF TRAVEL.—No. 1.

BY MRS. E. E. KELLOGG.

THE TOWER OF LONDON.

On the northern bank of the Thames, in the very heart of London, stands the famous Tower, which for eight centuries has held a most important place in English history, as a fortress, a palace, or a prison. Indeed, its history is the history of England; and its moldering walls are a monument of her terrible conflicts and weathered storms, her progress from fanaticism and despotism to personal liberty and peace. The Tower is not a single castle, but a series of towers surmounted by a battlemented wall, and encircled formerly by a broad moat filled from the river, but now dry and used as a parade ground for drilling the soldiers quartered in the Tower. Centuries ago, when the present site of London was only marsh and moor, the Romans built here a fastness, of which only a bit of crumbling wall remains to tell the tale; but what is now the Tower of London properly originated with William the Conqueror, who erected a square fortress with a turret on each of its four corners. Each succeeding monarch, in those tempestuous times, added a wall or a tower, to increase its strength and its size, until the structure covered twelve acres of land, its present extent.

Here, until the time of Elizabeth, the sovereigns of England dwelt in comfortless grandeur, having need to be surrounded by something more secure than royalty to insure their safety; and up to the time of Charles II. the royal court was held in the Tower. These ancient walls, could they speak, might tell of scenes of gorgeous pomp and magnificence, which often gilded the gloomy rooms; of gay tournaments, in which doubtless many of the suits of armor, still preserved in the armory, once glittered and shone on the flower of English nobility and chivalry. It was here on the 29th of May, 1533, that Henry VII. received, with unprecedented magnificence and display, the beautiful Lady Anne Boleyn as his queen; and it was from the Tower she proceeded, upon the following day, with "all the pomp of heraldry and pride of power," to Westminster for her coronation. It was to the Tower, three years afterward, on the first day of the same month, that she returned a prisoner, a discarded wife, her fair fame sullied, her bright career ended, to await in captivity her bloody fate. It was from here, on the 19th of May, that she passed out on her way to the scaffold; and in a vault of the Tower chapel her body lies mingled with the dust.

As a prison, the annals of the Tower are replete with sad and terrible events. A list of the illustrious captives, who, during the past eight centuries, have pined within its chill and gloomy walls, would fill a volume. Through the Traitor's Gate, a strong water-gate built over the moat, hundreds of notorious and royal personages have passed, to exchange dreams of happiness and glory for the dungeon, the torture-room, the block, and the heading-axe. In the White Tower is still shown the cell in which for twelve years Sir Walter Raleigh was confined, on suspicion of having been implicated in a plot to place the Lady Arabella Stuart, a descendant of Henry VII., upon the throne, and where he wrote his famous History of the World. Upon his release, he was sent to Guiana, South America, in search of gold mines; but failing in this, he was remanded to the Tower upon his return, and was beheaded by order of King James, it is said, to please his enemies, the Spaniards, whom Sir Walter, as a warrior, had often defeated.

The walls of Beauchamp Tower, so named, it is supposed, from Thomas Beauchamp, Earl of Warwick, who was imprisoned there during the reign of Richard II., are covered with devices and inscriptions traced by the various prisoners who have been confined there. The majority of these inscriptions are of a religious character, and were doubtless traced by persons immured for their religious belief. One of the most interesting is a device bearing the name of John Dudley, who was imprisoned for having joined the faction which endeavored to deprive Queen Mary of the crown. The device consists of a lion, a bear, and a ragged staff,—his family coat of arms,—underneath which is his name; and the whole is encircled with a wreath of acorns, roses, geraniums, and honeysuckles, emblematic of the Christian names of his four brothers,—Ambrose, Robert, Guilford, and Henry, as appears from the inscription, which is as follows:—

> "Yow that these beasts do wel behold, and se,
> May deme with ease wherefore here made they be,
> Withe borders eke wherein,
> 4 brothers names, who list to serche the ground."

It is evidently intended that the acorns should represent the initial letter of Ambrose; the roses, of Robert; the geraniums, of Guilford; and the honeysuckles, of Henry.

The single word "Jane," imprinted upon the bare wall, stands as a living monument of the beautiful and innocent Lady Jane Grey, whose troublous reign of thirteen days as Queen in the Tower palace changed to weeks of lonely captivity in its gloomy dungeons, and resulted in her execution upon the Tower green.

In one of the towers is shown the broad stone at the foot of the winding stairs under which the bodies of the sons of Edward IV. were secretly buried, after they had been smothered by the command of their cruel uncle.

In another tower close by, guarded by officials and surrounded by strong iron bars, are the royal crowns and jewels, for which so much blood has been shed,—pretty baubles of gold and precious stones, said to be valued at $15,000,000. Among them is the crown of Edward, one of the first, and that of Queen Victoria, the last. Victoria's crown is a cap of purple velvet inclosed in hoops of silver, the whole surmounted with a ball and cross of jewels, flashing with over 2,700 diamonds, and containing one sapphire worth $5,000,000, together with rubies and emeralds, each with its legend, as her majesty's crown has been constructed out of the fragments of half a dozen bygone insignia of royalty.

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Richard II., is now filled with specimen suits of armor, some of them dating back as far as the year 1250, together with twenty-two equestrian figures, life-size, clad in the armature worn by the princes and knights of old. These afford a correct picture of English war-array from the time of Edward I. to that of James II. The walls and ceilings are adorned with sunflowers, passion-flowers, and lilies, formed of sword blades, ramrods, bayonets, and pistols. Numerous trophies are to be seen here. Here, too, are specimens of the instruments of torture, thumb-screws, collars, and heading-axes, which have served to make the Tower a grim monument of the era of cruelty and bloodshed. The block is there, with the axe marks still visible, upon which Lords Lorat, Kilmarnock, and Balmerino were decapitated after the rebellion of 1745.

The warders, sometimes called beef-eaters, a corruption of buffetiers, in their picturesque dress, and velvet hat bright with red and blue ribbons, who are stationed in various parts of the buildings, were anciently employed to guard the prisoners and watch the gates.

The whole place is alive with historic reminiscences. Scarce a window, wall, or bridge but has its tale of weal or woe, too often, alas! of woe. And strange as it may seem, it is said that during the eight centuries which the Tower has stood, it has never sustained an attack from a foreign enemy. All the conflicts which have raged around and within its walls have been kindled and fed by the fierce passions and domestic strife of England's own sons.

ST. PAUL'S CATHEDRAL.

ST. PAUL'S is a symbol of Great Britain's ecclesiastical power, and is the grandest structure of its kind in the kingdom. Centuries ago, here stood the celebrated cross of St. Paul's, where the word of God was preached; where papel bulls were published, and noble men whom the flames of martyrdom could not appall, were urged to recant their faith; and where the Pope's condemnation of Luther was proclaimed, in the presence of Cardinal Woolsey. Upon this site two buildings have been leveled to the ground by fire, one of which, usually designated as Old St. Paul's, was the scene of Wycliffe's citation for heresy in 1337, and the burning of Tyndale's New Testament in 1527. The present edifice, which was thirty-five years in building, was designed by Sir Christopher Wren, and completed nearly two hundred years ago. It is an immense structure, built in the form of a cross, with a magnificent nave and transept, five hundred feet in length. One is struck with the vastness of the interior, every niche and corner of which is filled with beautiful statuary, including many extraordinary specimens of art.

In the crypt beneath lie the remains of scores of illustrious dead. All around are statues and monuments of the great in all professions,—the soldier, the statesman, the painter, the poet, and the philosopher. Tombstones form the pavement, upon which we read such names as Sir Joshua Reynolds, Lawrence, Turner, West, and Cornwallis. Here is to be seen the funeral car of the Duke of Wellington, cast from the cannon captured in the victories of the "Iron Duke;" and near by, in a porphyry sarcophagus, lies his body. In another sarcophagus, originally made for Henry VII., lie the remains of Lord Nelson, surrounded by a coffin made from a part of the mainmast of the ship L'Orient, destroyed at the battle of the Nile. The fact that St. Paul's is the burial place of Wellington and Nelson would serve to make it the Walhalla of England; for Wellington and Nelson are her most beloved heroes.

The guide who conducted us through the crypt asked us to solve the conundrum, "Why is St. Paul's Cathedral like a bird's nest?" and when we gave it up, laughingly answered, "Because it was built by a Wren." This is a fact which we ought to have remembered, since we had just passed a simple, unpretentious slab bearing his name, and the veritable inscription, "Do you seek my monument? Look about you?" And a wonderful monument it is, nearly half a mile in circumference, and costing, it is said, four million dollars. (The larger share of this large sum was raised by a tax on coal.) The height of the dome to the top of the great cross which surmounts it, is four hundred and four feet. Near its apex is the golden gallery, from which, through the fog and mist, one can catch a glimpse of the spires, towers, and roofs of London, far below, looking like the shadowy specter of an immense city. Here, in a tower, is the great bell which is tolled one hundred and twenty times each day at 1. P. M., and whose only other duty is to ring the funeral knell of the members of the royal family, the bishop of London, the dean of St. Paul's, and the mayors of London who die in office. In the interior of the cupola is the "whispering gallery," remarkable for its curious echo. A slight whisper uttered close by the wall on one side is distinctly audible on the other at a distance of one hundred and eight feet.

WESTMINSTER ABBEY.

THIS is England's mausoleum of her illustrious dead, the shrine of the dust of her great "in arms, in arts, in song." It is the only national sepulcher in the world; and a tomb within its walls, amid the fretted pillars, lofty arches, and marble columns, is considered the last and greatest honor which the English nation can bestow upon the most deserving of her sons and daughters. Here lie nearly all the kings, queens, and princes of England, from Edward the Confessor to George II.,—the reigning sovereigns for a period of more than twelve hundred years. Here sculptors, poets, philosophers, warriors, and divines lie silently moldering in the dust, while monumental marble embalms their memory.

The origin of the Abbey dates back to the seventh century, when Sebert, king of the East Saxons, is said to have erected upon the site of the present Abbey a

church to the honor of St. Peter, which was in the time of Alfred destroyed by the Danes, and afterward re-erected by King Edgar. Edward the Confessor, Henry the III., and other sovereigns, have rebuilt, remodeled, and added to the structure, until at the present time it is one of the most beautiful specimens of gothic architecture in existence. It is built in the form of a Latin cross, five hundred and thirteen feet in length, with towers that rise to the height of two hundred and twenty-five feet. The harmony of its proportions, the richness of the coloring, and the beauty of its clustered columns, together with the great array of monumental statuary, serve to render its interior strikingly beautiful. The Abbey is decorated with upwards of twenty stained glass windows, most of which are illustrative of some portion of the Te Deum. Monuments and tablets inscribed with familiar names of persons whose fame is world-wide, together with a record of their deeds and exploits, are everywhere,—

"Thronging the walls; and on the floor beneath
Sepulchral stones appear, with emblems graven,
And foot-worn epitaphs."

Scarce a niche within the entire edifice but bears a memorial to some of England's great men, who have filled history with their deeds, and the world with their renown. Among these are the names of Wesley, Sir Isaac Newton, Watts, Pitt, Warren Hasting, Darwin, and Dean Stanley—whose grave we found covered with a profusion of Easter blossoms—and scores of other illustrious personages.

In the "Poet's Corner" are memorials of many whose names will ever be associated with English poetry and thought,—Milton, Shakespeare, "Rare Ben Jonson," Campbell, Southey, Macaulay, Dickens, Goldsmith, and John Gay, upon whose tablet is inscribed the doggerel couplet composed by himself:—

"Life is a jest, and all things show it;
I thought so once, but now I know it."

In the chapel of Henry VII., which adjoins the east end of the Abbey, rests many a royal head. Here, sleeping in the same vault, lie "Good Queen Bess" and her sister, "Bloody Mary," and near by are the remains of Mary Queen of Scots. Enemies and rivals during life, their ashes are at peace within one common sepulcher.

One of the curiosities of the Abbey is the coronation chair; for here, within the same walls, the pomp and magnificence of the regal coronation of England's sovereigns has for centuries followed close upon the solemn burial of her dead monarchs. As Jeremy Taylor aptly says: "Where our kings are crowned, their ancestors lie buried; and they must walk over their grandsire's head to take his crown." Even when crowned previously in another place, as was the case with Henry III., the ceremony has been repeated at Westminster, in the presence of the nobles and chief ecclesiastical dignitaries of the land. The throne is an unpretentious old oak chair. Under its seat is kept the stone of Scone, upon which the kings of Scotland had been crowned from time immemorial up to the time of her invasion by Edward I., who brought the stone to London in token of the complete subjugation of the Scots; and if tradition may be believed, it is the stone used by the patriarch Jacob for a pillow in Bethel. On coronation day, the chair is covered with gold brocade, and placed in the center of the sacrium of the Abbey, where the august ceremony is performed by the archbishop. When the crown is placed upon the head of the newly made sovereign, the peers and peeresses also place upon their heads a coronet, and a signal is given from the top of the Abbey for the "Tower" guns to be fired at the same instant.

The "Chapter House" of the Abbey, so called because in the earliest times of the church it was the chamber in which the abbot and monks held, once a week, their "chapter," or meeting for discussion and business, was for nearly three hundred years used for the sittings of the House of Commons, being lent to the Commons by the abbot for that purpose; thus making it the scene of the chief transactions which have laid the foundation for the representative and religious liberty of England at the present day.

Westminster is celebrated as being the birthplace of the Presbyterian Church, as it was in the "Jerusalem Chamber" of the Abbey that the famous Westminster Assembly convened. It was also from Westminster that the first English Bible was issued from the press, and within its gray-grown walls, a few years since, sat the committee on its revision.

LONDON BRIDGE.

Nowhere else in the city can one realize so well the enormity of the traffic which makes London the commercial metropolis of the world as upon this passage across the Thames. Down the river as far as the eye can penetrate the hazy at-

mosphere, are seen forests of masts, here being the port of London; while passing to and fro across the bridge is a constant living stream of humanity; carriages, omnibuses, market carts, wagons loaded with every conceivable produce, drays, trucks, and foot passengers of every profession, hue, and nationality. It is estimated that eight thou-and foot passengers and nine hundred vehicles pass over the bridge every hour.

The London Bridge, so famous for the ghastly memories of the many trunkless heads which during the past history of England frequently adorned its pinnacles, was built in the twelfth century. A chapel dedicated to St. Thomas of Canterbury was built upon it, and a row of houses sprang up on either side, so that the bridge resembled a continuous street. Here lived the great painters Hogarth and Holbein, and, for a time, the still more famous John Bunyan. It was terminated by fortified gates on both banks, upon the posts of which were exposed the heads of traitors, heretics, and others who dared to disobey the royal mandates, or in any way displease the ruling sovereign. For six hundred years this was the only bridge across the Thames, but tide and time have long ago dismantled its piers and buttresses, and a more humane civilization has banished the despotism of which it was once the cruel monument; and in its place has appeared a modern structure, upheld by granite arches, which is notable only as being the center of the commerce of the world.

THE PALACE OF WESTMINSTER.

UNDOUBTEDLY the most imposing edifice in all the city of London is the new Palace of Westminster, comprising the Houses of Parliament, the new Law Courts, and Westminster Hall, a portion of an ancient royal palace originally built by William Rufus. The building is gothic in style, contains over a thousand apartments, and covers an area of eight acres. Three lofty towers adorn the structure, the largest of which, through whose portals the Queen enters on the opening and prorogation of Parliament, is called the Victoria tower, and is three hundred and forty feet in height. An immense clock with four dials, each nearly twenty-five feet in diameter, surmounts the next higher tower, while the bell, popularly called "Big Ben," whose clear tones sound the hour, is one of the largest in the world, weighing no less than thirteen tons. Five hours of hard labor are required to wind the striking fixtures of this clock.

The palace is built upon the bank of the Thames, and its river front is adorned with statues of all the English sovereigns from the Conqueror to the present Queen. The whole interior of the building is adorned with lavish magnificence, the corridors are decorated with fresco-paintings of scenes in the history of England, and the halls are richly gilded and adorned with statuary of celebrated English statesmen and nobles.

The House of Peers, in which the lords of England sit in council, is a room about ninety feet in length by forty-five in width. Its windows, filled with stained glass, contain the portraits of all the kings and queens of England since the Conquest; its walls and ceilings are richly adorned with heraldic emblems, while the niches between the windows are occupied by the statues of the eighteen barons who extorted the Magna Charta from King John. Near the center of the room is a seat covered with crimson cloth, the celebrated "woolsack," on which the lord chancellor sits. Behind this stands the gilded throne of the Queen.

The House of Commons is more simple, yet is handsomely fitted up with carved oak paneling, richly adorned ceiling, and stained glass windows. In the lobby of each of the Houses—neither of which was in session at the time of our visit, it being Easter holiday—we were shown the hat-racks, upon which the Lords and M. P.s hang their respective head coverings, each peg properly labeled with name and title, indicative of the care with which Englishmen proverbially guard their head-gear.

Westminster Hall, one of the few remaining portions of the ancient palace founded by the Anglo-Saxon kings, now forms the vestibule of the Houses of Parliament. It has been the scene of many royal feasts and ceremonies, the last of which was a public festival held at the coronation of George IV., when, according to the custom of those ancient times, the king's champion, in full armor, rode into the hall, and threw his gauntlet upon the floor, thus challenging any one to mortal combat who should dispute the right of the newly elected king to the title of sovereign. In this hall were held some of the earliest English Parliaments, and here Edward III. entertained the captive kings, David of Scotland and John of France. Here Charles I. was condemned to die, as was also Scotland's brave champion, William Wallace. In this hall, Cromwell, wearing the purple, ermine-lined robe of royalty, with a scepter in one hand and a Bible in the other, was inaugurated Lord Protector. Eight years later, in accord with the then existing party spirit, his body was rudely dragged from its grave in Westminster Abbey, and thrust into the Tyburn pit; while his head, with those of two of his

arty, was exposed on the pinnacles of this ame Westminster Hall, where it remained for hirty years. A gale at last carried it to the round, and it was afterward sold to a distant elative of the Lord Protector, who still has it n his possession.

In this Hall many of the great trials of State ave taken place. Here occurred the famous even years' trial of Warren Hastings, as did lso the acquittal of the seven bishops who had een committed to the tower on account of heir opposition to the Roman Catholic innovaion of James II.

Beneath the Hall is St. Stephen's Crypt, the most ancient portion of the palace. It was rected by King Stephen, and has recently een thoroughly restored. It is a low, vaulted tructure, beautifully adorned with carvings and racery. In it we were shown the place where Guy Fawkes was discovered just in time to preent the completion of his intended demolition f the Houses of Parliament.

THE BRITISH MUSEUM.

Nothing serves to give one a better idea of he vigorous intellectual life of the English eople than a visit to their National Museum, he nucleus of whose now vast contents was ormed by a library and collection bought of Sir Hans Sloan in the seventeenth century. The Museum is a world in its vastness containing an unrivaled collection of antiquities of very description,—Egyptian, Assyrian, Greek, Roman, and British, and a library exceeding ine hundred and fifty thousand volumes, among which are a greater number of American ooks than is contained in any library in the United States. Besides books, it has an exceedngly rare and valuable collection of manuscripts, nd autographs of the great of all lands and anguages.

Through the courtesy of Eld. Wm. Jones of London, we enjoyed the pleasure of a visit to he Assyrian department in company with a party in the charge of a gentleman familiar with Assyrian antiquities. This gentleman xpounded the otherwise mysterious characters, nd explained the use and history of the various bjects which make up the collection, most of which have been excavated from mounds found n the right bank of the Tigris River, and quite robably form part of the ruins of ancient Nineveh. A large collection of bas-reliefs, culptured on tablets, or slabs of alabaster, which originally decorated the palaces at Nimroud and Konyunjik—the latter supposed to have been the palace of Sennacherib—are very remarkable. Besides being beautifully carved, thus making valuable works of art, they commemorate the chief events in the lives of the Assyrian rulers, and serve as engraved histories which corroborate in a wonderful manner the truths of Scripture. The entrance gateways of these ancient palaces were generally ornamented on each side with colossal winged bulls or lions, with human faces, elaborately curled hair and beards, and wearing a high tiara. Several of these in a most excellent state of preservation are to be seen in the Museum. We were also shown an obelisk of black marble which was excavated near Nimroud. It is decorated with five tiers of bas-reliefs, illustrating the presentation of offerings to King Silima Rish, whose reign began about 932 B. C. The unsculptured surface is covered with inscriptions written in the vernacular of Nineveh recording exploits in the reign of the king, and giving the names of the donors to the obelisk, among whom are "Jehu of the house of Omri, king of Israel," and "Hazael," the contemporary king of Syria.

MADAME TUSSAUD'S WAX-WORK EXHIBITION.

One evening of our stay in London was spent at Madame Tussaud's exhibition gallery of wax figures, justly considered one of the "sights" of the metropolis. Here we met the celebrities, in effigy, of all ages and countries; and the accuracy of their portraits, the life-like poise of the figures, the ruddy complexions, and the historic fidelity of their garments, made it seem as if the wheel of Time had turned backward a few centuries, and we had been ushered into the presence of the real personages whose deeds, both good and evil, have so long been portrayed in history.

The first to greet us upon our entrance was our own beloved Washington, to whom is justly accorded an honored place among the wax nobility. During the evening we met the genial faces of our two martyred presidents, Lincoln and Garfield. All of England's sovereigns reign together here in peace and quiet; here is the present Queen and her court, her late consort, the late lamented Princess Alice, and the Prince and Princess of Wales, with their children playing with dog and doll, so thoroughly life-like you can hardly believe they are not real existences. King Henry VIII. in his grand court dress, with all his wives about him robed in queenly splendor, form a unique group. Near by sits Mary Queen of Scots, dressed for her execution, with the rosary which she held in her hand when beheaded at Fotheringay Castle three hundred years ago, on the floor at her feet, looking as if it had just fallen from her fingers. The beautiful Lady Jane Grey, clad in a dress of Quaker drab, stands near her, with an expression so childlike and innocent on her sweet face that it almost brings the tears to one's eyes to remember her tragic fate. Here, too, are the great reformers, Luther, Calvin, Knox, and Wesley; the poets Shakespeare, Chaucer, and Byron, and Sir Walter Scott in full highland costume. In another room sits, in effigy, the Berlin Congress. Statesmen, scholars, and rulers of all nations are numbered among the collection of celebrated characters; and so lifelike in appearance are they that at a distance it is quite impossible to distinguish between the animate and inanimate people sitting and standing about the room. Indeed, it often requires very close scrutiny to discern between the wax person and the real one.

Once during the evening we sat for several minutes on a seat with some one whom we supposed to be a living member of the human family, but found to our astonishment that it

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was the wax model of William Cobbett, the great politician. At another time, having become separated from our party, and desiring some information, we ventured to question a policeman, who, with his gloves in his hand, stood near the outer door. Receiving no reply, we were about to make a second inquiry, when the truth flashed upon us that the man was "wax." The master-piece of the entire collection is the statue of Voltaire, said to have been modeled from life.

In what is termed the *Golden Chamber* is exhibited the bed upon which Napoleon I. breathed his last on the lone isle of St. Helena. The carriage in which the emperor rode at the battle of Waterloo, still covered with the saber cuts of the dragoons who captured it, a tooth extracted while in exile, his favorite garden chair, the atlas in which he drew his battle plans, his table ware, and even the hairs of the tail of his favorite horse, are among other Napoleonic relics to be seen here.

The most extraordinary relic in the gallery is the model of the guillotine used in Paris during the first French Revolution, and the original knife by which Louis XVI. and Marie Antoinette were decapitated, together with twenty-two thousand other unfortunate victims.

Written for GOOD HEALTH.

THE PLACE AND POWER OF TRACTS.

BY JULIA COLEMAN.

THE farmer who is his own mechanic, as he walks through his forest land, looks out the timber that he wishes to use with a wise and careful selection. These hemlocks will do for flooring, those pines for shingles; that chestnut will wainscot the bath-room, this black walnut will make doors for the vestibule and the parlors. But when he finds a tree with a peculiar curve, just right for a pair of sleigh-runners, he cuts that up carefully. The entire tree may be good for various purposes, but the runners are cut out by themselves, and put away to season. In another tree he finds an axe-helve, in a sapling a cane; and these, too, are carefully cut out or trimmed up and prepared for service. These are the choice bits intended for tools to help him work or to help him walk, and if carefully selected and well prepared, they do him long and excellent service.

Now what these choice bits are to the mass of lumber, tracts are as compared with other literature. The massive tomes with their fair pages make a grand show, like so many smooth, well-grooved, well-fitted pieces of flooring or siding; but the tract is the choicest bit, wisely selected for a special purpose, and well fitted to do good service. Not inapt is the derivation, from *trahere*, to draw out; for the tract ought to be a special point or topic drawn out from other material or writings on account of its aptness or power. The best, brightest, or most convincing thing said on that subject, condensed, trimmed up, and arranged so as to make the strongest impression—such is the model modern tract.

If this be true, tracts ought to be the best reading extant on the topics of which they treat. Perhaps this is not invariably the case; for some men rush into print in a tract who have not the ability to write a book, but the majority of the tracts issued by societies, etc., for definite purposes, we believe come fairly under this description. We see, then, how entirely mistaken those people are who exclaim, "Oh, it is nothing but a tract!" and cast it scornfully aside. We believe the reason for this misapprehension, which certainly has prevailed to no small extent, is the imperfect or ill-advised methods of distribution. Some would give only to individuals. They would have the tract exactly fit every case. But a very small number of tracts can be used by that method, because it involves an immense amount of reading on the part of the giver, and such an accurate knowledge of individual cases as necessarily comes to but few distributers. An approximation of this is attempted on the part of many distributers, who look at the tract with one eye and at the recipient with the other, and try to make some sort of fitness in the gift, which, however, is oftener irritating than helpful; and the questions come up, "Did she think I needed *this?*" "What *could* she have seen about me that should lead her to give me such a tract?" when very likely if the attention of the donor were called to the offensive point, she would have disclaimed all knowledge of it.

To avoid all this, another course is often adopted, and tracts are given out indiscriminately. A miscellaneous assortment is taken in hand, and one or more is given to any one, sometimes with painful and sometimes with ludicrous results. In one instance a tract on dancing was given to a man who had lost both his legs. The tract itself might have been good enough; but it was of no use whatever to the wounded soldier, and like other things out of place, it became a nuisance. But suppose the subject of dancing to be discussed, to become of general interest in the entire community, say in some country place on the advent of a dancing master who is trying to get up a class. Suppose, also, that a minister is opposed to it, and the local paper is favorable or non-committal on the subject. The minister proposes to preach about it, but he wishes to give his people something to read, and study, and pray over, besides. So he sends for specimens of tracts on that subject, and selecting those best, and most suitable for his purpose, he secures a supply for his own congregation, calls attention to them in his sermon, and has them distributed at its close. Almost everybody is interested—the young people of course, and the parents and grand-parents naturally enough, and everybody else because it is a matter of public interest.

Even if the local paper is willing to discuss the matter, it may not be willing to insert the tract, which is cogent and convincing, and may often be added to what is published in the paper. It is true that "everybody reads the papers," and you can reach a larger number through them, but not always so effectively. There may be more than one paper, and the congregation do not all take the one containing the articles which it is desired they should all see.

A SKETCH OF EUROPEAN TRAVELS.

BY MRS. E. E. KELLOGG.

From earliest antiquity, man has sought to perpetuate the memory of the dead by some kind of lasting monument. Among the ancient nations, some form of structural tomb was very commonly provided for this purpose. Believing, as many of them did, that the spirits of the dead lived a kind of shadowy life, hovering about the tomb in which they were buried, and depending for their well-being entirely upon the honors bestowed upon them by their descendants, they spared no pains to make these last habitations as enduring as possible. Far more labor and greater expense was often bestowed upon the construction of the abode for the dead than upon the dwellings of the living. Their houses they called inns, because men dwelt there but a brief period; their tombs they termed everlasting mansions, because the dead lived there forever.

The Greeks and Romans attached the greatest importance to the burial of the dead or the entombment of their ashes, because of the common belief that if left without burial the spirit of the dead was doomed to wander alone and despondingfor a hundred years on the other side of the Styx; and if by mishap a person perished at sea, or otherwise under such circumstances that his body could not be found, a kind of tomb called *cenotaph* was erected by his friends, that the spirit of the departed might have a permanent dwelling-place. The rites of burial and burning seem to have both been used by the early Romans. With the latter method the body was reduced to ashes. These were quenched with wine, collected by the relatives of the departed, and finally deposited in an urn made of clay, glass, marble, bronze, or silver, according to the standing of the deceased.

The Roman tombs usually consisted of a vault, in which were placed the urns or the sarcophagi, as the case might be, with a chamber above adorned with statues or effigies of the dead, and where all requisite ceremonies for the honor of the departed were held. They varied in size according to the wealth and distinction of the deceased, many of them being large and superbly adorned, both within and without, with statuary, vases, and other works of art. If the family of the deceased was large, a patrimonial tomb was usually provided. The laws of ancient Rome provided that no dead should be burned or buried within the city; hence nearly all their tombs were constructed outside the walls. The gradual extension of the city limits has included some of the older tombs, so that to-day one occasionally sees in Rome a strange commingling of ancient monumental structures and modern architecture. Most of the tombs, however, were erected near some road leading from the city out across the broad Campagna that surrounds it. The *Via Appia* (Appian Way), the military road, constructed by Appius Claudius Cæcus, 312 B. C., seems to have been a favorite site for tombs; and if one may judge from the ruins that remain, they must have been erected as closely together as are the houses on a city street, and were ofttimes as vast in size.

Few places around Rome are possessed of more historic interest than this street of ancient tombs. Although scarcely a single one of the many hundred structures which once lined the road on either side is now aught but ruins, yet their manner of construction was so superior that the ravages of time have not entirely obliterated their original form, and one can gain an excellent idea of their architecture, although the government has removed most of their contents and decorations to safer keeping within the various museums of the city.

We spent the anniversary day of Rome's foundation, which occurred during our stay in the city, in an excursion on the Appian Way among the tombs of her great men. Flags were flying from the Capitol, and the air was redolent with strains of martial music; and other sounds of rejoicing, commemorative of the birth of Rome,

were heard as we rode out toward the broad Campagna through which the Appian Way extends.

Just within the old city wall (indeed it forms a part of the wall, Aurelian having drawn his line so as to cross it) is the tomb of Caius Cestius. It is a pyramid in form, one hundred and twenty-one feet in height, and ninety-six in width at its base. It is built of brick incased with white marble, now blackened by the hand of time. Its interior is adorned with paintings still in tolerable preservation. Of the history of the occupant, little is known, save the information contained in the inscription on the monument, which tells us that he was one of the *Epulones* whose duty it was to prepare the banquets for the gods on any occasion of public joy or sorrow.

The prospect which opened before us after leaving the city was magnificent. The broad, prairie-like Campagna, stretching away on either side for miles and miles, its green verdure flecked with snowy daisies, scarlet poppies, and other brilliant tropical flowers, with the blue of the sky above reflected on the Alban Mountains in the distance, made up a scene of unsurpassing natural beauty. For miles are seen the picturesque ruins of the ancient acqueducts, extending across the plains. By the roadside on either hand are continuous rows of ruined tombs. Fragments of their inscriptions, reliefs, and broken bits of statuary—here a headless trunk, there a marble foot, an arm, or a hand—are scattered promiscuously among the flowers, like leaves in autumn time.

Of the few tombs in tolerable preservation, the most conspicuous is that of *Cæcilia Metella*, wife of the younger Crassus. It is a circular structure, sixty-five feet in diameter, resting on a square basement, originally covered with travertine. The wall is twenty feet in thickness, and is adorned with a frieze of festoons of flowers and rams' heads alternating with each other. The original entrance is buried beneath the surrounding soil, but an opening has been made by which the interior can be visited. There is little to be seen other than the vault and chamber, however, as the sarcophagus and statuary have long since been removed to the city museums.

A large tomb near by is conjectured to have been erected for Messalu Corvinus, a distinguished statesman and poet under Augustus. A few of the tombs have a crematory connected with them, where the funeral pile was erected, and the body consumed to ashes. On the top of one immense, ancient tomb, the Normans of more modern times constructed a fortress tower. Upon still another an ingenious Italian has erected a small dwelling-house, in which he lived, in order, by means of the higher altitude, to escape the malaria so prevalent upon the Campagna. In many instances the capacious vaults of these old tombs now furnish a shelter to sheep, donkeys, and goats from the hot summer sun and pelting autumn rains.

We extended our excursion much beyond the usual limits, pressing our way on as far as the landmarks which identify the spot where once stood Three Taverns, the apostle Paul's last halt on the journey toward Rome. The ancie pavement of the Appian Way is well preserved, many places, and one can feel that he is tread ing upon the same stones over which Nero's chariot thundered, and St. Paul dragged his weary footsteps toward his last earthly home.

Tombs of kings, philosophers, and other persons of note abound, as can be learned from the fragmentary inscriptions to be seen. On our return we visited the tomb of the Scipios, where once were entombed the families of the famous consuls, the poet Ennius, and several members of other families of note. The structure was originally one of great magnificence, but there remains little to be seen, the inscriptions and monuments having been removed to the Vatican museum for preservation.

Adjacent to this tomb are three tombs, arranged to contain a arge number of cinerary urns, and termed *Columbaria*, because the niches in which the urns are deposited so greatly resemble pigeon holes (*columbaria*). Such tombs were usually used by great families for depositing the ashes of their slaves and dependents. We visited the one in which were deposited the urns containing the ashes of Cæsar's household. The tomb is a square excavation in the earth; around its sides in tiers, one above another, like the pigeon holes of a writing-desk, are the niches for the urns, with the names of the persons whose ashes they contain inscribed over them. The inscriptions are well preserved, and we noted among many others the names of Tryphena and Tryphosa, mentioned by Paul in the last chapter of his epistle to the Romans.

SALISBURY AND THE STONEHENGE.

Before leaving England, we made an excursion to Salisbury, famed for its beautiful cathedral, the loftiest in the kingdom. It is the pride of the place, and as is common with many large buildings in England, has a legend, as follows:—

> "As many days as in one year there be,
> So many windows in this church you see;
> As many marble pillars here appear
> As there are hours throughout the fleeting year;
> As many gates as moons one here does view;
> Strange tale to tell! yet not more strange than true."

The cathedral is built in the shape of a Greek cross, and is the best example of pure gothic architecture in England. It contains many monuments of interest and beauty, among which is one to Bishop Thomas, who, at his fourth marriage, had this cheerful inscription upon his wedding ring: "If I survive, I'll make it five."

A drive of nine miles over a gently undulating country of woodland and field, past groups of farm-houses with picturesque lanes and hawthorn hedges, solitary shepherd's huts, and an occasional ivy-grown church, brought us to Salisbury Plain, a vast meadow of velvety green grass, flecked with the white blossoms of English daisies. Its broad acres are unconfined by hedge-rows or fences, and unadorned with human habitation. Here, alone and solitary upon this broad expanse of meadow land, stands the Stonehenge, or hanging stones, the most perfect existing ruins of the ancient open temples built by the early Britons as sanctuaries for worship in their strange and cruel religion, the religion of the Druids. In an

area some three hundred feet in circumference stand three concentric circles of massive granite boulders, some of them twenty feet in height and weighing from eleven to seventy tons; many of them still connected by enormous flat stones lying across their tops, as perfectly fitted in their places as modern masonry could have arranged them. In the center is a large stone altar, and adjacent is the *cursus*, or auditorium, where the assembled people are supposed to have stood during the Druidic ceremonies. Just what these ceremonies were, is not known; but it is supposed their religion was a mixed worship of the sun, moon, and other heathen gods, and that their forms of worship included human sacrifices, the torture of criminals, and on special occasions the burning alive of immense cages full of animals or human victims. The priests, or Druids, were careful to keep all ceremonies as secret as possible, and taught the ignorant people to believe them wonderful magicians.

The Stonehenge was doubtless designed as a temple to the sun, since the altar upon which the victims were slain, and which is still to be seen, was so placed that the rays of the rising sun upon the longest day of the year fell directly across it.

One remarkable feature of the Stonehenge is the fact that no stone like that of which these ruins are composed has ever been found within an area of more than fourteen miles, and there can be no doubt that these huge blocks of granite were brought from a great distance; and when we recollect the meager facilities of those early times for transporting and placing in their present position such enormous boulders, we can but regard these ruins as a most wonderful monument of human skill and strength.

Upon the Plain are many ancient burial mounds, or *tumuli*, of later Roman times. A few miles distant are the ruins of Old Sarum, once a Roman citadel, and afterward a Saxon town, famous for the privilege it had, until the passing of the Reform Bill in 1832, of sending two members to Parliament, though without a single inhabitant.

PARIS.

Leaving Southampton by the evening boat, we spent one night in crossing that "silver strip of sea," the English Channel, and found ourselves the next morning in the port at Havre, the fogs of England far behind us, the radiant sunshine and blue sky of "La belle France" above us, and a peculiarly "foreign" aspect to our surroundings. The strangeness of hearing for the first time all conversation carried on in a foreign tongue is quite bewildering, and we could sympathize somewhat with the feelings of the poor Englishman who, being on a visit to the French capital, was exceedingly perplexed and annoyed because every one spoke French of which he could understand nothing. Awaking very early one morning, and hearing a chanticleer crow, he exclaimed, "Thank goodness, there's some English at last!" A person possessed of some previous knowledge of French, however, soon becomes able to comprehend something of the rapid current of words which flow together in one almost undistinguishable stream from the lips of the blue-bloused porters and guards, and even one quite unfamiliar with the language need experience no great difficulty in traveling on the continent, since, in these days of progress and travel, English-speaking guides and officials are to be found in almost every place where their services would be required.

The Frenchman's love of ease and elegance at once impresses itself upon our mind as we enter the beautifully cushioned and tastefully decorated first-class compartment of the train for Paris, and find a most ingenious foot-warmer, in the shape of a long, flat, copper can filled with hot water, placed before each seat for the comfort of the passengers. The proverbial propensity for economy is also to be remarked in the two-story railway coaches.

A ride of a few hours through upper Normandy with its picturesque old towns and charming landscapes, past Rouen with its treasures of antiquity and its memories of Joan of Arc, and along the shore of the winding Seine, in which scores of French peasant women were engaged in doing their weekly washings, standing knee-deep in the water, and rubbing the clothes on a broad flat stone, brought us to Paris.

London has been styled the "world's workshop," and Paris the "world's drawing-room." Its buildings of white limestone, its clean, smooth pavements, its broad boulevards bordered with double rows of rare shade trees, with parks and gardens at intervals, its palaces, fountains, arches, and columns,—all combine to make it the most beautiful city in Europe. And quite in keeping with the drawing-room idea is the showy, dazzling, artificial life of its people, with their smiling faces and charming courtesies. Night and day its streets seem channels of gaiety and pleasure, along which the current of life runs as smoothly and brightly as does the water in the Seine near by. But appearances are deceptive; "behind the scenes" are hints of dark tragedies and pictures of sin, suffering, wretchedness, and woe. Its fair white dwellings and beautiful streets are but the whited sepulchers which cover a multitude of sins

Upon arriving at our hotel, fatigued and hungry after our journey, we repaired at once to the dining-room for refreshment. But a dinner at a Parisian hotel is a formidable affair. There is a great display of clean, polished silver, bright china, and a long succession of courses, but with all little satisfaction to a hygienist. On the present occasion we were almost doomed to fast, for reasons at once apparent to the reader when we say that we were served to snail soup, veal and fried potatoes, fish with caper sauce, goose liver and mushrooms, stewed fowl, roast beef, green peas, puffs, hot milk, and one-half a stewed pear, in ten courses, and not a morsel of the "staff of life" included, although bread is so plentiful in Paris that it is sold by the armful, if we may judge from the number of matrons in snowy white caps and aprons seen upon the streets with arms full of long rolls of bread about the size of one's wrist, and varying from one foot to a yard in length. We might add in parenthesis that our first table d'hote in Paris was our last, and that we afterward patronized a restaurant, where excellent whole-wheat bread, pure milk, and luscious fruit were plentiful.

NOTRE DAME.

The historic church of Paris is the Notre Dame, which is as old as Christianity in France, and even before that time was a pagan temple. The edifice is built in the form of a Latin cross, and its front is profusely adorned with scriptural subjects. It is a most magnificent pile, with its marble floors, columns, arches, and rose-colored windows flooding everything within with a soft light; but amid all its loveliness we could almost hear, in fancy, the Te Deums chanted within its walls over the cruel murder of the victims of the St. Bartholomew massacre.

When, during the frenzy of the Great Revolution, the National Convention decreed the abolition of the Catholic faith and the establishment of the religion of Reason, the cathedral of Notre Dame was named the Temple of Reason, and a common peasant woman was borne in state through the streets of Paris, and enthroned here as Goddess of Reason.

Here have been celebrated the coronation ceremonies of French sovereigns, and here their funeral orations have been pronounced. Here Napoleon the Great placed the golden crown of laurels upon his own brow and upon the head of Josephine in the presence of the pope and one of the most brilliant assemblies ever gathered in the French capital.

Hidden within the sacristy of the church, and displayed upon the payment of a half franc, are the gold and silver utensils used in the great ceremonies of the church and the gorgeous vestments of her priests and bishops. A piece of the true (!) cross and a pretended part of the crown of thorns, said to have been purchased in the East by St. Louis himself, are among the relics shown.

HOTEL DES INVALIDES.

Nearly everything in Paris savors of her great hero, Napoleon. The magnificent marble Arch of Triumph, in the beautiful Champs Elysees, the grandest avenue in the world, was built to commemorate his victories; and that mighty shaft, the Column Vendome, an imitation of Trajan's column at Rome, was erected as an imperial monument by him. It is covered with a bronze coating made from the cannon he captured from the Austrians in the campaign of 1805, and adorned with bas reliefs commemorating his victories over that nation. A statue of the Emperor in the costume of a Cæsar surmounts the Column, which is one hundred and thirty-five feet in height. Strange to say, though the Column was hurled from its base by the communists in 1871, and its fragments carried to various parts of the world by relic-hunting travelers, with but one exception, and that has been duplicated, the parts have all been found and the Column re-erected since the establishment of the Republic.

But in all Paris there is nothing more wonderful than the tomb, in the chapel of the Hotel des Invalides, prepared as a last resting-place for the great Conqueror. The Hotel des Invalides is an asylum for disabled soldiers, and fitting, it would seem to be, that he whose greatest deeds were of strife and blood-shed should rest here among the old warriors of his beloved France. The chapel of the hospital is a majestic edifice, surmounted by an enormous gilded dome, rising three hundred and twenty-three feet above the ground. The interior is as gorgeous as marble and gold, light and shade, form and color can make it. A superb high altar, with a canopy of gilt supported by four columns of Egyptian marble, and flooded with the rosy light from the stained windows above and on either side of it, forms a beautiful background for the balustrade of pure white marble that incloses the large, circular, open crypt in the center of the chapel, directly beneath the magnificent dome. The walls of the crypt are of polished granite, on which are inscribed the names of Napoleon's great victories. In front of each of the pillars around its circumference stands a beautiful marble statue, keeping silent sentinel about the massive sarcophagus of Finland granite containing the remains of the great hero, which were brought from St. Helena in 1861 with great pomp and solemnity. Between the pillars of the crypt hang the tattered battle-flags borne in many a fierce conflict. A mosaic floor, with a marble wreath of laurels, surrounds the tomb whose only inscription is the simple letter N. upon one side. The entrance to the crypt is guarded by a bronze caryatid on either side, one holding a crown and sword of gold, the other with a globe crowned with a cross and a golden scepter,—giant wardens watching the tomb and keeping the sword and scepter while the Emperor sleeps. Over the entrance door, on a tablet, are Napoleon's own words, "I desire that my ashes may repose upon the banks of the Seine, in the midst of the French people I have loved so well."

THE ART GALLERIES.

Paris has two wonderful treasure-houses of art, the Louvre, in which no picture is placed until the artist has been dead at least ten years, and the Luxembourg, devoted to the productions of the living painters and sculptors of France. Both were formerly used as the residences of royalty. The Louvre is the most extensive, and is a magnificent palace, the creation of a series of luxury-loving rulers from Francis I. to Napoleon III. It comprises a succession of buildings surrounding a quadrangular court, which can be entered from the streets through lofty archways in each of the four sides of the palace. The Louvre with the Tuilleries, another royal palace which was united to it on the north side by Napoleon III., but was nearly destroyed during the siege of Paris, covers an area of twenty-four acres.

The lower floors of the Louvre are devoted to libraries and museums of Egyptian, Assyrian, Grecian, and Etruscan antiquities. In the great halls above are arranged with most perfect taste the choicest works of art of every description. Here one may walk for hours over acres of floor made of smoothly polished pieces of wood, through room after room, lighted from above, with ceilings heavy with gilded decorations and exquisite frescoes, amid gleaming marble pillars, dazzling mirrors, and every adornment that wealth or taste could devise, with miles of beautiful paintings, the marvelous productions of world-renowned artists, covering the walls while mosaic tables, elegant vases, rich cabinets and cases full of rare and precious things fill up all interspaces. The gallery of paintings is one of the most extensive in existence, numbering

nearly eighteen hundred and fifty pieces. Guido's "Ecce Homo;" Raphael's "Holy Family;" "The Marriage at Cana," by Veronese; "The Joiner's Family," by Rembrandt; and Murillo's "Conception," are among the chief works of this wonderful collection. One large hall is entirely filled with the paintings of Rubens. The gallery of sculptures contains some of the most beautiful masterpieces of ancient statuary to be found in the world, among which are the "Venus of Milo," and "The Fighting Gladiator."

The Luxembourg is less pretentious in size, but is no less remarkable for the beauty of its adornments and the value of its collection, which numbers among its exhibitors Rosa Bonheur, Müller, Arry Sheffer, and De la Roche.

THE COLONNE DE JUILLET,

Or, as it is sometimes called, the Column of Liberty, is a lofty shaft one hundred and fifty-three feet in height, surmounted by a gilt figure of the Genius of Liberty, erected upon the spot where once stood the Bastile, an ancient fortress and prison in whose dark, damp dungeons many a poor victim was immured without warning or trial. It was in the Bastile that the "man of the iron mask" was confined. Who this strange prisoner of State was is still a secret, though many conjectures have been made and much written upon the subject. No one but his appointed attendant is known to have ever seen his face. He wore a black velvet mask which enveloped his head and face and was fastened with steel springs in such a manner that he could not remove it without immediate detection, and the official to whose care he was intrusted was under royal orders to take his life immediately should he attempt to reveal his identity, as he seemed anxious to do. Twice he wrote something on different articles, and succeeded in giving them to persons not in the secret of the mystery; but his efforts were discovered and the recipients of the articles both died very suddenly, having been poisoned, it was supposed. These circumstances seem to indicate that the prisoner was a man of shrewdness and learning, and probably a person of eminent rank, and that his persecutors were solicitous of committing a crime of no common magnitude in thus confining him and excluding him from all intercourse with mankind. Many suppose him to have been the half-brother of Louis XIV. the then reigning sovereign, and a co-heir to the throne of France.

During the Revolution of 1789, the Bastile was destroyed by the populace, who regarded it as an obstacle to liberty, and its useless key now hangs in the hall at Mount Vernon, having been presented by Lafayette to Washington. It was on the site of the Bastile also that the good archbishop of Paris was shot, during the struggle of 1848, pleading the while with both social parties to cease their strife, and dying like his Master with a prayer for his murderers upon his lips.

Inscribed on the column are the names of more than six hundred victims who lie buried beneath it, and who fell during the same Revolution.

THE GOBELINS.

One of the most interesting excursions during our stay in Paris, was made to the government manufactory of Gobelin tapestry. During the reign of Louis XIV. the art of weaving tapestry was brought from Flanders, and a manufactory established by a man named Gobeelen, on the outskirts of the city. The manufactory is still in existence. In the exhibition rooms we saw imitated with marvelous delicacy and finish the finest of oil-paintings. Each minute line and shade faithfully reproduced, and the effect so exactly alike that it was impossible, without the aid of a glass, to tell which was the tapestry and which the oil-painting from which it was copied. Beautiful flowers, charming landscapes, historical scenes, and portraits of royal personages so exceedingly life-like that one almost felt ill-mannered to gaze at them, make up a collection of woven pictures worthy of a place beside the old masters. The cost of these tapestries is one hundred pounds sterling per square foot, and so highly are they valued that they are only made for the nobility, or as presents to foreign rulers.

We passed through the workshops, and saw the workmen weaving their wonderful productions, standing behind the vertically suspended frames in which the warp of the tapestry is placed, and plying back and forth through one or two threads of the warp at a time, one of the many scores of little bobbins filled with bright colored silks and wool which hang, each by its thread, from the uncompleted picture. Each stitch or line thus formed is carefully pressed into its place with the pointed end of the bobbin before another is made.

The entire work is done by hand, and it often requires from five to twenty years to complete a picture. The progress is slow, and the work difficult. Day after day the artist toils with only the knotty side of the work before him, always carefully studying the pattern which is hung just beside him, till at last the warp is all concealed, and turning the frame over, there is a masterpiece so perfect in design and color that it is best suited to adorn the home of royalty. It was an apt illustration, we thought, of the Christian laborer's life, who, having Christ for a pattern, toils on through discouragement and trials, seeing only the earthly side, till by and by the work, completed and immortalized, shall adorn the mansion of the Eternal King.

VERSAILLES.

Leaving Paris by the early train, we spent one day at Versailles, a spot made interesting by its association in history as the place where Louis XIV., "*Le Grand Monarque*," held his brilliant court, and the imperial home of the unfortunate Louis XVI. and Marie Antoinette. Until within three years it has also been the seat of the National Assembly, since the establishment of the Republic. This town, which numbers some 30,000 inhabitants, was originally the hunting lodge of Louis XIII., and the vast park of fifty miles circumference, which now surrounds the three palaces of Versailles, was his hunting ground. Louis XIV. chose the place as a royal residence, and employed an army of men for eleven years in constructing

one of the most immense palaces, and converting the grounds into one of the finest parks in all Europe, at a cost to the nation of two hundred million dollars. And even this was a small amount in comparison with the after-suffering that resulted to the people and the unfortunate descendants of the king, on account of the payments exacted for generations, to supply the means for such lavish prodigality. The site was a most unfavorable one for the creation of pleasure grounds, and the "genius of man was forced to struggle against Nature." Rivers were turned from their course to supply water for the fountains, and all the Arts vied with each other to make the park what it is to-day, a place of sylvan lakes, beautiful cascades, broad avenues bordered with stately lime trees, lovely gardens, orange groves, and immense fountains containing groups of statuary of most exquisite workmanship, which, when the waters play, present a most magnificent spectacle.

The Grand Palace, as it is termed, is over one-fourth of a mile in length, and contains no less than two hundred rooms; one of these, the Gallery of Mirrors, two hundred and thirty-nine feet in length, thirty-five in width, forty-three in height, and lighted by seventeen windows looking out upon beautiful gardens, is considered one of the finest halls in the world. Its ceilings are exquisitely painted by a renowned French artist, with allegorical representations of the principal events in the life of Louis XIV.; seventeen mirrors reflect the view from the seventeen windows; while marble statues of Minerva, Adonis, Venus, and Mercury fill the niches. It was in this magnificent hall, during the siege of Paris, that King William of Prussia, surrounded by the representatives of the various German rulers and the chiefs of his own Government, formally assumed the title of Emperor of Germany.

The building and maintenance of her palaces has four times bankrupted the French nation, and we do not wonder that in these later years there has been an attempt to do away with such expensive luxuries, by converting them into museums of art, of which the palace at Versailles is the historical picture gallery. There are said to be four miles of wall hung with paintings, where, upon canvas, is written the history of France, from the time of Charlemagne to Napoleon III. Room after room is filled with portraits of the great men of France, representations of the crowning of her kings, the signing of her treaties, and her victorious conquests; but not a solitary picture of French defeat. The many scenes in the life of Napoleon, chief of which is David's masterpiece, the Crowning of the Empress by Napoleon, are among the best of the collection.

The bed-chamber of Louis XIV., in which he died, still remains the same as when he last occupied it. The high bed with cumbrous, gold embroidered hangings, called vividly to our mind that incident of French history so widely known, of the announcement of his death by the high chamberlain, on the night of his decease. Scarcely had the last breath fluttered from the lips of the king when the official on the balcony just outside the door broke his white wand of office, and shouted to the crowd below "*Le roi est mort!*" and in the same breath "*Vive le roi!*"

An immense quadrangular court flanked on three sides by the buildings, fronts the palace. Gigantic marble statesmen and generals guard both sides of the court, with a bronze equestrian statue of "*le Grand Monarque*" as a central figure. Vast as is this space, shut in by palace walls and gates, it was filled to overflowing with an infuriated mob on the morning of Oct. 6, 1789, when the storm of the Revolution had burst over France, who demanded the king and queen as hostages in payment of a national debt of vengeance. We were shown the bedchamber in the palace where the unfortunate Marie Antoinette was sleeping on that memorable morning when, aroused by the cries of the guard that her life was in danger, and also the balcony (the same from which forty-four years before the high chamberlain announced the death of Louis XIV.) upon which, with her husband and children, she appeared, to satisfy the clamors of the raging mob below; but the blood-thirsty marauders were not appeased till they had dragged her forth from the palace doors to the prison fastness and the guillotine.

Every glance brought fresh to mind historical reminiscences of the unfortunate Queen as we wandered through her boudoir and library in the spacious old palace, or followed the winding path through the park to a less pretentious residence, the Petite Trianon, where she loved to dwell and receive a few intimate and personal friends; or still farther on, out of sight of palaces and villas, to the little Swiss village of picturesque farm houses, half hidden by the spreading branches of the grand old trees, where, when tired of the pomp and show of royalty, she repaired with a few chosen courtiers, to forget her crown, and play she was a peasant's wife.

A miniature lake, with an island on which is built a circular marble temple, a mill where the king played miller, and ground sacks of golden corn, a dairy where the courtiers churned the milk from the Swiss cows that grazed by the lake side, and where the leader of the frolic, attired in peasant costume, molded butter on a marble slab, with her own beautiful hands; together with a half-dozen rustic, gable-roofed houses that served as kitchen, dining and ball rooms, are all of the toy village. But it was an expensive plaything, and helped to incense the people against her, and the play turned to a sad reality when the Revolutionists dragged her forth from her royal home, and immured her within the bare walls of the Conciergerie. No make belief then! She was poor, indeed, when they took from her everything,—friends, husband, children, even her clothing,—so that she was obliged to borrow a black gown of woolen from the jailer's wife, in order to go decently robed to have her head cut off. No lack of hardship was hers when, with her beautiful hands that in her happy girlhood home Mozart had guided over the piano keys, pinioned behind her, she was thrust into a rude cart, and jolted over the rough pavement to the scaffold.

In the Grand Trianon, another palace built in the form of an Italian villa, with ground floor only, and long windows opening upon beautiful gardens, are the bed chamber, bath-room, and other apartments used by Napoleon. In the coach house near by are still kept his wedding coach and the State carriages used by the various sovereigns who have made Versailles their home.

PISA.

STARTING from the great Mount Cenis tunnel, a day's ride from Northern to Southern Italy, by way of Turin and beautiful Genoa, through smiling landscapes and picturesque Italian villages, the houses painted in a variety of neutral tints or adorned with frescoes on the exterior—no neighboring two alike—and surrounded with hedges of century plants and terraces of blooming cactus; past vine-clad hills and immense peaks of wooded mountain ranges on one side, and the shores of the blue Mediterranean on the other; through thrifty lemon, orange, and olive groves, and fields of luxuriant vegetation, where scarlet poppies grow as wild flowers amid the tall grass, brought us to Pisa just long enough before sunset to visit the four principal objects of interest,—the Cathedral, the Baptistery, Campo Santo, and the leaning tower, which, fortunately for travelers, are all grouped within a short distance of each other. Pisa is one of the oldest cities of Europe, having been a Roman colony long before the time of Christ.

The Cathedral, which was built to commemorate a naval victory over the Saracens, dates back to 1063. It is constructed of white marble, and is three hundred and ten feet in length and one hundred and nine feet high. Its front is a magnificent series of pillars and arches, and its interior imposing and exquisitely finished. It contains some fine paintings, most of which, like those of other Italian churches, are in honor of the Virgin Mary. But most interesting of all is the great bronze lamp that hangs pendant from the ceiling, and by its oscillations first suggested to Gallileo the theory of the pendulum, over three centuries ago.

The leaning tower, which for seven hundred years has been considered one of the architectural marvels of the world, is a beautiful, airy structure, rising in the blue Italian sky to the height of one hundred and eighty feet; and with its eight stories surrounded by pure white columns and ornamented cornices, it looks more like the work of some frost fairy than a solid structure of marble. Although so many years have elapsed since its erection, it presents scarcely any perceptible signs of decay. Its inclination, of a little more than fourteen feet from the perpendicular, was quite probably caused by the gradual sinking of the soil, as the ground in the neighborhood is porous and almost marshy, and the Cathedral has suffered so much from this same cause that there is not a single vertical line in it. In the Campo Santo, a neighboring cemetery, are paintings on stucco, supposed to have been executed about the year 1300, more than a century after the tower was built, which represent it in an upright position, so that it is quite probable the inclination was not intentional. The tower was designed as a belfry for the Cathedral, and contains a peal of bells, the heaviest weighing six tons.

The Baptistery, or church of St John's, opposite the Cathedral, is a four-storied rotunda of white marble, finished with columns, arches, and rich carving, and considered the most elegant structure of its kind in Italy. Its pulpit is the masterpiece of a celebrated Italian artist, and is adorned with bas-reliefs descriptive of the life of Christ.

The Campo Santo, or cloistered cemetery, is a vast rectangular space, inclosed by chapels and corridors adorned with paintings and sculpture, and filled with monuments, many of which are fine works of art. In the thirteenth century, when the crusaders lost the Holy Land, a pious monk of Pisa had fifty-three ship loads of earth from Mount Calvary brought here as a last resting place for those who mourned the loss of the Holy City, under the belief that the earth possessed the property of decomposing animal matter in the space of twenty-four hours. Whether the mourners for Jerusalem have all passed away, or whether the monks have lost faith in the virtue of the soil, we do not know; but no interments have been made here for so long that the ground appears a smooth lawn, edged with borders of flowers.

ROME.

We left Pisa just as the sun was rising over the Apennines, and in eight hours found ourselves in the Eternal City. No city in Europe is more interesting than Rome, the ancient center of western civilization. In its memorials of ancient grandeur are recorded the history of twenty-five centuries, nearly half the entire duration of the world.

In the valley between two of the seven notable hills upon which the city was founded is situated the ancient Roman Forum, (*Forum Romanum*,) where the Senate held its assemblies, and decreed protection to oppressed right and punishment to lawless violence, throughout the world, and where some of the most famous scenes in the history of the Roman Republic were enacted. Along the sides of the Forum were ranged shops occupied by butchers and other craftsmen, money changers and goldsmiths, and erected in various places were temples, public buildings, and monuments. An open space in the center, called the *Comitium* was the place where the popular assemblies were usually held. A multifarious business was transacted within the precincts of the Forum; and besides being used for political purposes, it was the place where the celebration of the funerals of the nobility occurred. As its original space was only 150 yards in length, it soon became too small for the increased traffic carried on there, and as the years rolled by the various rulers extended its limits, erected Basilicas, and adorned the grounds with columns, triumphal arches, statues, and works of art. During the Middle Ages the ancient Forum was destroyed, its temples spoiled of their embelishments, and the ruins gradually buried beneath rubbish and debris, in which condition it remained until the present century.

In the last few years, by means of extensive excavations, a considerable portion of its original surface, twenty-six feet below the present city level, has been cleared, and the remains of many celebrated temples and buildings have been brought to view. Rising in the center is one solitary pillar, the column of Phocas, which Byron terms the "nameless column, with a buried base," and which was the last new monument erected in the Forum.

On the east side are the remains of the temple of Cæsar, near which is a paved platform believed to be the oratorical tribune, where, at the funeral of the murdered Dictator, Mark Antony delivered the celebrated oration which wrought so powerfully upon the feelings of the excited people. It was here a funeral pyre was hastily

improvised, and the unparalleled honor accorded the "noble Cæsar" of being cremated in view of the most sacred shrines of pagan Rome.

On the south side a circular erection of concrete marks the spot where the temple of Vesta stood, upon whose altars burned the eternal fire. The Forum was bounded by streets, the most important of which was the Via Sacra, ascending to the Capitol, and over which at one point rises the triumphal arch of Septimius Severus, an elaborately ornamented marble structure erected in honor of that emperor and his two sons, Geta and Caracalla, who had achieved victories in the East over the Arabians and Parthians. The erasure of Geta's name, which, after he had killed his brother, Caracalla caused to be erased from the arch, is still plainly visible. Near this arch stood the Golden milestone, on which was marked the distances to all the chief cities of the then known world, and from which as a center radiated roads to all parts of the Roman empire.

Eight fluted columns mark the place where rose the temple of Saturn, which from the earliest times was the seat of the public treasury. Ruins of the Rostra, and Basilicas, besides those of many other notable structures, serve to make this spot one of the most interesting to all lovers of history.

THE COLISEUM.

One of the characteristics of the early Roman people was their inveterate love of amusement. Public games and festivals of some sort existed from the earliest times, and were carried on in the open air as a means of propitiating the gods, especially those who were supposed to grant or refuse health to their subjects, and productiveness to their fields and cattle. As time advanced, and the propensity for amusement increased, the number and variety of their diversions increased also, till in the time of Augustus Cæsar, sixty-six days of every year were devoted to public games. Under the later emperors, the duration and number of the festivals were so augmented that in the time of Marcus Aurelius they extended over 135 days, besides which there were many triumphal and even funeral games.

So madly devoted to a love of amusement did the people become, that the law courts were closed, and all ordinary business suspended, upon days when games were to be celebrated. Long before day-break the spectators would begin to gather, for the reason, probably, that although the provision made for their accommodation was by no means meagre, yet the throng of people who came to witness the sports was so vast that only those who were early on the spot were able to secure good positions. Women as well as men attended the festivals, and sat side by side watching the progress of the game. Chariot racing, theatrical performances, and gladiatorial contests were the leading diversions. For the purposes of the first-named game, an immense open circus was provided, lined on all sides with rows of seats to the capacity of two hundred thousand.

The gladiatorial contests probably had their origin in the custom of sacrificing slaves at the tombs of their masters; and either for the amusement of the spectators, or because they deemed it barbarous to sacrifice defenseless men, the slaves were allowed to fight with each other for their lives; and finally large numbers of slaves were kept by men of wealth, who trained them for this purpose, and furnished them to any one who wished to give an exhibition. At first this cruel sport was limited to funerals, and the gladiators fought in the Forum. But as the taste for this kind of amusement increased, and the number of combatants grew larger, the circus was used for the contests, and it became the custom for any who wished to gain political favor with the people to furnish them with an exhibition of gladiatorial strength and valor. The circus, however, was ill-adapted to this game, and for its convenience many ingenious plans were devised. In the time of Cæsar, two semicircular theatres of wood were erected so close together, that, if desired, after the theatrical performances were ended, one of the buildings could be turned entirely around on pivots, while the audience remained in their places, thus forming a circular tier of seats with an arena in the center well suited to gladiatorial contests.

When, however, the Republic was ended, and the Imperial government had collected the tributary wealth into one channel, an immense building, in which the most lavish magnificence was displayed, was erected solely for the accommodation of the gladiatorial shows. Its erection was begun in the year 72, by Vespasian, the first of the Flavian emperors, and hence was called the Flavian Amphitheatre, though in later times it is best known as the Coliseum, probably from the fact that a colossal statue of Nero adorned it during the eighth century. The emperor Titus continued the building of the coliseum after his return from the conquest of Jerusalem, and is said to have employed twelve thousand captive Jews in its erection. In magnitude it is surpassed by the pyramids alone. It is constructed of blocks of traventine, and consists of four stories, the first three being colonades, with pillars adorned with half columns of the Doric, Ionic, and Corinthian order, respectively. Its form on the exterior is an oval, with a circumference of more than sixteen hundred feet. Its height is said to have been 179 feet. The length of the arena is 278 feet, and its width 177 feet. Rising from the arena, one above another, in concentric tiers, intersected by steps and passages, were the seats for the spectators. A portion of these are still distinguishable, the foremost of which, the *Podium*, was designed for the emperor and persons of honor, and was elaborately finished with costly marble and rarest gems. Above these rose three other classes of seats of various degrees of honor, the humbler spectators occupying the last division in a colonade. Near the top it is supposed that sailors of the imperial fleet were stationed for the purpose of keeping a sail cloth stretched over the whole amphitheatre, to exclude the glare of the hot Italian sun. The coliseum was intended to hold about 100,000 people, and the expense of its building, it is said, would have been sufficient to erect a capital city.

Under the arena are numerous chambers, supposed to have been the dens of the wild beasts which were collected in immense numbers from all parts of the empire to assist in the terrible slaughters that were often carried on there.

Although in ruins, not more than one-third of the structure still remaining, it is by far the most imposing monument in Rome, standing as it does a relic of Roman wealth and power, as

a memorial of the faith and martyrdom of the early Christians, who, during the days of persecution, often bathed the arena with their life-blood.

The purpose for which the amphitheatre was erected was well indicated in its dedicatory celebration, at which five thousand wild beasts and ten thousand captives are said to have been slain.

The variety of the amusements which were here exhibited was not limited; sometimes wild beasts were urged to fight with each other for the entertainment of the populace; at other times men and beasts fought in fierce conflict; or man with man strove for life and freedom. One of the favorite contests was between a gladiator who had no defensive weapon, but was armed with a net in which to catch his opponent, and a long three-pronged fork with which to spear him should he become entangled in its meshes, and another fully armed and equipped. When a gladiator was disarmed or wounded, the spectators decided his fate; if they desired his release, they signified it by applause and the waving of handkerchiefs; but if they wished to grant him no favor, they pointed downward with the thumbs in silence. Sometimes the arena was flooded with water, and transferred into a lake, when imitations of naval battles were exhibited. At other times large trees, torn up by the roots, were securely fastened and fixed upright, their roots covered with earth, and the arena thus transformed into a forest for a hunting match.

The putting to death, either by the hand of an executioner or by exposure to hungry and savage beasts, of such persons as were under sentence of the law, was not an uncommon pastime. During the reign of Nero, the early Christians were often subjected to this cruelty; and after the conflagration of Rome, which that wicked king most unjustly attributed to the Christians, it became the custom of the people after any public misfortune to cry, "The Christians to the lions." To be a Christian in those days was to be a criminal.

For over three hundred years after the completion of the coliseum, the various emperors, according to their character, encouraged or endeavored to suppress these degrading amusements; but it was not till some time after the introduction of Christianity that they were abolished.

As we walked through the crumbling arches of the massive ruins, climbed the stairs, and looked down upon the arena where the blood of brave men and faithful martyrs has flowed so freely, we could but reiterate the sentiment of Dickens when he says the coliseum is the "most impressive, stately, solemn, grand, majestic, mournful sight conceivable, but, God be thanked, a ruin."

Several palaces of modern Rome have been built from material plundered from the coliseum. It owes its present preservation to Pope Benedict XIV., who forbade its further demolition, and consecrated it to the Passion of Christ, because of the martyrs who were sacrificed there.

THE PALACES OF THE ANCIENT KINGS.

The original site of embryonic Rome, the fastness of Pelasgo, or *Roma Quadrata*, was the Palatine hill, one of the notable seven upon which the Rome of later years was built. It was here that the poet Virgil pictures the shepherd king, Evander, as welcoming the pious Æneas. Here dwelt Romulus, Rome's half mythical founder, who, as tradition tells us, "inclosed the fortress within the limits of his new city, tracing round the foot of the hill with a plough drawn by a bull and a heifer, the furrow being carefully made to fall inward, and the heifer yoked to the near side to signify that strength and courage were required without, and obedience and fertility within, the city."

The Palatine was the home of Cicero and Cataline, and it was in the temple of Jupiter, built upon this hill by Romulus, that Cicero pronounced his famous oration against Cataline. The principal senators dwelt upon the Palatine, and it was in order that they might not be obliged to cross the Forum, in case of an uprising, and because they believed Jupiter would repel the enemies of State, that the senate had been called together in his temple. It was not expected that Cataline would presume to present himself before the senate, and it was his appearance there which led to the utterance of the well-known words by Cicero, "How long, O Cataline! wilt thou abuse our patience?"

The Palatine was the birth-place of Augustus Cæsar, and afterward his imperial residence. Here succeeding kings dwelt in royal magnificence, and palace after palace rose in costly splendor, until the name of Palatine became synonymous with palace. For their adornment, the quarries of the world were searched for pillars and slabs of alabaster and rare marbles, black, white, and tinted in every shade, the broken columns and fragments of which still remain among the ruins on the Palatine.

The chambers of the palaces of the Cæsars have been filled up, and were used as a foundation for the palace of the Flavian kings, but portions have recently been excavated, and antiquity-loving visitors can wander at will through some of the veritable halls and courts of the palace of Augustus Cæsar. We treasure among our choicest mementoes a beautiful fragment brought from this palace, and a piece of oriental marble picked up in the ancient Basilica, or justice hall, near by where it is supposed St. Paul was tried before Nero. A portion of the Emperor's chair still remains upon the tribune, as also a part of the bar before which the prisoners were brought.

The ruins of the palace of Vespasian are sufficiently well preserved to show the arrangement of the rooms; and the fragments of architectural carvings, columns of rare marble, and beautiful mosaic pavement serve as an index of its vanished splendors. The disposition of apartments is that of an ordinary Roman dwelling of that era, though on a much larger and grander scale, and without what were termed offices, viz., bedrooms, store-rooms, etc.; for the emperors did not reside at their palaces on the Palatine, but only came to hold court and festivities.

In the ordinary dwelling, the first room to command attention was the Atrium, or general room of resort for the family. It was usually a large apartment roofed over, with a square opening in the center, toward which the roof sloped, and to each of the four corners of which were attached spouts of various fantastic forms and devices for collecting the rain-water, and pouring it into a cistern in the floor of the Atrium

beneath. Often the Atrium was adorned with fountains, its walls lined with slabs of oriental marble, and its floor composed of mosaic made of little pieces of precious stone, marble, or glass imbedded in plaster, so as to form geometrical figures and sometimes even elaborate pictures.

The Atrium of the palace was used as a station for the palace guards and an ante-room for visitors. It is an oblong, anterior court, once surrounded by beautiful columns.

Adjoining the Atrium are two apartments, the chapel for the household gods, still containing a small square altar in marble with figures of the family deities, and the Tablinium, a room which in private residences was used as the family sitting-room, and which, as the name indicates, contained the family archives, the statues, pictures, geneological tables, and other ancestral relics, but which in the palace served as the throne room, where the emperor granted audiences. Nothing but the pedestals of the throne and a few fragmentary remnants of its mosaic pavement remain to tell the story of its former magnificence.

A little to one side of the Tablinium is an open court of imposing dimensions, once surrounded by a colonade of marble, and ornamented with statues, fountains, trees, and flowers. Opening on this court for its entire width, is the palace dining-room, where the royal feasters, reclining on fashioned couches of softest wool covered with Tyrian purple, and dining off golden service on citron-wood tables "more precious than gold," could feast their eyes on the beauties of nature and art, while they gorged their stomachs to the utmost with luxurious viands, until, when no more could be contained, they were obliged to retire, with a feather to tickle their throats, to an apartment just beyond, called the Vomitarium, and disgorge the contents of their much-abused stomachs into marble basins placed around for that purpose, that they might return with renewed appetite to the banquet board.

Gormandizing seems to have been a prevalent evil of degenerate Roman times, and prodigality in respect to the pleasures of the table and surroundings at meals was extreme. Nothing was too extravagant to minister to the pleasures of appetite. In the houses of the wealthy and the nobles, separate rooms, servants, and service were provided for use at different seasons of the year or on various occasions. Lucellus, who was celebrated for his wealth, is said to have had a certain standard of expenditure for each dining-room, so that when he told his servants which hall he would dine in, they knew exactly what style of an entertainment he desired; and there is a well-known story of how he deceived Pompey and Cicero, who insisted on visiting him at his family dinner, merely by sending home word that he would sup in a hall in which he never gave an entertainment of less cost than about $8,000.

From the dining-room of the palace we passed to an apartment conjectured, from the inscriptions found there, to have been the library, and thence into a lecture-room, along the walls of which are still seen traces of the seats.

Portions of Nero's Golden House, which extended over the Palatine and to two of the neighboring hills, ruins of the palaces of Caligula and Tiberius, and of a private house, the only one among the palaces, and believed to have been that of the father of Tiberius, still remain upon the Palatine.

THE CATACOMBS.

THE Catacombs, the ancient burial places of the early Christians, date back to the closing of the first or the early part of the second century. During the times of persecution, they frequently served as a place of refuge for the oppressed followers of Christ. Interments in the catacombs have not been common since the fourth century, but they have been the shrine to which pilgrimages were made for much of the succeeding time. Within the last few years, scientific investigation has rendered them much more interesting, and has greatly increased the knowledge concerning them. To "do" Rome without a visit to these underground cemeteries, would be quite unsatisfactory; and so, if the reader will accompany us, we will make a tour of the catacomb of St. Callistus, one of the best preserved of the more than forty different ones that honeycomb the Campagna around the city.

A ride of something more than a mile beyond the ancient Aurelian wall—for the Roman law prohibited the interment of the dead within the precincts of the city—along the Appian way, that ancient road of triumph, over which many a gilded chariot has rolled in the centuries gone by, past ruins of temples and triumphal arches, out into the broad Campagna, an immense undulating prairie of verdant fields, flecked with small, crimson-tipped daisies, looking like snow flakes amid the grass that never grows see brings us to a vineyard underneath which is the subterranean tombs. Near the entrance to the catacombs a party of workmen are still engaged in the work of excavation. A small brick building covers the passage into this cave of sepulchers, and contains many of the inscriptions and reliefs found in the catacombs, as also copies of most of the important paintings with which their walls were adorned.

Having obtained a guide, and been provided with a supply of lighted tapers, we pass through the door, and descend a flight of stone steps to the first section of the catacombs, some thirty-five or forty feet below the surface. The passages are scarcely three feet in width, and vary from six to ten in hight. On either side, like shelves, from floor to ceiling, are the niches for the reception of the dead, one above another, often seven or more high. When the niches were occupied, the aperture was entirely closed with a slab of marble or terra cotta, either plain, or inscribed with the name of the deceased, with the addition of "*in pace*," and occasionally a more elaborate inscription, making, as one writer figuratively and aptly says, an underground "library, on the shelves of which Death has arranged his works."

The niches are now most of them empty, or filled with fine dust and an occasional fragment of the bones of some ancient member of the human family; and the inscription tablets have been removed to the museums for preservation and more satisfactory inspection.

Not a ray of natural light penetrates this ancient city of the dead; the darkness is intense, and the air is by no means the freshest and sweetest. The passages are tortuous and intricate, but their monotony is occasionally broken by a chamber of much larger dimensions. These were the tombs of wealthy and noble families, and were originally adorned with great splendor. The walls and ceilings were beauti-

fully sculptured and painted. Sarcophagi of bronze or rare marble held the bodies of the dead. In one of these chambers two sarcophagi still remain unmolested, and through the glass over their tops may be seen the remains, one of them preserved in a mummy-like form, the other nearly resolved to its original elements. Around these sarcophagi were originally placed rich vases and other valuable treasures of the deceased. In some of the catacombs, many such vases have been found, on which were engraved portraits of St. Paul and St. Peter. Other Scriptural subjects, as Moses smiting the rock, Noah and the ark, and the raising of Lazarus, were quite frequently traced upon them.

These chambers are said to have been used as places for worship by the Christians during the times of persecution; and in later years they have been used as sacrament chapels, where services have been held in honor of the martyrs. During the massacres instigated by Nero and other Roman despots, thousands of Christians found refuge in these cities of the dead, spending months and even years therein without once seeing the light of day. The inscriptions and paintings which adorn their walls are mostly indicative of hope and the resurrection. One, supposed to have been intended to commemorate the Last Supper, has been partially restored. It represents Christ with the disciples at a table, whereon are plates of fishes and eight baskets full of bread. A head of Christ and one of St. Cecilia are found in one of the chambers in which that martyr was entombed. On the anniversary of her martyrdom, that portion of the catacombs is illuminated, and services are held. The anchor, the dove, the olive-branch, and the fish are among the common symbols found on the walls and tablets.

There are miles of these passages and galleries, all with the same ghastly linings, but all so nearly alike that having seen one, we can imagine the rest. It is computed that in all the different catacombs, there are about nine hundred miles of these tomb corridors, and that six million bodies have been entombed therein. Of this number, it is estimated that one hundred and seventy thousand were interred in the catacombs of St. Callistus.

At present, there is generally no communication between the different catacombs. Each one is beneath a separate rise of ground in the Campagna, and is separated from the others by the intervening depression.

THE PANTHEON.

THE most perfectly preserved monument of antiquity in all Rome is the Pantheon, the great temple of all the pagan deities. It was erected twenty-seven years before the birth of Christ, as an inscription above the entrance tells us, by Agrippa, son-in-law of Augustus Cæsar, both of whose colossal statues once adorned its portico. The building is a circular structure, surmounted by the most magnificent dome in the world, and adorned in front with a portico fourteen yards deep, upheld by a colonade of sixteen Corinthian columns of granite, thirty-nine feet high and thirteen feet in circumference. The walls of the building, which are constructed of brick-work, are twenty feet in thickness, and were originally covered with marble and stucco.

By a strange freak of architecture, the interior of the building is a perfect circle, one hundred and forty feet in diameter; and what is still more curious, the central hight and the diameter are also equal, so that the interior of the building is almost an exact hemisphere. The surface of the walls are broken by seven niches, in which used to stand the statues of the gods worshiped by pagan Rome. Rare marble and beautiful statuary then adorned the walls, and the ceiling of its dome was decorated with gold-leaf.

The Pantheon has no windows, but is lighted from above by a circular opening twenty-eight feet in diameter in the center of the dome, through which the sunshine or the rain descends, according as nature smiles or weeps.

The simplicity and grace of form of this ancient temple, together with the effect of its single central light upon its rare marble and gilded decorations, must have rendered it a place of surpassing loveliness. Although despoiled of its pristine beauty, it still presents a strikingly imposing appearance.

In 609, A. D., the Pantheon was consecrated as a Christian church, and so, on our early morning visit, it seemed not strange to see, kneeling before its ancient altars, scores of devout Catholics, telling their beads and saying their prayers.

Like many other European churches, the Pantheon, since its consecration to Christianity, has been converted into a burial-place for the illustrious dead. Here sleeps, behind an altar, in a vault covered with funeral wreaths and insignia of royalty, the late king, Victor Emanuel. Here, too, is the tomb of the great artist, Raphael, and near by a statue of the Madonna, executed by Lorenzetto in accordance with his last will. The Pantheon is also the last resting-place of Balthazer, Peruzzi, and many other celebrated artists.

THE SCALA SANTA, OR SACRED STAIRS.

On our round of sight-seeing among the many objects of interest which make Rome a many-leaved picture-book to the tourist, we stopped one afternoon to see, under a portico near the church of St. John Lateran, a marble staircase of twenty-eight steps, which, as tradition states, and every good Catholic believes, are the identical ones by which Christ descended from the judgment seat in the house of Pontius Pilate. They were brought to Rome in 326 A. D., by the Empress Helena, mother

of Constantine the Great, and are held so sacred that human feet are never allowed to touch them, all persons ascending on their knees, repeating an Ave, or prayer, at each step. There are stairs parallel with the holy ones by which the devotees may descend. At the top is a private chapel of the popes, said to contain a painting, attributed to St. Luke, of the Saviour when twelve years of age. We did not see it, as we were not permitted to make the ascent, though we counted a score of devotees of all ranks and ages toiling up the steps with tears and devotions, just as did Martin Luther centuries ago, when light flashed upon his questioning mind in the words of inspiration, "The just shall live by faith." The stairs are kept protected by a casing of wood, lest the marble should be worn away, on account of the great concourse of pilgrims constantly ascending them, as an act of penance for themselves or their friends; for, according to the pope's decree, every one who ascends these steps on his knees, kissing through the apertures cut in the wooden casing, the spots that mark drops of the Saviour's blood on the stairs, can obtain for himself nine years' indulgence for each step, or may shorten the stay in purgatory of some beloved friend already deceased, two hundred and fifty years for each ascent.

THE CHURCH OF THE CAPUCHIN MONKS.

From our first arrival in the city, we frequently met these monks, whom we at once recognized by the pointed hood, or cowl,—not unlike in shape, the ornamental hood of a lady's circular cloak,—attached to their long butternut-colored gowns, unconfined save with a loose cord or rope at the waist, from which hung their cross and rosary, and reaching to their feet, which, either bare or strapped to wooden sandals, appeared beneath it. We were told that they obtained their living by begging from door to door, the people feeling bound to give them something because of their sacred calling. We fear their example is more closely followed in this respect than in any other, at least begging seems to be the chief occupation of the largest share of the inhabitants, if we may judge from the crowds of beggars that swarmed about us or our carriage at every stop we made, begging for a *centimissi*, and were only made to desist in their protestations by the vociferous threats of our gentlemanly Italian guide.

The church of the capuchin monks contains Guido's famous picture of the Archangel Michael trampling upon the devil, the fiend's face being a portrait of Pope Innocent X., for whom the renowned artist had a great aversion. Other fine pictures on scriptural subjects, the work of celebrated artists, adorn the gloomy walls of the not otherwise interesting interior. The building is of stone, dimly lighted, and with such an atmosphere of chilly dampness pervading it, that, as the wooden sandals of the monk, who acted as an escort, clattered over the stone pavement, and resounded with a hollow echo through the building, we felt more as if we were visiting a prison than a church.

Following our guide, we descended a flight of narrow stairs to the curious cemetery beneath the church, where are kept the remains of four thousand dead friars. It is divided into four recesses, open on one side to the corridor, which is lighted by grated windows. The walls of these recesses are decorated in a ghastly manner with the dismembered bones of the departed monks arranged in geometrical figures, festoons, crosses, columns, altars, and even as lamps which hang from the ceiling. A few disinterred skeletons which have been allowed to remain intact,—the reason for this special promotion we did not learn,—dressed in their friar's robes, are placed in niches faced with bones, and held in an upright position by a cord knotted about their waist, and secured to a hook behind.

In each recess is a grave of sacred earth brought from Jerusalem, in which, as they died, each monk was permitted to slumber twenty-five years, or till a tomb was needed to inter some other deceased monk, then the longest buried was disinterred, and his skeleton used whole or in pieces as authority might direct, while the recently departed took his place, so that, as a writer aptly says, "Each good friar in his turn enjoys the luxury of a consecrated bed, attended with the slight drawback of being forced to get up long before day-break, as it were, to make room for another lodger." We were told, however, that the present city authorities have forbidden the further continuance of these strange burial customs.

THE CHURCH OF ST. PETER.

The first object to command attention as one approaches the city of Rome, and the most conspicuous from all out-looks, is the lofty dome of St. Peter's church, the largest and most magnificent temple for religious worship to be found upon the globe. The foundations of the present

structure were laid almost a half century before the discovery of America, while more than three centuries were required for its completion. Its erection cost over fifty million dollars, exhausting the treasuries of forty-three popes, who lived, reigned, and died while it was building, and requiring the sale of indulgences, against which Luther protested, to bring in the immense amount needed, while the annual expense of its maintenance is over thirty thousand dollars.

The edifice stands upon the site of the ancient circus of Nero, where so many of the early Christians suffered martyrdom. In front of the church is a vast square, or court, well paved, and crossed by marble walks. From the church as a center, on either side, partially inclosing the grand court, extend two immense semicircular colonades, built, as an inscription tells us, for a "shadow in the day time from the heat, and for a place of refuge and a covert from the storm and from rain" (Isaiah 4:6), and consisting of two hundred and eighty-four Doric columns, each sixty feet in hight, arranged in four series, with passage-ways between, the whole covered with a stone roof. The central passage under the colonade has space for two carriages abreast. Arranged along the battlement of its roof are the marble statues of one hundred and sixty-two saints and martyrs, executed by the celebrated artist, Bernini; and on the higher battlements of the church in the center are thirteen colossal statues representing Christ and the twelve apostles.

In the center of the grand court rises a lofty Egyptian obelisk of red granite, which was first brought from ancient Heliopolis by the emperor Caligula, and is said to be the only monument of the kind at Rome which has never been overthrown. It is also the sole remaining witness of the heroic death of the Christian martyrs who perished in Nero's circus, for whom it stands as an enduring monument, bearing on its four sides the inscriptions, "Christ is triumphant! Christ reigns! Christ is Emperor! Christ paid all our debts!" The obelisk, which weighs five hundred tons, was removed from its original site (at the left of the church) to its present position on rollers, an extremely difficult undertaking. During its removal occurred a thrilling incident still frequently cited. The superintendent of the work, in the construction of his apparatus for raising the shaft, had omitted to allow for the tension of the ropes; and when it was suspended high above the crowd, it would have fallen had not a brave sailor, at the critical moment, shouted,—although silence was imposed on all under penalty of death,—"*Wet the ropes!*" thus solving the difficulty. Of course he was pardoned for his timely violation of the King's command, since he saved the lives of the people, and was the means of preserving the obelisk. He chose as his reward the privilege for himself and his family of providing the palm branches for St. Peter's on Palm Sunday,—a privilege which is still accorded to his descendants.

Two magnificent fountains, one on each side of the obelisk, send up a continuous feathery spray of bright water, upon which the sun paints many a brilliant rainbow ere it falls with ceaseless splashing into the immense porphyry basins below.

Passing across the grand court, and ascending the marble steps, we entered an immense vestibule extending across the front of the building, from which two great portals lead into the temple itself, one, the *Porta Santa* (Sacred door), is opened only once in a quarter of a century, during the year of Jubilee; the other, the great central doorway, is closed by the famous bronze doors, and only used on grand occasions. Other smaller doorways, over which hang heavy quilted leather curtains in place of doors, are for more common use.

The church, which, like most European cathedrals, is built in the form of a Latin cross, covers an area of more than five acres. We had been repeatedly told of its immense dimensions, of its vast space that no crowd ever fills, and where one can almost lose himself in its immensity; but so perfect is the harmony and symmetry of its proportions, that we could hardly credit the figures until our guide called attention to the comparative measurements of other immense European cathedrals, as indicated upon the pavement, showing that several good-sized churches might easily be contained within St. Peter's.

Of its interior grandeur no adequate description can be given. Its floor of rich mosaic, its lofty paneled vault, magnificently adorned with gildings and rarest works of art, its thirty gorgeous altars, its marble and alabaster pillars, its costly statues, the master-pieces of such artists as Michael Angelo and Bernini, its beautiful copies in mosaic of world-renowned paintings, its sculptured tombs, grand arches, rare frescoes, splendid chapels, each as large as an ordinary church, its massive columns and gorgeously tinted windows,—all combine to make it a place of such overwhelming grandeur and surpassing loveliness that we could but think, If human agency can create such a marvelously grand and beautiful structure as this, to what must the beauty of the "city not made with hands" be equal.

Directly under the lofty dome stands the "high altar" used only by the pope on high festivals. Above this altar, borne by four richly gilded, spiral columns, nearly one hundred feet high, is a colossal bronze canopy made from metal taken from the Pantheon. Beneath the high altar is a tomb said to be St. Peter's. Doors of gilded bronze close the niche containing the apostle's sarcophagus, and eighty-nine ever-burning lamps keep constant vigil before this most sacred shrine. In the tribune, which occupies the extreme end of the nave beyond the high altar, is kept, inclosed in a bronze covering of great beauty, the ancient wooden episcopal chair in which it is claimed St. Peter officiated as first pope. Gigantic statues of those four great Fathers of the church, Augustine, Ambrose, Chrysostom, and Athanasius, hover about the four posts of the chair, like bronze sentinels.

One of the objects th at attracted our attention was a statue in bronze—nearly twice life size, seated on a throne of white marble beneath an elegant canopy—which was once a heathen image of Jupiter, but which has been remolded and christened St. Peter. About this image a crowd of men, women, and children pressed at all hours, with apparently sincere adoration, bending the knee before it, and kissing the extended foot of

the bronze saint. On festival days this statue is clothed in magnificent robes, a jeweled crown placed on its head, a guard stationed beside it, and pope, priest, and people alike do homage to it, and kiss its metal toe.

Confessional boxes for eleven different languages are provided at St. Peter's, so that persons of all nationalities who chance to visit Rome, and may desire to "unburden their hearts to a fellow-sinner behind the lattice," can be accommodated.

Beautiful works of art, masterpieces of celebrated painters and sculptors, abound on every hand, even the basins for "holy water" and the tombs of departed kings and popes are marvelous specimens of carving and sculpture. Here is the wonderful copy in mosaic of Raphael's masterpiece, *The Transfiguration; The Raising of Tabitha by Peter*, after Costanzi; The *Archangel* by Guido Reni and his *Crucifixion of Peter*. Michael Angelo's admirable *Pietà*, the Virgin Mary with the dead body of Christ on her knee, occupies a central place in one of the chapels. Hundreds of other lovely productions of art combine with the architectural symmetry and lavish splendor of its adornments to make St. Peter's a matchless monument of art and beauty.

THE VATICAN PALACE.

THE most magnificent treasure house of art and antiquities in all the world is the Vatican, the residence of the pope of Rome, and the largest palace in existence, containing upwards of eleven thousand different apartments. Here the wealth of ages has accumulated the rarest and richest gems of sculpture and painting, while some of the very rooms themselves are the masterpieces of those two great artists, Michael Angelo and Raphael, who adorned their walls with most beautiful and wonderful creations of art. Never did we realize more completely that "art is long, and time is fleeting" than during that one day of our stay in Rome set apart for an excursion to the Vatican.

The entrance to the palace is guarded by Swiss soldiers, dressed in a picturesque costume of yellow and gray, who doffed their caps politely as we passed, and prepared to ascend the *Scala Regia*, the grandest stairway in the world, decorated with frescoes illustrating the history of the popes, and covered with a tunnel vaulting borne by Roman columns. Our first visit was to the Sistine Chapel, the apartment where most of the religious solemnities requiring the especial presence of the pope, take place. The entire ceiling of the large room was painted by Michael Angelo, and is regarded as the chief work of that great artist. He was nearly two years in accomplishing the task; and it is said that in consequence of such long-continued gazing upward, his eyes became so affected that he could not read a letter until he had placed it above his forehead. The upper part of the vaulting is in nine sections, each representing some great event of the world's history from the creation to the deluge. The lower portion of the ceiling is divided into triangles, and is occupied by figures of the prophets and sibyls, twelve in all. The conception of the character and appearance of the prophets, as embodied in their portraits, is marvelous. Once seen, they can never be forgotten. In the four corner arches are the pictures of *The Israelites in the Wilderness; Artaxerxes, Esther, and Haman; David and Goliath;* and *Judith*,—each a beautiful production of art. How salvation came to the world, and how proclaimed, is said to be the theme which Michael Angelo undertakes to illustrate with these ceiling paintings, the central portion showing how sin entered the world, and the promise of redemption, while the prophets proclaim the promise; and the corner pieces portray some of the wonderful deliverances of God's people. The elucidation of the idea is very fine, the figures most life-like, and the adaptation of scenes and persons to the places they occupy, makes the whole, architecturally as well as artistically, a masterpiece.

Reaching across the entire altar wall of the same chapel, sixty-four feet in width, is another magnificent painting by this talented master, called the *Last Judgment*. The upper portion represents Christ surrounded by the apostles, patriarchs, saints, and martyrs, in the act of judging the world; while the lower half depicts the resurrection of the dead with the place of everlasting torment just below, in accordance with Dante's conception, where are to be seen the boatman Charon and the judge Minos, whose face is the portrait of Biago de Cesena, master of ceremonies of Paul III., who had censured this picture on account of the nudity of the figures. In revenge, the artist painted him as Minos; and when, in real distress, he went to the pope concerning it, the pope asked, "And where has he put you?" "In hell," was the answer. "Ah!" said the pope, "then I can do nothing for you. If it had been in purgatory, I might have got you out, but over hell I have no power."

Other paintings by celebrated artists, representing parallel scenes in the life of Christ, adorn the sides of the chapel.

From the Sistine Chapel we passed to four consecutive rooms, called Raphael's *Stanze*, and decorated with frescoes executed by that master, unrivaled by any other work of art in existence, save the ceiling of the Sistine Chapel. The ceiling of the first of these rooms is decorated with allegorical figures, and Biblical and mythological scenes symbolical of the four principal spheres of intellectual life, *Theology, Poetry, Philosophy, and Justice*; while the wall paintings under each are elaborations of the same idea. Beneath Theology is a painting called the *Disputa*, intended to represent the glorification of the Christian faith; with portraits of St. Peter, Adam, St. John, David, Paul, Abraham, Moses, the Fathers of the church, with Christ and the Virgin, and many other Bible characters. Beneath Poetry is a scene in which are portrayed the nine Muses; and beneath Philosophy is the celebrated painting called the *School of Athens*, a picture in which the great philosophers and masters of thought in ancient times stand out clear and unmistakable. In the center are Plato and Aristotle, Socrates with his bald head, Diogenes, Ptolemy, Pythagoras, and a score of others.

The second *Stanza* is decorated with frescoes and paintings representing the triumph and divine protection of the church, in which the portraits of the popes figure conspicuously.

The third *Stanza* contains a most celebrated painting, called the *Conflagration of Borgo*, founded upon a traditional incident of the extinguishment of a fire which had broken out in the Borgo, by the sign of the cross made by Pope Leo IV.

The last *Stanza* is called the hall of Constantine, and is almost entirely devoted to paintings representing scenes in the life of that king. In another part of the Vatican is an extensive hall, or gallery, sometimes called Raphael's Bible, the frescoes of which, executed by that great artist, are all scenes from the Bible, forty-eight being taken from the Old Testament and four from the New. In the picture gallery is the last work of Raphael, the *Transfiguration*, said to be the grandest painting in the world. Here, too, is Raphael's *Madonna*, Titian's *Madonna and Saints*, the *Last Communion of St. Jerome*, by Domenichino, and the *Adoration of the Shepherds*, by Murillo, besides many other celebrated works of art.

The Vatican museum is an immense collection of antiquities and relics. Here are sarcophagi, vases, bas-reliefs, and specimens of almost everything useful and ornamental used in ancient times. Here we saw the only ancient Roman chariot in existence, an ancient crematory gridiron, and a magnificent porphyry bath basin from Nero's Golden House. Ten rooms are filled with Egyptian antiquities, and twelve with Etruscan terra-cottas, vases, jewels, ornaments, and cinerary urns, among which we noticed some curious ones in the form of houses and huts found in the very ancient graves near Albano.

The library of the Vatican is an enormous collection, occupying twelve rooms, and comprising no less than twenty-three thousand Greek, Latin, and oriental MSS., registers of papal acts, letters of the popes, and many other interesting and important documents. The books and manuscripts are, however, kept in closed cases, so there is no pleasure to be derived from a visit there. Twelve other galleries are filled with statuary,—perfect gems of sculpture and marvels of art. Here are busts of emperors, philosophers, heroes, and the statues of gods and myths. Here is the *Apollo Belvedere*; and the famous group of *Laocoon*, the father with his two sons strangled by serpents at the command of the offended Apollo. According to Pliny, this group was executed by the three Rhodians, and was placed in the palace of Titus. Here is the beautiful *Minerva Medica*, in Parian marble; the *Perseus*, by Canova; the *Colossal Group of the Nile*, one of the finest specimens of classic sculpture, consisting of a male figure of colossal proportions, in a recumbent position, resting its left arm on a sphinx, and surrounded by sixteen playing children, emblematic of the sixteen yards the river rises, with hundreds of other lovely creations of art.

In the great hall of the palace are to be seen the various expensive gifts that have been presented to the popes from different emperors and nations. Another apartment of the Vatican contains curiosities from the catacombs, and another still with a floor of ancient mosaic, contains a collection of ancient pictures of interest.

Neither the pope nor his apartments are shown, but his portrait is to be seen occasionally on canvas and stained glass.

LAST GLIMPSES OF ROME.—THE CAPITOL.

HISTORICALLY a most interesting spot is the Capitoline hill, one of the seven upon which ancient Rome was founded. To modern sightseers its attractions consist of three separate palaces, arranged around the three sides of a small square, or *piazza*, as it is called in Italian, which is especially noted as the spot where Romulus is said to have founded his asylum; where the popular assemblies were wont to be held; where the blood of the Roman citizens was first shed in civil warfare on the occasion of the suppression of the revolt of Tiberius Gracchus, B. C. 133; and where Brutus harangued the people after the murder of Cæsar. A flight of asphalt steps leads from the street to this *piazza*, at the foot of which are two handsome lions of Egyptian porphyry, and at the top two colossal statues of Castor and Pollux, which once adorned the theater of Pompey. At the left of the highest steps are kept a pair of wolves in a cage, in reminiscence of the story, which every child has heard, of the wolf that nourished the twins, Remus and Romulus, Rome's half-mythical founders.

In the center of the square is the celebrated bronze equestrian statue of King Marcus Aurelius, the only perfect ancient equestrian statue in existence. Beyond this statue is the palace of the senators, built upon the ruins of the Tabularium (repository of the state archives) of ancient Rome, and containing a spacious senate hall, the offices of the civic administrators, and an observatory.

The palace on the right is called the *Conservatori*, and contains an extensive collection of antiques and bronzes, and a portrait gallery of eminent Italian poets, scholars, painters, architects, and sculptors. Here is the celebrated bronze "Wolf of the Capitol," "The Thunder Stricken Nurse of Rome," with the rent in the right hind leg, which Cicero mentions, in his description of the figure, as having been caused by a stroke of lightning in his own day. That mental cramming is not wholly of modern origin is apparent from the fact that we find here preserved an ancient tombstone to a boy of eleven and one-half years, who, according to the Latin inscription, worked himself to death extemporizing in Greek verse, after having gained the prize over fifty-two competitors.

Here is the cinerary urn of the beautiful Agrippina, mother of the infamous Caligula; but her ashes must long ago have been scattered to the winds, for the urn was employed in the middle ages as a measure for corn. More cheerful objects are the beautiful statues of the *Thorn Extractor*, a boy removing a thorn from his foot; *St. Sebastian*, a celebrated painting by Guido; and the masterpieces of such other painters as Tintoretto, Veronese, and Guercino, which adorn the walls of the several rooms of the *Conservatori*.

Just across the square from this palace is the *Capitoline Museum*, comprising a collection rich in admirable works, though much less extensive than that of the Vatican.

Among the most noted of the statuary is the Dying Gladiator, found in the sixteenth century, and representing a Gallic warrior re-

ming on his shield, while the blood pours om a wound in his breast which he has evi- ently inflicted upon himself, preferring death o captivity. Here, too, is the beautiful Faun y Praxiteles, made memorable in modern times y Hawthorne's description in his "Marble Faun." It is the figure of a youth in an atti- ude of grace, with his garment, a lion's skin, thrown over his shoulders.

The *Venus of the Capitol*, also said to be the workmanship of Praxiteles, a most marvelous statue in which "the marble flows like a wave," and the oldest Mosiac in existence, a represen- tation of *Doves on a Fountain Basin*, sometimes called Pliny's dores because mentioned by him, are among other objects of special note.

A fine collection of busts and statues of Roman emperors, empresses, scholars, warriors, and philosophers, hundreds in all, make one of the most interesting portrait galleries in the world.

TRIUMPHAL ARCHES.

Spanning the highest point of the ancient *Via Sacra*, which leads from the capitol to the southern gate of the city, the route by which triumphal processions passed to the temple of Jupiter, rises the magnificent Arch of Titus, constructed of Grecian marble, and erected A. D. 70, to commemorate the conquest of Jerusalem. Of all the gala days of ancient Rome, those on which the victories of successful generals and commanders were celebrated, were unparalleled in splendor and jubilation. Pageantry was a special feature of the occasion; especially were the spoils of war and the trains of chained captives paraded before the eyes of the people; and so we read that upon the occasion of the return of Titus from the war with the Jews, a hundred thousand captives, with sad, despairing faces, followed the train of the proud conqueror, bearing the most holy treasures of the temple at Jerusalem—the great golden candlesticks, the silver trumpets, and other sacred utensils—as trophies of the conquest. Upon one side of the interior of the imposing arch erected to commemorate this triumph, is traced in wonderful bas-relief, a representation of this triumphal procession, with the captive Jews, the table of shew-bread, and golden candlesticks, incense vessel, and jubilee trumpets, copied in all probability from the originals. On the opposite side is a relievo of the emperor, Titus, seated in a triumphal car, attended by Victory, who is in the act of crowning him with laurels. To this day no Jew will pass under this arch, but turns aside with averted countenance, and in detestation spits upon it as he passes by.

Rome abounds in triumphal arches; but one erected in commemoration of the victory of Constantine over Maxentius at the Ponte Molle in 311, when Constantine declared himself in favor of Christianity, which spans the *Via Triumphalis*, is said to exceed in magnitude any other triumphal arch in existence. It has three passages, but its delicately cut bas-reliefs and decorations, which were plundered from an arch originally erected in honor of Trajan, contrast strongly with the rude additions made in the time of Constantine.

THE MARMERTINE PRISON.

In connection with the triumphal arches, one can hardly help but think of the Marmertine Prison, the terrible place to which, as the triumphal processions began to ascend the capitoline hill, the most illustrious of the captives were led aside, and in its dark, damp dungeons doomed to die. It is one of the oldest structures in Rome, and consists of two vaults, one above another, the lower of which was originally reached only through a circular opening, or "man-hole," in the stone floor. This lower chamber is ten feet wide, nineteen in length, with a height of less than seven feet, of which the historian Sallust says, "Its uncleanliness, its darkness, and its noisome smell, make it indeed a truly disgusting and terrible abode." Here Jugurtha, king of Manritania, was starved to death; here the accomplices of Cataline were strangled; here Vercingetorix, the enemy of Cæsar, suffered, and Simon Bar Gidras, the last defender of Jerusalem; and here it is tradition places the scene of the apostle Paul's final imprisonment, and where it is believed he addressed his immortal farewell to the Christian world. If this be the identical place, we wonder not that the damp, chill atmosphere of the dungeon made the apostle feel the need of the cloak which he had left at Troas.

The papal legends assert that St. Peter, too, was imprisoned here, and that a spring of water which we saw in the floor of the lower cell burst forth miraculously to furnish water for the baptism of one of the jailors converted through his instrumentality.

STRASBURG AND ITS CATHEDRAL.

Just on the confines between France and Germany, where the Brusche and the Ill mingle their waters in one common stream, is situated the city of Strasburg, with its quaint, old-fashioned dwellings, its beautiful cathedral, and other world-renowned objects of interest. Built centuries ago by the Romans, afterward conquered by the Germans, it was taken by the French in 1681, and reconquered by the Germans during the late Franco-Prussian war, after a siege of seven weeks, upon the one hundred and eighty-ninth anniversary of its capture by the French. Like most border cities, Strasburg is strongly fortified. Its streets are narrow and irregular; but its curiously built houses, often painted in checks of various colors, with their long, pointed roofs and huge chimneys, on many of which the storks have taken up their abode, give the town a very odd and picturesque appearance.

The one prime object of interest to the tourist is the cathedral. According to tradition, it occupies the site of the sacred wood in which the ancient Druids built their altars, and offered sacrifices to Esus, their god of war. The present edifice, though not the first church founded here, dates its beginning from 1015. Two hundred thousand workmen, imbued with the religious enthusiasm of that epoch, began the work, *for the salvation of their souls*, but several hundred years elapsed before its completion. Earthquakes, lightning strokes, and almost innumerable fires, retarded its construction, injured its beauty, and several times demolished it almost entirely. Since its completion, the vicissitudes

of time and the enmity of man have frequently threatened its destruction. The storm of shot and shell that fell upon the town during the war of 1870, left many a mark upon the cathedral to tell the tale of the bombardment. The work of restoration had been so complete, however, that upon our visit we found but few remaining traces of the devastating siege, although we were told that it was struck by more than one thousand projectiles.

Like many European cathedrals, the style of architecture is Gothic. It is built of sandstone, chiseled and carved into many varied forms, so sharp in outline and so beautiful and delicate as to give the structure a light and airy appearance hardly surpassed by any other similar edifice. The number of statues that are arranged to cluster about its portals and stand in the niches of its walls, is very great. A group of fifteen gigantic statues, representing the day of judgment, adorns its front. In the center is Christ, the Judge, on either side, the Virgin and John the Baptist. Angels sounding the last trumpets and bearing the records, surround them, while beneath stand the four Evangelists.

Its one graceful spire rises four hundred and seventy-four feet above the pavement. It was intended, originally, to build two towers, one on each corner of its square front; but for lack of means, only one was completed, and the lack of a second one gives the cathedral an unfinished appearance on one side, which greatly mars the symmetry of its exterior.

Its interior is rich in sculpture, statues, and some of the finest pieces outside, are the handiwork of a lady, Sabina von Steinbach, daughter of the principal architect of the cathedral.

Though justly celebrated for its beauty, the cathedral contains a great attraction in its most wonderful astronomical clock, the work of a distinguished mechanician of Strasburg. It was just a few minutes before twelve when we found ourselves amid a throng of other expectant sightseers before this marvelous piece of mechanism, of which the proportions are fifty feet in height and more than half that in width. Immense dial plates indicate the time from seconds to months and years. Four automaton figures, called the four ages, indicate the quarter hours by strokes upon the bell, childhood striking the first quarter, youth the second, manhood the third, and old age the fourth; while a grim figure with an hour-glass in hand, representing Father Time, strikes the full hours.

As the hour of noon turned, we noted Old Age rise and touch the bell, while Time began the twelve long strokes that indicated the hour; at the same instant, a little higher up on the clock, a figure representing the Saviour stepped out and raised his hands, while figures representing the twelve apostles passed, one with each stroke of the bell, bowing before him. During this time, a cock, perched on a pinnacle several feet above, with motions and voice imitating nature, flapped his wings and crowed thrice. This clock also tells the times and seasons of all ecclesiastical feasts and events as far as they are associated with astronomical phenomena. A celestial circle, or orrery, represents the mean tropical revolutions of each of the planets visible to the naked eye; the phases of the moon; eclipses of both sun and moon, calculated for all time; and the equation of time.

The church of St. Thomas, in another part of the city, contains the celebrated monument to Marshal Saxe, erected by Louis XV., of France. The monument consists of an immense marble sarcophagus with lid raised as if in preparation for his burial. At one end stands a grim skeleton in marble, representing Death; while on the right a female figure, personifying France in deep sorrow, stands with upraised hand as if to prevent Marshal Saxe, whose erect statue stands with one foot advanced, from descending into the tomb, and, at the same time, prevent the advance of Death. Other allegorical figures represent the nations he had conquered in arms.

Strasburg is also famous for its goose-liver pies, or *pate de foie gras*. A regular business of producing abnormal geese livers for the manufactury of these so-called dainty dishes is carried on here. Shut up in dark rooms, their feet nailed to planks, and often their eyes plucked out that they may not see, and thus exercise too much, the poor creatures are regularly stuffed every two hours with as much food as can be crowded down their throats. Some thirty quarts of corn are required to complete this stuffing process, by which time the livers are by far the largest part of the goose, so the poor birds are killed, and their livers canned and sent to various parts of the globe for the especial delectation of epicurean palates. We were not quite so fortunate in our visit to the liver factories as in seeing the wonderful clock, for the stuffing season was just over; but we were shown the places where the work was done, and any quantity of canned livers, which were ready for exportation, and on which we might have secured great bargains had we been so inclined.

THE CASTELLATED RHINE.

SEVEN o'clock one June morning found our party with our various pieces of luggage, which proved to be far more numerous than the proverbial old lady's "big box, little box, band-box, and bundle," on board the steamer Hohenzoller, just moving out from the wharf at Mayence, on our way down the Rhine to Cologne.

For ages, travelers and poets have sung of the beauties of this wonderful stream, whose origin goes back to the melting snows of the high Alp glaciers, and whose identity is lost in the *Wal* ere it reaches the sea. The river, which is broad and clear, sweeps in wide and graceful curves amid steep crags and mountains which stand back just far enough to give room for the modest little villages that ~~here and there~~ dot the shores, or rise abruptly from the water's edge, their rocky slopes terraced with vineyards, and their almost inaccessible peaks crowned with the hoary ruins of some old castle once occupied by lawless barons who exacted toll of all passing vessels. For sixty miles, from Mayence to Coblentz, the banks are lined with these vestiges of by-gone feudal splendor, "around whose crumbling walls once rang the clash of arms, and in whose dungeon cells the brave and beautiful have languished." The moldering castles, half hidden under a weight of ivy, the rocky steeps and pretty villages, each have their point

of interest or ancient legend,—something to invest them with a charm, so that our entire journey was one continuous panorama of varied beauty and interest.

Almost at once after leaving Mayence the steamer passed the island of Petersau, where Louis the Pious, the son and successor of Charlemagne, sought refuge and died in 840. A little farther on are other islands, where Charlemagne used to resort for the purpose of fishing, and where he built a magnificent palace.

The first village of note is Bingen, "fair Bingen on the Rhine," with its old chateau Klopp, or castle of Drusus, in which tradition asserts the emperor Henry IV. was for a long time confined. Just beyond, on a huge rock in the middle of the river, is situated the famous "Mouse Tower," described by the poet Southey as the one to which Archbishop Hatto fled to escape the vengeance of the rats which, according to tradition, were sent *en masse* to devour him as an act of justice, because he shut his starving peasants into his barn and set fire to it, though his granaries were overflowing with the corn they plead for. History, which in this instance does not accord with tradition, informs us that the tower was built in the Middle Ages for a toll-house and danger-signal station, the navigation of the river at this point being very difficult and dangerous, because of a strong current beginning just below.

Passing on, the storied ruins of the Rheinstein, Sonneck, Heimburg, and a score of other beautiful castles, crown the heights above the stream. Here is the town of Bacharach, the *Ara Bacchi* (altar of Bacchus) of the Romans, which has long been celebrated for its wines. According to the old rhyme translated by Longfellow in the "Golden Legend,"—

> "At Bacharach on the Rhine,
> At Hochheim on the Main,
> And at Würzburg on the Stein,
> Grow the three best kinds of wine."

Tradition states that the city of Nuremburg obtained its freedom in return for an annual tribute of four casks of the wine of Bacharach. On the heights just above the village is the castle of Stahleck, the residence of the counts Palatine in the twelfth century, which was taken and retaken eight times in the Thirty Years' War.

A curve in the river now brings to view, upon a rocky island in the middle of the stream, the picturesque castle of Pfalz, built by the Emperor Louis in the fourteenth century, for the purpose of exacting tolls from passing vessels. It was near this place that, on the night of the first of January, 1814, the Prussian army, under the command of Blucher, crossed the Rhine.

Farther on down the stream are the ruins of Schönberg castle, the cradle of the celebrated family of that name. According to an ancient legend, one of the counts who dwelt here had seven beautiful daughters who were as coquettish as they were fair. "So great were the number of the victims of their heartlessness, that *Lurlei*, the river fairy, resolved to punish them. One day when they were going to a neighboring castle, a violent storm arose, their boat was overturned, and the maidens were precipitated into the water. They were at once changed into rocks." At low tide, the Seven Sisters are still to be seen in the river.

A little farther on is the village of St. Goar, which owes its origin to a hermit of that name who in 570 A. D. came here to preach to the inhabitants. He passed his days in exhorting his rude hearers, and devoted his nights to watching the passing barques and warning them of danger, the navigation at this point being then very perilous. The king, hearing of his piety and benevolence, tendered him an Archbishopric. St. Goar declined the honor, and desired only to pursue his useful life. Tradition says he proved to the people the divine origin of his mission by "throwing his threadbare cloak across a sunbeam, where it remained suspended as on a peg." Upon his death, a chapel was built over his remains, where for centuries the monks of St. Goar received pilgrims, and extended the rites of hospitality to travelers.

Two neighboring castles are denominated the "Cat" and the "Mouse," the latter scornfully so called because the Counts of Katzenellenbogen, who built the former, said their Cat would soon eat it up. Near by are two other ancient castles, called "The Brothers," the subject of many legends.

Two of the most imposing structures upon the river are the Stolzenfels (Proud Rock) castle, and the fortress of Ehrenbreitstein (Honor's Broad Stone). Near the latter, a bridge, constructed on the top of some fifty or more large row-boats, spans the river. As our steamer approaches, a part of the bridge, as if impelled by invisible oarsmen, swings slowly round to make an opening, while a crowd of market-women and townspeople on either side impatiently wait the passing of our vessel and the closing of the bridge.

Another hour's ride, and we come to some of the most magnificent scenery upon this world-renowned river. Here a series of thirty peaks, with "the castled crag of Drachenfels, frown over the wide and winding Rhine." On the opposite shore are the picturesque ruins of the castle of Rolandseck, and in the river below is seen the beautiful island of Nonnenworth, with its old convent. In the castle which, says a legend, in "the most ancient times" crowned the summit of the Drachenfels, or Dragon's Rock, dwelt Hildegarde, a beautiful maiden, and beloved by the celebrated Roland, nephew of Charlemagne. When he went to the wars, she waited and watched at home, as "many a brave maiden has done," till at last there came only the news of his death at the battle of Roncevaux. Then Hildegarde, leaving her father's castle, went down to bury her young life and bright hopes in the convent on the island of Nonnenworth. But the rumor of Roland's death was false, and in time he returned only to find Hildegarde the bride of the church. Then upon the rock opposite the Drachenfels the unhappy youth built the castle of Rolandseck, commanding a view of the island of Nonnenworth, where he could watch the nuns as they walked in the convent garden, and perhaps distinguish among them the face of Hildegarde.

Our next stopping-place is Bonn, famous for its university, which numbers among its professors some of the most eminent scholars of Europe. Bonn is also the birthplace of Beethoven. The house in which he was born is still standing in a quiet street near the river. Outside the city, in a little park, is a fine statue of the great musician.

Twenty miles farther, and we are at Cologne, in full view of the beautiful cathedral, of which we will give you a description next month.

COLOGNE was anciently an important Roman town, and derived its name from the fact that Queen Agrippena, whose birth-place it was, induced the Emperor Claudius to send thither a colony of veteran soldiers, after which it was known as *Colonia Agrippena*. One old gateway and a few fragments of crumbling wall still remain as vestiges of Roman times.

The history of Cologne shows it to have been, anciently, both a rich and a powerful city, carrying on an extensive commerce, and sustaining one of the finest universities in all Germany. Like many other European cities, it has been the subject of many vicissitudes of war, having been conquered and reconquered by both the French and the Germans, and to the latter it now belongs.

The glory of the modern city is its grand Cathedral, the finest gothic church in all the world. More than six hundred years was this Cathedral in building. Begun two centuries before the discovery of America, it was partially built, then allowed to remain in its unfinished state from the sixteenth century till the nineteenth, during which time a war between Germany and France occurred, and the soldiers took possession of the building, using it as a magazine for [illegible] and as a prison, melting the statuary for purposes of war, and destroying most of the objects of antiquity.

In 1816, under the auspices of the king of Prussia, its restoration was begun, and the building continued to completion, so that it stands to-day a marvel of architectural beauty, its whole exterior a mass of fretted stone, exquisitely carved pillars, pinnacles, statues, and ornamental facades, surmounted by two lofty spires, the tallest in all Europe, so beautifully carved as to appear almost as fragile as frostwork, rising to the height of more than five hundred feet. The length of the Cathedral is said to equal its height. Its width is two hundred and thirty-one feet. Its interior, though not so gorgeous as some of the Italian cathedrals, is by no means commonplace. Its lofty columns, fine arches, and rich carving, harmonize with its immense proportions, giving the whole an appearance of elegance and beauty. Beautifully colored windows full of pictured sacred scenes lend a rich, warm tint to all.

The Cathedral contains seven hundred and twenty-six stone figures, statues of prophets, apostles, martyrs, and Fathers of the church, mostly executed by two eminent sculptors, Fuchs and Werres. The one great shrine of the Cathedral is a curiously-wrought case of silver-gilt, inlaid with jewels and precious stones, containing the bones (?) of the three "Wise Men" who brought offerings to the infant Saviour from the East. The bones of these Magi, or "Kings of Cologne," as they are here most frequently termed, were brought by the Empress Helena from Constantinople to Milan, and afterward presented by Barbarossa to the Archbishop of Cologne.

A slab in the pavement near this shrine covers the heart of Maria de Medicis, and in the various side chapels are monuments of the archbishops, beginning with Conrad of Hochsteden, the founder of the church, relics of the saints, and many other curiosities.

The guide who attended us on our first visit to the Cathedral offered, in a most charitable spirit, to show us, free, the original model of the great church if we would but step across the street where it was kept. We found, however, that the proprietors of this wonderful model were cologne-venders, who, although they required no fee for a view of the model, expected us to return their liberality (!) by purchasing a bottle of cologne water. The "only veritable" *eau de cologne* is sold in more than forty places; and although the only genuine distiller is a certain Johann Maria Farina, there are, as Martha Penny in Hood's *Up the Rhine*, writes, "so many farinaceous impostors, and Johns, and Marias you don't know witch is him or her."

One feature of the city, peculiar to Cologne alone, as far as our observation extended, was the large number of shops situated in narrow alleys covered with roofs and lighted by skylights. Perhaps this arrangement was for the convenience of those who desired to make shopping a rainy-day business. The streets are generally narrow, and not remarkable for cleanliness, though we failed to get a sniff of each of the seven odors for which the city is noted.

One afternoon of our stay, we visited the church of St. Ursula, the patron saint of Cologne. St. Ursula was, as the legends say, the daughter of a British king, who lived at some remote period of antiquity, and who, for some unknown reason, accompanied by eleven thousand virgins, made a pilgrimage to Rome. On their way back to their own country they were massacred at Cologne by the Huns, because they persisted in remaining faithful to their vows. In commemoration of this sad event, a church was built as a tomb for the princess and her unfortunate companions. The bones of the saint and virgins are worked into a kind of sepulchral mosaic, and adorn the interior walls of the church; while the skulls of St. Ursula and a few of her chosen followers are stowed in the treasury of the church in the interior of the heads of certain gold and silver images.