

NOTES OF A VISIT TO SOME OF THE ANATOMICAL SCHOOLS AND SURGICAL CLINICS OF EUROPE IN 1887*

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EARLY in July with Prof. Kerr of Winnipeg,

I visited Germany after a delightful trip through Holland. In the Hague we saw the wonderful "Lesson in Anatomy," Rembrandt's masterpiece, painted when he was only 26 years of age. This is the picture of Prof. Tulpius giving a demonstration on the subject to his students and which is familiar to you no doubt through photos and chromos, which give but a faint idea of the original. In Hamburg we just missed Dr. Schede who was off on his holidays, but saw Dr. Weisinger, and were well treated by the assistants, who spoke very good English. The amount of material is enormous; the operations commence about ten in the morning and go on continuously until two in the afternoon—and this is daily. There are often two or three operations going on at the same time in the same room. Their methods are very thorough as regards antisepsis. The instruments are kept in glass trays in carbolic acid and the ligatures in alcohol. Here they endeavour to cure the patient by one dressing applied dry. The method of operation is as parts near to the seat of operation scrubbed follows: The patient is stripped and all the with soap and hot water and then deluged with sublimate solution poured over him. This of course makes everything in the neighbourhood very moist; the operating table and patient are continually deluged with sublimate and the surplus drains away to a central drain in the middle of the concrete floor of the operating room. The floor is so wet that the operator and his assistants wear large rubber boots to keep themselves dry. The spray apparatus which was used there a few years ago is now discarded; I saw it standing neglected in the corner of the operating room. It was of immense size and must, when in full blast, have obscured

everything, for it had enough steam-making capacity to move a good sized locomotive engine.

The Hamburg hospital is a very large one, some 800 to 1,000 beds. The wards seemed to me to be very much over-crowded, the ceilings low, no ventilation, and altogether the hospital is one from which no great surgical results could be expected. It is in fact more primitive in its style of architecture and arrangement than our own Montreal General Hospital. Still such is the care taken to have everything surgically aseptic that the results equal if they do not excel, those obtained in the most modern hospitals. There is no medical school in Hamburg so that strangers visiting the place are welcomed and allowed to see as much of an operation as one of the assistants.

From the wealth of material and the small number of visitors and spectators, a visit to Hamburg for the purpose of following for a few weeks the practice of its large hospital would well repay any of you who intend going abroad after graduation.

If one believes in the germ theory one should of course endeavour by all the means in one's power to prevent the entering into a wound during an operation and subsequently of all the disease producing and pus generating germs. Most surgeons nowadays believe (in a kind of way) that inflammation is due to the introduction of atmospheric germs into damaged tissue and if this introduction be prevented, the wound heals without inflammation. Now although this is the belief of most surgeons they do not act upon it. Those like Mr. Lawson Tait and Dr. Bantock who don't believe in germs being the *fons et origo mali* believe in cleanliness. Mr. Tait has asserted that if he could get enough dried germs he would use them as dressings for wounds—so little does he fear them. Their precautions are

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not so elaborate as one would expect from a true believer. Such a true believer we find in Dr. Neuber of Kiel. He carries into his practice the legitimate conclusion which results from the adoption of the germ theory, and even good and orthodox antiseptic surgeons look upon him as an extremist. We saw him in Kiel where he has a private hospital. He was formerly Esmarch's first assistant, but quarrelling with him he built a private hospital exactly opposite to Esmarch's own, and has, they say, taken from him most of his private practice. His hospital is new and contains about 40 beds, 15 for first class and the rest for second class patients. The most remarkable thing about his hospital is the number of operating rooms which are the talk and amusement of German surgeons, and which he showed us with great pride. They have all concrete floors with a centre runway for surplus sublimate and the walls are also of concrete and can be easily and thoroughly washed. Each operating room has its set of instruments. The first and largest room is for septic wounds, the second for aseptic wounds, the third for chronic diseases, as those of joints, etc., the fourth for diseases of the genitals and rectum, and last, the holy of holies into which we infidels were allowed merely to look for a moment—for abdominal sections. Neuber is a short, stout, florid man, with a red and somewhat fat face adorned with a short flaxen moustache. He struts around in his aseptic white outer garment in a most imperious and self-conscious way; has a very overbearing manner; speaks in a loud voice to his assistants and patients, and as the English would say, has no end of "swagger."

To show you his method of procedure I shall describe one case. An old man about 65 years of age came in suffering from a very large abscess of the forearm. He was transferred to the henchmen of the great surgeon to get ready for the sacrifice. First he was stripped of all his clothes and laid on the operating table, the lower part of his body covered with a rubber sheet. Then the servant took a scrubbing brush and soap and scrubbed him thoroughly from his chin to the tips of his fingers, including also the side of the chest; then he cleaned and pared his fingernails and deluged him with several pailsful of sublimate solution. After this he was told to hold up the affected arm till

Dr. Neuber was ready for him. In some ten minutes Neuber came in his white linen coat and big goloshes with his assistants, similarly equipped, applied an Esmarch near the shoulder but did not give any ether. After artistically poisoning his scalpel he made a cut about six inches long in the arm and thus freely opened the abscess, the edges of the incision being held apart by the assistants with large hooks. He then took an enormous sharp spoon and scooped out all the inflammatory tissue and again used his Niagara of sublimate, after which he stuffed the wound with iodiform gauze. He then shouted out "los" or "let go." when the hooks were removed, and applied an enormous quantity of dressing (washed gauze) and over all a cotton wadding bandage. The Esmarch was loosened and the operation was over. The man, however, was compelled to hold his arm up for some ten minutes longer. In three or four days he would return; the wound would then be granulating and after paring the edges it would be united with sutures and the whole thing, so said Dr. Neuber, would be well in ten days. Dr. Neuber, as perhaps some of you are aware, was the first to introduce bone drains. But now he tells me he has discarded all drains and always does secondary suture. His method of treating carbuncle is heroic. He cuts it out, and after scraping the deep cavity, stuffs it with iodoform gauze, and after a week pares the edges and applies sutures and the parts unite by first intention. He showed us some cases in which he had done this and where the patients were well in ten days. He is a very able and original man; a quick, good but rather too showy operator, and a man very ready of resource.

After visiting the quaint old city of Lübeck we went to Berlin. The weather was so hot that there was no very great inducement to visit hospitals. We saw Bardeleben at the Charité but were not much impressed with either his methods or manners. He is very old-fashioned, talks a great deal about everything and nothing, and attracts only a small class. The great man in Berlin is von Bergman, head of the Imperial Surgical Klinik. He is a very able surgeon and one whose great reputation does not need any commendation from me. Von Bergman is about 50 years of age, a rather

large man with a dark beard and sharp features; he looks very much alive and is so. He has a very keen eye and makes up his mind rapidly when presented with a difficult case. The amount of work he does is simply enormous. He has six assistants who are kept busy applying dressings to patients on whom he operates. One afternoon I saw him excise six breasts with removal of axillary glands in all cases, and in two with ligature of the axillary artery; one excision of shoulder; one excision of the knee joint; one excision of the hip, and a case of trephining for head injury. This was all in one afternoon. As soon as a patient is operated on, the table is wheeled back into the large arena and an unoperated patient wheeled forward. The first patient has the dressings applied by the chief assistant and his assistants, and a new assistant helps with the next operation, and so on. There are continual relays of patients in the background waiting to be operated on. Each case is described by the professor and during the operation the steps explained. If there is any waiting for patients the professor talks about some case or brings in a case he has operated on some days before, to be dressed for the first time, probably, before the class. The students have no ward work here. The method of dressing is similar to that used in Hamburg; washed gauze, rubber drains and over all a cotton-wool bandage and then a starched one. The only difference is that they were less extravagant in their use of sublimate.

Professor Kuster has charge of a large hospital in Berlin. We went to see him and were received very kindly; no students attend this hospital, which is under the charge of Sisters, and in consequence the operating room is a very small one. Kuster has most of his operation cases in tents in the beautiful grounds attached to the hospital. All the cases we saw were doing well with the exception of a case of amputation of both thighs. We saw several abdominal sections for ovarian tumour and hydatid of the liver, one excision of the kidney, several hip and knee excisions. The dressing in all the abdominal cases was very simple, merely a coat of iodoform and collodion painted on, nothing else. Professor Kuster uses but little irrigation; he dreads sublimate for he has had several cases of poisoning from it. His methods are very simple and there is no show

about him. All his equipment is most plain, yet he does an enormous amount of work and his results are remarkably good. He is a youngish man, with nice open face, honest, earnest brown eyes; very courteous and pleasant to strangers, and in fact a perfect gentleman. His manners are in great contrast to those of many of his brother surgeons in Germany. I saw him excise a large tumour of the neck very skillfully and quickly. He is a very neat operator.

Hahn, of the Frederichsheim, we did not see as he was away; also Martin the ovariologist had his hospital closed to strangers.

Had the weather been better and had I not been prostrated with an attack of severe summer diarrhoea I should have seen more in Berlin. We one day went to Virchow's lecture on Pathology and after much difficulty secured a seat and heard the great man lecture. I also visited the magnificent anatomical institute in connection with the university. It is under the charge of Professor Waldeyer, assisted by Dr. Braeside. It is of magnificent proportions and contains numbers of rooms for original work. It is nearly as large as the Physiological Institute but not quite so ornate. The dissecting room is of large size and well lighted, but as it was out of session there was nothing there but empty tables and stools. Professor Waldeyer was busy in the histological department of the building and kindly showed us through there. Dr. Braeside piloted us through the museum. Although the museum has a great number of specimens they are crowded into a number of small rooms and badly arranged. Dr. Braeside said that they had not long got their specimens together and that he must apologize for the confusion. They had some good specimens of frozen sections suspended in alcohol in flat glass jars which showed them up very well. Among the skeletons are several giants who in life belonged to Frederick the Great's Grenadier Regiments. The basement is fitted up for storage and the injection of subjects. They gather their subjects in summer and keep them in slate tanks on shelves in a vapour of alcohol. There, as in most of the German schools, they use a preservative injection of alcohol, carbolic acid, and glycerin, and clean their bones by macerating them in water heated to about 100° F. for some weeks and then wash the fat out by

keeping them in a weak solution of soda or scrubbing them with a soda solution.

From Berlin we went to Halle a town in Saxony of about 100,000 inhabitants. It is the seat of a large university with a capital medical school. All the university buildings and clinics are new and magnificent. Volkman's surgical klinik is very nearly perfection. Professor Volkmann has frequently been offered more lucrative positions elsewhere but has always declined them. It is said he can get anything out of the Government in the way of buildings and equipment, for you must know even the smallest town in Germany has a most excellent hospital under Government control. Volkmann's klinik is a very large one, some 400 beds, and the majority of the cases are bone and joint diseases. Volkmann is well known for his success in excision of the rectum for cancer, although his assistants tell me he can see much better results in his cases than they can. We unfortunately did not see Professor Volkmann as he was confined to his bed through illness while we were there, but his chief assistant showed us all the interesting cases. Professor Oberts who is a second professor there did the honours in the operating room and we tried to see the operations but only succeeded in seeing the head of the professor and the backs of the students. At first for a minute or two there is a fair view, but soon the students leave their seats and crowd round the operating table so that everything is obscured to the modest stranger and visitor. I was told by the assistants that this was all Volkmann's own fault as he frequently invited the students down into the arena (which is a large one) to see the operation to better advantage, the result being that only the most pushing and persevering ones see anything. Sometimes they crowd the professor so closely that he has to dig into the ribs of the nearest students with the ends of his ulnae in order to get elbow room, and when they crowd very closely he loses his temper, orders the students back to their seats and afterwards denounces them in no very choice language. Next day, however, he is in good temper again and the same thing is repeated. Notwithstanding these little weaknesses I am told that Volkmann is a very able and enthusiastic clinical teacher. We saw many interesting cases there of ex-

cision of the hip walking round with his special push-chair within two months of operation. The anatomical department I could not get into, it being closed and the professor being away. The building from outside is a very fine one.

From Halle we went to Leipsig but saw little there. The old fashioned hospital consists of a series of wooden barracks as they call them, at right angles to a central passage. Thiersch presides over the surgical wards but we did not see him. His chief assistant showed us over the hospital and we saw some very good cases of skin grafting for various operations. Two especially good ones in extroversion of the bladder. This was the only place in Germany where we saw the spray used. It was a mere survival, a vestigial remain, compared to the discarded ones we saw elsewhere. The anatomical department was good but no work was going on and the place was in the charge of a janitor. Numbers of excellent sections by Professors His and Braune were seen and some good obstetrical preparations. It was here I saw the beautiful casts of dissection, etc., some of which are now added to our museum.

We next proceeded to Göttingen where we spent a day with Professor Koenig. Koenig is well known for his excellent surgery and his special work on joints. The hospital is an old fashioned one but it has a fine operating room. Koenig was most civil and polite and did everything in his power to show us all his methods. There was nothing very new. A number of urethral and bladder cases were operated on, but in this department of surgery the Germans do not shine and they are surpassed easily by their neighbours the French. The Anatomical Institute is a curious old place and contains the original collection of skulls made by the celebrated anatomist Blumenbach. The lecture room is on the old plan, a central "pit" with rows of seats all round and I should think must be very inconvenient for lecturing but good for demonstrating; in fact it was designed especially for this purpose when subjects were scarce. As in most of the smaller places we went to, the dissecting room was quite bare.

We continued on our journey visiting Marburg in Hesse, a most beautiful old town where I had years ago spent some months, and here I renewed acquaintance with old friends and

was treated as well as the returned prodigal is reported to have been. There is a fine old anatomical museum here which was founded by the late Professor Lieberkühn, and a fine collection of sketches of the various races. The surgical hospital is a very ancient one and was under the charge of Professor Roser. The surgery is old fashioned as the professor has always been opposed to new fangled ideas. The chief beauties of Marburg are the situation of the old Ste. Elizabethan Kirche built in the 13th century and quaint old Castle on the hill in the middle of the town. There is a museum here in the Old Hall celebrated for its being the place where the famous disputation between Luther Zwinglius and Melanethon took place in 1529.

After leaving Marburg we went through Giessen to Frankfort where nothing was to be seen in the medical way. We then visited Heidelberg and saw Czerny, the celebrated surgeon, who showed us some interesting cases, among them being two of nephrolithotomy and one excision of the kidney. Czerny still uses the spray in his laparotomies I was told. I also visited the fine anatomical department under the directorship of Professor Gegenbauer, but like all the other places it was occupied by a janitor only. The museum is small and insignificant. Czerny's hospital is a very complete one; he has seventy beds arranged in two buildings isolated from each other. Each building has four one-storey pavilions which are parallel and separated by a garden. One of the buildings is entirely for septic cases, croup and suppurating wounds. The croup (diphtheria) pavilion is divided into a number of small rooms holding two or three patients, kept at a high temperature and saturated with a vapour of water and chloride of potassium which is being continually generated by a steam apparatus. We saw many tracheotomies. No dressing is applied to the tracheotomy wound. The septic block has a separate operating room furnished with instruments used nowhere else. In the aseptic building is a fine amphitheatre for clinics, with mosaic floor and two operating tables. Antiseptic solutions for operator and assistants are on tap and for washing purposes and labelled "before operation," "after operation." In this wing are four pavilions, two for men and two for

women. Each pavilion contains about 20 patients and at the end of each is a private room for particular cases.

After enjoying the view from the castle and hill, which is so familiar to everyone from the pictures, and crossing the historic old bridge over the Necker, we went on to Strassburg. Here the Germans have erected a magnificent set of university and hospital buildings, eye and ear clinics, throat and lungs, gynaecology, medical and surgical, etc., and an anatomical and physiological department. This is the home of the illustrious Hoppe-Seiler. We went through the buildings guided by one of the surgical assistants, a German American who was very obliging and attentive. In the surgical department we saw Lücke, celebrated for his great success in the operation of gastroenterostomy, introduced by him. We saw some cases that had been lately operated on. The operation consists in establishing a communication between the stomach and the duodenum or some other part of the small intestine when there is disease or obstruction at the pyloric end of the stomach. In some knee cases we saw Lücke's favourite dressing of sugar applied. We also saw Professor Kussmaul, well known for his plan of relieving intestinal obstruction by washing out the stomach. Strassburg is not yet thoroughly Germanized and although the people are German they prefer to talk French and dislike exceedingly the Germans and their overbearing manners. The gorgeous old cathedral is one of the great sights of Strassburg.

Before leaving Germany I might say with regard to the surgery as seen in the hospitals, that it is nothing if not operative. It seems to me that German surgeons thought nothing of a case if they could not operate on it, and in my opinion they often operated unnecessarily and sometimes recklessly. For instance I saw a case of lymphadenoma where all the glands in the body were enlarged, neck, axilla, groins and retroperitoneal and I presume intrathoracic as well. They intended removing all they could and I saw them remove three of the neck and axillae and as soon as the wound caused by the removal of these healed they were going to tackle the groins and afterwards do an abdominal section and endeavour to remove the retroperitoneal glands. I said, "surely you won't stop there, why not open up the

thorax and remove the intrathoracic?" They smiled and said they would wait and see the effect of the operations they had already planned. They run to extremes both as to manners and methods, and I should be curious to see their methods ten years from now. The number of cases under the care of each surgeon is enormous and so, consequently, is the experience obtained and I do not deny but that they make good use of it. The peculiar docility of the German patients enables surgeons to put in practise methods of treatment often of an experimental nature which would not be tolerated on this side of the Atlantic or in England.

The amount of bone disease one sees in Germany is an awakening to one accustomed to the practice of excision in Canadian hospitals. In nearly all the hospitals almost three-fifths of the cases consist of tuberculous disease of bone and osteomyelitis. This is due to the miserable food and poverty of many of the people. I was surprised to find that in but few of the German hospitals were students allowed in the wards; they are taught altogether in the operating theatre. It seemed to me that the German system of teaching medicine produced a number of inferior men and a few first class ones; resulted in fact, in educating a few men highly and well, but many are sacrificed. No doubt many good men are produced and the opportunity for original research is great. But in anatomy for instance the professor thinks more of his original investigations than of teaching his students. The anatomical museums and the facilities for teaching are greater in Great Britain. In surgery in Germany, if a man is fortunate enough to get an assistant's post his opportunities for teaching and for promotion and future success are great, but if not he sinks to the level of the average. The methods of dressing have changed greatly of late years and nearly all the surgeons use the dry form of dressing. The actual ritual of Lister is not thought so important as these few rules followed at Heidelberg, Göttingen and elsewhere: (1) Absolute disinfection of the part to be operated on and its neighbourhood; (2) Rigorous antiseptic cleansing of the hands of operator and assistants; (3) careful disinfection of instruments and the dressings. By this means and the use of a sublimate or carbolic lotion

during the operation the best hopes are afforded for the good results of that operation.

Before I close this already too long address I must say something about Paris, which I visited at the end of August. It was rather an unfortunate time as most of the hospital surgeons were away on their holidays. However, we went round the various hospitals with their assistants and saw the way they conducted their clinics and treated their cases. Paris is far behind in hospital surgery; that is general surgery. The principles of antisepticism have never been fully grasped and the spray which has been abandoned nearly everywhere else has only just been introduced. These Parisians seem to think that everything worth knowing can be learnt in Paris and that there are no surgeons outside of Paris. They can learn nothing from outside. From the Germans of course, they will not accept anything, even their science; and they detest the English almost as much. The hospitals are filled with venereal cases. I did not see many interesting surgical cases and what I did see showed me that the surgery was not cleanly. I visited the Charite, Neckar, St. Louis, Hotel Dieu and Salpetriere. Charcot and Pasteur were both away, so was LeDenton, Polaillon, Trelat and Champonniere and Terillon; but we saw Guyon and Pean.

The museum of St. Louis is remarkable for its models of skin diseases; they are the most perfect representations I ever saw. The method of preparation is a secret; the material used is not wax but some preparation which is elastic, like rubber. Dupuytren's Museum at l'Ecole de Medicine has many wonderful preparations of bone diseases and some of the specimens are quite historic, but they are fast going to decay, covered with dust and badly arranged. It bears no comparison to the museum of the Royal College of Surgeons of London. I had the pleasure of seeing Pean operate several times in private for ovarian and other abdominal tumours. He is a large, thick set man with very broad shoulders, short, thick neck and an enormous head. He wears side whiskers and has a very determined face; one can see at once that he is a man of great force of character. He and Lawson Tait resemble each other somewhat. When operating he sits in front of his patient at the end of the table

between her legs. He is a wonderfully rapid and dexterous operator. I saw his readiness in one case which I shall presently describe. He uses but few sponges but employs dry linen napkins which he tucks in around the edges of the abdominal wound. He uses an enormous number of forceps, all shapes, curved, long, short, fenestrated, and has always several hundreds in readiness under the charge of the instrument maker, who is present at all operations. The instruments are not placed in any antiseptic solution nor is any special precaution as regards wound infection observed. Sponges on holders are occasionally used to swab out the fossa of Douglas and these are wrung out of weak sublimate lotion. Pean operates at a private hospital in charge of the Sisters of Charity and before an operation quite a number of foreigners are assembled who are furnished with cards of admission. These are chiefly Spaniards and South Americans with whom Professor Pean does a large consulting practice. Soon the great man appears decked in a swallowtail coat and enormous shirt front, and after most pleasantly greeting us all and shaking hands warmly we are asked up to the small operating room where the patient is under ether and in charge of the two assistants. Both of these are quite old men who have assisted him for the past 15 years, and during the operation they are continually abused and sworn at by their chief, who talks all the time, and the better the operation is going the worse is the language he uses. But when any difficulties arise then he is silent as the grave and his assistants have a rest and do not perspire so visibly. The case I referred to was as follows: A woman, aged 40 had suffered from a tumour of the abdomen for some years; several men had refused to operate because of its supposed malignancy. At last one undertook the operation but on account of the difficulties had to abandon it. When she came to Pean she had a large ulcerating surface between the umbilicus and pubis and in the centre of this was a faecal fistula communicating with the large bowel. The whole ulcerating mass was much indurated and connected with a large tumour which filled up the true pelvis. Pean tackled this case by first excising, by an elliptical incision, the fistula and ulcerating mass, and then dissecting out the tumour,

which was everywhere adherent. This he did rapidly, always applying a pair of forceps before cutting so that at one time he must have had several dozen forceps employed. In his dissection he removed nearly all the contents of the true pelvis and appendages, posterior wall of bladder and a couple of feet of bowel, principally sigmoid flexure. He did all this rapidly and so skillfully did he use his various forceps that very little blood was lost. He certainly impressed one with his readiness, resource, rapidity, skill and presence of mind in this operation, which presented such difficulties that but few surgeons would have been able to overcome them. When I left Paris a week after the operation the patient was still alive but what the ultimate result was I do not know.

At the Hospital Necker, Guyon may be seen three times a week at 9 a.m. He is a very handsome man with a mild English-looking face, clear cut features, and well shaped mouth. I never saw a man so dexterous in urethral surgery and with such delicacy of touch. The amount of material at his disposal is enormous and good use he makes of it too. Any morning one goes there one is sure to see a case of lithotrity or lithotomy (suprapubic); there are always cases of stricture with perineal section and occasionally a tumour of the bladder. I saw several lithotrities and lithotomies. In the former operations he uses two lithotrites one heavy toothed for breaking the stone, and one flat bladed smaller one for breaking the pieces; he uses a small evacuator because he crushes so finely. He performs his operations very rapidly and is very cleanly in his proceedings. All his instruments are dipped in boracic solution before use and wiped with a clean linen napkin. He washes out the bladder in all cases with a weak boracic solution and does this with a brass syringe which has a pointed nozzle; this fits into his catheters. In evacuating the crushed stones he always presses the rubber ball with expiration and the outflow of water and with it the debris of stone is evacuated during inspiration. He uses a great many instruments in perineal sections, but his methods and skillfulness contrast most favourably with the clumsy urethral surgery I saw in Germany. It is the one thing that France is ahead of Germany in, viz. urethral surgery. To illustrate Professor Guyon's skill let me tell

you of one instance I witnessed. A man was admitted into his ward with a long piece of soft rubber catheter which had broken off in his bladder. Guyon introduced a small lithotrite talking all the while and telling us what he was doing. He said after a few seconds, "Now I have got hold of it but it is cross-ways. In these cases it is very important to seize the foreign body in its long diameter. Now I shall move the instrument along so; now I have it properly seized." And so he had for on withdrawing it was grasped by the instrument

lengthways and followed quite easily. He seemed as if whilst he was operating he had eyes at the end of his instrument, so accurate and sensitive is his touch.

But I fear I have already trespassed too much on your time, and trusting that my sketchy account of a very profitable and pleasant trip may prove of service to some of you who may be going abroad, and thanking you for your attentive hearing, I shall now leave you in that most delightful of all cities where good Americans go when they die—Paris.