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Sunday
September 22nd.

Dear Dr. Penfield,

My last letter was written shortly after I had returned from Manchester. We were still at Thursley camp, waiting for orders to move to our more permanent site. When those orders came we proceeded with our entire equipment and took up temporary quarters on the grounds of this estate. The men were under canvas and we took over the servants quarters in the garage and stables. We were very comfortable actually and exceedingly so in comparison to our previous accomodations. We remained in the servants quarters while the main building was being emptied and changes were made to receive us. About three weeks ago we moved into the building and have set about getting organized and fitted for work. Col. Russel came with us first and two weeks later Col. Cone and Major Botterall joined us. (The nurses arrived in London about two weeks ago and their arrival coincided with the first big scale air attacks on London. We feared that such an initiation would be extreemly unpleasant for them. We had been somewhat accustomed to it by the gradual build up in activity. However it turned out that the news they had been getting in Canada had sufficiently exaggerated the happenings that the real thing did not seem so severe. Hanson and I went to London two weeks ago today to greet them and were caught in the second raid that night.

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It was an experience never to be forgotten. Our driver had taken shelter in one of the public shelters and was not allowed to leave. He was to have met us at the car at half past nine. When he failed to show up we guessed what had happened and we spent the remainder of the night sleeping on the floor in a basement. The planes were overhead at all times and their drone was broken by the sound of the anti-aircraft guns and the sound of the exploding bombs. We watched for a time from the courtyard but finally retired to get some rest before the "all-clear" sounded. This came at five-thirty in the morning. We went out and decided to look for a cup of coffee, but as you know, it is not an easy thing to find in London at that hour. We finally gave up and returned to the car to wait for the driver. When he appeared we set off for home. It was then daylight but cool and cloudy. We located a small shop on the outskirts where we were able to get a cup of hot tea. While we sat there, a member of the "home guard" or local defense volunteer, as they were first called, came in - also for a cup of tea. He was the most typical example of the ordinary Englishmen in that band of men. It was wonderful to sit there after our harrowing experience of the night and listen to him calmly give his views of the happenings. Strangely enough, while he was in France during the last war, his home had been demolished by a bomb dropped from the occasional raid. He mentioned this while telling of his work that night. Without any show of emotion, excepting unshakable confidence, he stated in simple

words the whole attitude of this country. He then paid for his cup of tea and set out to get a few hours sleep before returning to his "day-time" job. As we finished the drive home, we felt more and more the significance of this mans outlook and the character which lay behind it. We felt much better and resolved to make the very most out of the opportunity to do our part.

On the whole our equipment has been well handled. There are of course items missing but steps are being taken to secure them. We have it all unpacked and the temporary operating room set up. The beds are up and we are now waiting for more sterilization facilities. We will probably begin taking neurological cases this week and perhaps surgical ones too. You can realize how much it means to all of us to be at work again. Yesterday Arthur Childe spent the whole day setting up x-ray equipment and this morning took his first films. His first case was Miss Scott, who fell yesterday on a bicycle and injured her wrist. There is a fracture of the radius but no displacement and it should heal quickly and not cause her any discomfort.

24 Last Wednesday ten of us piled into the back of a three ton truck and went to Oxford to attend the meeting of British Neurosurgeons. Mr. Dott is president of the society. Prof. Cairns and Prof. Jefferson were both there. We thoroughly enjoyed the whole day. The morning session was taken up with discussion of gun shot wounds of the head. Quite a number of the case reports came from districts receiving wounded from the more

2 heavily bombed areas. Some of the reports were from France. After this discussion, we took time off for lunch and returned at two in the afternoon. There was a very interesting report on some work in progress regarding nerve regeneration. This work has been done on rabbits and it was felt by the investigators that definite proof was obtained to show that the severed sciatic nerve ^{after suture} regenerates towards the periphery at a rate of four to five mm. a day. This is of course much faster than the rate usually given. It was felt that the rate corresponds very closely to the rate in man. They felt that the discrepancy was due to the fact that the nerve regenerates to the part, say muscle or skin, and that there, there is a considerable period of delay - often long - before the nerve fibers become physiologically active ie. movement and pain reception. The accepted rate of two mm. a day had been calculated as from the time of suture of a nerve till the function returned. These workers also pointed out another source of error in addition to the delay after the fibers have reached their destination, and that is the time required for the fibers to grow through the point of suture or the graft as the case might be. Their work also indicated that there is no striking difference in rate of regeneration when suture is performed immediately and when the suture has been done some time after the nerve has been severed. That is to say that the ability of the proximal nerve fibers to regenerate is not appreciably altered by a delay, nor is the ability of the distal nerve to receive the new fibers decreased.

Prof. Cairns gave a paper on brain fungus. Unfortunately we had to leave before the last two papers by Prof. Jefferson and Mr. Dott. All of this is to appear in a report some time later and you will undoubtedly get a copy of that.

It is raining hard now and has been intermittantly for the past two weeks. It is better that way at present. Yesterday we ran off a tennis tournament - doubles - among the officers. Dr. Cone was in fine form and I am sure it was the first exercise he has had. He seemed to thoroughly enjoy it.

All of us are well and I am sure our dispositions have been greatly helped by the work now at hand and the preparations that have been under way. Our "mess" nights are always a pleasant affair and we all speak of home and our associations there and wish that you could drop in with us.

Mother told me that a copy of the interim report of this unit had been mailed to her from the Institute. She appreciated it very much and so did I. Your letter to me was exceedingly welcome and I know just how busy you must be at this time. That makes me doubly grateful for the letter.

With best wishes,

Sincerely,

Bill
